

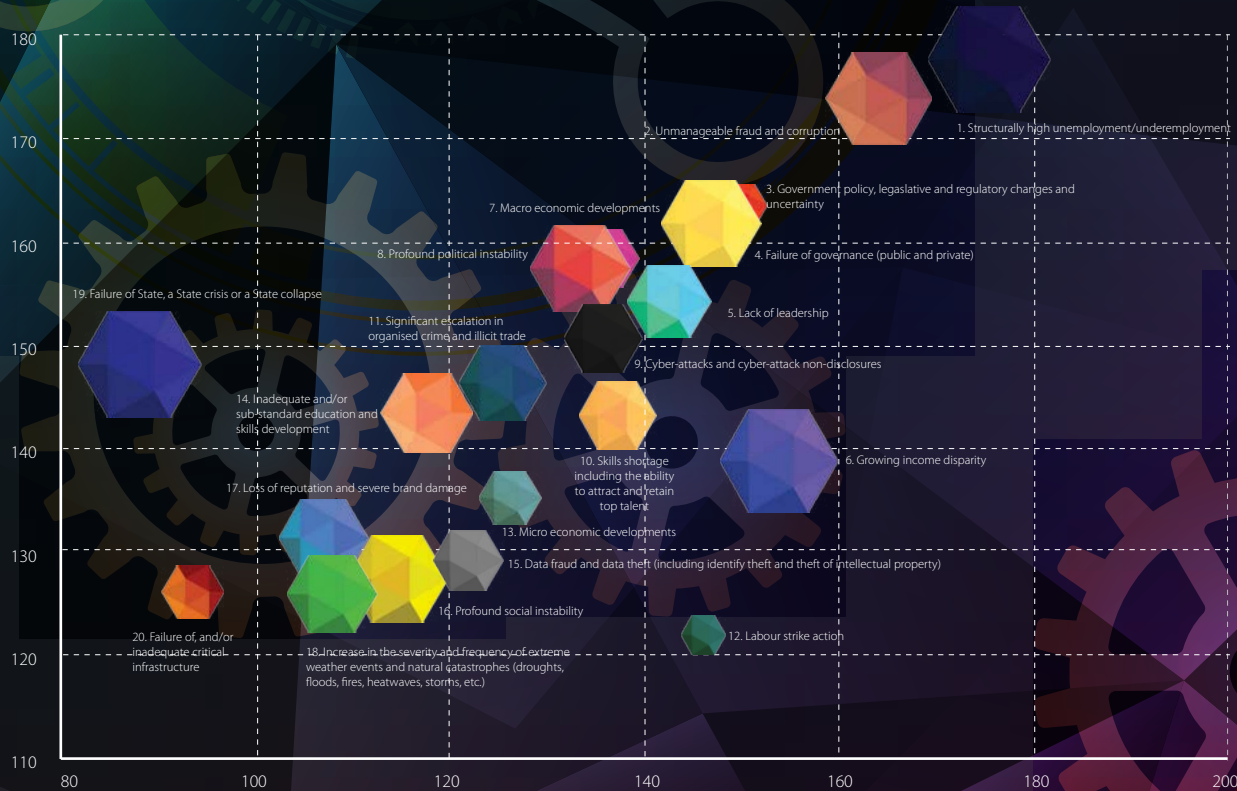


IRMSA Risk Report

South Africa Risks 2018

Fourth Edition

SOUTH AFRICA RISK PROFILE



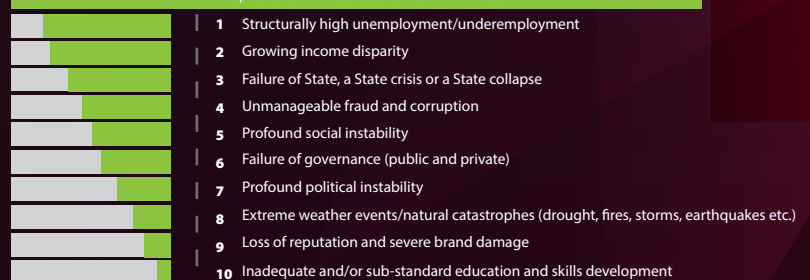
Top 10 COUNTRY risks rated on IMPACT



Top 10 COUNTRY risks rated on LIKELIHOOD



Top 10 COUNTRY risks rated on RISK READINESS



SOUTH AFRICA INDUSTRY RISK PROFILE



Top 10 INDUSTRY risks rated on IMPACT



Top 10 INDUSTRY risks rated on LIKELIHOOD



Top 10 INDUSTRY risks rated on RISK READINESS



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INSTITUTE OF RISK MANAGEMENT SOUTH AFRICA

The report and e-book is available at
www.irmsa.org.za/page/2018_Risk_Report

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"We can judge our progress by the courage of our questions and the depth of our answers, our willingness to embrace what is true, rather than what feels good"
- Carl Sagan

FOREWORD

Berenice Francis

President

The Institute of Risk Management South Africa

The quote represents what risk professionals do every day – we assist the business in facing and preparing for what is true, possibly scary, rather than what feels good. The fourth edition of the IRMSA Risk Report has built on lessons of the past and contributes to evolving the conversation to what should be discussed and acted on within our business landscape. It is clear as we look at the challenges that we all are facing, that these hard conversations are needed, and at this time transparency and clarity is a must.

South Africa 2018 and beyond, remains an uncertain place for business, organisations and individuals. As risk professionals, uncertainty is our bread and butter – it provides us the opportunity to set frameworks and assess strategies. Yet given the level of uncertainty and the plethora of news coming from our ever more connected world, how do organisations distinguish between noise and fact?

Last year, the Institute of Risk Management South Africa (IRMSA) used 'Lead' as its overarching theme for all events, training and thought leadership. This theme speaks volumes as to how organisations and business leaders should be using risk management within their organisations, teams and projects. In such uncertain times, risk management should be used as the leading tool to guide business. From the top, right through to the lower levels of each business, each person should see themselves as a risk manager and be equipped as such. Risk Management must lead the board agenda and play an active and prominent role in all discussions, decisions and strategy.

It is not too difficult for a risk manager to focus on, and ensure risk compliance. Slightly more challenging is to report and present the risk profile to an organisation and to have the discussions around sensitive risks or why risk responses are not effective. The challenge that each of us must accept head-on is to stay true to our profession and to what is expected of an effective risk manager when we are pressured to overlook real risks, governance failures, weaknesses in internal control frameworks or to just to "report on what is palatable".

This report asks business leaders and risk professionals to be courageous in acknowledging certain truths and sharing insights of how they have treated or even tolerated risks. It acts as a beacon to allow the reader to focus on what matters. It is up to you to reflect on the insights of the experienced contributors to this report and align their insight with your views, to learn through the shared collection of advice and apply what best suits your current context.

I wish to thank all the contributors for their selfless sharing and guidance and trust that you find this report as informative and instrumental in your work, as a leader, as I do.

PREFACE

Christopher Palm

Chief Risk Advisor

The Institute of Risk Management South Africa

In 2014, and it is no different today, the vision of the IRMSA Risk Intelligence Committee was to deliver a tool that could form part of the risk practitioners' tool box and transform the presence and value proposition of risk management in the boardroom by moving ever closer to contributing towards unveiling those unknown unknowns.

The IRMSA Risk Report is meant to be an input to the risk management process. The real value of this report lies in it being assimilated into the risk management process and contributing to better strategy development and decision-making. Three additional contributions that further increase the applicability of this report are Futures and Scenarios, Risk Relationship Analysis and an Energy Sector specific risk review.

The process of collating data, structuring and preparing the report includes continuous benchmarking with other globally recognised risk reports. Also, of the 1000+ participants, the clear majority are active in the risk management space at varying levels in leadership. The Subject Matter Experts (SMEs) involved in our risk reports are recognised experts in their field with the added value that these SMEs have a documented history of working in the area for which they are an expert. They have done the work; they not only understand South Africa and Industry risks, but the details within those risks. They understand industry best practices and can communicate those insights to help the risk profession improve on the performance of risk management.

Gratitude goes to the IRMSA Membership, the public and private business communities, the Risk Intelligence Committee and the IRMSA Executive Committee for providing these insights. Thanks also goes to the Institute of Futures Research (IFR), independent strategists, futurists and the South African National Energy Association (SANEA) for generously sharing their opinions and how their insights

and suggested risk treatment plans impact on the wider environment.

In the 2018 report, we focus on talking about risk, Risk causes and proposals on how to treat the risks captured using visuals that are self-explanatory and concise. As far as the SME input is concerned, the 65+ SME views are presented in a summary fashion. To reduce the risk of losing valuable insights, experiences and lessons shared by the SMEs, a supplementary e-Book has been added, allowing the reader to navigate the source data by risk and by SME. The detailed SANEA Energy Risk Report and participant information also form part of the e-Book.

“There are known knowns. These are things we know that we know. There are known unknowns. That is to say, there are things that we know we don't know. But there are also unknown unknowns. There are things we don't know we don't know.”

- Donald Rumsfeld

Over the past 24 months, IRMSA has been driving change management initiatives with themes like “Future Fit Risk Managers”, and “Lead 2017”. For 2018, our theme is “Big Thinkers”. These themes are reflective of what IRMSA believes the future risk profession should aspire to. No doubt, risk compliance is important; to bed-down an effective risk management framework and mature it continuously. We must however shift our focus more to the actual risk: risk managers should be “process facilitators” and “translators of risk data into workable information and action”;



but even more is required. Risk managers should be “the ultimate integrators” of strategic and business risk information and the risk responses to address these risks. More to the point, risk management needs to increase its predictive capability; and risk managers should increasingly become the ones that speak the unspeakable, take up the role of mind-changers that influence leadership and embrace the benefits that big data can offer risk management.

I believe that the IRMSA Risk Report 2018 is contributing towards these proposed shifts. It highlights major risks and proposes critical actions to respond to the risks. In some cases, it has been about speaking about the most uncomfortable issues and in so doing, proposes ways to achieve these proposed shifts.

In closing, having reflected on the past 6 months and considering the many companies that have been damaged by leadership indiscretions, I am sure somebody has asked

the question: “Where was risk management?” Or even more damning, “Where was the risk manager?” This again proves that risk management should not function in isolation and it is the duty of risk professionals not to work in silos, but to understand, participate in and influence all areas of the organisation. If risk management is properly embedded within an organisation and a strong risk management culture adopted, we will see more organisations being able to maintain stability during times of difficulty and seize the ‘opportunities’ that come their way to prosper.

I leave you with a quote from Steve Jobs that resonates so much with where risk practitioners find themselves today:

“Don’t let the noise of others’ opinions drown out your inner voice. And most important, have the courage to follow your heart and intuition.”

-Steve Jobs



EXECUTIVE SUMMARY

The IRMSA Risk Report creates awareness of the risks facing the achievement of the South African national and industry objectives. It intends to stimulate debate on how to best manage the risks highlighted in the report through communicating current challenges clearly, so that effective risk treatment plans can be developed to benefit both the country and industry.

IRMSA's methodology, in generating this report, involves a series of workshops and surveys conducted throughout the year with South Africa's top risk management professionals spanning every major industry within the public and private sectors. The report is created within the context of identified global risks derived from various key globally recognised sources.

IRMSA recognises the National Development Plan (NDP) as the legitimate summation of the joint goals of government (national, provincial and municipal level) and the private sector, to work towards to deliver a shared and prosperous future for the country and its people.

The analysis of the South African context is performed considering the internal and external environments as well as significant national and international emerging trends including emerging technologies. This is supplemented with scenarios developed by the Institute of Futures Research: South Africa to 2028. In developing these scenarios, skills and leadership were identified as the key uncertainties driving change over the next 10 years. Two scenario stories were developed for SA 2028, namely "#Alljustfall" and "Tall trees", indicating how these likely directions could impact industry and the country should they materialise.

Political, economic and societal risks again dominate the South African risk landscape. Several of these risks have materialised (in different degrees) during 2016 and 2017 with mostly negative consequences for the economy, our country's people and our country's international reputation.

The Top 10 South Africa Risks are:

1. Structurally high unemployment/underemployment
2. Unmanageable fraud and corruption
3. Government policy, legislative and regulatory changes and uncertainty
4. Failure of governance (public and private)
5. Lack of leadership
6. Growing income disparity
7. Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT
8. Profound political instability
9. Cyber-attacks and cyber-attack non-disclosures
10. Skills shortage including the ability to attract and retain top talent

In the Industry Risk Profile, political, economic and societal risks likewise dominate the South African risk landscape. Cyber-crime including data theft have been part of the landscape for the past three years. The new risk entry on the industry risk landscape for 2018 is disruptive technologies.

The Top 10 South African Industry Risks are:

1. Cyber-attacks and cyber-attack non-disclosures
2. Government policy, legislative and regulatory changes and uncertainty
3. Structurally high unemployment/underemployment
4. Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT
5. Profound political instability
6. Skills shortage including the ability to attract and retain top talent
7. Micro economic developments: Inflation, deflation, austerity measures, national economic slowdown
8. Capital availability/credit risk
9. Unmanageable fraud and corruption
10. Failure of governance (public and private)

The relationships between risks and proposed treatment plans (from SMEs) were assessed by an independent analyst. This type of assessment is undertaken to assess which risks are the major drivers that shape the risk landscape. Once this is understood, prioritising these risks can occur, which – if done effectively – could redefine the risks and outcomes we urgently need to manage. The areas requiring prioritised attention for 2018 (given the risks identified by the respondents) are:

- Addressing the skills shortage
- Replacing/developing unethical/inadequate leadership
- Improving the organisation's risk culture
- Managing fraud and corruption
- Generating better certainty around Government policy, legislation and regulatory changes

The analysis shows that to effectively address these prioritised risks, we must do things differently: in our country, industry and organisations. Future success will not only require these areas being tackled well, but innovatively given the consistent re-occurrence and intensification of these risks. Creatively addressing the 5 areas highlighted above, can re-shape not only how we operate, but with whom and under what conditions.

A first energy industry specific risk report developed through collaboration between IRMSA and SANEA highlighted risks at country and industry level. There is a strong correlation between SANEA's contribution and the Top 10 Risk profiles of South Africa and South African Industries. The following four energy related risks should be included in your risk assessments for continuous monitoring and review:

- A water crisis
- Business models for decentralisation of the energy market
- Slow responses to changing demand in the country energy mix
- Lack of investment in liquid fuels infrastructure

A summary report is included in Section 2 and the detailed report has been included in the e-book.

This links to IRMSA's current initiative through the hosting of the public-sector forums and the vision to role this out to the private sector through industry specific workgroups.





CONCLUSION

This report was developed by South African experts through their specific risk lenses. A better take than these insights into what the risks are that need addressing will be hard to find. For this reason, leadership at all levels should consult the report as we embark on a new year and a new trajectory for South Africa.

There are significant differences between the global risks and those identified for South Africa, and therefore it is so important that this report is internalised by national and industry leadership and presented as **our** story. It is a powerful tool for decision makers; important to them in creating the appropriate context and relevant awareness of the unique circumstances in which they make decisions and how those decisions impact on South Africa and the achievement of South Africa's objectives.

Even within our own national and industry contexts, the views of the SMEs show both areas of alignment and difference. This should be embraced as a rich source of data that the risk professional/practitioner should use when addressing similar risk that impact their organisations.

Considering the number of risks that have materialised over the past 18 months and considering how many of those risks were highlighted since 2016, it is indicative that knowledge of the risks is not enough. We must show greater willingness and ability to effectively treat or respond to these risks, in both the public and private sectors. The challenge therefore is for the future risk professional to act on the insights gained from our risk data. Risk practitioners must become the voice speaking the unspeakable and become mind changers supporting leaders in their decision-making roles.

Unless role players in both the public and private domains align for common goals and interests, and treat the risks noted in this report, the much-needed growth trajectory for the NDP is unlikely. This will require shifts in three areas:

- A change in corporate culture
- A focused shift around governance and ensuring accountability
- A new approach towards skills

The challenge that faces the risk management profession is to contribute to this shift. To achieve and sustain the ability to influence leaders and decision makers by presenting them with credible assessments and treatment options for all the risks that impact the organisation's strategy and objectives and the NDP objectives.

In support of this call to action, IRMSA's current initiatives through the hosting of the public-sector forums and private sector workgroups will be strengthened. By playing this coordinating role, public, private as well as industry specific risk functions could benefit from exposure to different risk management behaviours that may lead to different outcomes. This is already underway in the mining and energy sectors.

TAKE CONTROL OF YOUR RISK

A black and white photograph of a hand placing a domino to stop a chain reaction. Several dominoes are already falling in a line from left to right, and the hand is placing a new one to stop the sequence. The background is blurred, focusing on the hand and the dominoes.

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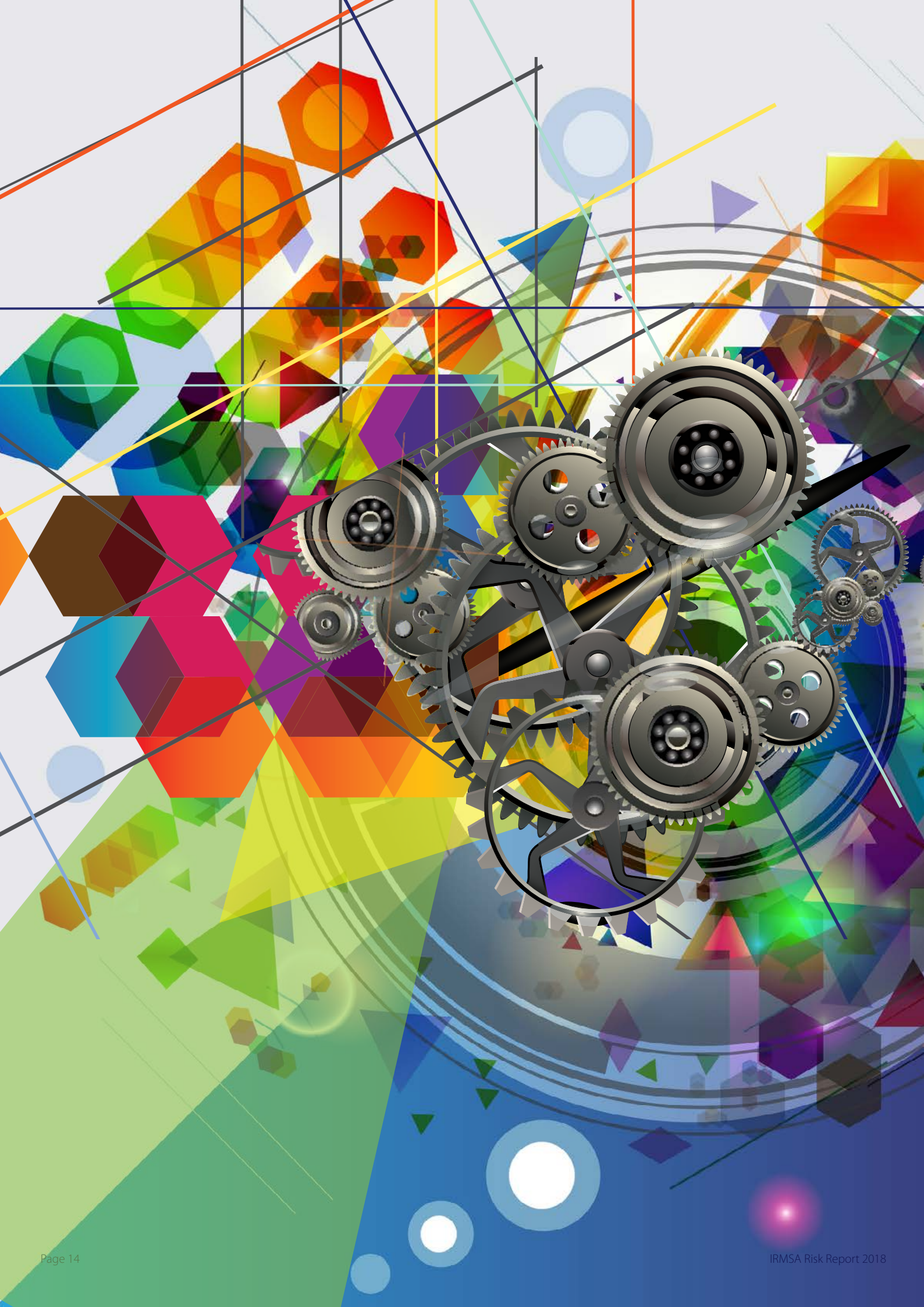
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Award Winner







INTRODUCTION

ISO 31000:2009 defines risk as the “effect of uncertainty on objectives” and an effect is a positive or negative variance from what is expected.

IRMSA recognises the National Development Plan (NDP) as the legitimate summation of the joint goals of government (national, provincial and municipal level) and private sector; to work towards to deliver a shared and prosperous future for the country and its people.

Using this as a fundamental point of departure, allows for a very practical approach to constructing an on-point IRMSA Risk Report 2018. First, whenever we try to achieve an objective, there is always the possibility that things will not go according to plan. For that reason, the report allows for the sharing of the high-level country and industry risks relevant to the objectives and the context in which both find themselves. Second, because the definition recognises that all of us operate in an uncertain world, it creates the opportunity for comments which are relevant to the South African country and South African industry context, including a look at the future through various scenarios.

Intent and objectives of the IRMSA Risk Report

The IRMSA Risk Report creates awareness of the risks facing the achievement of the South African country and industry objectives. It stimulates debate on how to best manage the risks highlighted in the report through communicating current challenges clearly to create effective risk treatment plans benefiting the country and all South Africans. Ultimately, we will be better informed, more decisive and move with increased confidence to achieve our vision of creating a foundation for South Africa’s sovereign and industries’ competitiveness which is sustainable from an economic, environmental and social perspective.

The Risk Report also supports one of the key roles of IRMSA which is to create opportunities for collaboration between all role players impacted by risk management. The very nature of a risk based conversation, should inevitably lead to collaboration between all parties involved and result in an inclusive approach when making decisions and managing uncertainty related to the achievement of the objectives.

Approach and methodology

This IRMSA Risk Intelligence Committee's approach involves a series of workshops and surveys throughout the year with South Africa's top risk management professionals spanning every major industry within the public and private sectors. The report is also created within the context of identified global risks derived from various key globally recognised sources.

The surveys use the NDP to link the national risk profile to the country's developmental objectives. During the first survey, the risk management fraternity respondents were asked to select the top 15 risks from a list of 50 risks which they believed could adversely affect the achievement of the NDP priorities and objectives as well as those of their respective industries.

The IRMSA Risk Intelligence Committee then compiled a list of the top 20 national and industry-level risks based on the data gathered from the surveys. Full risk descriptions were created prior to the initial survey so that they could be better understood by the respondents. A second survey was then run to analyse the risks and rate them according to impact, likelihood and risk readiness, again for both country and industry. A top 20 risk view by country and industry forms part of this report, coupled with a greater understanding of these risks as provided by the Subject Matter Experts.

It is one of IRMSA's objectives to establish industry specific workgroups to focus on industry specific risks and to enable industries to have their own risk reports which will ultimately feed into the IRMSA Risk Report. This year we have added a first industry specific risk report derived through collaboration between IRMSA and SANEA.

Further, the IRMSA Risk Intelligence Committee aims to assist in the maturing of risk management. Since 2017, we have emphasised the importance of paying attention to the South African risks that are systemic in nature, compromising entire systems as opposed to merely their component parts. Risks have been analysed independently, using systemic lens to identify the risks that should be prioritised given their role in the South African system.

Lastly, IRMSA collaborated with the IFR to provide a futures view in the form of scenarios to allow the risk practitioners to make a more meaningful contribution to the drive towards enhancing risk management into a predictive capability.

Structure of the report

For ease of working through the report, it is made up of three distinct sections:

Section 1 refreshes the reader on the NDP priorities and objectives as well as presents the current state of our country. It also brings into perspective South Africa's future landscape starting with a global perspective working its way to scenarios relevant to South Africa.

Section 2 of the report provides a view on the top 20 risks for both country and industry and a comparison between the results of the reported South Africa Risks since 2016. This is followed by a Risk Relationships Analysis and a high-level risk readiness assessment of the top country and industry risks.

Section 3 gives a summary of SMEs' comments and insights on the top 20 risks for both country and industry and includes their views on:

- risk causes
- suggested treatment options or risk responses and,
- the risk landscape in the near term (18 months) and longer term (3-5 years).

IRMSA acknowledges the people who were integral to the successful creation of the report and provides information about the project team.



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SECTION 1

South Africa's National Development Plan Objectives

South Africa's NDP, launched in 2012, is a detailed blueprint for how the country can eliminate poverty and reduce inequality by the year 2030. It is a plan to unite South Africans, unleash the energies of its citizens, grow an inclusive economy, build capabilities, and enhance the capability of the state and leaders working together to solve complex problems. As a long-term strategic plan, the NDP serves four broad objectives and the supporting chapters – these formed the basis of identifying, analysing and evaluating the country risks:

Four broad objectives that inform the NDP

- Providing overarching goals to achieve by 2030
- Building consensus on the key obstacles to achieving these goals and what needs to be done to overcome those obstacles
- Providing a shared long-term strategic framework within which more detailed planning can take place to advance the long-term goals set out in the NDP
- Creating a basis for making choices about how best to use limited resources

Developmental themes that deal with different aspects related to the achievement of its goals:

- Economy and Employment
- Economic Infrastructure
- Environmental Sustainability and Resilience
- Inclusive Rural Economy
- South Africa in the Region and the World
- Transforming Human Settlements
- Improving Education, Training and Innovation
- Healthcare for all
- Social Protection
- Building Safer Communities
- Building a Capable and Developmental State
- Fighting Corruption
- Nation Building and Social Cohesion







South Africa's Context: Global View

South Africa, viewed from a global context is considered a diversified economy with significant natural resources. Financial services and manufacturing increasingly contribute more to GDP growth than mining and agriculture. According to the World Economic Forum's Global Competitiveness Report 2017, South Africa (61st in the world) remains one of the most competitive countries in sub-Saharan Africa, and among the region's most innovative (39th in the world) - but was dropped 14 positions in the overall rankings in 2017.

Political uncertainty in 2018 has contributed to significant declines in the confidence of South African business leaders: although still relatively good in the African context, from a global perspective, the country's institutional environment (76th), financial markets (44th), and goods market efficiency (54th) are all rated as weaker (Source: WEF Global Competitiveness Report 2017).

The national context sees South Africa, since emerging from its 2009 recession, with hardly any noteworthy growth. Growth has fallen short of the government's target of 5%, and depending which source one consults, 2018 growth could arguably trickle up to 1.2% and reaching 1.7% in 2019 whilst persistently enduring low international demand for its commodities and an unemployment rate above 25% and rising.

There is increasing mumbling over the ongoing failure to respond to the people's expectations on unemployment, poverty and service delivery. These, and the magnitude of state capture and pervasive corruption are significant drivers of social instability. Demonstrations, with tens of thousands taking to the streets to ask for President Jacob Zuma's resignation, highlights this rising political and social tension.

The December 2017 ANC National Elective Conference elected a new party president and preliminary indications are that the international community is responding positively. As far as the impact on the presidency of the country goes, uncertainty remains to the timing and degree of reform. This uncertainty will likely still weigh on consumer and investor confidence, limiting domestic demand and private investment as a conservative "wait and see" approach is likely.

South Africa's sovereign credit rating was downgraded to non-investment grade in 2017, resulting in increasing financing costs on the high levels of government debt. The banking sector remains strong although there is increased exposure in terms of credit risk because of the effect of the economic slowdown on borrowers' creditworthiness.

High levels of unemployment and sagging consumer confidence will be a drag on domestic demand. Additionally, high levels of corruption, political uncertainty, and concerns about the price of energy will likely limit foreign direct investment.

South Africa's Context: Global trends and technologies influencing the 2018 South Africa Risk Context

The analysis of the South African context is informed by considering the significant global trends and emerging technologies provided below which were identified in the latest World Economic Forum (WEF) Global Risks Report. The WEF describes a trend as a long-term pattern that is currently occurring and that could contribute to intensifying global risks and/or altering the relationship between them.

Identified trends and technologies are defined in Tables 1 below and 2 overleaf:

Trend	Description
Ageing population	Ageing populations in developed and developing countries driven by declining fertility and decrease of middle- and old-age mortality
Changing landscape of international governance	Changing landscape of global or regional institutions (e.g. UN, IMF, NATO, etc.), agreements or networks
Changing climate	Change of climate, which is attributed directly or indirectly to human activity, that alters the composition of the global atmosphere, in addition to natural climate variability
Degrading environment	Deterioration in the quality of air, soil and water from ambient concentrations of pollutants and other activities and processes
Growing middle class in emerging economies	Growing share of population reaching middle-class income levels in emerging economies
Increasing national sentiment	Increasing national sentiment among populations and political leaders affecting countries' national and international political and economic positions
Increasing polarization of societies	Inability to reach agreement on key issues within countries because of diverging or extreme values, political or religious views
Rising chronic diseases	Increasing rates of non-communicable diseases, also known as "chronic diseases leading to rising costs of long-term treatment and threatening recent societal gains in life expectancy and quality
Rising cyber dependency	Rise of cyber dependency due to increasing digital interconnection of people, things and organizations
Rising geographic mobility	Increasing mobility of people and things due to quicker and better-performing means of transport and lowered regulatory barriers
Rising income and wealth disparity	Increasing socioeconomic gap between rich and poor in major countries or regions
Shifting power	Shifting power from state to non-state actors and individuals, from global to regional levels, and from developed to emerging market and developing economies
Rising urbanization	Rising number of people living in urban areas resulting in physical growth of cities

Table 1: Trends identified in the 2017 WEF Risk Report



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Emerging Technologies	Emerging Technology Description
Artificial intelligence and robotics	Ageing populations in developed and developing countries driven by declining fertility and decrease of middle- and old-age mortality
	Advances in automated processes ranging from manufacturing to driverless vehicles and automated knowledge work, enabled by highly competent cyber-physical systems and machines that can substitute for human beings to complete various tasks most often associated with thinking, multitasking, and fine motor skills
Biotechnologies	Innovations in genome editing, gene therapies, and other forms of genetic manipulation and synthetic biology resulting in additions to the registry of sequenced species of animals as well as human DNA, the creation of previously non-existent organisms, and modifications to microbes and organisms for medical, agricultural and industrial applications, including integrating them with electronic and computing advancements
Energy capture, storage and transmission	Deterioration in the quality of air, soil and water from ambient concentrations of pollutants and other activities and processes
	Breakthroughs in energy technologies, including advanced batteries and fuel cells, orbiting solar arrays, tidal energy capture, wind and bioenergy, as well as advances in nuclear fusion containment, smart grid systems, wireless energy transfer, and increased fuel cell fabrication efficiencies
Blockchain and distributed ledger	Increasing national sentiment among populations and political leaders affecting countries' national and international political and economic positions
	Developments in cryptographic systems that manage and verify distributed transaction data on a public ledger, increasing transparency and securing an immutable record for application to cryptocurrencies such as bitcoin as well as for verification of varieties of transactions across industries, especially in financial technologies (FinTech)
Geoengineering	Creation and development of technological processes that intercede in the Earth's geological and climatic systems, ranging from land reclamation to atmospheric seeding in order to influence weather patterns or remove carbon dioxide
Proliferation and ubiquitous presence of linked sensors	Rise of cyber dependency due to increasing digital interconnection of people, things and organisations
	Proliferation and ubiquitous presence of linked sensors, also known as the "Internet of Things", combined with sophisticated large-scale data analytics that will connect, track and manage physical products, logistics systems, energy grids and more by sending and receiving data over widespread digital infrastructures
Neurotechnologies	Increasing socioeconomic gap between rich and poor in major countries or regions
	Creation of new methods for insight into, and control of, the functionality and processing dimensions of the human brain, allowing for the ability to read, influence and communicate brain activity through various secondary technological dimensions such as smart drugs, neuroimaging, bioelectronic interfaces, machine-brain interfaces and brainwave decoding and manipulation
New computing technologies	Rising number of people living in urban areas resulting in physical growth of cities
	Innovations in materials and assemblages used to process or store digital information, such as centralized cloud computing, quantum computing, neural network processing, biological data storage, and optical computing, including new software development, cryptography, and the cybersecurity processes associated with each
Space technologies	Technologies that can be used in space that will increase the ability of both public and private entities to access, explore, and create new forms of value such as microsatellites, reusable rockets, integrated rocket-jet engines, optical and imaging technologies, sensor developments, resource exploitation, laser and communications technologies, space exploration and habitat developments, and techno-scientific breakthroughs that are transferable to the marketplace
Virtual and augmented realities	Development of sophisticated immersive virtual environments that can range from heads-up displays and holographic readouts to fully mixed digital and physical environments and complete virtual worlds and interfaces

Table 2: Emerging technologies identified in the 2017 WEF Risk Report

South Africa's Context: WEF Risk Comparison

The top 5 risks comparison between South African and WEF respondents' views are similar in that the respective profiles are spread across all five risk categories but differ significantly in the actual risks identified (refer to Tables 3 and 4 below).

The risk profile for WEF respondents is more concerned with natural disasters, natural catastrophes, climate change and water crisis. Terrorist attacks and weapons of mass destruction also feature on both the 2016 and 2017 risk profiles.

South African respondents assessing national and industry level risks are predominantly concerned with economic, geopolitical and societal risks. Government concerns, economic developments and unemployment are the key risks on the South African Risk landscape. Fraud, corruption and breakdown in governance are also key risks highlighted in both the country and industry profiles.

Risk comparison by Impact

World Economic Forum		South Africa	South African Industry
2016	2017	2018	
Weapons of mass destruction	Failure of climate- change mitigation and adaptation	Structurally high unemployment/ underemployment	Cyber-attacks and cyber-attack non-disclosures
Extreme weather events	Weapons of mass destruction	Unmanageable fraud and corruption	Government policy, legislative and regulatory changes and uncertainty
Water crises	Water crises	Failure of governance (public and private)	Macro-economic developments
Major natural disasters	Large-scale involuntary migration	Government policy, legislative and regulatory changes	Loss of reputation and severe brand damage
Failure of climate- change mitigation and adaptation	Severe energy price shock	Macro-economic developments	Profound political instability

Table 3: Comparison between Top South African (National and Industry Levels) and WEF Risks by Impact

Risk comparison by Likelihood

World Economic Forum		South Africa	South African Industry
2016	2017	2018	
Extreme weather events	Large-scale involuntary migration	Structurally high unemployment/under-employment	Structurally high unemployment/under-employment
Large-scale involuntary migration	Extreme weather events	Unmanageable fraud and corruption	Macro-economic developments
Major natural disasters	Failure of climate- change mitigation and adaptation	Growing income disparity	Profound political instability
Large scale terrorist attacks	Interstate conflict with regional consequences	Government policy, legislative and regulatory changes and uncertainty	Skills shortage including the ability to attract and retain top talent
Massive incident of data fraud/theft	Major natural catastrophes	Failure of governance (public and private)	Cyber-attacks and cyber-attack non-disclosures

Table 4: Comparison between Top South African (National and Industry Levels) and WEF Risks by Likelihood

South Africa's Context: Scenarios for South Africa 2028

Institute for Futures Research

Prof André Roux and Doris Viljoen

Scenarios are stories about possible futures. Each scenario in a set is based on different assumptions about how key uncertainties will play out, how current trends will develop and which new factors may come into play.

Scenarios are never a comprehensive image of the future or the only possible construct of uncertainties. But, they hold the potential of 'rehearsing' possible futures, offering opportunities to deepen insight, enrich debate and promote a shared understanding of where and how stakeholders can influence the future.

Towards 2028, there are 9 key factors that will probably be shaping the future of South Africa. Factors influence, and are influenced by one another. One possible analysis of the interplay between factors is summarised in the table below.










Critical factors <i>Strong influence on other factors and strongly influenced by other factors</i> <i>Observers should keep track of changes in the status of these factors at all times, and use that to influence a system; these factors frequently form either virtuous or vicious circles.</i>		
Factor	Description	Current Status
5% economic growth	Sustained 5% economic growth (measured by GDP) in a turbulent global environment	
Social Capital	Responsible, ethical and efficient leaders, economic and social benefits from strong relations between members of society	
Economic activities of the youth	Actively participate in the economy, ability of the country to realize a demographic dividend.	
Food, Water, Energy security	Ability of the system to facilitate access to food, water and energy for all members of the population	
Active factors <i>Strong influence on other factors, but weakly influenced by other factors.</i> <i>Effective levers: may be possible to have a significant effect on the system through intervention</i>		
Factor	Description	Current Status
Autonomy of democratic institutions	Institutions (like the Reserve Bank, Judiciary, Public Protector etc.) are able to perform their activities free from undue interference by others	
Critical infrastructure	Expanding and maintaining infrastructure (roads, railways, airports, water and energy distribution systems, etc.)	
Appropriate skills	Knowledge, skills and attitudes that enable participation in current and future economic activities	
Reactive factors <i>Weak influence on other factors, but strongly influenced by other factors</i> <i>Useful indicators of the effects of interventions in the system</i>		
Factor	Description	Current Status
Democratic surplus	A democratic surplus occurs when members of a society have legal rights that do not translate into economic or other societal well-being benefits. They have democracy without economic emancipation.	
Lazy/buffering factors <i>Weak influence on other factors and weakly influenced by them</i> <i>It will not be the driving factor, but a positive change will have a positive effect on the rest of the system</i>		
Savings	Money that government, corporates and individuals save in order to use at a later stage, invest or buy capital goods.	

Table 5: Analysis of the interplay between 9 key factors shaping the future of South Africa

For this exercise, skills and leadership were identified as the key uncertainties driving change over the next 10 years. From the diagram below, two scenario stories were developed for SA 2028, namely “#Alljustfall” and “Tall trees”.

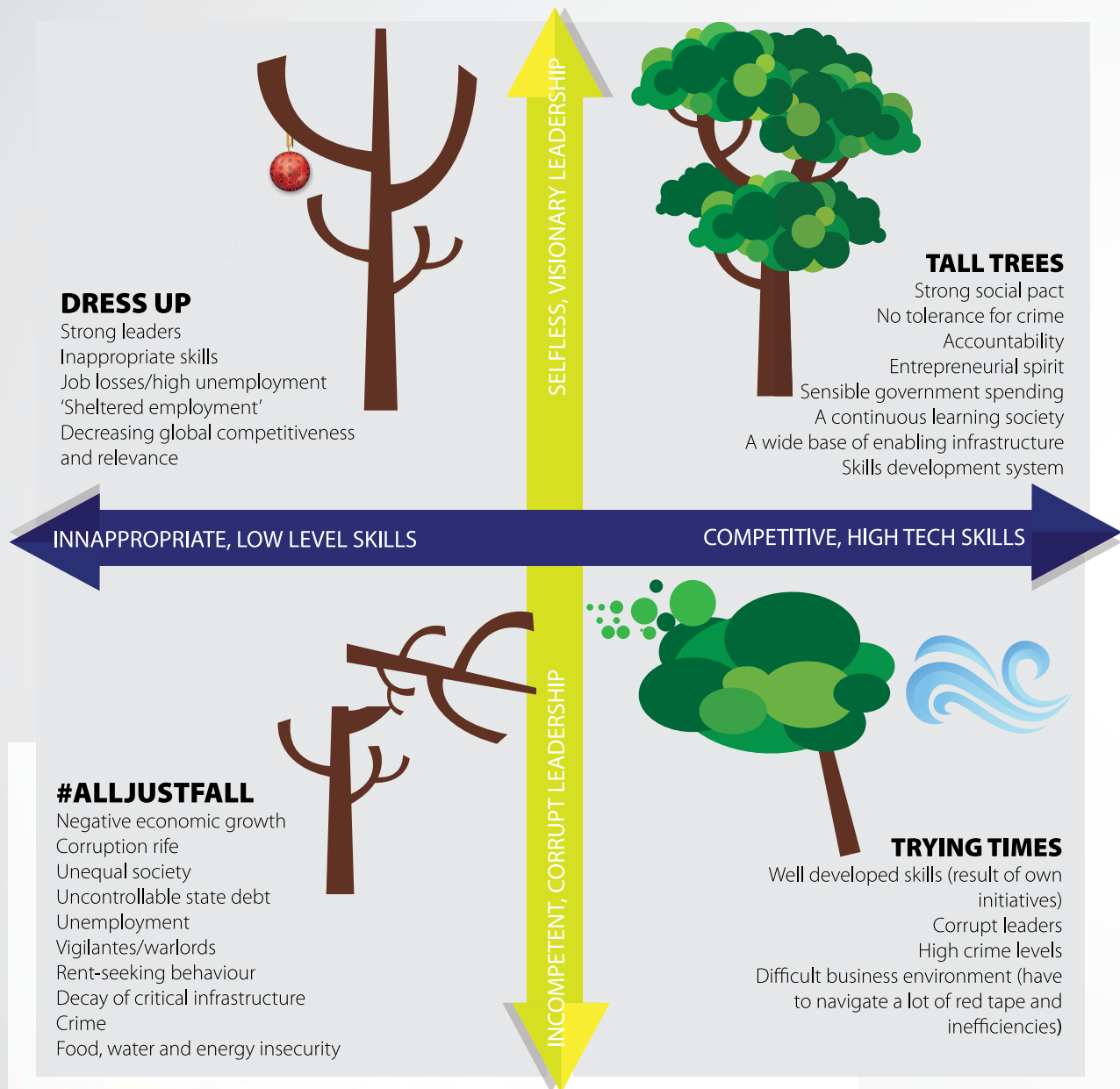


Diagram 1: Two scenario stories for SA 2028

Scenario 1: #Alljustfall

2028 does not start well. Looking forward, it will probably not end well either. Business confidence is at an all-time low. The economy is growing at a negative rate, previously successful industries are dying, and state debt is increasing beyond controllable levels.

The 4th industrial revolution has rendered thousands of jobs obsolete over the past 10 years. South Africa now has one of the highest unemployment rates in the world. Funds invested in skills development are not helping to improve the situation, because skills development initiatives are:

- Inappropriate (not developing the kind of skills required in the economy of the future);
- Sub-standard (content, facilitators and management of the process are of inferior quality); and
- Only available to a few well-connected individuals in urban areas.

The South African people feel despondent, grovel in negativity and blame everyone and everything for their dismal situation. Polarisation and radicalism rule and violent crimes are the order of the day. A few good people remained in government, trying their best to make a difference, but they are vastly outnumbered by corrupt officials who are not suitably qualified or experienced enough to fulfil their duties in an effective manner. Even the autonomy of the democratic institutions is at risk and international bodies warn that South Africa is moving toward becoming a failed state.

Tourists are afraid of visiting South Africa. The once favoured destination has turned into an unsafe place. Groups of vigilantes are ruling the streets; homeless people have moved into heritage sites and the public transport infrastructure has deteriorated to such an extent that significant parts of it are basically non-operational.

Access to food, water and energy is increasingly difficult. Infrastructure that enabled the distribution of water and energy in the past is now in dire need of maintenance. In many towns and cities, water is either not available through the piping system or so badly contaminated that it is unsafe to drink. Poverty is increasing and many people go to sleep hungry.

Some farmers are still trying to rear animals and cultivate lands to produce fresh food, but it is an uphill battle. There is very little government funding available to support the agricultural value chain. 'The Reapers' is a national group of gangs that specialises in stealing crops and livestock just before it goes to market. Livestock and crops are so frequently stolen from the farmland that insurers do not want to insure losses due to theft any more.

Corruption throughout the value chain causes whole loads to disappear and moneys paid for stock or services rendered are 'rerouted' before reaching the intended recipients. The lack of ethics and the incompetence of many people in leadership positions (in government, organised labour as well as civil society) makes it very difficult to live, work or do business in South Africa.

Society has decayed to such an extent that **#Alljustfall** is becoming the SA theme.

Scenario 2: Tall trees

2028 is a year of hope and optimism. The people of South Africa are starting to feel the benefit of the social pact between labour, government and civil society. Their strong bonds and concerted efforts are starting to pay off; the trees of trust are growing tall. There is a sustained increase in economic growth and members of society have access to exciting economic opportunities. This broader access has resulted in a significant drop in the poverty and income inequality levels.

Corruption is very low, almost non-existent. Government officials are considered as the 'good people'. After the clean-up of a few years ago, the newly appointed people regulate and govern state affairs in a commendable manner and societal trust levels are high.

A new brand of leadership emerged over the past 10 years. People that now hold positions of power in government, organised labour and civil society are competent practitioners as well as selfless visionaries; they actively seek to collaborate for the greater good of the people that they serve. They keenly defend the autonomy of democratic institutions and they ensure that government expenditure is prudent.

An inspiring change took place over the past ten years. People of all ages realised that they could create their own economic opportunities and that they could take responsibility for their own skills development. A number of factors enabled this development, as illustrated in the figure below.

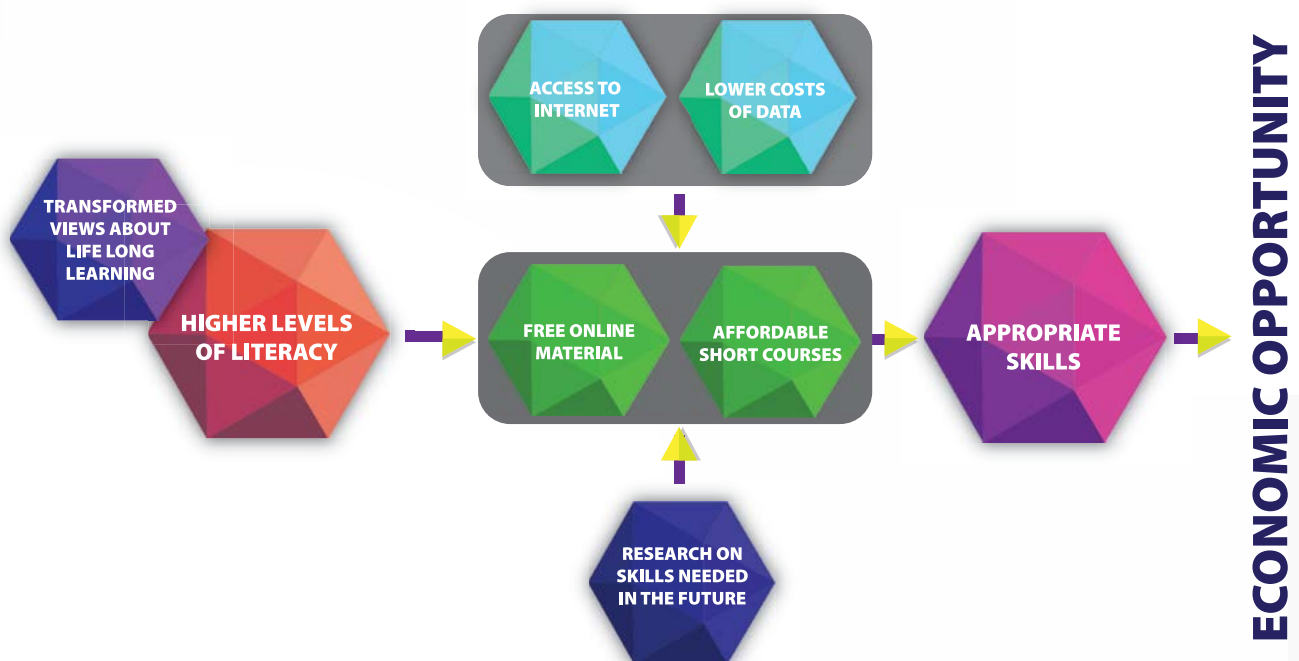


Figure 1: Factors enabling the development of "self" economic opportunities

The education system now allows lifelong access to people of all ages and proficiency levels so that they can enrol for numerous rounds of re-skilling. Government funds continuous research on the skills that would be required in future, while providers are quick-to-market with the learning interventions that develop the identified skills. With the work environment changing so rapidly, this transformed view of lifelong learning is enabling the population of South Africa to continually redesign their own future. We still have a long way to go, but the initial successes of their peers are inspiring more people to join the ranks of the economically active lifelong learners.

In 2028, the Tall trees are standing proud. People on all levels of society are experiencing enhanced economic emancipation. In the near future, their social and economic privileges could be on par with their democratic rights.



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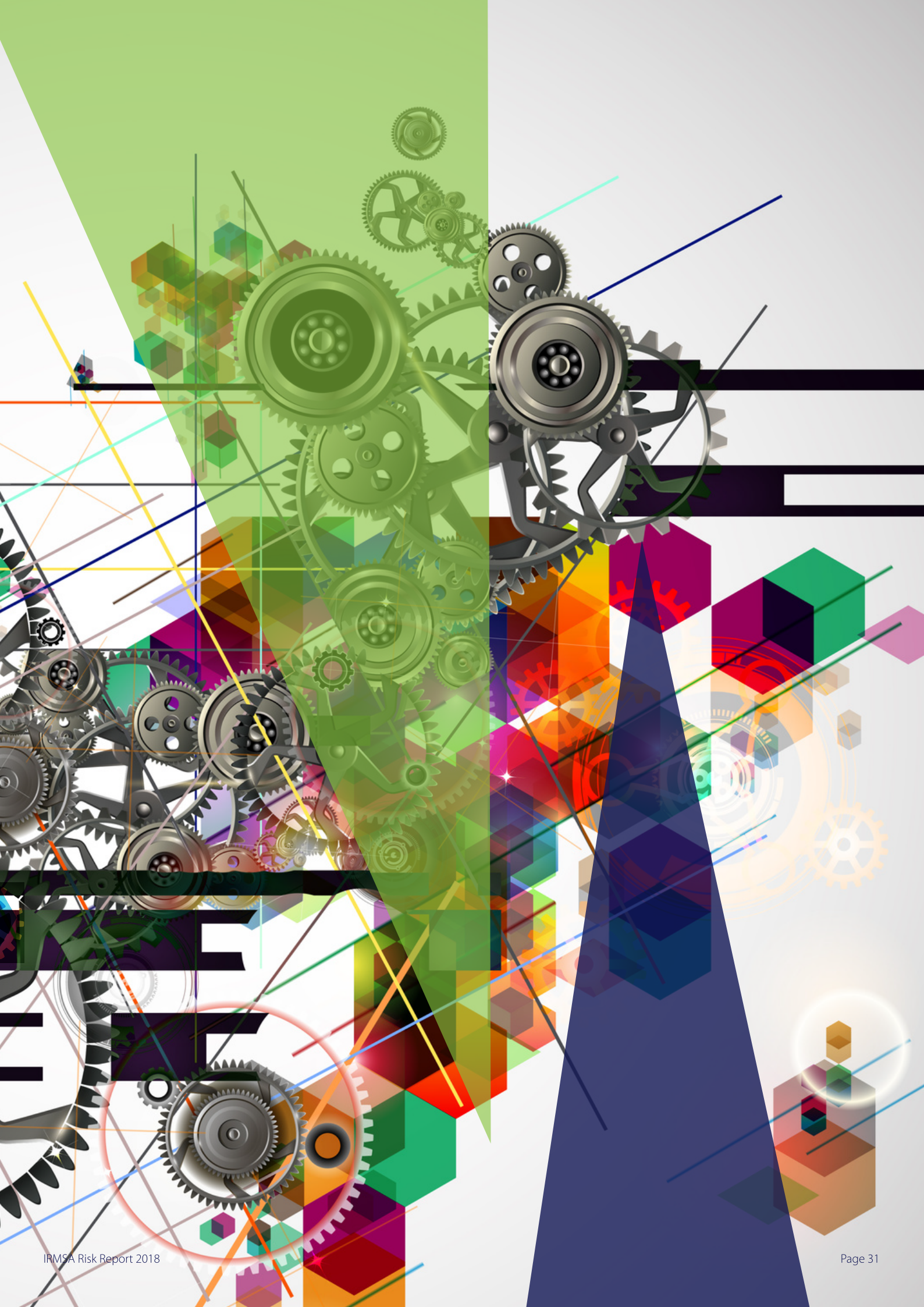
SECTION 2

In this section, focus is on talking about risk, risk causes and proposals on how to treat the risks and using visuals in such a way that the message is self-explanatory and concise. As far as risk causes and recommended risk responses are concerned, the 65+ SME views are presented in a summary fashion. To reduce the risk of losing valuable insights, experiences and lessons shared by the SMEs, a supplementary e-Book has been added, allowing the reader to navigate the source data by risk and by SME.

Adding to this, relationships between risks and proposed treatment plans were assessed by Dr. Dana Gampel, an independent analyst. The value of her contribution lies in identifying which risks are the major drivers that shape the risk landscape. Once this is understood, prioritising these risks can occur, which – if done effectively – could redefine the risks and outcomes we urgently need to manage.

The analysis shows that to effectively address these prioritised risks, we must do things differently: in our country, industry and organisations. Future success will not only require these areas being tackled well, but innovatively given the consistent re-occurrence and intensification of these risks.

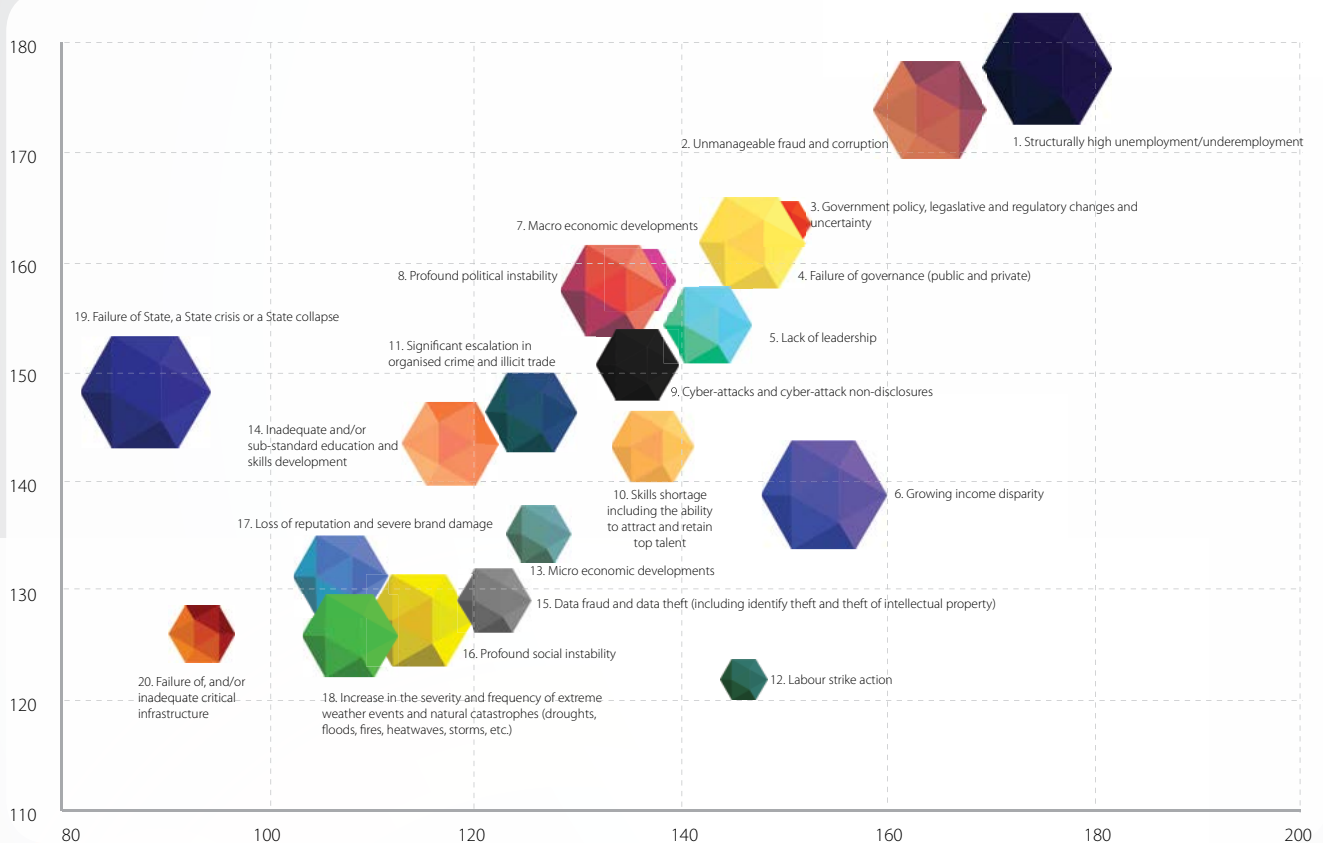




South Africa Risk Profile

Top 20 South African Risks ranked on impact and likelihood:

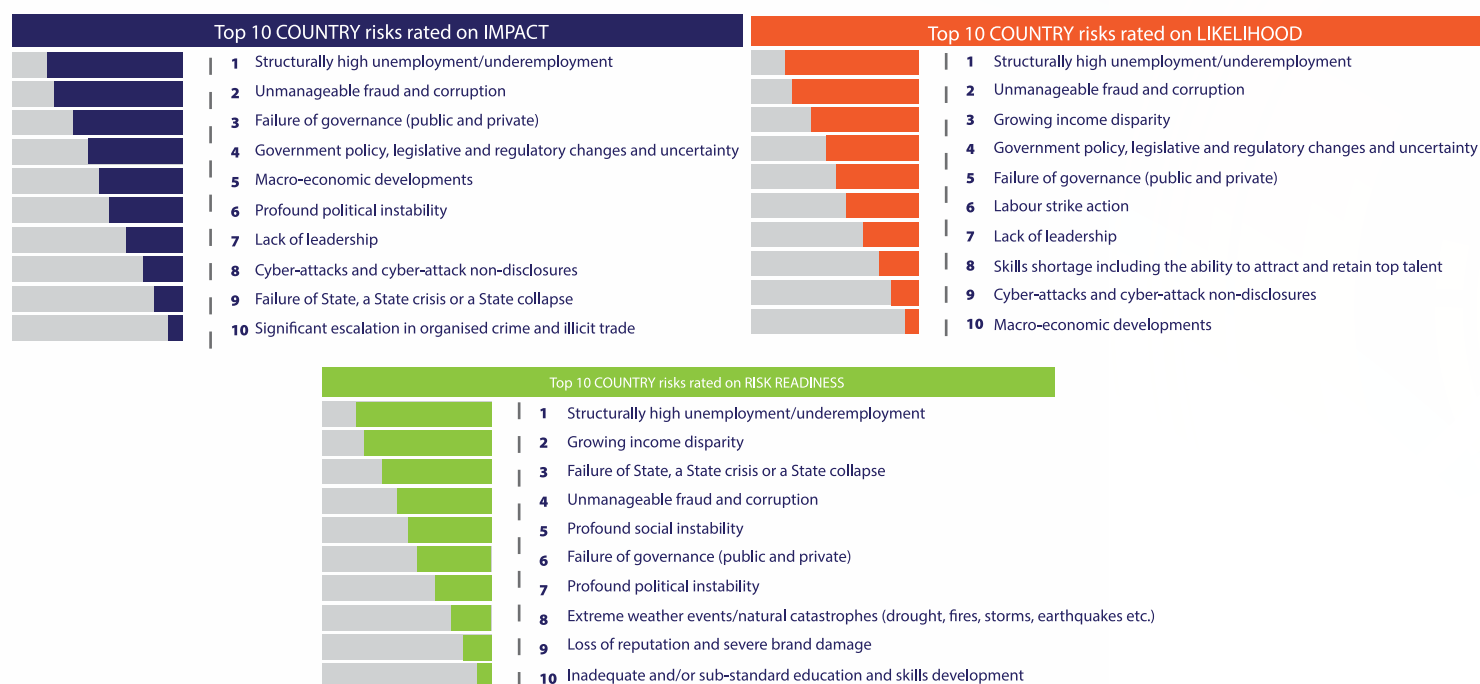
1. Structurally high unemployment/underemployment
2. Unmanageable fraud and corruption
3. Government policy, legislative and regulatory changes and uncertainty
4. Failure of governance (public and private)
5. Lack of leadership
6. Growing income disparity
7. Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT
8. Profound political instability
9. Cyber-attacks and cyber-attack non-disclosures
10. Skills shortage including the ability to attract and retain top talent
11. Significant escalation in organised crime and illicit trade
12. Labour strike action
13. Micro economic developments: Inflation, deflation, austerity measures, national economic slowdown
14. Inadequate and/or sub-standard education and skills development
15. Data fraud and data theft (including identify theft and theft of intellectual property)
16. Profound social instability
17. Loss of reputation and severe brand damage
18. Increase in the severity and frequency of extreme weather events and natural catastrophes (droughts, floods, fires, heatwaves, storms, etc.)
19. Failure of State, a State crisis or a State collapse
20. Failure of, and/or inadequate critical infrastructure



Graph 1: South African Top 20 Risks plotted for impact, likelihood and risk readiness

Note: The size of the orb reflects the risk readiness of the country to treat the risk. The bigger the orb the less ready the Country is to treat the risk.

Top 10 South African Risks ranked individually on impact, likelihood and risk readiness



Graphs 2 – 4: Individual top 10s ranked by impact, likelihood and risk readiness

Risk Readiness Assessment for the South African Risk Profile

The high-level risk readiness assessment for the top South African risks has been provided in graphs 1 to 4. Survey respondents scored the effectiveness of their respective organisations' risk response plans in place, or whether they have undertaken a review, to address each of the Top 20 Country risks.

The size of the orb reflects the risk readiness of the country to treat the risk. The bigger the orb the less ready the country is to treat the risk. The risks that we are least ready to deal with include:

- Risk 1 - Structurally high unemployment/underemployment
- Risk 2 - Unmanageable fraud and corruption
- Risk 4 - Failure of governance (public and private)
- Risk 8 - Profound political instability
- Risk 7 - Macro economic developments
- Risk 16 - Profound social instability

The risk readiness ratings offer insights into our maturity around how we deal with risks identified:

- Scores of high risk readiness that have correlating low scores around impact and likelihood speak mainly to events of the recent past (such as strike action and inadequate critical infrastructure) with which we have some experience. These could indicate successes regarding how these risks have been managed and what we are familiar with/have had to address.
- Scores of low risk readiness (i.e. large orbs) that have correlating high scores around impact and likelihood have been reported since 2016 and have materialised in different degrees. Their persistence speaks to how we have either inadequately addressed these risks or how we have misunderstood their significance.
- Results show that we are ready for the risk around reputation loss. However, as reputations and stock values continue to decline, this should be reviewed.
- According to these results, we are ready to deal with risks that are both likely to occur and have high consequences – such as lack of leadership, cyber-attacks and skills shortages. If this was indeed the case, one would expect lower impact and/or likelihood ratings. This indicates that perhaps we are aware of the risks and may have some plans to respond to the risks. However, what we call “ready” is possibly more “familiar” than ready.

Comparison of the Top 10 South African Risks over the past three years

Top 10 South African Country Level Risks from 2016-2018

The following risks have been part of the South African Top 10 Risk profile for the past three years:

- Structurally high unemployment/underemployment
- Unmanageable fraud and corruption
- Lack of leadership

The following risks have been part of the South African Top 10 Risk profile for at least 2 of the three years:

- Failure of governance
- Growing income disparity
- Economic developments
- Profound political instability
- Skills shortage including the ability to attract and retain top talent

That these risks continue to feature prominently, is indicative of how effectively we deal with risks and their causes. Table 6 below highlights the Top 10 Country risks that have continued to prevail.

The colour scheme represents a legend of similar colours indicating similar risks repeated over the three years' comparison.

	2018	2017	2016
1	Structurally high unemployment/underemployment	Increasing Corruption	Insufficient Electricity Supply
2	Unmanageable fraud and corruption	Water Crises	Increasing Corruption
3	Government policy, legislative and regulatory changes and uncertainty	Unemployment or Underemployment	Skills Shortage
4	Failure of governance (public and private)	Droughts in Sub-Saharan Africa	Education and Skills Development
5	Lack of leadership	Lack of Leadership	Water Crisis
6	Growing income disparity	Fiscal Crisis / Credit Rating Downgrades	Structurally High Unemployment/Underemployment
7	Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT	Economic Slowdown or Recession	Lack of Leadership
8	Profound political instability	Increasing Strike Action	Increasing Strike action
9	Cyber-attacks and cyber-attack non-disclosures	Profound Political and Social Instability	Failure/Shortfall of Critical Infrastructure
10	Skills shortage including the ability to attract and retain top talent	Governance Failure	Severe Income Disparity

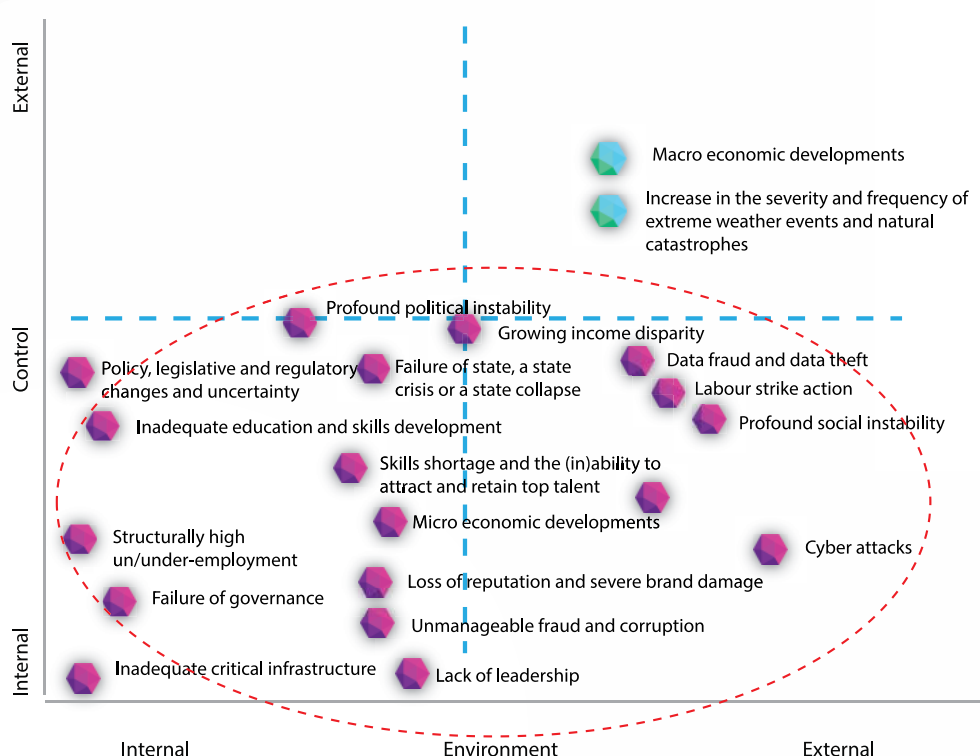
Table 6: Comparison of the Top 10 South African risks over the past three years

In Section 3, Subject Matter Experts provide possible causes and propose various risk responses to these risks which have been part of the South African Top 10 Risk profile since 2016.

Risk Relationships Analysis - Country

The Risk Relationship Analysis, shown in Graph 5 below, highlights the top 20 risks identified at a country level. These risks are plotted on the x-axis according to the degree to which they emanate either from **within the country** or **external** to it. The y-axis represents the degree of **influence over that risk/capacity to implement the risk responses/control(s)** by Government. The reason for this specific lens (internal:external) is to assess what we can – and have the responsibility to – address as priorities.

Graph 5 below shows which risks emanate internally and which arise from more external arenas (such as Macro-economic developments). The extent to which the **country** can influence and/or effectively shape the risk itself by implementing risk responses to address the risk causes is determined by the amount of risks arising internally – viz. within the domain of Government itself. Organisations, in turn, must align with such response strategies as they are the country's positions on these issues. However, organisations have the opportunity to influence these country positions, given the democratic and social pact arrangements in place. The extent to which these risks are thus "internal" not only speaks to how Government can – and should - address these specific risks, but also how organisations can influence and shape the response, because of the channels in place to do so.



Graph 5: Risk Relationship Analysis at Country level

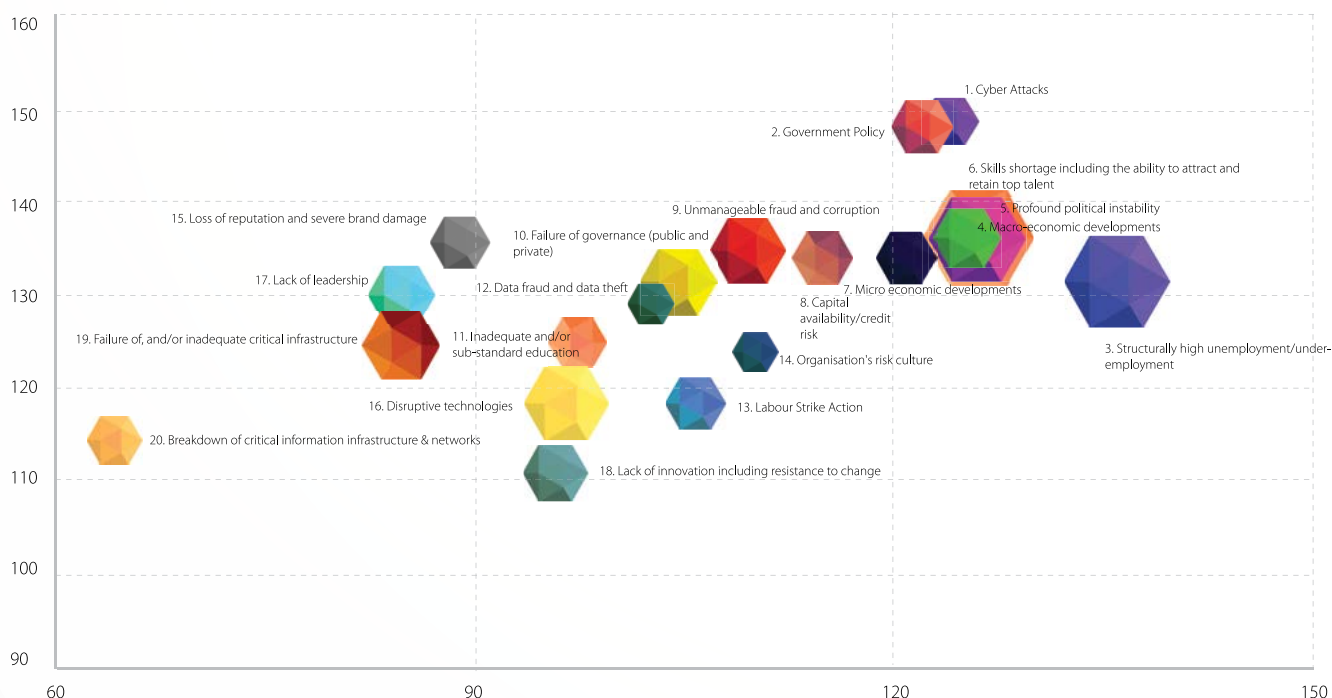
Observations:

- Twelve (60%) of the risks arise from the internal environment and 18 of the total risks noted (90%) are within Government's immediate control to address these effectively. Having direct influence over how these risks can be treated should reflect a lower impact/likelihood level than those noted in Graph 1. An explanation for this disjuncture could refer to the reality around the lack of implementation capacity, even if the risk response is deemed to be effective.
- Given this finding, it is recommended that risk practitioners reassess the risks (and their treatment plans) to determine whether the extent of the impact and likelihood levels refer to initial treatments only. This would then explain why the impact and/or likelihood scores remain high. The extent of the risk itself should also be considered to check that treatment plans address how the risk will be managed and how the unintended consequences will be considered.
- Risk treatments need not remain the sole domain of those charged to address it, given the increasingly-complex risk landscape today. Securing support to ensure implementation is suggested.
- For those risks that originate in the external environment and where the ability to implement risk responses are limited, it is suggested that strategies are again risk assessed, resilience and business continuity plans evaluated and developed with others who can assist in treating these risks more effectively. This speaks to strategic partnership options which will need to be defined at a political level.

South African Industry Risk Profile

Top 20 South African Industry Risks ranked by impact, likelihood and risk readiness:

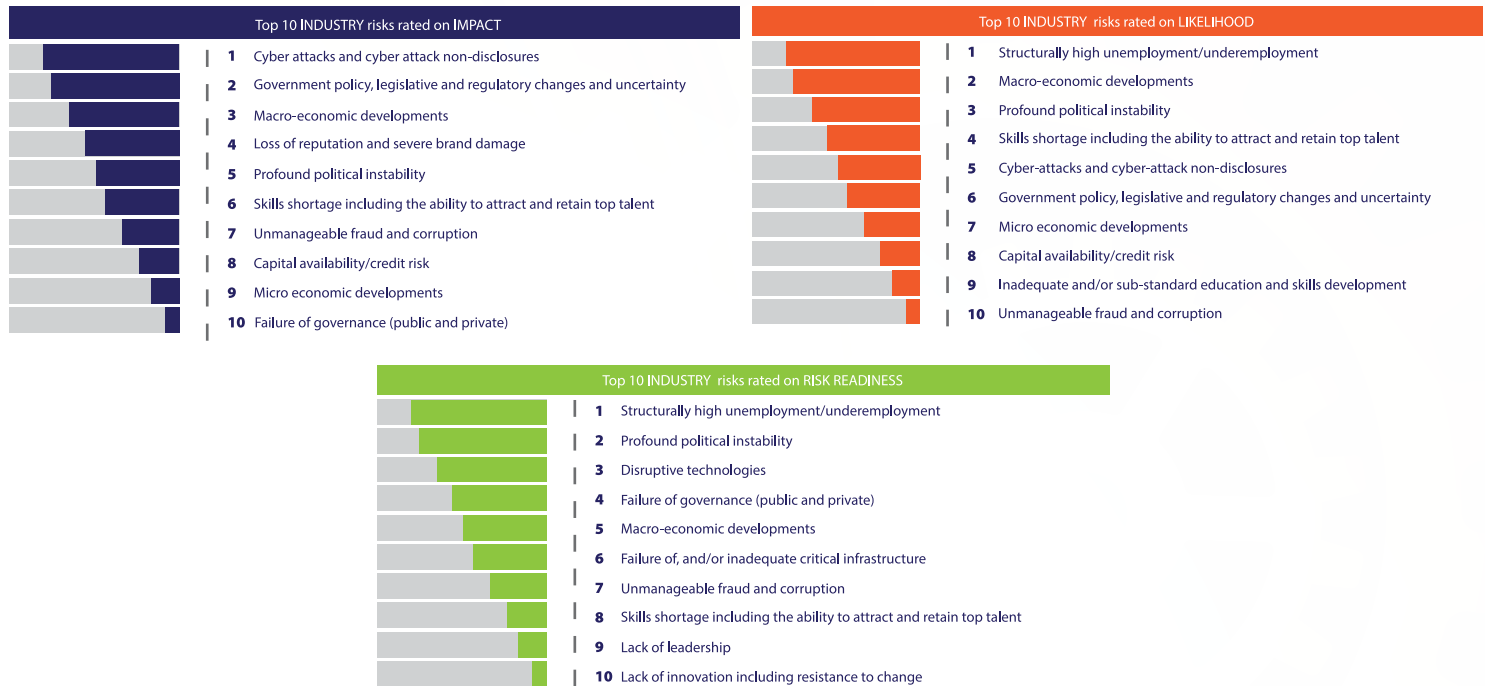
1. Cyber-attacks and cyber-attack non-disclosures
2. Government policy, legislative and regulatory changes and uncertainty
3. Structurally high unemployment/underemployment
4. Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT
5. Profound political instability
6. Skills shortage including the ability to attract and retain top talent
7. Micro economic developments: Inflation, deflation, austerity measures, national economic slowdown
8. Capital availability/credit risk
9. Unmanageable fraud and corruption
10. Failure of governance (public and private)
11. Inadequate and/or sub-standard education and skills development
12. Data fraud and data theft (including identify theft and theft of intellectual property)
13. Labour strike action
14. Organisation's risk culture not successfully enabling the achievement of strategic and operational objectives
15. Loss of reputation and severe brand damage
16. Disruptive technologies
17. Lack of leadership
18. Lack of innovation including resistance to change
19. Failure of, and/or inadequate critical infrastructure
20. Breakdown of critical information infrastructure & networks



Graph 6: South African Industry Top 20 Risks plotted for impact, likelihood and risk readiness

Note: The size of the orb reflects the risk readiness of the country to treat the risk. The bigger the orb the less ready the Country is to treat the risk.

Top 10 South African Industry Risks ranked by impact, likelihood and risk readiness:



Graphs 7-9: Individual top 10s ranked by impact, likelihood and risk readiness

Risk Readiness Assessment for the South African Industry Risk Profile

The high-level industry/organisational risk readiness assessment for the top South African Industry risks has been provided in Graphs 6 to 9. Survey respondents scored the effectiveness of their respective organisations' risk response plans in place, or whether they have undertaken a review, to address each of the Top 20 Industry risks.

The size of the orb reflects the risk readiness of the industry to treat the risk. The bigger the orb the less ready the industry/organisation is to treat the risk. The risks with the lowest readiness ratings are highlighted below:

Risk 3 - Structurally high unemployment/underemployment

Risk 5 - Profound political instability

Risk 16 - Disruptive technologies

Risk 10 - Failure of governance (public and private)

Observations:

- Like the Country risk analysis, scores of low risk readiness (large orbs) that have correlating high scores around impact and likelihood speak mainly to risks involving labour (unemployment), governance and leadership. These risks have also been reported since 2016 and have materialised in various ways for different industries. Despite their different manifestations, we are essentially familiar with them and have reported on their expected impacts for some time. Notwithstanding this familiarity, they continue to have significant impacts - inferring that the treatment plans are not necessarily effective or sufficiently wide ranging. Reconsidering these plans in light of the suggestions made in this report is suggested.
- Industry is ready to deal with risks that are both likely to occur and have high consequences – such as government policy shifts, cyber-attacks, credit risk as well as micro-economic developments. If this is indeed the case, one would expect lower impact and/or likelihood ratings.
- Industry/organisations are ready for the risk around reputation loss which, for many organisations has begun to occur. The lessons gleaned from major reputational declines last year should be applied as treatment plans are updated. The speed and extent of the damage should also feature as measures to control and real value can be restored once the likely event has occurred.

Comparison of the Top 10 South African Industry Risks over the past three years

Top 10 South African Industry Level Risks from 2016-2018

The following risks have been part of the South African Industry Top 10 Risk profile for the past three years:

- Cyber-attacks and data fraud
- Government policy, legislative and regulatory changes and uncertainty
- Unmanageable fraud and corruption
- Profound political instability
- Skills shortage including the ability to attract and retain top talent
- Unmanageable fraud and corruption

The following risks have been part of the South African Industry Top 10 Risk profile for at least 2 of the three years

- Failure of governance
- Economic developments

That these risks continue to feature prominently, is indicative of how effectively we deal with risks and their causes. Table 7 below highlights the Top 10 Industry risks that have continued to prevail.

The colour scheme represents a legend of similar colours indicating similar risks repeated over the three years' comparison.

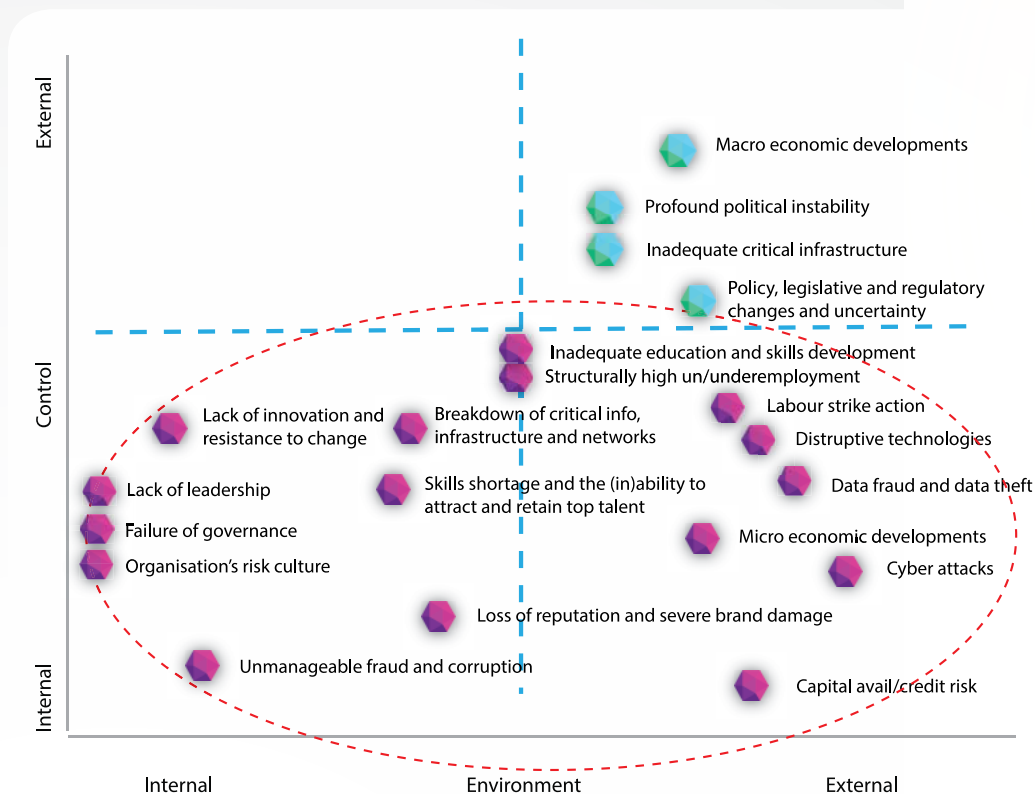
	2018	2017	2016
1	Cyber-attacks and cyber-attack non-disclosures	Increasing Strike Action	Regulatory/Legislative Changes
2	Government policy, legislative and regulatory changes and uncertainty	Exchange Rate Fluctuations	Insufficient Electricity Supply
3	Structurally high unemployment/underemployment	Lack of Innovation	Skills Shortage
4	Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT	Regulatory/ Legislative Changes	Increasing Corruption
5	Profound political instability	Increasing Corruption	Government Policy Changes
6	Skills shortage including the ability to attract and retain top talent	Profound Political and Social Instability	Reputational Damage or Adverse Media/Social Media Attention
7	Micro economic developments: Inflation, deflation, austerity measures, national economic slowdown	Fiscal Crisis / Credit Rating Downgrades	Massive Incident of Data Fraud/Theft
8	Capital availability/credit risk	Escalation in Large-Scale Cyber Attacks	Profound Political and Social Instability
9	Unmanageable fraud and corruption	Governance Failure	Water Crisis
10	Failure of governance (public and private)	Education and Skills Development	Failure/Shortfall of Critical Infrastructure

Table 7: Comparison of the Top 10 South African Industry risks over the past three years

In Section 3, Subject Matter Experts provide possible causes and propose various risk responses to these risks which have been part of the South African Industry Top 10 Risk profile since 2016.

Risk Relationships Analysis – Industry

The Risk Relationship Analysis shown in Graph 10 below, highlights the top 20 risks identified at an industry/organisational level. These risks are plotted on the x-axis according to the degree to which they emanate from either within the industry/organisation or external to it. The y-axis refers to the degree of influence/capacity to implement the risk responses/control(s) by the industry/organisation.



Graph 10: Risk Relationship Analysis at Industry level

Observations:

- Ten (50%) of the risks stem from the internal environment and sixteen of the total risks are within the industry/organisation's immediate control. Having direct influence over the ability to control these risks, should be reflected in lower impact/likelihood levels than those noted in the results. It is recommended that risk practitioners reassess the risks and review risk response plans in line with the SME reports, which consistently stress increased awareness and internalisation of the risks and their associated risk response plans. Further, indicating where risks arise and where influence over these occurs can also assist in allocating responsibility and/or partnering to better address the specific issues noted.
- Many organisations have responded to the lack of infrastructure/enabling environments and are increasingly supplying their own means to enable delivery of their products/services. This risk response is not surprising, but it is also disruptive to the status quo and has necessitated a reconsideration of business models and competitive relations. The SANEA report attached, speaks to some of these developments. Both associated industries and government will have to assess the risks and opportunities arising from these actions as conventional assumptions, and expectations become challenged as a result.
- Regarding those risks that originate from the external environment, e.g. macro-economic development; political instability; inadequate infrastructure and policy uncertainty and where the ability to implement risk responses are limited, it is suggested that strategies are assessed, and resilience and business continuity plans are evaluated and developed where required to creatively deal with, and view, these risks differently. Successfully tackling these challenges will position organisations better as we enter a new chapter in South Africa's developmental journey.



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Risk Relationship and Treatment Option Analysis

When the top risks were analysed, 25 major risks were noted. These pertain to both country and industry. The relationship between these risks were mapped according to whether they were causes (also referred to as drivers) or the result of some of these driving forces (i.e. outcomes).

Understanding which risks are causes/drivers and which are outcomes is useful for three key reasons: First, drivers or risks that influence other factors should be noted and addressed, but often are not within in our direct control. Managing these risks or drivers usually manifests as managing the outcome of these forces. Secondly, understanding outcomes helps deduce how the drivers of these risks/issues arise and materialise. This insight informs what enables the outcome (and the driver to a lesser extent) and helps shape effective treatment plans. Thirdly, those risks that score high as both causes and outcomes are both strategic and significant areas for effective risk management. These are the “pivotal risks” that, if addressed differently, help to reshape the risk landscape as we know it. Influencing these risks should be prioritised because they are at the heart of the landscape map and prioritising these risk treatment plans should be the focus for the year ahead if we intend to reshape this risk landscape.

Diagram 2 categorises the risks identified by the SMEs into primarily “drivers”; “outcomes” and “pivotal risks”. Some of the proposed treatment plans to address these pivotal risks are included in the Diagram.

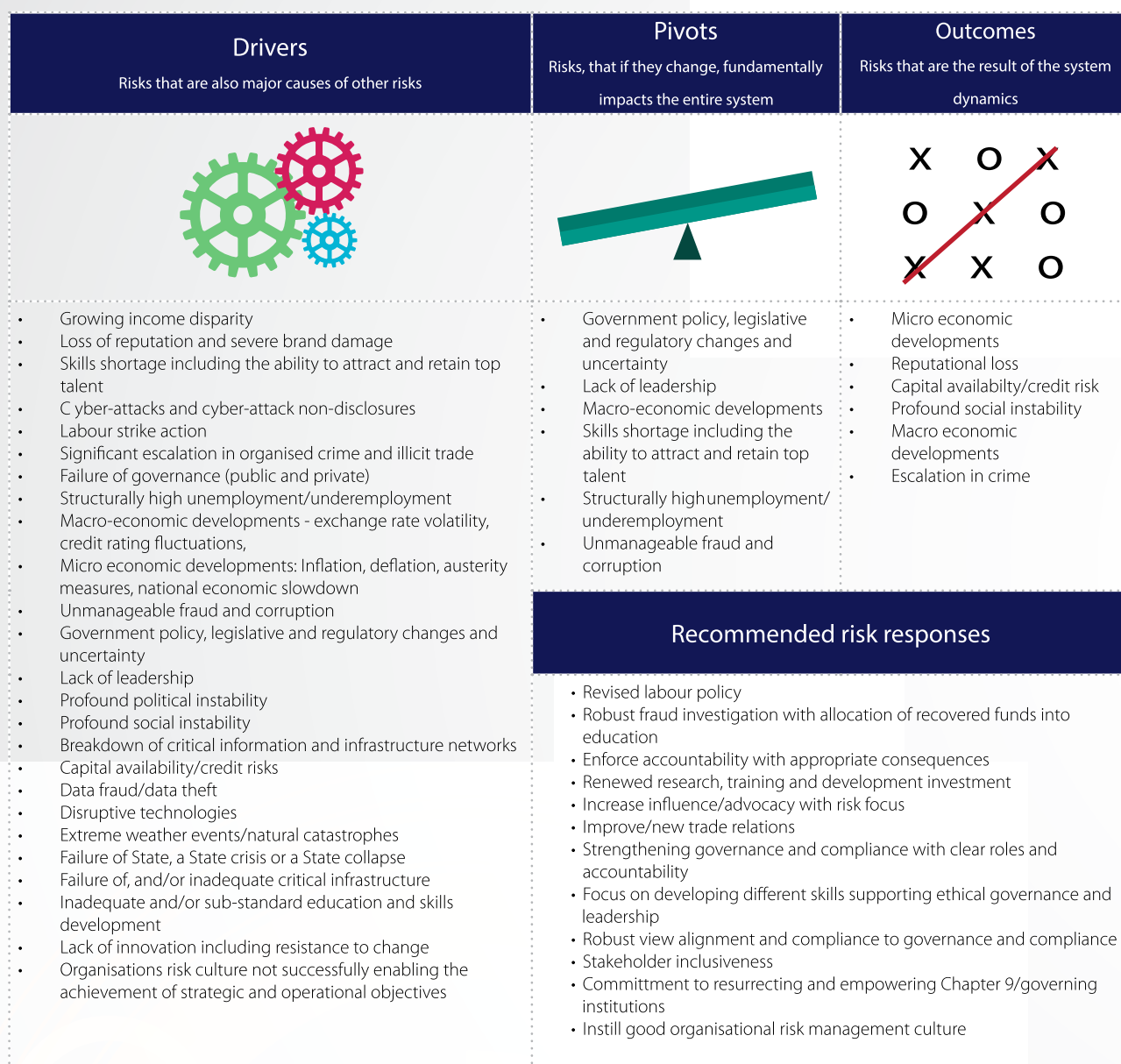


Diagram 2: Risk Causal Relationship and Treatment Option Analysis

Industry specific risk review: Energy Industry

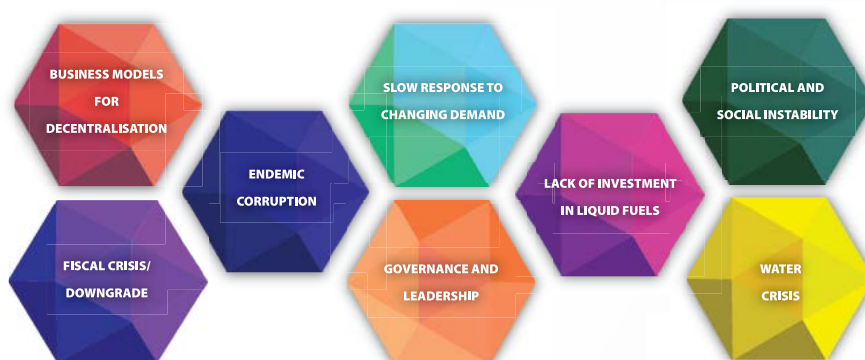
A lot has been spoken in the media about the need for nuclear energy, price of electricity and the role of renewable energy. IRMSA collaborated with SANEA to give an industry expert view on risks impacting the energy landscape in South Africa for 2018 and beyond.

SANEA's energy experts ranked the top 20 risks in terms of impact, likelihood and risk readiness and chose the top 5 risks at both a country and industry level.

Rank	Country		Industry	
	Impact	Likelihood	Impact	Likelihood
1	Water crisis	Water crisis	Water crisis	Water crisis
2	Governance and leadership	Endemic corruption	Fiscal crisis/downgrade	Carbon intensity
3	Endemic corruption	Fiscal crisis and downgrade	Lack of investment in liquid fuels	Economic recession
4	Fiscal crisis/downgrade	Exchange rate fluctuations	Environmental compliance	Slow response to changing demand
5	Political and social instability	Governance and leadership	Business models for de-centralisation	Business models for de-centralisation

The highest ranked energy related risks in the top 5 for impact and likelihood and at both a country and industry level are that of a water crisis, with a medium risk readiness at an industry level and low risk readiness at a national level. The fiscal crisis features in both the country and industry top 5 in terms of impact and the industry perspective is that the economic recession is more significant than exchange rate fluctuations. Governance and leadership together with endemic corruption and political and social instability are highlighted at the country level. At the industry level more sector specific risks such as environmental compliance, carbon intensity and business model and investment related risks are deemed to be more impactful and likely.

The experts debated which should in their view, be highlighted as being priority risks for addressing in 2018. The priority energy related risks for 2018 were narrowed down to the 8 risks that are depicted below:



- A water crisis is deemed to be particularly significant, as it will severely impact the attainment of the NDP, given that it cuts across all sectors of society and business
- Fiscal crisis/downgrade also scores high in both the country and industry perspectives with a low risk readiness at an industry level.
- At country level, endemic corruption, governance failure and political and social instability are areas where the experts feel there is low risk readiness and a high impact as well as likelihood of occurrence.
- At an industry level, business models for decentralisation is a priority risk and is driven by technology and the market.
- The energy industry has traditionally been long term, capital intensive, with long lead times for new capacity therefore the risk of slow responses to changing demand is critical.
- A key concern in the liquid fuels industry is the risk of a lack of investment in liquid fuels infrastructure.

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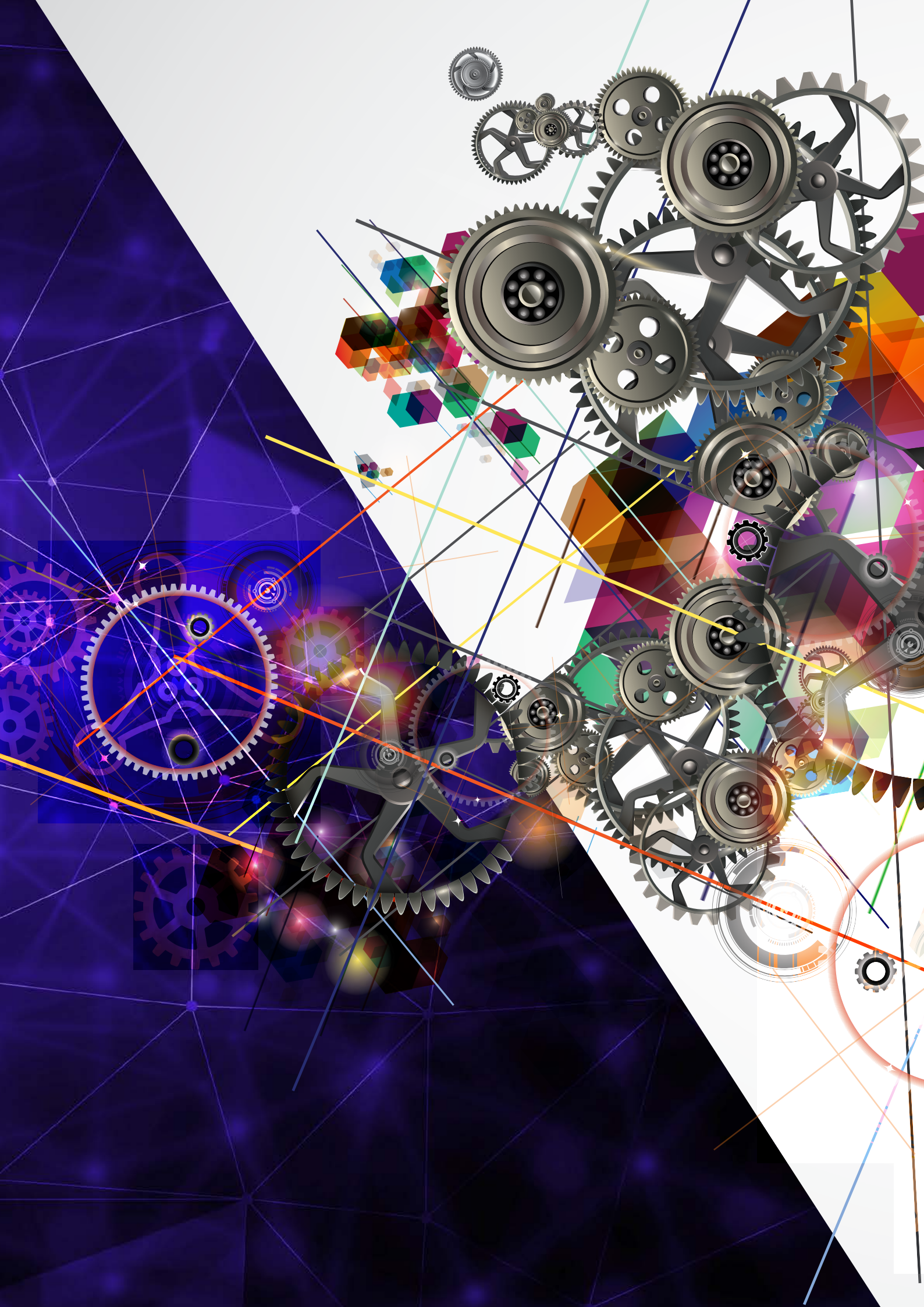
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SECTION 3

Subject matter expert insights on country and industry risks

A subject-matter expert (SME) is a person who is an authority in a particular area or topic. In general, IRMSA uses SMEs when developing materials (a book, an examination, a manual, etc.) about risk and directly related topics. The SMEs involved in our risk reports are recognised experts in their field and have specific knowledge concerning the risks.

The value add of this section in our report is that these SMEs have a documented history of working in their area of expertise. They have done the work; they not only understand South Africa and Industry risks, but the details within those risks. They understand industry best practices and can communicate those insights to help the risk profession improve on the performance of risk management.

In contrast to the previous reports, the approach for the 2018 Risk Report is to deliver a consolidated SME opinion for each of the Top 20 risks. This will allow the reader to have a single view of all the SME opinions on one page. The SME opinions have been structured along the following:

- Risk causes
- Risk responses specific to the country context
- Risk responses specific to the industry context
- The SMEs' views on the 3 to 5-year horizon

In addition to the SME section contained in the body of this report, the complete SME questionnaires for all Country and Industry risks have been included in an e-book. This will allow the reader to access any further details that may be required from the SMEs.

The report and e-book is available at:
www.irmsa.org.za/page/2018_Risk_Report

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Subject matter expert index

Name	Title	Organisation	Risks commented on
Deon Binneman	Reputation Management Adviser, Speaker and Trainer	The Reputation Go-To Guy	Loss of reputation and severe brand damage
Robin Bolton	Sustainability Specialist	IsoMetrix	Extreme weather events/natural catastrophes (drought, fires, storms, earthquakes etc.) Profound social instability
Matome Bopape	Information Risk Officer	Vodacom	Cyber-attacks and cyber-attack non-disclosure Data fraud and data theft (including identify theft and theft of intellectual property)
Peter Bosch	Associate Executive	PolicySA	Inadequate and/or sub-standard education and skills development
Adv Werner Bouwer	Director	Nexus Forensic Services	Unmanageable fraud and corruption Failure of State, a State crisis or a State collapse
Dr Mark Bussin	Chairperson, 21st Century and EXCO Member, SARA	21st Century	Skills shortage including the ability to attract and retain top talent Structurally high unemployment/ underemployment
Les Carlo	Risk Intelligence Committee Advisor	The Institute of Risk Management South Africa	Organisation's risk culture not successfully enabling the achievement of strategic and operational objectives
Trevor Channing	Executive Manager Governance and Risk	Chemical Sector Education Training Authority (CHIETA)	Profound political instability Growing income disparity
Graeme Codrington	Co-founder and International Director	Tomorrowtoday	Lack of innovation including resistance to change
Davis Cook	Chief Executive Officer	The Research Institute for Innovation and Sustainability (RIIS)	Lack of innovation including resistance to change
Miles Crisp	Group Chief Executive Officer	Tarsus Technologies Group	Lack of leadership
Ryan Cummings	Director	Signal Risk	Failure of governance (public and private) Profound political instability
Michael Davies	Chief Executive Officer	ContinuitySA	Labour strike action Cyber-attacks and cyber-attack non-disclosures Extreme weather events/natural catastrophes (drought, fires, storms, earthquakes etc.) Organisation's risk culture not successfully enabling the achievement of strategic and operational objectives Loss of reputation and severe brand damage
Paul de Kock	Founder and Director	IsoMetrix	Extreme weather events/natural catastrophes (drought, fires, storms, earthquakes etc.) Profound social instability

Name	Title	Organisation	Risks commented on
Kris Dobie	Manager for Organisational Ethics	The Ethics Institute	<u>Unmanageable fraud and corruption</u>
Haroun Docrat	National Senior Commissioner	Commission for Conciliation, Mediation and Arbitration (CCMA)	<u>Profound social instability</u>
Walter Ehrlich	Director	Retlaw Fox	<u>Failure of governance (public and private)</u>
Berenice Francis	Group Commercial Executive	Imperial	<u>Government policy, legislative and regulatory changes and uncertainty</u>
Richard Foster	Owner and Managing Member	Richard Foster and Associates	<u>Lack of leadership</u>
Fred Goede	Senior Lecturer	Centre for Applied Risk Management (UARM) North-West University	<u>Extreme weather events/natural catastrophes (drought, fires, storms, earthquakes etc.)</u> <u>Organisation's risk culture not successfully enabling the achievement of strategic and operational objectives</u>
Sy Gourrah	General Manager	Actom Power Systems	<u>Failure of, and/or inadequate critical infrastructure</u>
Chris Gower	Revenue Protection Manager: BCMM	Buffalo City Municipality	<u>Significant escalation in organised crime and illicit trade</u>
Bheki Gutshwa	Vice President & Executive Committee Member	The Institute of Risk Management South Africa	<u>Government policy, legislative and regulatory changes and uncertainty</u>
Zanele Hlophe	Chief Audit Executive	Commission for Conciliation, Mediation and Arbitration (CCMA)	<u>Labour strike action</u>
Martin Hopkins	Partner	PwC People and Organisation (Reward Consulting)	<u>Growing income disparity</u>
Chandu Kashiram	Independant Consultant		<u>Unmanageable fraud and corruption</u> <u>Profound political instability</u> <u>Growing income disparity</u>
Nerine Khan	Chief Executive Officer	Employment Relations Exchange	<u>Labour strike action</u> <u>Skills shortage including the ability to attract and retain top talent</u> <u>Profound social instability</u> <u>Structurally high unemployment/ underemployment</u>
Matthew le Cordeur		Fin24	<u>Failure of State, a State crisis or a State collapse</u>
Alan Low	Chief Executive Officer	Pi	<u>Unmanageable fraud and corruption</u>
Peter Lukey	Chief Policy Advisor: Strategic Environmental Intelligence	Department of Environmental Affairs	<u>Extreme weather events/natural catastrophes (drought, fires, storms, earthquakes etc.)</u>
Malebu Makgalemela	Executive for Enterprise Risk Management	Telkom	<u>Lack of leadership</u>
Christelle Marais	Practice Leader: Strategic Risk Consulting	Marsh	<u>Lack of leadership</u> <u>Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT</u> <u>Significant escalation in organised crime and illicit trade</u> <u>Organisation's risk culture not successfully enabling the achievement of strategic and operational objectives</u>

Name	Title	Organisation	Risks commented on
Brendan Maseti	Group Risk Manager	Lonmin	Labour strike action Profound social instability
Thulani Mkhungo	Chief Risk Officer and Chief Audit Executive	Special Investigating Unit (SIU)	Failure of, and/or inadequate critical infrastructure
Dikeledi Mnyandu	Director: Risk Management	Dept of Transport - KZN	Structurally high unemployment/ underemployment
Solly Moeng	Managing Director and Senior Consultant	Don Valley	Failure of State, a State crisis or a State collapse
Edwin Mpofu	IT Security Operations Manager	Wolfpack Information Risk	Cyber-attacks and cyber-attack non-disclosures Data fraud and data theft (including identify theft and theft of intellectual property)
Lwandle Mqadi	Specialist, Climate Change and Sustainable Development: Group Risk and Sustainability	Eskom	Extreme weather events/natural catastrophes (drought, fires, storms, earthquakes etc.)
Parmi Natesan	Executive: Centre of Director Development	The Institute of Directors Southern Africa	Failure of governance (public and private)
Vally Padayachee	Strategic Adviser	The Association of Municipal Electricity Utilities of Southern Africa (AMEU)	Failure of, and/or inadequate critical infrastructure Breakdown of critical information infrastructure & networks
Nick Piper	Director	Signal Risk	Labour strike action
Renisha Rajpaul	Principal Specialist: New Business Risk Management	Vodacom	Disruptive technologies
Anne Reed	National Risk Manager	Binder Dijker Otte (BDO)	Cyber-attacks and cyber-attack non-disclosures Data fraud and data theft (including identify theft and theft of intellectual property) Breakdown of critical information infrastructure & networks
Gabrielle Reid	Associate: Risk Analysis and Security	S-RM	Profound political instability Significant escalation in organised crime and illicit trade
Alex Roberts	Regional Director	Cura Risk Management Software	Breakdown of critical information infrastructure & networks
Prof Andre Roux	Head: Future Studies Programme	University of Stellenbosch Business School	Micro economic developments: Inflation, deflation, austerity measures, national economic slowdown Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT Capital availability/credit risk Growing income disparity
Ross Sanders	Director Global Technology Services	Cura Risk Management Software	Disruptive technologies
John Sanei	Trend and Innovation Specialist		Lack of innovation including resistance to change Loss of reputation and severe brand damage
Terrance Singh	Director	Ruhi Consulting	Lack of innovation including resistance to change
Pieter Smith	Independent Researcher and Analyst	Viridis Insights	Breakdown of critical information infrastructure & networks
Paul Stiff	Head of Client Engagement & Multinational – Africa	AIG	Disruptive technologies
Tap van den Berg	Senior Manager: Enterprise Risk Management	Sasol	Micro economic developments: Inflation, deflation, austerity measures, national economic slowdown

Name	Title	Organisation	Risks commented on
Dr Whitey van der Linde	Senior Lecturer	University of Johannesburg	<u>Skills shortage including the ability to attract and retain top talent</u> <u>Inadequate and/or sub-standard education and skills development</u>
Schalk van der Merwe	Executive Manager	Innoxico	<u>Unmanageable fraud and corruption</u>
Coen van Wyk	Consultant	In On Africa	<u>Failure of governance (public and private)</u> <u>Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT</u>
Claudelle von Ecke	Chief Executive Officer	IIASA	<u>Inadequate and/or sub-standard education and skills development</u> <u>Lack of leadership</u>
Nicky Weimar	Senior Economist	Nedbank	<u>Micro economic developments: Inflation, deflation, austerity measures, national economic slowdown</u> <u>Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT</u> <u>Capital availability/credit risk</u>
Ogi Williams	Senior Research Analyst	In On Africa	<u>Failure of, and/or inadequate critical infrastructure</u>
Hermien Zaaiman	Associate professor and Manager	Centre for Applied Risk Management (UARM), North-West University	<u>Organisation's risk culture not successfully enabling the achievement of strategic and operational objectives</u>
Standard Bank			<u>Lack of innovation including resistance to change</u>
The Compliance Institute			<u>Government policy, legislative and regulatory changes and uncertainty</u>

DEON BINNEMAN

Reputation Management Adviser, Speaker and Trainer
The Reputation Go-To Guy

Deon Binneman is an international Keynote speaker, Professional Facilitator and Trainer with superb platform skills, who has wowed audiences in 16 countries with hard-hitting, well researched, topical, entertaining messages and insights on business and personal reputation. Deon focuses specifically on reputation management and leadership training, the training of Boards and Executives managing crisis, corporate responsibility and various stakeholder matters. In addition here to Deon provides Business Development managers and Consulting Practice owners on how to market their professional and consulting services.

Risks commented on:

- Loss of reputation and severe brand damage



LOSS OF REPUTATION AND SEVERE BRAND DAMAGE

DEON BINNEMAN

Reputation Management Adviser, Speaker and Trainer - The Reputation Go-To Guy

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

It is very difficult to quantify reputation risk and it is therefore imperative that companies become more proactive and deal with risks and issues preferably whilst they are still small.

If reputational risk cannot be quantified, then an issue-based approach to issues and incidents will aid in protecting the reputation.

By examining and extrapolating and viewing issues and incidents through the lenses of a stakeholder, opportunities, shortcomings and mitigation approaches will be revealed. Even though this is closely aligned to the ethical training provided by Compliance departments, this type of thinking and approach goes much further.

There is thus a need to educate management to factor stakeholder management and reputation management thinking into decision making processes.

Loss of Reputation is also called Reputation Risk. The problem is that we do not clarify our definitions.

- Reputational Risk is “the potential that negative publicity regarding an institution’s business practices, whether true or not, will cause a decline in the customer base, costly litigation or revenue reductions - The Federal Reserve System’s Commercial Bank Examination Manual
- Reputation risk means the risk that an institution’s reputation is damaged by one or more than one reputation event, as reflected from negative publicity about its business practices, conduct or financial condition. Such negative publicity, whether true or not, may impair public confidence in the company, result in costly litigation, or lead to a decline in its customer base, business or revenue.
- Is the risk that an activity, action or stance performed or taken by a company or its officials will impair its image in the community and/or the long-term trust placed in the organisation by its stakeholders, resulting in the loss of business and/or legal action. (This definition illustrates the importance of policies, procedures, communication and training in an organisation).

I like to define it in 4 ways and then describe the mitigation strategies.

Reputation Risk (Stakeholder perspective)

- Reputational Risk emerges when the reasonable expectations of stakeholders about an organisation’s performance and behaviour are not met.
- (Mitigating this risk means developing and maintaining strong stakeholder relationships, ongoing monitoring, communication and management)

Reputation Risk (Asset perspective)

- Reputational Risk is defined as the loss of earnings that occur in a situation of negative public opinion. Example – Junk status

Reputation Risk (Incident Perspective)

- Reputational Risk is the exposure incurred from unexpected incidents, or from unanticipated response to the institution’s initiatives, actions or day-to-day activities.

Reputation Risk (Compliance Perspective)

- Reputational Risk can also be defined and viewed as the loss or negative publicity that can arise from failure to meet regulatory or legal obligations

Q. Give three primary causes of this risk.

- Lack of Strong Leadership
- Lack of Compliance with not just laws and regulations but also best practice
- Corporate Culture i.e. the way we instinctively do things

Q. What are the consequences if this risk materialises?

- It generates extra costs
- It is a source of competitive disadvantage
- It destroys market value
- Reduced or delayed access to finance
- Less flexibility with the regulators
- Less societal licence to operate
- Delays and other managerial costs
- Higher worker costs and retention issues, etc
- It raises questions about the company’s standards of compliance and attitudes

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Professional Services
- Hospitality and Tourism

Q. What are the barriers that prevent us from solving this risk?

- Lack of training Management in Reputation Risk Understanding, Mitigation and Management.

Q. What is the effective risk response to treating the risk on a National level?

Reputation needs to be protected as well as built. Hence, there are two types of reputational risks: negative and positive.

This is important for reputational risk management as the mindsets for addressing risks from a negative and a positive perspective are quite different. Negative risk involves thinking about what could go wrong. Positive risk is about creatively enhancing the company.

Negative risks lead to loss of reputation, loss of market share, financial losses and, sometimes, as in the case of Arthur Andersen, for instance, the demise of the company. Several private and public enterprises have been in the media limelight in recent years as a result of problems with their products (e.g. Chinese companies), their internal strategies and operations (e.g. British Petroleum) and the actions of their management (e.g. Enron).

For private sector enterprises, loss of reputation is not good for their business. For public sector entities, loss of reputation reduces influence and impact. Private and public enterprises suffer from negative risks due to having an attitude that "it won't happen to us," taking actions without wanting to acknowledge the consequences or thinking that "we can get away with it." The recent political developments in South Africa are a clear example of this.

Positive risks are those that enhance a company's reputation, market share, share value and profitability. More and more private and public sector enterprises are managing (or taking) risks that integrate economic, social and environmental imperatives into their mission, strategies, business and culture.

Q. What is the effective risk response to treating the risk on an Industry level?

Better stakeholder management and engagement.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Reputation Risk will impact severely. Currency downgrades and loss of Rugby World Cup are solid examples.

R O B I N B O L T O N

Sustainability Specialist
IsoMetrix

BSc (Hons) Microbiology, BSc (Hons) Water Utilisation, PMD (GIBS), Pr Sci Nat

Robin has been in the environmental, social and sustainability field since 2000 as a consultant with a main focus on the mining, oil and gas and infrastructure sectors as well as with financial institutes. He has worked across Africa and parts of the Middle East.

His key experience is in integrated management systems, water efficiency mechanisms, environmental authorizations, environmental monitoring, Environmental Social and Governance analysis, auditing and feasibility studies, international lending requirements, mine closure, environmental and social risks and the environmental and social license to operate.

He has taken on the role of a sustainability specialist within IsoMetrix with the designation of Executive Head Sustainability.

Risks commented on:

- Extreme weather events/natural catastrophes (drought, fires, storms, earthquakes etc.)
- Profound social instability



EXTREME WEATHER EVENTS/NATURAL CATASTROPHES (DROUGHT, FIRES, STORMS, EARTHQUAKES ETC.)

ROBIN BOLTON
Sustainability Specialist - IsoMetrix

PAUL DE KOCK
Founder and Director - IsoMetrix

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The increasing uncertainty and erratic nature of the occurrence and intensity of weather events and natural disasters, be they storms, droughts, increased temperatures and winds or fires makes for the planning and cleanup of these more and more difficult and costly. The unpredictability of these extreme events is real and the consequences are disruptive and destructive.

The achievement of the NDP objectives needs strong policies, real actions and importantly budget. The raising of any additional risks to the already fragile economy will result in funds being available to meet the NDP objectives unrealistic.

Although the direct risk of these extreme events to the achievement of the NDP objectives may not be that clear, there is no doubt that the national coffers will need to be accessed to pay for the consequences of these events, which, in some cases, may be hefty. This reduces the quantum available to support the NDP.

RSA can ill afford not to attract investment and grow the economy. If potential investors as well as those currently investing in RSA do not feel comfortable with how the country is planning to manage extreme weather events and the consequences thereof, they may well look and establish their operations elsewhere. RSA needs to send a clear message that it is proactive about this topic and serious about understanding these risks, putting measures in place to mitigate the effects and protecting investments.

In terms of sectors which will be affected, I believe agriculture will be mostly impacted upon due to changing rainfall patterns (intensity and distribution), rising temperatures and the greater occurrence of fires all of which will negatively affect productivity. Tourism could also suffer through cities such as Cape Town being impacted by water shortages and areas of natural biodiversity being affected by drought.

The objectives of the NDP can still be achieved with the risks posed by extreme weather events and natural catastrophes. It is however, how well RSA research, understand the risks and plan for and manage the consequences which will instill confidence in the country which hopefully, in some small way, helps the economy to grow and thus makes meeting the objectives slightly more possible.

Q. Give three primary causes of this risk.

- Changing weather patterns (distribution and intensity of rainfall, droughts, rise in temperatures etc.)
- Reduced vegetation cover leading to erosion and unstable ground conditions
- Urbanisation resulting in more intense storm water runoff thereby affecting water courses

Q. What are the consequences if this risk materialises?

- Infrastructure damage
- Vegetation damage
- Crop, forestry and general land damage
- Soil erosion
- River system damage
- Tourism negatively affected
- Business confidence reduction

Q. Which industry will be most affected if this risk materialises?

- Energy, Water and Utilities
- Insurance and Reinsurance
- Engineering and Construction
- Hospitality and Tourism
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

I do not believe that there are any material barriers that prevent RSA from preparing and planning for the consequences of these risks, besides a lack of awareness, urgency and will. Certain barriers however do exist in managing and reducing the causes of the risks which are within our control but certain barriers exist which are outside of our control as more on a global scale.

Q. What is the effective risk response to treating the risk on a National level?

To start with, our Government needs to adequately research the causes, likelihood and consequences of these risks (including regions and sectors most likely to be affected) to then be able to appropriately plan for reducing them (if possible) as well as mitigating the consequences thereof. Some responses which can be considered on a National level include:

- Ensuring infrastructure (such as buildings, dams, roads) is designed to withstand the higher likelihood and consequence of these risks
- Adequately designed and constructed urban storm water management systems including ongoing maintenance to ensure they cope with extreme rainfall events
- Undertaking water supply studies now to ensure sufficient storage facilities are available
- Adequately funded, resourced and skilled disaster response teams to deal with the events and the consequences
- Information sharing with regions and sectors likely to be affected so that appropriate planning and mitigation can occur
- Provide education and awareness on this topic to all

Q. What is the effective risk response to treating the risk on an Industry level?

Different industries will be affected in different ways and the likelihood and impacts will differ across regions of our country. Each industry needs to understand how they will be affected and what they need to do to prevent their operations from being disrupted. As discussed previously, Government has a responsibility and role to play in researching these risks and providing the findings to the public.

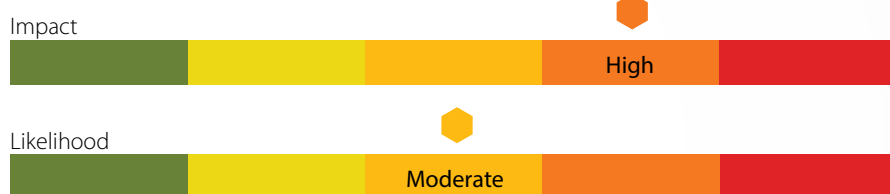
Industry and Government need to work together in planning for and implementing realistic measures to reduce the impact of these extreme weather events and catastrophe's.

All industry players, be they private or state owned, then need to implement the measures agreed to with Government. This may well have cost implications but the consequences of not adequately planning for these risks could be disastrous. Perhaps Government can assist industry through some form of incentive scheme else a penalty system to ensure that where applicable, industry implements the measures necessary to cater for these risks.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No. (Lack of will and urgency probably comes under the Leadership category)

PROFOUND SOCIAL INSTABILITY

ROBIN BOLTON
Sustainability Specialist - IsoMetrix

PAUL DE KOCK
Founder and Director - IsoMetrix

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The achievement of the NDP objectives needs strong policies, real actions and importantly budget. The raising of any additional risks to the already fragile economy will result in the funds being available to meet the NDP objectives more difficult to justify.

RSA can ill afford not to attract investment and grow the economy. If potential investors as well as those currently investing in RSA do not feel comfortable with the occurrence, motives and consequences of social instability and how the country is planning to manage this, they may well look to establish their operations elsewhere thereby negatively affecting our economy.

Social instability is not a new risk to RSA and is a real threat to our industries. This instability will continue until certain fundamentals are addressed and the situation improved. Social instability leads to an unstable and unreliable work force as well as posing a political risk to the country.

Social instability can also lead to organized and wildcat strikes and stoppages due to social unrest. Mining in particular has been hurt by these events. Manufacturing and Agriculture have also been affected, albeit to a lesser extent. Social instability has a knock on effect. Operations can suffer productivity loss and reputational damage. Reduced productivity results in reduced profits and less Royalties and taxes to the Government. Less available taxes puts pressure on treasury to fund programs such as the NDP's. Foreign investors are also not comfortable with committing funds to a country where there is an unstable workforce.

Social instability can however be considered a driver for the implementation of NDP's. This type of instability is a result of various factors, with lack of employment and opportunity, inequality, lack of education and skills, poor living conditions, low remuneration, unfulfilled promises, political interference all playing a part. Through the NDP's many of these factors could be addressed.

Q. Give three primary causes of this risk.

- Unemployment and inequality
- Unfulfilled promises by Government and Industry
- Lack of education, skills and opportunities

Q. What are the consequences if this risk materialises?

- This risk has already materialized. The consequences are current being felt and include:
- Dented country reputation leading to the reduction of investment
- Disrupted operations leading to reduced profits and royalties and taxes collected
- Weakening rand due to poor foreign lending rates

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Energy, Water and Utilities
- Petrochemicals, Oil and Gas
- Engineering and Construction
- Mining and Quarrying
- Education
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Lack of will and understanding by both Government and industry to determine the causes and address them.
- Populist policies and short term vision from Government.
- Widespread corruption at all levels.
- Lack of economic growth
- Lack of employment opportunities.

Q. What is the effective risk response to treating the risk on a National level?

Both Government and big business have a responsibility and opportunity to address this risk on a national level. Governments role to reduce social instability and the risk it poses should include :

- Addressing poor living conditions which many of the workforce find themselves with
- Creating jobs
- Growing the economy
- Addressing inequality
- Identifying where social instability is real or potentially likely to develop and address the causes

Big businesses who have a national footprint can also play a role. They can positively influence people and communities by implementing policies which have a positive social spin off, addressing social ills within their sphere of influence, provide advice and assistance to those in need, be aware of the state of society they work in so as to be able to identify and address risks which could lead to instability.

The economic sectors where the effects of social instability are most notably felt, is mining and manufacturing. Although progress has been made, unfortunately there is still a way to go before the risk posed to these sectors by social instability will be under control.

Q. What is the effective risk response to treating the risk on an Industry level?

All industries have a role to play. In general and as a minimum, industry must:

- Comply with Government Acts and Regulations, policies and plans.
- Obtain a 'Social License to operate' through responsible and adequate stakeholder engagements and living up to their promises and commitments
- Identify opportunities and implement Corporate Social Investments
- Understand the context that they work in and address social needs where possible
- Ensure that the procurement of goods and services complies with policies and standards which leads to the upliftment and benefit of our society

To prevent the occurrence of protests, strikes and any other disrupting behavior by employees, communities or society as a whole, industry players can implement measures to predict the occurrence of these events and intervene early enough to prevent there occurrence. There are various practices and methods being used as early warning systems to warn organizations of a pending risk, which allows them to address the causes before the risk materializes.

Businesses must avoid being sucked into corrupt relationships and practices which reduce the tax base, reduce delivery and damage the economy.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No

M A T O M E B O P A P E

Information Risk Officer Vodacom

Matome is the Information Risk Officer at Vodacom Group with over 14 years' experience in Information Risk, Security and Governance management and also Digital Security Risk. Matome has an MBA and a Postgraduate Diploma in Business Administration (PDBA) from GIBS and an Honours in Computer Science from the University of Pretoria.

In his current Information Risk Officer role at Vodacom, Matome is responsible for Cyber Security Risk Management, Privacy Risk Management, general Information Risk Management, Information Governance and Data Protection Awareness across the Vodacom Group of companies. This includes the Mozambique, Lesotho, Tanzania and DRC local markets. Before his current role, Matome worked at Telkom in the role of an Information Risk and Governance Specialist. Prior to that he worked at KPMG in an IT advisory role in the security and privacy unit. During this period, he was exposed to a varied number of clients on including ABSA Capital, Investec, Eskom Pension Fund, AFGRI, Miners Pension Fund, ABSA Wealth, and Neotel amongst others, resolving their various issues. Matome started his career at Faritec in the Security Administrator, Internet Developer and Internet Security Engineer Information Security Consultant roles. Matome is experienced in ISO/IEC 27002, CobiT and ITIL.

Risks commented on:

- Cyber-attacks and cyber-attack non-disclosures
- Data fraud and data theft (including identify theft and theft of intellectual property)



CYBER-ATTACKS AND CYBER-ATTACK NON-DISCLOSURES

MATOME BOPAPE

Information Risk Officer - Vodacom

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The National Development Plan (NDP) aims to eliminate poverty and reduce inequality by 2030. The plan focuses on the critical capabilities needed to transform the economy and society. Some of the capabilities are at risk of not being fully realised if this risk materialises.

A number of the NDP crucial factors are heavily dependent on the increasing level of internet connectivity that is continuing unabated which include the following:

- Urbanisation is a phenomenon that is generally on the increase and in South Africa today, about 60 percent of the population lives in urban areas. This is forecast to increase to 70 percent by 2030. This will most definitely lead to an increase in growth that increases demands and thus expanding consumer markets. Greater competition is thus created in certain technology enabled services.
- As science and technology innovation continue to revolutionise the way in which goods and services are produced, there is an enormous expectation that this will lead to more efficient ways of providing health and education services. Pervasive connectivity is required in order to electronically deliver educational material and medical services to remote places in the cost effective way. 40 percent of the South Africa population is projected to have access to the internet in 2017. Through the vast adoption of the internet by the youth, it is envisaged that this will result in more cohesiveness in society potentially resulting in more social inclusion.
- The NDP seeks to achieve a number of milestones by 2030 that are enabled by or affected by the above mentioned factors. Continuous cyber-attacks on services that individuals use will diminish the confidence that new users of technology services have on them. This is related to a trust factor attached to these services. Continued use is based on the assurance that the services are safe to use. These milestones include the increase in employment, raising per capita income, increase the quality of education, creating affordable access to health care and accessibility made available to high-speed broadband internet amongst others.

Q. Give three primary causes of this risk.

- Users of computer devices do not keep up with the advances of cybercriminals
- Lack of layered security defence that can protect corporate environments and root out sophisticated attacks
- Underestimating cybercriminals that are either personally, ideologically or economically motivated
- Insider threats to organisations in the form of negligent or disgruntled employees

Q. What are the consequences if this risk materialises?

- Identity theft where an individual's personal information is obtained to commit fraud, obtain credit or other forms of gaining financial advantage.
- Business interruption / Unavailability of resources e.g. ransomware
- Virus and malware distribution for notoriety or malice
- Data manipulation – not all attacks are about theft or destruction. A more sinister cause is the manipulation of data in place such that machines can be controlled or the wrong information reported to human operators without their knowledge.
- Decision making impairment by senior government officials, corporate executives, investors and others, if the information they are receiving cannot be trusted
- Penalties for non-compliance to data protection regulations
- Virtualised threats – because of the growth of cloud services, a significant amount of information resides in the cloud making it a prime target for cyber-attack.

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Education
- Healthcare
- Other (Real Estate, Transportation)

Q. What are the barriers that prevent us from solving this risk?

- Social engineering – the “hacking of people” due to their susceptibility because of lack of awareness
- Lack of understanding by companies of their disclosure obligations as relating to data breach incidents and risks. Many companies decide to a breach happens in order to avoid negative publicity
- Fear of economic suicide
- The transition from devices to the cloud is creating new challenges as most are in 3rd party hosted environments and the controls required to secure the cloud from the perspective of the organisation are not well understood/known. The safety of cloud services is not just about technical controls but also about sovereignty of access when data is physically located in a foreign country, making it susceptible to that country's laws and regulations.
- Technologies that are not fit for purpose, making them vulnerable to breaches
- Lack of understanding of evolving/evolved cyber threats
- Internal monitoring controls in most organisations are still very weak. More than 90 percent of data breaches are discovered by external parties.
- Basic information security controls are not adequate. 63 percent of breaches are caused by weak, default or stolen password.

Q. What is the effective risk response to treating the risk on a National level?

At a national level, the government needs to play a crucial role of coordinating the national cyber threat interests. This begins at a policy framework perspective where there is a need to have a e that will guide how the threat is approached nationally. This must include all the entities that are impacted by the cyber threat such as the government itself, academia and the various industries.

Government also needs to have skilled and qualified IT personnel. Government should also consider the amount of budget spend on tackling the cyber threat to enable a stronger cyber defence to better detect, deter and respond to the cyber risks posed to the country and to not necessarily just depend on industry.

Intercountry agreements related to the approach to cyber threats need to be in place in order to better coordinate the management of the threats. Because the threat of cyber-attacks does not operate within the confinement of borders, there is a need for countries to better coordinate response efforts.

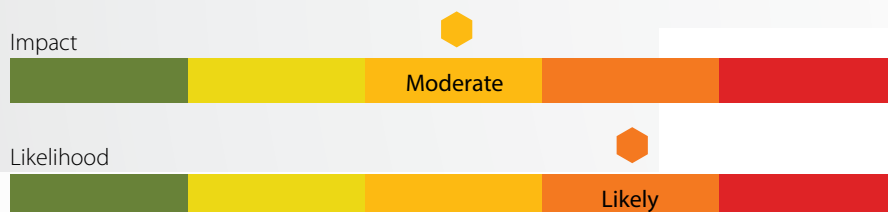
Q. What is the effective risk response to treating the risk on an Industry level?

A number of industries are prone to this risk because of the amount of customer personal or sensitive information that they process. The increasing demand for data has necessitated that companies use new technologies that at most are vulnerable to a lot of the cyber threats.

Industries must address the risks in the new technologies that are being utilised for the processing of data. Some of the innovations used generate further risks through increased interconnectedness and complexity. For instance, the number of Internet of things (IoT) devices in some industries is increasing drastically. Most of these new IoT devices are unsecured and lend themselves to being targets for cyber-attacks. The health industry, in particular, is very susceptible to cybercriminals because of the proliferation of devices that capture personal health data.

Over and above the obligation to secure systems and the data on them, companies should also be aware of their responsibilities in containing the risks of cyber-attacks. These include addressing and complying to legal and regulatory requirements and enabling capabilities around mobilising of a breach incident response team to investigate cyber-attacks. The team must include relevant senior leadership, legal and external counsel that will handle breach disclosure requirements, especially in cases where customer data may be compromised.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



DATA FRAUD AND DATA THEFT (INCLUDING IDENTITY THEFT AND THEFT OF INTELLECTUAL PROPERTY)

MATOME BOPAPE

Information Risk Officer - Vodacom

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The proliferation of mobile technology and the continued increase in connectivity that is envisaged is resulting in a lot more data being collected than ever before. Digital services are growing at a blistering rate due to the networked effect, which is when the users of a solution benefit from the fact that many others have chosen to use the same solution. Examples of these are social media services that are currently being used. More and more organisation are becoming lighter on physical assets and much heavier on data assets. The rise of data driven companies like Uber, Google and Amazon is due to the fact that they have embraced the mind set of data as an asset. The data driven decision making capabilities that arise from analysing the troves of data collected has made data a capital entity that can give a competitive advantage over those that have not realised the value of the data in their possession.

The reasons for amassing all this data is due to the value that it can or might create. The use of this data is intended for a myriad of uses, some legitimate, some not.

With digitization and datafication in every industry, this result in increased collection of data by organisations which also includes personally identifiable information. Due to the increased value of such information that create the risk of identity theft, which is the fraudulent practice of using another person's name and personal information in order to obtain credit, loans, etc.. Identity theft and other such crimes diminishes that trust that individuals have on the data based services that are meant to help them in attaining a better life. This reduces the proliferation of these services and thus retards the rate of progress desired.

The ease with which individuals are able to immediately find and access information reduces the search cost to learning. This learning is one of the desired effect of the NDP. Creating a trust environment within which individuals can access information and make use of it to improve their livelihood is an essential aspect of a progressive country.

Q. Give three primary causes of this risk.

- **Accidental or inadvertent insider behaviour**
This behaviour is in no way intended to harm the organisation but an overwhelming majority of data breaches that have happened have been to insider neglect of basic preventative behaviours and adherence to security control requirements. Risky insider behaviour include malicious, negligent and accidental.
- **Loss or theft of data assets**
The main cause of loss or theft of information is mostly due to basic controls not maintained in an organisation's environment.
- **Phishing**
Environments where there has not been user education and awareness are very susceptible to phishing attacks due to lack to the lack of knowledge of how to identify phishing scams.

Q. What are the consequences if this risk materialises?

- **Competitive ability**
One of the main reasons why data breach happen is because cyber criminals are determined to get hold of their target's intellectual property. This is a very broad category that include such things as product pricing and strategic intents. The theft of such assets is not always immediately apparent until the competitive advantage is lost. This is not easily detectable until the strategic objective is not met.
- **Reputational damage and loss of consumer sentiment**
Having an organisation's data breached and leaked into the wrong hands in whatever form can have dire consequences that result in direct or indirect losses. One of these major consequences is the organisation losing its reputation consumer trust as a result. These are not always directly measurable as the significant component of reputational loss happens significantly after the breach or theft event. This also applicable to small organisations as well.
- **Regulatory scrutiny**
Governments across many territories have taken at position that if an organisation has custodianship of personally identifiable information, then it will be legislatively bound to protect that information with grave consequences if not fulfilled. Breaches have an added burden of dealing with government auditing the extent to which data protection control were in place and then grave circumstances should they be found wanting
- **Further Theft**
In a corporate environment, the theft of information can potentially result in further loss either to the company itself or the company's customers. This is dependent on the type of information that was initially stolen or lost. In the case of financial information like customer credit cards records, financial loss can occur.
- **Damaged Intellectual Property**
Loss of sensitive business information like intellectual property can also result in an organisation losing competitive advantage in its operating market. Damages arising from the infringement of intellectual property can result in significant unrecoverable loss of future profits

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Transport and Logistics
- Manufacturing
- Healthcare

Q. What are the barriers that prevent us from solving this risk?

- Scarcity of skills
There are scarce IT Security specialist and engineering skill that are becoming more critical as there is more data being collected and processed. The extensiveness of the data being collected now and into the future demands that adequately qualified and experienced individuals be responsible for protecting it against highly sophisticated attacks.
- Budget issues
In cases where the board do not consider data as an asset that is valuable and needs to be protected as such, it will prove to be very difficult to convince the senior leadership to spend more on protecting the data.
- Outdated technology
One of the best technical controls in making sure that computer systems do not have vulnerabilities is to make sure that they are continually patched. End-of-life technologies make it increasingly difficult to protect them against this risk and require specialised protection techniques that are not pervasively available.

Q. What is the effective risk response to treating the risk on a National level?

Data breaches at a national level have an immense potential to cause damage to the reputation of a country but also raises awareness internationally about the vulnerability of a country's sensitive data, potentially increasing the attention to the data in the country and subsequently resulting in further breaches. The mitigation of such a situation requires action at a national level.

Data theft and in some cases, data breach, imply that someone has broken, entered and took data without due authorisation from its owner. Most progressive nations have realised the needs to define these as criminal activities. With the Cybercrimes and Cybersecurity bill currently being reviewed this will enable law enforcement to take appropriate action. The challenge will be assuring that the law enforcement agencies are well prepared for the legislation through training and awareness.

Legislation around data protection and privacy is expected to change the way that organisations and businesses approach the protection of customer and employee personal data. It is thus imperative that individuals are aware of their rights relating to the protection of their personal information against theft and misuse. Organisations that collect and process personal information also need to know their responsibilities towards the protection of their customers and employees' personal information.

Q. What is the effective risk response to treating the risk on an Industry level?

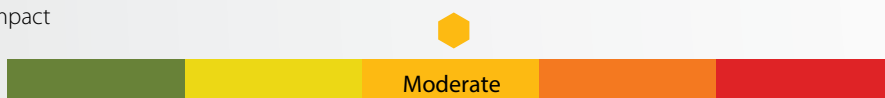
As stated there are a number of reasons data breaches are increasing. Below are suggested industry responses to the issues around data breaches and identity theft/fraud.

Companies must invest in training of their employees to better tackle the ever changing landscape of data breaches and theft. Employers largely favour experience over education and young professionals with a better understanding of the current landscape are ignored. Continuous partnerships between industries and academic institutions must be fostered to help better train the next generation of security experts. These can be in the form of internship programs and training opportunities with a knowledge exchange between existing employees and the interns.

The traditional security controls such as perimeter defence, firewalls, strong passwords and employee and customer awareness must remain as the basis of and fundamentals of the first line of defence. Industries must however look at the next level of data protection. Organisations in the industries must make sure that there is buy-in from the executive boards so as to get support to identify and protect key data assets. This protection involves firstly, identifying the key data owned, secondly, identifying where the data is located, thirdly, identifying who has access to critical data and then determining its level of protection required (read, write, access rights).

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact

High



Likelihood

Likely



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No

PETER BOSCH

Associate Executive PolicySA

Peter Bosch has been an educator and Head of Department: Mathematics in both government and former model C schools for 14 years. Following his years as an educator, he pursued careers in the financial services industry – first, as a Manager in the insurance industry in Namibia, followed by the Financial Services Board in South Africa. His entrepreneurial spirit led to him establishing two successful businesses of his own. However, his passion for serving the public through public service organisations saw him selling his businesses to take up a position in the South African Qualifications Authority where he was responsible for the evaluation and registration of qualifications and part qualifications on the National Qualifications Framework (NQF).

His core functions, however, included the recognition of professional bodies and registration of their professional designations on the NQF. Among other qualifications, Peter completed a Master of Public Administration (MPA) at the University of Pretoria and is currently studying towards a Bachelor of Laws (LLB) degree.

Risks commented on:

- Inadequate and/or sub-standard education and skills development



INADEQUATE AND/OR SUB-STANDARD EDUCATION AND SKILLS DEVELOPMENT

PETER BOSCH

Associate Executive - PolicySA

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Education and skills are inextricably linked to each other. Many studies suggest that investing in education and skills is a key enabler to the economic growth of a country. In the absence of effective growth-enhancing public policies, the investment in education and skills development will not by itself produce economic growth. South Africa, as an upper middle income country, does not have the necessary dynamic sectors to compete meaningfully at an international economic level. Rather, it has become home to huge informal businesses trading mainly in low-level services.

It will be unwise to postulate that a more educated labour force will necessarily achieve the objectives of the National Development Plan. However, there is growing evidence that a more educated society may translate into higher rates of innovation, higher overall productivity and faster introduction and implementing of new technology.

In fact, it will be prudent of Government to commission a study that will produce evidence on the kind of education that will contribute the most to economic growth. These include general schooling, on-the-job training or formal technical training. Further to this, the study must also establish at what level these different kinds of education contributes mostly to economic growth – that is, primary, secondary or higher education. The study could be significant as one of the reasons why the socialist systems in Eastern Europe failed to sustain economic growth was partly attributable to an unwillingness by governments to economically reward individuals on the basis of their productivity. Instead, politically exposed individuals were rewarded with economic privilege. The findings of such study could be used to refashion and enrich our current economic and education policies.

The quality of the kinds of education and skills is central to the notion of human capital which is defined as “the economic value of an individual’s skill set”. It is our human capital that will allow us to gainfully participate in the economy and accomplish a “decent standard of living through the elimination of poverty and reduction of inequality”. The unprecedentedly high unemployment rate is one of the implications of an inadequate education and training scheme.

Q. Give three primary causes of this risk.

- Poorly resourced education and skills development institutions
- Inappropriate education, training and skills development strategies that are not attuned to national and international economic needs
- Poor quality of education and skills development provision

Q. What are the consequences if this risk materialises?

- Insufficient number of skilled workers
- High unemployment levels
- Unsustainable economic growth

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Communications and Technology
- Manufacturing
- Education
- Healthcare

Q. What are the barriers that prevent us from solving this risk?

- Slow rate of addressing the disproportionate resource distribution in the education and training system.
- Lack of commitment from stakeholders and partners including government to improve the quality of education and skills provision especially in the so-called township schools and higher education institutions.
- Insufficient promotion of the teaching profession to instill pride and raise the esteem of educators.

Q. What is the effective risk response to treating the risk on a National level?

In spite of growing international recognition for the importance of policies and support mechanisms for quality care and education for young children, early childhood development (ECD) remains a neglected part of our education and training system. There is a large body of evidence confirming the long-term beneficial effect of a quality early childhood curriculum for young children's development. Thus, the quality of ECD provision must be elevated as it hones and molds the holistic child and ultimately forms the foundation of their lifelong learning.

Concerning the schooling system as a whole, more still needs to be done to improve disadvantaged schools and achieve better learner success. This can be done by, among others, capacitating school management teams, creating a supportive school environment for learners and staff, attracting and retaining high quality teachers, as well as stimulating healthy relationships between the school, parents and communities. Thus, the Education departments may consider a nationwide skills audit to develop a targeted capacity building programme for teacher effectiveness and quality enhancement in education.

Quality in the ECD, primary, secondary and higher education system provides learners with cognitive, non-cognitive and socio-emotional skills, which facilitate the acquisition of skills and knowledge in subsequent years of education.

Q. What is the effective risk response to treating the risk on an Industry level?

South Africa has a skills deficit especially with regard to artisanal skills. There is a need to increase the skills pool particularly for artisans, technicians and related occupations. Failing to do so will create a workforce that is not keeping up with the skills needed to remain competitive in an increasingly knowledge-based economy. Sector education and training authorities (SETAs), though their discretionary funds, have a prominent role to play in contributing towards skills development.

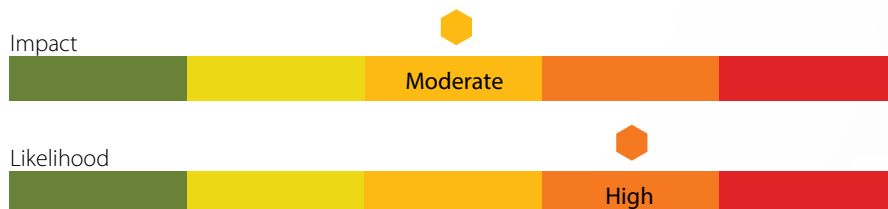
The support of and buy-in from large corporate employers and state-owned enterprises is needed to work closely with the relevant education and training institutions by providing much needed training equipment and experienced staff to address specific needs specifically for training with a workplace experiential learning component. Similarly, private-public partnerships are also required to ensure that the Technical and Vocational Education and Training (TVET) colleges are equipped with current equipment.

In addition to well-equipped TVET colleges the education departments, as part of establishing a robust skills strategy, must invest in the upskilling of college lecturers to improve their pedagogical, vocational and technical knowledge and skills as well as ensure that they are exposed to the latest developments and technology both in the colleges and in industry.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- No real incentives for productive workers / excellent teachers
- Political-administrative dichotomy

A D V W E R N E R B O U W E R

Director
Nexus Forensic Services

Advocate Werner Bouwer is a Director of Nexus Forensic Services. He has 26 Years of experience in the forensics industry. He holds the following qualifications: B Juris, LLB, Certificate in Labour Relations, Master's Degree: Forensic Accounting & Auditing. He is an ETPD registered accredited facilitator, Assessor and Moderator – SASSETA as well as a Accredited Facilitator Assessor and Moderator – Authority.

Risks commented on:

- Unmanageable fraud and corruption
- Failure of State, a State crisis or a State collapse



UNMANAGEABLE FRAUD AND CORRUPTION

ADV WERNER BOUWER

Director - Nexus Forensic Services

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Chapter 14 of the NDP outlines a vision for 2030 of a country with a 'zero tolerance' for corruption and where "citizens do not offer bribes and have the confidence and knowledge to hold public and private officials to account and in which leaders have integrity and high ethical standards."

This, together with the vision of ensuring that anti-corruption agencies have sufficient resources, remain independent from political influence and that investigations are acted upon, has become a pipe dream.

Whereas fraud and corruption may have been manageable in normal circumstances, the current macro culture is reflective of a high tolerance for fraud and corruption. The sense of impunity and disarming of law enforcement agencies results in the above being unattainable.

Q. Give three primary causes of this risk.

- Disablement of the NPA and law enforcement agencies
- Tone (override) at the top
- Political meddling in enforcement activities, and using state power to victimize whistle-blowers.

Q. What are the consequences if this risk materialises?

- Unmanageable state of fraud and corruption
- Growing complacency and consequent culture manifestations
- Further economic decline and consequent downgrades
- Increase in poverty

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Energy, Water and Utilities
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Healthcare
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Lack of tone at the top and walking the talk
- Lack of political (executive) will
- Lack of effective oversight
- Lack of or no zero-tolerant reaction
- Lack of skill / competence

Q. What is the effective risk response to treating the risk on a National level?

- Stop political deployment to critical government positions.
- An independent investigative law enforcement (refer to the recent Grinaker decision / DSO v Hawks).
- Independent prosecuting authority with the necessary skill sets.

Q. What is the effective risk response to treating the risk on an Industry level?

- Capacitate industry regulators with proper empowerment and enabling legislation.
- Enable and pursue cross-industry co-operation and information sharing to prevent fraud and corruption risks, and role players.
- Develop and embed sound culture drivers throughout industries to ensure sustainable ethical practices and behaviours.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

The list is relevant and comprehensive and provides a valuable profile against which to guide consequent risk management protocols. The impact when fraud and corruption materializes results in the increase of various other risks (the socio – economic impact of unmanageable fraud and corruption is pervasive and substantive).

FAILURE OF STATE, A STATE CRISIS OR A STATE COLLAPSE

ADV WERNER BOUWER

Director - Nexus Forensic Services

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The risk is material, and a 100% barrier to the achievement of the NDP.

Q. Give three primary causes of this risk.

- Corrupt top officials of government who appears to still have the balance of power
- No law enforcement
- Corrupt intelligence community

Q. What are the consequences if this risk materialises?

The State will collapse in total. Possible coup from opposition political parties (without violence).

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Energy, Water and Utilities
- Petrochemicals, Oil and Gas
- Mining and Quarrying

Q. What are the barriers that prevent us from solving this risk?

- Lack of political will / tone at the top
- Cronyism at the top level
- Lack of independent SAPS Force and NPA
- Cadre deployment
- President has too much powers to appoint top persons in security cluster

Q. What is the effective risk response to treating the risk on a National level?

- Truly independent NPA and SAPS (the latter – refer to the Glenister court decision regarding the Scorpions). Head of NPA must have security of tenure and independent from whims of politicians
- Independent Head of Intelligence
- Current power balance moves to other ANC faction
- New Cabinet

Q. What is the effective risk response to treating the risk on an Industry level?

- Decriminalise contraventions by industry participants. This will substantially mitigate the effect of a malfunctioning NPA
- Provide powers to industry regulators, aligned with decriminalisation
- Invest in capacity to enforce
- Public / private partnerships to enforce on industry levels
- Examples – international (UK Anti - Corruption legislation) and Companies Act

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No

MARK BUSSIN

Chairperson, 21st Century and EXCO Member, SARA

Dr Bussin is the Chairperson of 21st Century Pay Solutions Group, a specialist reward consultancy employing nearly 50 deep technical specialists. He has remuneration experience across all industry sectors and is viewed as a thought leader in the HR and remuneration arena. He serves on and advises numerous boards, audit and remuneration committee's and has consulted in many countries. Mark holds a Doctorate in Commerce and has published or presented 55 academic articles and over 400 popular papers and has appeared on television and radio, and in the press for expert views. Mark has been a guest lecturer at several academic institutions and supervises Master's and Doctoral thesis. He is an EXCO member of SARA (South African Reward Association) and is a Global Reward Practitioner (GRP) tutor. As a past commissioner in the Presidency, he advised on the Remuneration and conditions of employment for the President, Deputy, Ministers, Judges, Magistrates, Parliament and Traditional Leaders.

Risks commented on:

- Skills shortage including the ability to attract and retain top talent
- Structurally high unemployment/underemployment



SKILLS SHORTAGE INCLUDING THE ABILITY TO ATTRACT AND RETAIN TOP TALENT

MARK BUSSIN

Chairperson, 21st Century and EXCO Member, SARA - 21st Century

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Skills shortages and blindly applying affirmative action for specialist positions like Anesthetists will prevent the achievement of the NDP

Q. Give three primary causes of this risk.

Idiotic laws and practices in Home Affairs, Politicians have "lost their voices", Brand damage to SA Inc by our government has reached crisis levels.

Q. What are the consequences if this risk materialises?

No implementation of the NDP, poor growth, increasing inequality and the current President stays in power

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

Poor education system, ridiculous regulatory framework and lack of political will

Q. What is the effective risk response to treating the risk on a National level?

Reduce tax to create jobs, resolve fees must fall campaign, eliminate institutionalised theft and apply the funds to more worthy causes

Q. What is the effective risk response to treating the risk on an Industry level?

Hiring interns, increased training – doing what the government should be doing.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

President Zuma remains in power

STRUCTURALLY HIGH UNEMPLOYMENT/UNDEREMPLOYMENT

MARK BUSSIN

Chairperson, 21st Century and EXCO Member, SARA - 21st Century

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The achievement of the NDP is impossible unless this is addressed. It is one of the assumptions and cornerstones that needs to be in place.

Q. Give three primary causes of this risk.

- Ill-conceived regulatory environment
- Corrupt President and cadre
- Too many blunders in the education space
- No GDP growth

Q. What are the consequences if this risk materialises?

More of the current situation – no growth, poor education system, politicians acting with impunity for self-gain, skills flight

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Manufacturing |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Hospitality and Tourism |
| • Communications and Technology | • Education |
| • Insurance and Reinsurance | • Healthcare |
| • Transport and Logistics | • Wholesale and Retail |
| • Petrochemicals, Oil and Gas | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

Poor education, ill-conceived regulatory environment, cadre deployment exacerbating incompetence, slow GDP growth, no political will – and these all lead to lower international investment, the President of SA.

Q. What is the effective risk response to treating the risk on a National level?

- Voting for different policies
- Educate and train people because of Government inability
- Continually engage Government spelling out more vociferously what damage ill-conceived policies do.
- Recall the President of SA

Q. What is the effective risk response to treating the risk on an Industry level?

- Create intern positions at lower salary
- Educate all on the importance of labour stability for international confidence and investment
- Create a culture of “ours” and abandon “us VS them” mentality
- Lobby to recall the President of SA

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

President Zuma finds a way of staying in power.

LES CARLO

Risk Intelligence Committee Advisor
The Institute of Risk Management South Africa (IRMSA)

Les Carlo is a Doctor of Engineering, awarded by Warwick University (UK) in 2013. In his professional capacity, he is an Honorary Member of the Institute of Risk Management of South Africa, a Fellow of the South African Institute of Electrical Engineers, a Fellow of the Institute of Engineering Technology (UK), a Registered Professional Engineer (South Africa) and a Chartered Engineer with Engineering Council (UK). Les was employed as an electrical engineer in electrical distribution industry in the UK until immigrating to South Africa in 1983. From 1983 until he retired, at 65, in 2015 he was employed by Eskom Holdings Ltd. From 1983 until 2000 he worked initially as an electrical engineer until moving into engineering management. His career from 2000 until 2012 was focussed on general management, including positions as CEO and board member of a number of Eskom's subsidiaries. In 2012 he moved into a corporate role as the General Manager (Risk & Resilience) until retiring from Eskom in 2015.

Risks commented on:

- Organisation's risk culture not successfully enabling the achievement of strategic and operational objectives



ORGANISATION'S RISK CULTURE NOT SUCCESSFULLY ENABLING THE ACHIEVEMENT OF STRATEGIC AND OPERATIONAL OBJECTIVES

LES CARLO

Risk Intelligence Committee Advisor - The Institute of Risk Management South Africa (IRMSA)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Organisations will put the achievement of NDP objectives at risk where delivery by them in support of NDP priorities and development themes is key, and where such organisations fail to sustain an attitude towards, and the behaviours characteristic of, effectively managing their risk profile. Being conscious of the trends of external and internal factors that create awareness of risk and a commitment at all organisational levels towards seriously managing risk is fundamental. Such organisations will include but not be limited to government departments, State Owned Enterprises, public and private businesses, non-governmental organisations, and institutions that operate particularly in the education and health sectors.

Q. Give three primary causes of this risk.

- An internally focussed risk management approach limited to administrative compliance to minimum legal and policy requirements
- Inadequate risk management knowledge and skills, combined with insufficient knowledge and understanding of the risk subject matter and its impact on the organisation's objectives
- Failure to manage risk in alignment with the organisation's appetite and tolerance profile

Q. What are the consequences if this risk materialises?

Within all organisations if the risk materialises there will be:

- Increasing need to respond to spontaneously occurring current problems
- sub-optimal performance operationally together with diminished focus on, and resources applied to achieving strategic objectives
- surprises emanating from the external environment that detrimentally affect performance and that require the application of resources that would otherwise be required to drive operational and strategic objectives
- failure to recognise and capitalise on opportunities to take appropriate levels of risk in pursuit of objectives
- eventually, stagnation and decline, including limited ability to contribute to NDP implementation

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Engineering and Construction
- Education
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Insufficient focus on risk management in an organisation's governance processes
- Inadequate development of risk management capacity together with broad industry knowledge and experience within line management
- Limited credibility of "risk managers" and opportunity to influence at senior organisational levels
- Limited "business" understanding and application of risk management knowledge at "risk practitioner" level

Q. What is the effective risk response to treating the risk on a National level?

There is adequate direction, guidance and policy within South Africa for the effective management of risk to happen.

Q. What is the effective risk response to treating the risk on an Industry level?

At Board or highest committee level, the establishment of separate Risk Committees, supported by Chief Risk Officers, should they not currently exist. The building of risk management capacity at Board and executive level, with particular emphasis on external environmental trends as they impact strategic risk both at a planning and implementation stage. At an operational level, ensuring that risk managers and practitioners have sound knowledge of the organisations business so that they can apply risk management processes effectively in conjunction with line management. Also governance processes that ensure that the processes of managing and monitoring operational risk is robust and not limited to a "box-ticking" administrative process.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



High



Likelihood



Likely



TREVOR CHANNING

Executive Manager: Governance and Risks
The Chemical Industries Education & Training Authority (Chieta)

Trevor Channing holds a post graduate degree in Industrial Economics and has 26 years' experience in the Public and Parastatal Environment, also holding several managerial/executive positions in Labour Relations, HR Management, Strategic Planning and Organisational performance management, monitoring and reporting. Currently he is the Executive Manager Governance and Risks at the Chemical Sector Education Training Authority(CHIETA) who facilitates skills development for the nine economic sectors of the South African Chemical Industry. This is a position he has held since 2011 being primary responsible for Governance, Risk management, Internal audit, ICT Governance, Strategic Planning and Organisational Performance Management. He is also a member of the Institute of Directors (IODSA).

Risks commented on:

- Profound political instability
- Growing income disparity



PROFOUND POLITICAL INSTABILITY

TREVOR CHANNING

Executive Manager Governance and Risk - Chemical Sector Education Training Authority (CHIETA)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Profound political instability will have a significant impact on the objectives of the NDP. It is now estimated that SA need to maintain a sustained economic growth rate of 7- 8 % over the next decade to reduce unemployment to levels comparable to our BRICS counter parts. For this we need a political stable environment that attracts substantive foreign investments that drives economic growth that SA requires to successfully combat our current socio economic challenges around poverty and unemployment.

Q. Give three primary causes of this risk.

- Political Infighting within ruling party
- Non delivery and implementation of Government programmes aimed at benefiting South Africans, specifically the poor and rural areas
- Poor Governance and accountability
- Economic policies not conducive to attracting sustained and large foreign investments

Q. What are the consequences if this risk materialises?

- Marginal/negative economic growth which places us in a technical recession despite current (although slow) global economic recovery
- Increased inequality and poverty
- More violent protest actions
- Reduced state revenue- SARS missing its collection targets which negatively delivery

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Manufacturing |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Hospitality and Tourism |
| • Communications and Technology | • Education |
| • Insurance and Reinsurance | • Healthcare |
| • Transport and Logistics | • Wholesale and Retail |
| • Petrochemicals, Oil and Gas | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

- Corruption, fruitless, wasteful and unauthorised Government expenditure
- Optimisation of the effectiveness of state owned enterprises
- Reduced Government Income which increases the budget deficit to fund Government programmes
- Lack or misaligned skills to increased national and global market share and growth

Q. What is the effective risk response to treating the risk on a National level?

- Economic policies that attract foreign investments and stimulate economic growth and state revenue
- Clamp down on corruption and enforcing and strengthening ethical leadership within SA
- Increased Investments and expansion of SMME's with multiple benefits of job creation and increased black business owners participation in the SA Economy
- National Security, immigration control and crime reduction

Q. What is the effective risk response to treating the risk on an Industry level?

- Closer Collaboration between Industry and Government with sole purpose of making SA Industries more competitive on national and global stage
- Collaborative skills and Intellectual Capital Development in support of expanding Industries

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No comprehensively covered and categorised

GROWING INCOME DISPARITY

TREVOR CHANNING

Executive Manager Governance and Risk - Chemical Sector Education Training Authority (CHIETA)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The non management of the current growing income disparity threatens the majority of the NDP priorities inter alia that of strengthening our democracy, labour absorption, citizenry, social cohesion and a developmental state. We have one of the largest income disparities in the world and it is not sustainable for the prosperous SA we all want.

Q. Give three primary causes of this risk.

- Stagnant economic growth
- Unemployment
- Ethical Leadership

Q. What are the consequences if this risk materialises?

- Increased and more violent protest action
- Increased Poverty
- Increase dependence on social grants which is becoming more and more unaffordable and unsustainable for Government

Q. Which industry will be most affected if this risk materialises?

- Financial Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Wholesale and Retail

Q. What is the effective risk response to treating the risk on a National level?

- Ethical Leadership
- Improved and relevant Education and Skills Development
- Moderate wage increases on top and senior management level

Q. What is the effective risk response to treating the risk on an Industry level?

- Commitment to improved remuneration and wealth distribution models/frameworks benefiting middle and lower classes
- Priority attention and investment to SMME development and SMME sustainability partnerships
- Relevant and focused skills development in support of Industry growth areas and competitiveness

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No, comprehensively covered

GRAEME CODRINGTON

Co-founder and International Director
TomorrowToday

Graeme Codrington is an expert on the future of work. He is a researcher, author, futurist, presenter and board advisor working across multiple industries and sectors. He has a particular interest in disruptive forces changing how people live, work, interact and connect with each other. Speaking internationally to over 100,000 people in more than 20 different countries every year, his client list includes some of the world's top companies, and CEOs invite him back time after time to share his latest insights and help them and their teams gain a clear understanding of how to successfully prepare for the future. Graeme is the co-founder and international director of TomorrowToday, a global firm of futurists and business strategists. He is also a guest lecturer at five top business schools, including the London Business School, Duke Corporate Education and the Gordon Institute of Business Science. He has five degrees, including a Doctorate in Business Administration (DBA), a Masters in Sociology, and other professional degrees in Accounting, Arts and Theology, and Youth Work.

Risks commented on:

- Lack of innovation including resistance to change



LACK OF INNOVATION INCLUDING RESISTANCE TO CHANGE

GRAEME CODRINGTON

Co-founder and International Director - Tomorrowtoday

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Almost all aspects of the NDP are going to require delivery of outcomes we are not yet achieving in ways we are not yet engaged with. In other words, innovation capability is absolutely critical to all aspects of the NDP, as well as being a key objective in and of itself. Looking at the other countries and economies, it is clear that we are at a shift point in human history. Industries and economic models are changing more now than at any time in the last century, and the rules for success and failure in every sector of society are being rewritten. We cannot keep doing what we were doing – new approaches, methods and skills are required. That is why innovation is now an imperative in every organisation. It is equally imperative for society and government, and a lack of innovation is a serious threat to advancement of any social, economic or political goal.

Innovation is not just about products, services or channels to market. The most innovative organisations in the world right now are focusing most of their energy on innovating their very business models. The risk is not just a lack of innovation, but also the incorrect focus of innovation attempts.

Q. Give three primary causes of this risk.

- Lack of innovation science, including limited understanding of the antecedents to innovation and underdeveloped management skills to implement an innovation agenda
- Lack of resources allocated to innovation, including lack of political will to support innovation
- Lack of a desire/understanding of the role of failure and experimentation in any innovation strategy

Q. What are the consequences if this risk materialises?

- Stagnant economic growth
- Lack of delivery of objectives of NDP
- Frustration in all systems
- Not enough incentives to take risks required for genuine innovation and economic growth
- Decreasing competitiveness as a nation as other countries innovate ahead of us
- Loss of FDI

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Manufacturing |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Hospitality and Tourism |
| • Communications and Technology | • Education |
| • Insurance and Reinsurance | • Healthcare |
| • Transport and Logistics | • Wholesale and Retail |
| • Petrochemicals, Oil and Gas | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

- Lack of allocation of resources specifically to innovation
- Lack of engagement with a culture of experimentation, that includes failure
- No political will to incentivise policies and economic incentives that would foster innovation, especially among SMEs (e.g. easing bankruptcy laws, creating funds for entrepreneurs, innovation prizes, etc)
- Lack of creativity
- A general lack of understanding of future trends, systems thinking and the science of innovation
- Leadership focused more on short-term returns and results

Q. What is the effective risk response to treating the risk on a National level?

- Establish high level teams to support government departments in innovation efforts
- More training of innovation systems and mindset
- Require government departments to innovate, and establish targets and measurements to ensure this happens
- Implement government policies and programmes that encourage risk taking in the economy and society
- Learn from and import innovative ideas from other countries. Create a national level task team to actively seek out these ideas from other parts of the world
- Look for cross party support of the NDP, so that it is not derailed or used as a political weapon in elections

Q. What is the effective risk response to treating the risk on an Industry level?

Have a focus on innovation, allocate resources to it and implement formal innovation processes, supported by policies that encourage risk taking, and measure the whole innovation system not just outcomes.

- Innovation does not emerge as the result of industry conferences, management memos or employee suggestion boxes. In organisations and industries, the most important determinant of innovation success is building a culture of innovation. This includes at least five key elements that must be systemic:
 - being future-focused – deliberate, structured engagement with emerging trends and disruptive change at all levels of the organisation
 - being curious – too many leaders believe their job is to have the answers; but the best leaders today know that asking the right questions is much more important.
 - experimentation – creating a culture that actively encourages ongoing experimentation in all aspects of the business, including a comfort with failure, learning from failure and rewarding those who do so.
 - listening to more diverse opinions, and actively giving previously excluded voices an opportunity to be heard.
 - overcoming limiting orthodoxies, particularly by not being enslaved to best practice and industry standards that are outdated.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Ageing population and shifting demographics
- Growing middle class in emerging economies, with increasing wealth gap between rich / upper middle class and the extremely poor.
- Climate change and extreme weather
- Increasing polarization of societies, based on fundamentally different world views
- The fomenting of intra-country debates and divides by foreign players who wish to destabilise society, but don't have a particular ideological agenda besides instability
- Rise of chronic diseases, and the mutation of certain diseases beyond modern medicine especially antibiotics
- Rising geographic mobility, including southern movement of African migrants and urbanisation
- Lack of global leadership from traditional power bases of US, UK and Europe
- Increasing nationalistic sentiment

DAVIS COOK

Chief Executive Officer
The Research Institute for Innovation and Sustainability (RIIS)

Davis is the CEO of RIIS, an innovation consulting firm that assists organisations to tackle difficult and complex issues of long term market relevance and sustainability. He has a diverse career history, including strategy, risk and management consulting for various global consultancies in both the UK and SA. He worked as a civil servant for several years, including as advisor to the MEC for Economic Development in Gauteng, focusing on innovation and growth policies for Gauteng. He has also started (and failed) several businesses in South Africa and the UK. His academic background includes physics and applied mathematics, philosophy, economics and developmental studies.

Risks commented on:

- Lack of innovation including resistance to change



LACK OF INNOVATION INCLUDING RESISTANCE TO CHANGE

DAVIS COOK

Chief Executive Officer - The Research Institute for Innovation and Sustainability (RIIS)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The poor innovation performance of SA remains a key risk to long term growth and development of the economy, and general nation building.

However, it is masked by a number of pressing issues that immediate attention. These political and economic events have overtaken SA, and the kind of large scale investment into innovation required to achieve the grand ideas of the NDP is unlikely to be realised any time soon.

This does not imply that efforts into innovation have been halted altogether. There are some incredible efforts being undertaken in all sectors, from mining to energy to fintech, retail and many others. However, this may lead to a difficult problem in terms of inequality.

Much of the innovation that is taking place – particularly during difficult economic periods – are only those projects that generate significantly high financial returns to offset the increased risk. These projects are often digital in nature (as they enable rapid global scaling), and hence are not inherently employment creating; instead, they serve to increase the wealth of a relatively small group. While, under normal circumstances, other forms of innovation (e.g. socially focused programmes) would still benefit from investments, the current economic situation creates additional barriers for this.

Essentially, the difficult economic climate creates additional constraints on innovation efforts that prioritise social goods over financial rewards (though these are, of course, not always exclusive). The result is that the innovation that does still take place may not serve to achieve the NDP goals of reduced poverty and reduced inequality.

The greatest lack of innovation, in my opinion, is not the kind that exploits 4th Industry technologies, but those that enable socially relevant and financially viable businesses. Investment into these types of business remain sorely lacking in SA, and the potential impact they could have in lifting large swathes of the population into higher income brackets would have a material impact on society, particularly over the medium- to long-term vision of the NDP.

Q. Give three primary causes of this risk.

- Political and economic uncertainty in South Africa makes it difficult for companies to allocate funds and resources to innovation projects that do not have short term benefits (for example, protecting against job losses through operational efficiency)
- Short-term (<5 year) perspectives of organisational leadership – many leaders do not plan for or build long-term interventions, i.e. over 5 to 10 years; this is often the timescale by which innovation can properly impact on markets and society. This is often more a public sector challenge than private sector
- A still developing professional understanding of different innovation methodologies and processes decreases the rate of success, and means that many organisations become 'burnt' by failed innovation efforts

Q. What are the consequences if this risk materialises?

- The long term decline (which we see even now) of South Africa's competitiveness and performance against other markets, leading to reduced manufacturing, job losses, economic stagnation. It also shifts the economy across to sectors that are reliant on natural competitive advantages (e.g. tourism), where there are limited opportunities to share in globally scalable markets (i.e. we can't export our tourism sites)
- An increased reliance on foreign IP and technology to solve problems, exacerbating our technology balance of payments deficit, and making it increasingly difficult to participate in the 4th Industry economy
- Increasing inequality, as an elite section of the population are able to benefit from disproportionate incomes, enabling them to access global skills, education and opportunities; while the remainder of South Africa are pushed even further across a digital and income divide

Q. Which industry will be most affected if this risk materialises?

- Energy, Water and Utilities
- Transport and Logistics
- Manufacturing
- Education
- Healthcare

Q. What are the barriers that prevent us from solving this risk?

- The complete inauthenticity of political leadership is a major barrier to the foundations required for innovation being put in place
- South African corporates are not yet able to distinguish between genuine innovation professionals, and well-intentioned but misguided amateurs; the result being that corporate innovation efforts fail because of the lack of understanding of the corporate environment, the nature of professional innovation management, or how the two interact

Q. What is the effective risk response to treating the risk on a National level?

A coordinated innovation vision – at an industry level – is not only possible to create (and has been done in numerous countries around the world), but can act as a catalyst towards spurring investment into a range of innovation activities.

Such a longer term view on the role of innovation has helped countries to radically change their fortunes, and while such as an approach has often been spearheaded by a visionary leadership (e.g. Singapore), a collective approach is likely to be more effective in South Africa given the challenges facing the South African body politic and bureaucracy.

A piecemeal approach (e.g. addressing education, or funding, or legislation) is problematic in that innovation is ultimately a system-wide effort, and while each of these are inherently important, the only way to shift the reality of innovation performance in the country, is to change the mind-set of the nation at large about why investment into innovation is itself important.

Q. What is the effective risk response to treating the risk on an Industry level?

Industry can be far more discerning and demanding when it comes to adopting and implementing innovation practices. For example, in many organisational functions (finance, supply chain, HR, operations) there are minimum professional standards expected of people in those roles. Yet, despite a range of academic and professional qualifications and certification available around innovation, very few organisations are even aware of them.

Instead, the latest 'fads' are often adopted wholesale, without understanding the broader nature of innovation, and innovation management systems. Just as one wouldn't let an enthusiastic bookkeeper sign off the financials of a listed company (no offence to bookkeepers!), organisations should not allow enthusiastic innovation proponents to lead large scale innovation programmes. It is, and should be treated, as any other professional discipline.

Industry should, therefore, place much higher expectations on the individuals, consultants and groups responsible for delivering on innovation mandates.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

None additional

M I L E S C R I S P

Group Chief Executive Officer
Tarsus Technologies Group

Miles is currently Group CEO of Tarsus Technologies Group, a private IT Distribution business serving the African region. The Tarsus Group employs some 1200 people. Prior to that Miles was CEO of SecureData Ltd, an Information Security company listed on the Johannesburg Stock Exchange before being acquired by Tarsus Technology Group in March 2014. Before that he was Group CEO of O'Keeffe & Swartz Consulting (Pty) Ltd, a group of enterprises employing some 800 people in the business of direct sales of simple insurance products to the public and related administrative services.

Risks commented on:

- Lack of leadership



LACK OF LEADERSHIP

MILES CRISP

Group Chief Executive Officer - Tarsus Technologies Group

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

This is a fundamental risk and more significant than any other. The NDP is complex and far-reaching. It will require planning, delegation, clear communications, definition of an outcome, milestones and monitoring, dedicated personnel and accountability and consequences for non-delivery. None of the above can happen without decent leadership.

Q. Give three primary causes of this risk.

- Lack of vision, articulation of an outcome
- Incompetence – poor appointments, wrong qualifications, experience or attributes
- Political interference – it is impossible to lead anything if you are undermined

Q. What are the consequences if this risk materialises?

Just one over-riding consequence – non-delivery

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Energy, Water and Utilities
- Communications and Technology
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Mostly political and ideological
- Corruption

Q. What is the effective risk response to treating the risk on a National level?

Change in current political leadership. There is no political will to see that good leadership is in place. Cabinet level appointments have one objective – to maintain the status quo. It is essential that government and private sector sit down together in what Clem Sunter called an economic Codesa.

Q. What is the effective risk response to treating the risk on an Industry level?

This depends on the industry. We need to build strong Chambers and Associations and work through them. Clear enforced regulation, training and more training.

Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

I like the very comprehensive list of risks. When I tried to add more I found that the existing list does cover them.

RYAN CUMMINGS

Director
Signal Risk

Ryan Cummings is a director of the political and security risk management consultancy, Signal Risk, and co-founder of the My Travel Risk travel security web application. He is also a founding member of the Nigerian Security Network and independent consultant to various international news media outlets including the New York Times, TIME magazine, the Associated Press, Al-Jazeera, AFP and Deutsche Welle. He is also a contributor to publications and think tanks, most notably CNN, the Tony Blair Foundation, the International Peace Institute (IPI) and the Daily Maverick, on issues of terrorism, conflict and political instability. Mr. Cummings has also been invited to provide insights on these issues at seminars organised by the US State Department, the Munich Security Conference, the Cairo Centre for Conflict and Peacekeeping and the Institute of Risk Management South Africa (IRMSA).

Risks commented on:

- Failure of governance (public and private)
- Profound political instability



FAILURE OF GOVERNANCE (PUBLIC AND PRIVATE)

RYAN CUMMINGS

Director - Signal Risk

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The efficacy of the NDP is contingent on a government which is stable, competent and, perhaps most importantly, is perceived as possessing the legitimacy to achieve the socio-economic development goals. If these conditions are not met, the South African government would find it difficult to function its day-to-day governance objectives, let alone that of longer-term planning which requires the buy-in of various stakeholders to whom it is both partnered and accountable. In short, a failure of governance would also translate to a failure in South Africa achieving its NDP goals.

Q. Give three primary causes of this risk.

- The foremost cause of this risk which is unfolding in South Africa is that of corruption. Specifically, where large swathes of resources allocated to the functioning of the South African state and that which is supposed to be used to render the services with which it has been entrusted, is being misappropriated. A continuation of this form of mass scale of corruption is already rendering the government's inability to deliver on its short-term commitments such as the provision of housing, the delivery of basic services and affordable education. In addition to contravening the social contract entered into between the state and society, its inability to meet its commitments is fuelling social unrest which further burgeoning an already tenuous security dynamic in South Africa.
- Policy uncertainty is another issue which could lead to governance failure in South Africa. A radical shift in socio-economic and political policy in South Africa as being touted by the incumbent regime is further impacting government resources already being siphoned by corruption. Policy shifts or uncertainty is being ascribed for promoting disinvestment in South Africa and that of capital flight, both of which have adverse implications for the fiscus and for the medium-to-long term functioning of the state.
- Weak rule of law is another factor which could threaten governance failure in South Africa. Specifically within the South African context, we see how the state officials implicated in malfeasance have been able to successfully skirt prosecution and even use law enforcement bodies to abet corrupt practices. A loss of confidence in the rule of law, or perceptions that its enforcement within the South African context is conducted with prejudice and favour, could further promote criminality – particularly by groups who are able to exploit inconsistencies in application of the law – and further breakdown confidence by society in the government's inherent ability to govern. In all of this, the state's position as an authoritative body capable of maintaining a functioning society will be diluted.

Q. What are the consequences if this risk materialises?

- Social agitation in the form of frequent, widespread and pervasive unrest which could have implications for economic and social instability
- Higher threat of conflict as population groups vie for accessing dwindling resources and access to state patronage
- Higher threat of crime as criminal groups exploit inconsistent and vulnerable rule of law
- Economic downturn which would occur due to disinvestment and impact of criminality, social agitation and communal conflict

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Manufacturing |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Hospitality and Tourism |
| • Communications and Technology | • Education |
| • Insurance and Reinsurance | • Healthcare |
| • Transport and Logistics | • Wholesale and Retail |
| • Petrochemicals, Oil and Gas | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

The most apparent barrier is the constitutionality of how governance authority is both elected and secured in South Africa. The undue influence or so called 'capture' of key institutions mandated to keep checks and balances on the abuse of power by executive leadership is another barrier.

Q. What is the effective risk response to treating the risk on a National level?

As much of the threat stems from the national level, there is not a clear response to how the risk will be mitigated and treated at this stage, outside of individuals devising such strategies within a party, and not a governmental, level.

Q. What is the effective risk response to treating the risk on an Industry level?

On an industry level, managing governance failure is a difficult task outside of lobbying resources behind civic movements and other bodies which are surrogating the initiatives which agencies are meant to carry out but which, due to undue influence, or failing to implement.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

I think all risks are sufficiently covered

PROFOUND POLITICAL INSTABILITY

RYAN CUMMINGS

Director - Signal Risk

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Profound political instability will create conditions in which a government is unable to meet its most basic functions and short-term development goals whose achievement is intrinsic to the successful achievement of any longer-term strategies, specifically those as ambitious and complex as those outlined in the NDP. Furthermore, chronic political instability also has a profound impact on the local and international stakeholders upon which the South African government would be dependent on achieving its desired goals as outlined in the NDP document.

Q. Give three primary causes of this risk.

- Corruption - The loss of resources to corruption which would otherwise be allocated to public services has and will continue to elicit social unrest which, if increased in frequency and pervasiveness, could in turn lead to chronic political instability. Corruption can also lead to associated forms of political instability by influencing or promulgating unsound socio-economic policy which could benefit the few at the expense of the many.
- Political factionalism – Chronic political instability can also occur as a result of factionalism within the ruling administration. Specifically, where state resources are used by rival factions as a means of political leverage and where their allocation is equally skewed. This could see factionalism at a state level play out on a communal level, placing rival population groups at threat of conflict.
- Economic downturn – Malgovernance, corruption and misguided political stability could create economic downturn which could lead to increases in living costs, unemployment and the government's inability to provide basic public services. Such factors itself could curtail chronic political stability manifest in social unrest.

Q. What are the consequences if this risk materialises?

- Social unrest – Political instability could foster social unrest by communities aggrieved by a lack of government's ability to provide the services it is mandated to or where its provision is skewed toward a specific community or social demographic
- Conflict – Chronic political instability can also lead to conflict between social groups vying for access
- Crime – Political instability can also increase crime due to economic downturn and policing services being allocated to political fallout as opposed to anti-crime initiatives.
- Economic downturn – Political uncertainty can also lead to chronic downturn due to disinvestment and economic disruption

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Energy, Water and Utilities
- Manufacturing
- Hospitality and Tourism
- Education

Q. What are the barriers that prevent us from solving this risk?

The most apparent barrier is the constitutionality of how governance authority is both elected and secured in South Africa. The undue influence or so called 'capture' of key institutions mandated to keep checks and balances on the abuse of power by executive leadership is another barrier.

Q. What is the effective risk response to treating the risk on a National level?

Ensuring that state institutions and the judicial, legislative and executive branches of government maintain their independence and that the necessary checks and balances are imposed on these various branches of government.

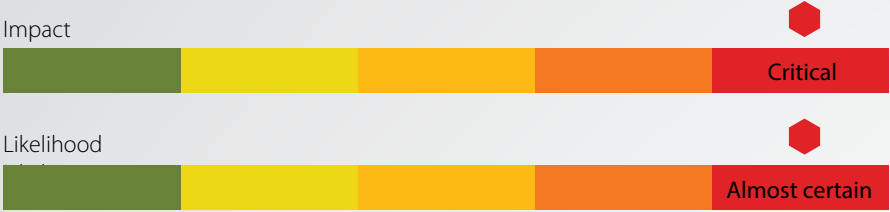
Q. What is the effective risk response to treating the risk on an Industry level?

In terms of political uncertainty, industry risk response needs to focus on strengthening institutions capable of maintaining government accountability and/or which imposes checks and balances on political institutions.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

I think all bases are covered.



M I C H A E L D A V I E S

Chief Executive Officer
ContinuitySA

Michael Davies has been involved in the Business Continuity Industry for more than ten years, having spent the last twenty years in the IT Industry with companies such as Dimension Data, Enterprise Technologies, Amdahl, Computer Configurations and MGX. Michael has predominantly been on the financial side of business with the most recent progression in 2011 being from financial director to CEO of ContinuitySA in 2011. He has spoken on organisational resilience and BCM at various conferences and heads up the largest independent BCM supplier in Southern Africa. Michael completed a B.comm degree from the University of Natal and a MBA from the Henley College in the UK. He is an affiliate of the Business Continuity Institute based in London and a member of the Institute of Directors.

Risks commented on:

- Labour strike action
- Cyber-attacks and cyber-attack non-disclosures
- Extreme weather events/natural catastrophes (drought, fires, storms, earthquakes etc.)
- Organisation's risk culture not successfully enabling the achievement of strategic and operational objectives
- Loss of reputation and severe brand damage



LABOUR STRIKE ACTION

MICHAEL DAVIES

Chief Executive Officer - ContinuitySA

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

There is a large risk to the achievement of the NDP as increasing strike action is reducing productivity of the South African work force and in turn making it harder for organisations to compete at an international level. The strike actions also leads to larger political unrest issues and government's resources are diverted to deal with crisis and emergencies rather than building the economy. Furthermore, the labour strike action is rarely passive and many of the events cause destruction leading to loss of income to affected parties. The stated aims of the NDP to provide safe and reliable public transport, physical safety and security, social protection and employment are at risk.

Q. Give three primary causes of this risk.

- Social discontent – a growing population living in poverty
- An increasing wage gap between the highest and lowest salary earners
- Incompetence and lack of managerial capability in many of the parastatals and municipalities including bribery and corruption

Q. What are the consequences if this risk materialises?

A negative impact on the economy, loss in reputation for South Africa and decreasing confidence of foreign investors to invest in the country, fatalities and injury at its worst (it is important to remember the people element).

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Manufacturing |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Hospitality and Tourism |
| • Communications and Technology | • Education |
| • Insurance and Reinsurance | • Healthcare |
| • Transport and Logistics | • Wholesale and Retail |
| • Petrochemicals, Oil and Gas | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

Leadership of the country and appropriate private organisations not taking accountability. Leaders inability to acknowledge the true situation and preparing a clear plan forward, communicated to all stakeholders and then being held accountable for that plan.

Q. What is the effective risk response to treating the risk on a National level?

Government entities, parastatals and private organisations must prepare for the inevitable strike action that is going to occur. Plans need to be created and tested for the possible strike action scenarios. Key role players to understand what the need to do. Collaboration between government and private organisations to address the issues and work productively towards a feasible solution.

Q. What is the effective risk response to treating the risk on an Industry level?

Planned, rehearsed and practiced plans including crisis communication in times of incidents and disruptions caused by strike action. This would include crisis simulations in order that all role players understand their responsibilities during incidents. Open, transparent communication to all stakeholders is vital.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Nothing further to the list

CYBER-ATTACKS AND CYBER-ATTACK NON-DISCLOSURES

MICHAEL DAVIES

Chief Executive Officer - ContinuitySA

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The risk to the NDP is that a failure of IT systems, direct denial of access to information and potentially making confidential information public could have several negative impacts. Should this happen it could lead to a myriad of issues such as loss of reputation, litigation, inability to work etc. This would obviously hamper any achievement of the NDP objectives specifically in regard to social protection (not physical but confidential information) and employment. It also potentially results in loss of data and business and service delivery interruption.

Q. Give three primary causes of this risk.

- Criminal intent for commercial reasons or terrorism leading to political instability. An example of criminal intent for commercial reasons would be ransomware on organisations' computer systems demanding payment in bitcoins for reversing the denial of access to systems and on the political side would be where Russia allegedly hacked into US IT systems during the elections
- Social justice for organisations like anonymous who make information public in a name and shame
- Some hackers perform cyber-attacks just to prove that they can

From a non-disclosure point of view

- Fear of loss of reputation in the market

Q. What are the consequences if this risk materialises?

Cyber-attacks have been around for years but are growing year after year. The attacks are becoming more public in nature as there have been a number of cyber-attacks across numerous countries. Due to improved connectivity and mobility, cyber-attacks are becoming a greater risk. Organisations failing to prepare for potential attacks are likely to experience:

- Financial loss
- Reputational loss
- Loss of confidence in the organisation by shareholders, clients, employees and suppliers

The non-disclosure of cyber-attacks by organisations fails to generate the collaborative ability of organisations to work together to protect against specific cyber-attacks and fails to warn other organisations should an organisation be impacted by a specific attack

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Manufacturing |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Hospitality and Tourism |
| • Communications and Technology | • Education |
| • Insurance and Reinsurance | • Healthcare |
| • Transport and Logistics | • Wholesale and Retail |
| • Petrochemicals, Oil and Gas | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

The ubiquitous nature of the internet and connectivity, lack of awareness of general principles of protection and the continual evolving nature of cyber-attacks.

Q. What is the effective risk response to treating the risk on a National level?

The government and parastatals creating a better awareness of the potential of cyber-attacks and facilitating work groups to deal with the issue.

Q. What is the effective risk response to treating the risk on an Industry level?

Creating industry forums to work together in collaboration to protect, detect and respond to cyber-attacks, creating better awareness in organisations and employing adequate protection measures on the organisations IT systems. Awareness around the social engineering element of cyber-attacks is also necessary.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Nothing further to the list

EXTREME WEATHER EVENTS/NATURAL CATASTROPHES (DROUGHT, FIRES, STORMS, EARTHQUAKES ETC.)

MICHAEL DAVIES

Chief Executive Officer - ContinuitySA

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Due to the disruptions that follow the extreme weather events, outages in service delivery normally have a negative impact on business and service delivery. Large disruptions can cripple businesses in numerous ways, directly if the impact is at the place of work or indirectly if employees cannot get to the place of work. These events tend to have a depressing effect on the economy which in turn will be a risk to the achievement of the NDP affecting safety and security, employment and productivity.

Q. Give three primary causes of this risk.

- Mother nature being a bigger force than humans can manage
- Cyclical climatic changes on earth over thousands of years
- Urban development creating man made obstacles in comparison to natural ways for natural catastrophes to dissipate, e.g. pavements and roads creating channels for flooding to turn roads into rivers

Q. What are the consequences if this risk materialises?

Destruction to property and assets, fatalities and injuries, business interruption, disruptions, possible loss of reputation and damage to brand.

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Manufacturing |
| • Energy, Water and Utilities | • Engineering and Construction |
| • Communications and Technology | • Mining and Quarrying |
| • Insurance and Reinsurance | • Hospitality and Tourism |
| • Transport and Logistics | • Healthcare |
| • Petrochemicals, Oil and Gas | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

Our inability to control extreme weather events, the climate and mother nature.

Q. What is the effective risk response to treating the risk on a National level?

Certain weather events are seasonally so the Government can prepare for them and have emergency services, disaster management services etc, on standby, ready to go. For example, flooding in summer in Gauteng, fires in Western Cape during the dry summers. Furthermore, collaboration between departments such as the South African Weather Services and disaster management can lead to pre-emptive or proactive management of natural catastrophes.

Q. What is the effective risk response to treating the risk on an Industry level?

Building resilience and good business continuity planning with rehearsed plans in simulations and testing of those plans lead to an effective risk response.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Nothing further to the list

ORGANISATION'S RISK CULTURE NOT SUCCESSFULLY ENABLING THE ACHIEVEMENT OF STRATEGIC AND OPERATIONAL OBJECTIVES

MICHAEL DAVIES

Chief Executive Officer - ContinuitySA

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

A lack of an adequate risk culture at an executive level has the potential of seriously limiting achievement of the NDP. Given the high probability of disruptions in execution of plans, organisations must have a well-developed risk culture to be able to withstand, respond and recover from those disruptions. Conversely, those organisations with a well-developed risk culture are building greater resilience to the impacts of disruptions or disasters. The more resilient government entities and private organisations can become the more likely the objectives of the NDP are likely to be met.

Q. Give three primary causes of this risk.

- Budget constraints within organisations and that many of the risk mitigation solutions are considered a grudge purchase – the majority of industries are under huge competitive pressures and rather focus the limited resources they have on revenue generating activities than revenue protecting measures
- Organisational risk not being taken seriously because some organisations have the mind-set that 'It won't happen to me' – a classic case of head in the sand when considering potential disruptions as there are many other items to address in the organisation
- A lack of understanding of a comprehensive risk approach to the organisation – in some cases organisations are well intentioned but just do not have the requisite skills to pro actively build a positive risk culture

Q. What are the consequences if this risk materialises?

If an organisation does not incorporate a risk culture to enable strategic and operational objectives the following consequences are likely if it is unable to deal with disruptions;

- Financial loss
- Reputational loss
- Loss of confidence in the organisation by shareholders, clients, employees and suppliers
- Potential negative impact on the community in which the organisation operates

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying

Q. What are the barriers that prevent us from solving this risk?

The reluctance to allocate resources in the form of budget and people.

Q. What is the effective risk response to treating the risk on a National level?

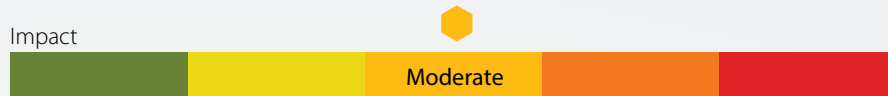
Creating a better awareness to the value of utilising a risk culture to enable strategic and operational objectives and providing positive legislation.

Q. What is the effective risk response to treating the risk on an Industry level?

Creating a better awareness within the organisation to the value of utilising a risk culture to enable strategic and operational objectives and providing guidance in the form of policy and procedures.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact

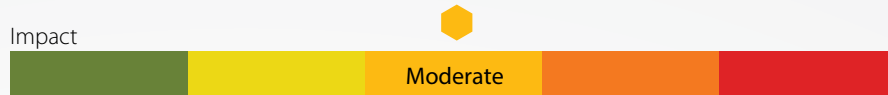


Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Nothing further to the list

LOSS OF REPUTATION AND SEVERE BRAND DAMAGE

MICHAEL DAVIES

Chief Executive Officer - ContinuitySA

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

According to the NDP's view on the role of leadership and accountability for implementation of the NDP is that political leadership is critical for effective implementation. The President and Deputy President will be the lead champions of the Plan within Cabinet, in government and throughout the country. However, there are a number of members of the current ruling party of South Africa accused of bribery and corruption (amongst other allegations) and the issues have been documented in the media for the rest of the world to see. The impact of this is a loss of reputation and severe brand damage for South Africa as a country. It has a direct negative impact on the economy of the country and foreign investment is diverted to other countries. This directly negatively impacts the NDP objectives for South Africa and the economy shrinks and organisations tend to hold cash rather than investing. It has a constricting influence on employment and growth for the country.

Q. Give three primary causes of this risk.

- The key role players being unaware of their roles in protecting reputation and brand as well as a lack of training and preparation
- A lack of understanding that certain actions or omission of the correct actions have a larger effect, amongst them damage to reputation and brand
- Inability to allocate resources – budget and people to protect reputation and brand

Q. What are the consequences if this risk materialises?

A classic case of loss of reputation and severe brand damage recently would be the IT outage at British Airways which left approximately 75,000 passengers across the world stranded. The incident itself was not good but quite recoverable. British Airways lack of crisis management and communication is the issue that exacerbated the situation resulting in severe loss of reputation and brand damage. The share price of the holding company dropped sharply after this incident. In cases like this, organisations are likely to experience;

- Financial loss
- Loss of confidence in the organisation by shareholders, clients, employees and suppliers

The lack of honest and clear communication inhibits trust with all stakeholders

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Manufacturing |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Hospitality and Tourism |
| • Communications and Technology | • Education |
| • Insurance and Reinsurance | • Healthcare |
| • Transport and Logistics | • Wholesale and Retail |
| • Petrochemicals, Oil and Gas | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

A lack of planning around communicating to all stakeholders during emergencies, crisis, disasters and disruptions. A lack of business continuity planning.

Q. What is the effective risk response to treating the risk on a National level?

Better awareness in government entities of cause and effect of actions and omissions of governance and diligence. Clear and transparent communication to departments, private sector and society.

Q. What is the effective risk response to treating the risk on an Industry level?

Planned, rehearsed and practiced crisis communication in times of incidents and disruptions. This would include crisis simulations in order that all role players understand their responsibilities during incidents. A good principle is to talk first, talk fast and tell the truth. This means that organisations do not try and avoid communication and try to keep an incident on the quiet. Open, transparent communication to all stakeholders is vital. Important to be quick to communicate to all stakeholders.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Nothing further to the list

PAUL DE KOCK

Founder and Director
IsoMetrix

Paul de Kock obtained his BSc and BSc (Hons) degrees from the University of Natal and completed the Advanced Management Programme (MAP) at the University of the Witwatersrand. Paul has 25 years of experience in the development and implementation of integrated management systems in a variety of sectors including mining, energy, petrochemical, logistics and financial services. Paul's specific areas of specialization include integrated Governance, Risk and Compliance (GRC) systems, Enterprise Risk, Compliance and HSE. Paul has worked across Africa, and is well versed in the complexities of GRC within the mining industry. Paul is a visionary in the field of GRC management systems. He developed the first version of IsoMetrix, for environmental management, in 1996 and founded Metrix Software Solutions in 2002. The company has grown to become a major player internationally, and now offers software solutions in all areas of GRC, with a focus on Health, Safety and Environment (EHS), Quality, Enterprise Risk and Governance, Compliance, Sustainability, Social Management, Occupational Health and Hygiene, Primary Healthcare & Wellness and Food Safety. Metrix also has offices in Perth, Toronto and Atlanta.

Risks commented on:

- Extreme weather events/natural catastrophes (drought, fires, storms, earthquakes etc.)
- Profound social instability



EXTREME WEATHER EVENTS/NATURAL CATASTROPHES (DROUGHT, FIRES, STORMS, EARTHQUAKES ETC.)

ROBIN BOLTON
Sustainability Specialist - IsoMetrix

PAUL DE KOCK
Founder and Director - IsoMetrix

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The increasing uncertainty and erratic nature of the occurrence and intensity of weather events and natural disasters, be they storms, droughts, increased temperatures and winds or fires makes for the planning and cleanup of these more and more difficult and costly. The unpredictability of these extreme events is real and the consequences are disruptive and destructive.

The achievement of the NDP objectives needs strong policies, real actions and importantly budget. The raising of any additional risks to the already fragile economy will result in funds being available to meet the NDP objectives unrealistic.

Although the direct risk of these extreme events to the achievement of the NDP objectives may not be that clear, there is no doubt that the national coffers will need to be accessed to pay for the consequences of these events, which, in some cases, may be hefty. This reduces the quantum available to support the NDP.

RSA can ill afford not to attract investment and grow the economy. If potential investors as well as those currently investing in RSA do not feel comfortable with how the country is planning to manage extreme weather events and the consequences thereof, they may well look and establish their operations elsewhere. RSA needs to send a clear message that it is proactive about this topic and serious about understanding these risks, putting measures in place to mitigate the effects and protecting investments.

In terms of sectors which will be affected, I believe agriculture will be mostly impacted upon due to changing rainfall patterns (intensity and distribution), rising temperatures and the greater occurrence of fires all of which will negatively affect productivity. Tourism could also suffer through cities such as Cape Town being impacted by water shortages and areas of natural biodiversity being affected by drought.

The objectives of the NDP can still be achieved with the risks posed by extreme weather events and natural catastrophes. It is however, how well RSA research, understand the risks and plan for and manage the consequences which will instill confidence in the country which hopefully, in some small way, helps the economy to grow and thus makes meeting the objectives slightly more possible.

Q. Give three primary causes of this risk.

- Changing weather patterns (distribution and intensity of rainfall, droughts, rise in temperatures etc.)
- Reduced vegetation cover leading to erosion and unstable ground conditions
- Urbanization resulting in more intense storm water runoff thereby affecting water courses

Q. What are the consequences if this risk materialises?

- Infrastructure damage
- Vegetation damage
- Crop, forestry and general land damage
- Soil erosion
- River system damage
- Tourism negatively affected
- Business confidence reduction

Q. Which industry will be most affected if this risk materialises?

- Energy, Water and Utilities
- Insurance and Reinsurance
- Engineering and Construction
- Hospitality and Tourism
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

I do not believe that there are any material barriers that prevent RSA from preparing and planning for the consequences of these risks, besides a lack of awareness, urgency and will. Certain barriers however do exist in managing and reducing the causes of the risks which are within our control but certain barriers exist which are outside of our control as more on a global scale.

Q. What is the effective risk response to treating the risk on a National level?

To start with, our Government needs to adequately research the causes, likelihood and consequences of these risks (including regions and sectors most likely to be affected) to then be able to appropriately plan for reducing them (if possible) as well as mitigating the consequences thereof. Some responses which can be considered on a National level include:

- Ensuring infrastructure (such as buildings, dams, roads) is designed to withstand the higher likelihood and consequence of these risks
- Adequately designed and constructed urban storm water management systems including ongoing maintenance to ensure they cope with extreme rainfall events
- Undertaking water supply studies now to ensure sufficient storage facilities are available
- Adequately funded, resourced and skilled disaster response teams to deal with the events and the consequences
- Information sharing with regions and sectors likely to be affected so that appropriate planning and mitigation can occur
- Provide education and awareness on this topic to all

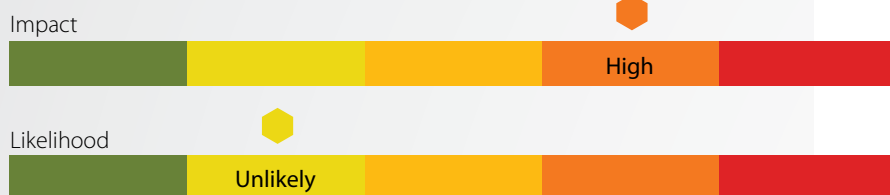
Q. What is the effective risk response to treating the risk on an Industry level?

Different industries will be affected in different ways and the likelihood and impacts will differ across regions of our country. Each industry needs to understand how they will be affected and what they need to do to prevent their operations from being disrupted. As discussed previously, Government has a responsibility and role to play in researching these risks and providing the findings to the public.

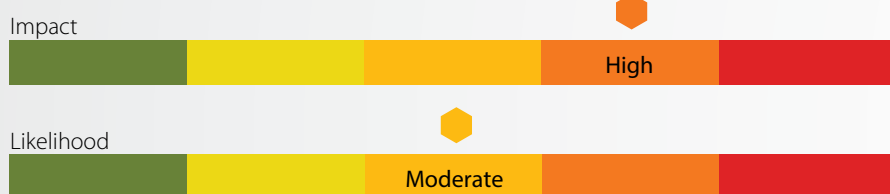
Industry and Government need to work together in planning for and implementing realistic measures to reduce the impact of these extreme weather events and catastrophes.

All industry players, be they private or state owned, then need to implement the measures agreed to with Government. This may well have cost implications but the consequences of not adequately planning for these risks could be disastrous. Perhaps Government can assist industry through some form of incentive scheme else a penalty system to ensure that where applicable, industry implements the measures necessary to cater for these risks.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No. (Lack of will and urgency probably comes under the Leadership category)

PROFOUND SOCIAL INSTABILITY

ROBIN BOLTON
Sustainability Specialist - IsoMetrix

PAUL DE KOCK
Founder and Director - IsoMetrix

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The achievement of the NDP objectives needs strong policies, real actions and importantly budget. The raising of any additional risks to the already fragile economy will result in the funds being available to meet the NDP objectives more difficult to justify.

RSA can ill afford not to attract investment and grow the economy. If potential investors as well as those currently investing in RSA do not feel comfortable with the occurrence, motives and consequences of social instability and how the country is planning to manage this, they may well look to establish their operations elsewhere thereby negatively affecting our economy.

Social instability is not a new risk to RSA and is a real threat to our industries. This instability will continue until certain fundamentals are addressed and the situation improved. Social instability leads to an unstable and unreliable work force as well as posing a political risk to the country.

Social instability can also lead to organized and wildcat strikes and stoppages due to social unrest. Mining in particular has been hurt by these events. Manufacturing and Agriculture have also been affected, albeit to a lesser extent. Social instability has a knock on effect. Operations can suffer productivity loss and reputational damage. Reduced productivity results in reduced profits and less Royalties and taxes to the Government. Less available taxes puts pressure on treasury to fund programs such as the NDP's. Foreign investors are also not comfortable with committing funds to a country where there is an unstable workforce.

Social instability can however be considered a driver for the implementation of NDP's. This type of instability is a result of various factors, with lack of employment and opportunity, inequality, lack of education and skills, poor living conditions, low remuneration, unfulfilled promises, political interference all playing a part. Through the NDP's many of these factors could be addressed.

Q. Give three primary causes of this risk.

- Unemployment and inequality
- Unfulfilled promises by Government and Industry
- Lack of education, skills and opportunities

Q. What are the consequences if this risk materialises?

This risk has already materialised. The consequences are current being felt and include:

- Dented country reputation leading to the reduction of investment
- Disrupted operations leading to reduced profits and royalties and taxes collected
- Weakening rand due to poor foreign lending rates

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Energy, Water and Utilities
- Petrochemicals, Oil and Gas
- Engineering and Construction
- Mining and Quarrying
- Education
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Lack of will and understanding by both Government and industry to determine the causes and address them
- Populist policies and short term vision from Government
- Widespread corruption at all levels
- Lack of economic growth
- Lack of employment opportunities

Q. What is the effective risk response to treating the risk on a National level?

Both Government and big business have a responsibility and opportunity to address this risk on a national level. Governments role to reduce social instability and the risk it poses should include :

- Addressing poor living conditions which many of the workforce find themselves with
- Creating jobs
- Growing the economy
- Addressing inequality
- Identifying where social instability is real or potentially likely to develop and address the causes

Big businesses who have a national footprint can also play a role. They can positively influence people and communities by implementing policies which have a positive social spin off, addressing social ills within their sphere of influence, provide advice and assistance to those in need, be aware of the state of society they work in so as to be able to identify and address risks which could lead to instability.

The economic sectors where the effects of social instability are most notably felt, is mining and manufacturing. Although progress has been made, unfortunately there is still a way to go before the risk posed to these sectors by social instability will be under control.

Q. What is the effective risk response to treating the risk on an Industry level?

All industries have a role to play. In general and as a minimum, industry must:

- Comply with Government Acts and Regulations, policies and plans
- Obtain a 'Social License to operate' through responsible and adequate stakeholder engagements and living up to their promises and commitments
- Identify opportunities and implement Corporate Social Investments
- Understand the context that they work in and address social needs where possible
- Ensure that the procurement of goods and services complies with policies and standards which leads to the upliftment and benefit of our society

To prevent the occurrence of protests, strikes and any other disrupting behavior by employees, communities or society as a whole, industry players can implement measures to predict the occurrence of these events and intervene early enough to prevent there occurrence. There are various practices and methods being used as early warning systems to warn organizations of a pending risk, which allows them to address the causes before the risk materializes.

Businesses must avoid being sucked into corrupt relationships and practices which reduce the tax base, reduce delivery and damage the economy.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No

K R I S D O B I E

Manager for Organisational Ethics
The Ethics Institute

Kris Dobie is Manager for Organisational Ethics at The Ethics Institute, based in Pretoria, South Africa. His main focus is on ethics management in the public sector with a special interest in corruption prevention. He served on the Global Reporting Initiative's G4 anti-corruption working group, and he also serves on the Gauteng Province Anti-Corruption Task Team. He holds a degree in Landscape Architecture from the University of Pretoria, as well as MPhil in Workplace Ethics (Cum Laude) from the same institution.

Risks commented on:

- Unmanageable fraud and corruption



UNMANAGEABLE FRAUD AND CORRUPTION

KRIS DOBIE

Manager for Organisational Ethics - The Ethics Institute

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

It is a critical risk as it impacts go far beyond individual incidents of fraud and corruption. It has the potential to destabilise the country through weakened governance and political instability, leading to a breakdown of trust, which in turn impacts on investment and growth.

Q. Give three primary causes of this risk.

- Poor political leadership
- Breakdown of parliamentary accountability culture
- Breakdown of key state anti-corruption agencies

Q. What are the consequences if this risk materialises?

- Breakdown of country morale and morality
- Political instability
- Weakened governance
- Loss of faith in government
- Economic outflows and lack of investment

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Manufacturing |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Hospitality and Tourism |
| • Communications and Technology | • Education |
| • Insurance and Reinsurance | • Healthcare |
| • Transport and Logistics | • Wholesale and Retail |
| • Petrochemicals, Oil and Gas | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

- Party loyalty trumping corruption concerns
- Proportional representation system undermines accountability to citizens
- Disinterested and disillusioned voter-base with a lack of access to opportunities

Q. What is the effective risk response to treating the risk on a National level?

- Political change
- Restoring the integrity of key institutions

Q. What is the effective risk response to treating the risk on an Industry level?

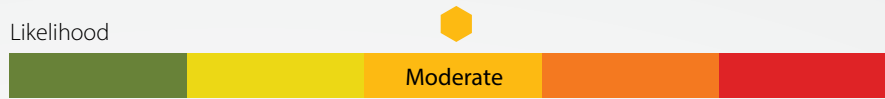
- Industry partners joining forces against corruption (Collective action)
- Promotion of industry ethical standards
- Ethical governance within organisations
- Engagement with committed government role-players

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood

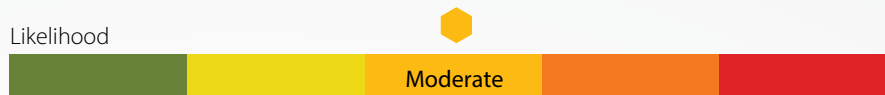


Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No



H A R O U N D O C R A T

National Senior Commissioner
Commission for Conciliation, Mediation and Arbitration (CCMA)

Haroun Docrat is the National Senior Commissioner for the Collective Bargaining and Outreach Department of the Commission for Conciliation, Mediation and Arbitration (CCMA). The CCMA is an independent, juristic body that helps to resolve disputes and offers advice and training on labour relations. He has been at the CCMA since its inception and was appointed as a Commissioner in 1999. He occupied various portfolios and his current portfolio focuses on three priority areas: to facilitate improved collective bargaining to advance labour market stability, intensify dispute management and prevention interventions to reduce conflict in the workplace and to enhance employment security mechanisms to save jobs. The scope of the department ensures that the CCMA adapts to the dynamic challenges within the labour market in order to promote stability and advance economic growth.

Risks commented on:

- Profound social instability



PROFOUND SOCIAL INSTABILITY

HAROUN DOCRAT

National Senior Commissioner - Commission for Conciliation, Mediation and Arbitration (CCMA)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The risk is relevant and contributes to increased service delivery and community driven protests. It also gives rise to xenophobia.

Q. Give three primary causes of this risk.

- Political instabilities especially in local government
- High unemployment
- Lack of service delivery
- Job seekers relocating to economic hubs which places a burden on the local government structures to deliver basic services

Q. What are the consequences if this risk materialises?

- Increase in crime
- Poverty
- Community based protests
- Loss of investor confidence
- Political instability

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Manufacturing |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Hospitality and Tourism |
| • Communications and Technology | • Education |
| • Insurance and Reinsurance | • Healthcare |
| • Transport and Logistics | • Wholesale and Retail |
| • Petrochemicals, Oil and Gas | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

- Decline in fiscus to different entities in government
- Rising labour cost and lack employment opportunities
- Ineffective roll out of government initiatives due to fraud and corruption

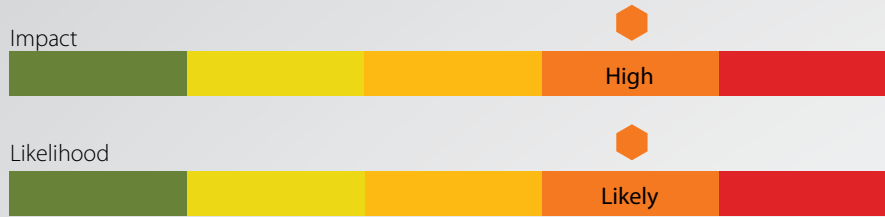
Q. What is the effective risk response to treating the risk on a National level?

- Effective implementation of proper governance processes
- A tailored approach, taking into consideration unique Regional dynamics and allocation of resources
- Political Stability

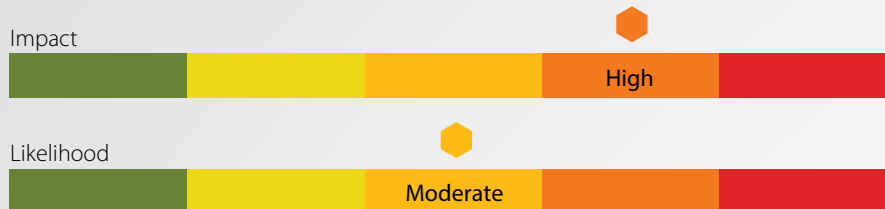
Q. What is the effective risk response to treating the risk on an Industry level?

- Proper implementation of governance processes
- Implement project labour agreements in areas where companies operate
- Training and development opportunities to the communities
- Potential business to local entrepreneurs

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Increasing mechanisation in certain industries or sectors leading to high unemployment
- Skills shortages that contribute to labour market volatility

W A L T E R E H R L I C H

Director
Retlaw Fox

Walter Ehrlich is a Chartered Director CD(SA) specialising in Strategy and Risk with a passion for building better boards in the private, public, and non-profit sector. He held a number of senior positions including Executive Director of Total Botswana, and Retail Strategy & Investment Manager of Total South Africa. He spent three years based in Paris as part of the Corporate Audit Department of the Total Group. Upon his return to South Africa, he was appointed head of the Commercial Fuels Division, responsible for the Mining, Agricultural and Commercial sectors. Later he was tasked with the responsibility of modernising the Internal Audit Function, after which he was appointed Consulting Manager, responsible to the CEO for developing and implementing Integrated Risk Management, and various other GRC projects. He served as Chairman of the Total Corporate Risk Committee and participated in the Audit Committee of the Board. After leaving the corporate world he founded Retlaw Fox Associates, which specialises in risk management training and coaching for boards, directors, executives, senior managers, and risk managers. Walter has a BA (Law) degree from Rhodes University and an MBA degree from Henley Business School at Reading University (UK). His MBA specialised in Strategy and Change Management, and concluded with a dissertation in Enterprise Risk Management. Walter is a Director of World Vision SA where he serves on the main board and as Chairman of the Finance, Audit, and Risk Committee, the Managing Director of The Advocates of Hope NPC, and a Steerco member of PRMIA (The Professional Risk Managers International Association) SA. Walter is part of the Enterprise Risk Management team at SARS.

Risks commented on:

- Failure of governance (public and private)



FAILURE OF GOVERNANCE (PUBLIC AND PRIVATE)

WALTER EHRLICH

Director - Retlaw Fox

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Governance fails when leaders fail.

Governance, whether in the public or the private sector, requires the exercise of ethical, rational and effective leadership by the governing body and management towards the achievement of an ethical and accountable culture, good performance or service delivery, effective control, efficient use of resources (including the use of taxpayer's money), and legitimacy. No one influences governance in an organisation more than its leaders and thus, if governance fails, leaders have failed and should be held to account, and be compelled to give an account.

Ethical leadership is present when there is integrity, accountability, competence, responsibility, fairness and transparency. It involves the anticipation, assessment, and treatment of the negative impacts of the organisation's activities and outputs on the triple-context of society, the economy, the environment as well as the six capitals (manufactured, intellectual, human, social and relationship, and natural capital). When ethical leadership is absent governance is almost certain to fail.

To achieve the objectives of the National Development Plan, which endeavours to achieve a better life and a sustainable future for the country and all its citizens, the public and private sector of South Africa Inc. must be led and governed in a way that manages risk and actively promotes the achievement of these objectives.

Yes, effective leadership is results-driven and yes, it is about achieving organisation-specific strategic outcomes but good and effective leadership must go beyond the narrow focus on an organisation's own objectives and earnestly and responsibly take into account the impact its actions have on society, the economy, and the environment.

South Africa's current news feed is saturated by stellar and seemingly endless failures in governance, not only in state-owned entities but also in private sector companies, which directly threaten the attainment of the NDP outcomes. Bring state-capture into the mix and governance failure emerges as a critical risk, not only to the NDP objectives but to the sovereignty of the state.

Q. Give three primary causes of this risk.

- Ineffective and unskilled governing bodies
- Ineffective and unskilled management / cadre deployment
- Greed, corruption and narrow self interest

Q. What are the consequences if this risk materialises?

- Rating agency downgrades
- Higher cost of capital
- Failure to realise the objectives of the NDP
- Service delivery breakdown
- Organisational failure / state failure

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Petrochemicals, Oil and Gas |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Education |
| • Communications and Technology | • Healthcare |
| • Insurance and Reinsurance | • Wholesale and Retail |
| • Transport and Logistics | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

- Political interference in the economy
- No minimum level of competence for directors
- Patronage / cadre deployment on the governing bodies of critical state institutions
- Poor support of director development programmes leading to sub-competent directors

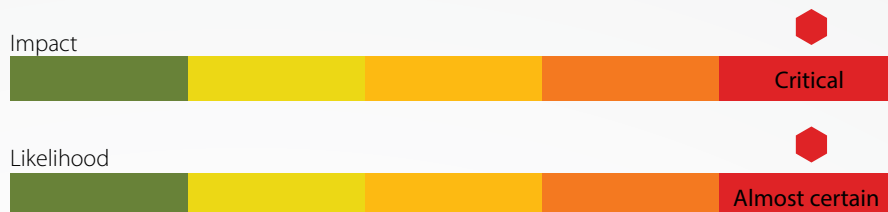
Q. What is the effective risk response to treating the risk on a National level?

- Transparent and competitive processes to appoint ethical and competent heads of critical institutions
- Appointing professionally certified and experienced directors (e.g. Chartered Director's)
- Training directors according to the IoDSA Director Competency Framework
- Effectively applying King IV

Q. What is the effective risk response to treating the risk on an Industry level?

- Transparent and competitive processes to appoint ethical and competent heads of critical institutions
- Appointing professionally certified and experienced directors (e.g. Chartered Director's)
- Training directors according to the IoDSA Director Competency Framework
- Effectively applying King IV

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

The corrupt and self-serving conclusion of a nuclear deal by captured state officials could lead to SA being locked into a deal we do not need and cannot afford which could result in the loss of fiscal sovereignty and impoverishment of future generations of South Africans.

By following a radically transparent and exemplary governance process free from political or foreign interference coupled to a rigorous needs and affordability analysis the right decisions could be made to secure the sustainable provision of SA's energy requirements. Ultimately a political solution is needed.

B E R E N I C E F R A N C I S

Group Commercial Executive Imperial

Berenice Francis, IRMSA President, is the Group Commercial Executive of Imperial. As a group EXCO member, her portfolio includes the development and monitoring of the implementation of frameworks for governance, risk and compliance across the Imperial group. She has been actively involved in IRMSA since 2006, where she has been a member and later chair of the membership committee, a Vice President of EXCO and chair of the Education and Technical Committee. She was the recipient of the 2015 IRMSA Risk Manager award. She holds a BCom(Acc); BCompt (Hons) and a MBA. Professional memberships include IIASA, IRMSA and the IoD. She is an Associate member of IRMSA, a Certified Internal Auditor (CIA) and Certified Control Self Assessor (CCSA).

Risks commented on:

- Government policy, legislative and regulatory changes and uncertainty



GOVERNMENT POLICY, LEGISLATIVE AND REGULATORY CHANGES AND UNCERTAINTY

BERENICE FRANCIS

Group Commercial Executive - Imperial

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Legislation provides an opportunity for South Africa to redress legacy laws to reflect the values and priorities of today's society.

For individuals and business it sets a framework and rules within which to build models within which to operate in South Africa, both strategically and operationally.

The alignment of laws to NDP priorities is not always clear and the plethora of legislation can often be confusing and frustrating in terms of the cost of implementation. In recent years, the multi-objectives that certain laws, their accompanying regulations and punitive actions, has created scepticism about the objective and understanding of law maker's understanding and appreciation of business and society.

Q. Give three primary causes of this risk.

- Misaligned priorities
- Changes in ministerial heads and officials
- Inadequate consultation around market impact and cost

Q. What are the consequences if this risk materialises?

- Unintended cost and practicality of implementation
- Missed opportunity to work in cohesion and have positive impact on society
- Inability to enforce the laws we have
- Dismissiveness and disregard for rule of law and governments roles

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Manufacturing |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Hospitality and Tourism |
| • Communications and Technology | • Education |
| • Insurance and Reinsurance | • Healthcare |
| • Transport and Logistics | • Wholesale and Retail |
| • Petrochemicals, Oil and Gas | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

Time taken to change laws is long and the process for consultation is not necessarily adequate to ensure fair representation of all parties. Relationship with policy makers and stakeholders need to be improved so that mutual trust is reestablished.

Q. What is the effective risk response to treating the risk on a National level?

We need a framework incorporating issues such as:

- Does the proposed legislation require a process change response?
- Does it impact my operating model and my ability to compete?
- Does the legislation impact how my industry operates and necessitates strategic changes to my business?
- Does the proposed legislation impact any future growth opportunities?

When new legislation is introduced the applicable organisation needs to understand the following key matters:

- What changes?
- How will the legislation be enforced?
- Who is the responsible government agency?
- What are the penalties attached to non-compliance – be they reputational, losing social licence to operation, fines or convictions?
- What is the proposed time frame and how soon should I react?

Q. What is the effective risk response to treating the risk on an Industry level?

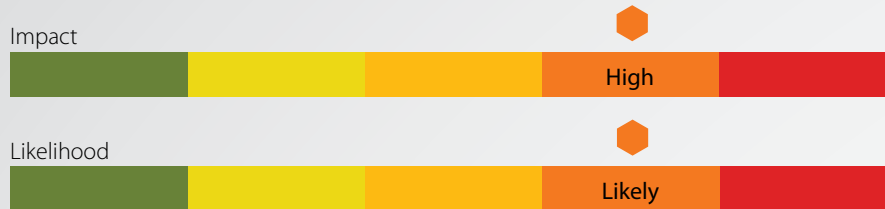
Prevention / influence before changes:

- Industry bodies need to be more active and ensure representation on all policy changes, not just ones where it is believed to have possible adverse consequences. More active and voluntary participation by society and subject matter experts in government would ensure more balanced approaches to legislation.

Once a law is enacted

- Work with policy makers to contribute positively, as opposed to finding ways to be legally non-compliance

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



RICHARD FOSTER

Owner and Managing Member
Richard Foster and Associates

Richard, a Chartered Secretary and a Chartered Director holds post graduate qualifications in Corporate Law (Wits), Tax Law (RAU) and Corporate Governance (RAU), held senior management positions in Anglo American, Mondi, and Old Mutual. during his corporate career, and been overall responsible inter alia for Corporate Governance, Corporate Secretariat, Risk, Corporate Insurance, Legal Services as well as overall line management responsibility for certain short-term insurance schemes. Further held non-executive directorships/chairmanships in various regulated companies both in South Africa and overseas. Richard has since 2014 been operating an independent consultancy specialising in corporate governance and also serves as a professional Independent Non- Executive Director/ Chairman on various boards / board subcommittees including regulated entities within the Financial Services sector.

Risks commented on:

- Lack of leadership



LACK OF LEADERSHIP

RICHARD FOSTER

Owner and Managing Member - Richard Foster and Associates

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

I suggest this risk ranks amongst the top five at both country and industry level in public and private sectors alike. Good governance or good corporate governance can best be described as defined in the King IV Report on Corporate Governance for South Africa 2016 as "the exercise of ethical and effective leadership by the governing body towards the achievement of the following governance outcomes

- Ethical culture
- Good performance
- Effective control
- Legitimacy"

Ethical leadership and effective leadership should complement each other to ensure the achievement of strategic objectives and positive outcomes for any organisation in an ethical manner based on integrity competence, responsibility and accountability.

It is suggested that the absence or lack of either of these elements in such leadership particularly as espoused in King IV, would lead to the contrary outcomes thus inter alia, negatively impacting the current and future economic growth of the country. These concepts I suggest are interchangeable at a country or industry level and accordingly would severely impede the achievement of the objectives of National Development Plan and delivery of the attendant policy objectives. I further suggest it is increasingly difficult for leadership in industry to succeed if such leadership is lacking in government. Industry and government need to operate in parallel in order to create the efficient capital and financial markets. The lack of funding and or attendant increase in cost of capital impact both government and industry alike. It should be remembered that measurements of governance can be made in terms of multiple factors which are not always consistent and may impact the perceptions and behaviours of those who are governed and allow the political and commercial interests of those dominant forces to be imposed without regard to the qualitative dimensions of good governance.

Q. Give three primary causes of this risk.

- Lack of ethical and effective leadership including lack of competent or merit based appointments in leadership positions in key departments and /or institutions
- Lack of role clarity in leadership particularly between shareholder ,governing body and management and the resultant dynamics and interference that can result from same
- Lack of accountability by those occupying key leadership positions in respect of shortfalls in delivery of strategic objectives in an ethical manner

Q. What are the consequences if this risk materialises?

Lack of delivery of policy and strategic objectives

Unethical culture pervading in an organisation set by the tone from the top resulting in fraud perpetrated on shareholders and or other material stakeholders as the case may be. Possible contagion of such a culture within key stakeholders such as customers and suppliers

Economic failure of organisations both public in the and private sector

Faltering economy due to under performing or collapse of key institutions or organisations

Loss of Investor confidence in the country as a whole and a downgrading of its credit status by global rating agencies i.e. "The Junk Bond Dilemma"

The poor performance of commerce and industry increases the risk of lack of funding for government through the respective tax regimes and reduced contribution by business to society in the desired positive manner of operating in the triple context

Further , the aversion to the payment of due taxes by business due to the perception that they will not be effectively utilised and /or further be squandered or misappropriated results in more aggressive tax strategies

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Petrochemicals, Oil and Gas |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Education |
| • Communications and Technology | • Healthcare |
| • Insurance and Reinsurance | • Wholesale and Retail |
| • Transport and Logistics | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

- Difficulty to hold members of leadership bodies accountable for their actions
- Challenges to change the status quo at leadership level and ensure the necessary changes are made to ensure inter alia good corporate governance is driven down through the various organisations on a qualitative basis
- Complexity, extent and depth of the relationships that exist between public and private sector and challenges to address the issues effectively without unintended consequences for various organisations and their attendant stakeholders where an organisation considered key to the companies sustainable economy and /or social stability collapses
- Training directors according to the IoDSA Director Competency Framework
- Effectively applying King IV

Q. What is the effective risk response to treating the risk on a National level?

To ensure that responsible ethical and effective leadership is present in the necessary government structures, further that sufficient focus is placed on ensuring key departments and entities have strong ethical and competent leadership to implement the relevant policy / strategy within mandate. That priority be given to ensuring good corporate governance is adhered to and particularly that an ethical culture is proactively addressed throughout the organisation and the requisite change management initiatives put in place to achieve same.

That members of the leadership in organisations are suitably held accountable for any transgressions of good corporate governance as provided for by the relevant legislative frameworks in place.

Q. What is the effective risk response to treating the risk on an Industry level?

- Effective response would be similar to the above focussing on the implementation of good corporate governance within the organisation particularly around the appointment of a balanced and effective governing body which in turn understands clearly its role and responsibilities including specifically what is required from a good corporate governance perspective. Further, that the principles of corporate governance are suitably applied on a proportionate basis in relation to the organisation to achieve the four good governance objectives as earlier stated. A well balanced and effective governing body will be key in achieving this.
- The need and value of training for members of governing bodies in this regard particularly where they may be inexperienced or lacking in the necessary skills should be specifically noted and proactively addressed.
- The role of the shareholder particularly institutional investors in good corporate governance as responsible investors, in inter alia giving the necessary input into the appointment of the members of a governing body and exercising its voting rights in a proactive and responsible manner to ensure good governance should be further noted.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Comfortable with the risks outlined.

F R E D G O E D E

Senior Lecturer

Centre for Applied Risk Management (UARM), North-West University

Fred is a senior lecturer at North-West University where he teaches the MCom in Applied Risk Management in Johannesburg at the Centre for Applied Risk Management (UARM), after a 25 career in managing Safety, Health and Environmental (SH&E) risks. He is current research interest focusses on sociotechnical systems - understanding the complex interaction between human systems and technological systems, with for some, the growing concern about automation, systems and artificial intelligence.

Risks commented on:

- Extreme weather events/natural catastrophes (drought, fires, storms, earthquakes etc.)
- Organisation's risk culture not successfully enabling the achievement of strategic and operational objectives



EXTREME WEATHER EVENTS/NATURAL CATASTROPHES (DROUGHT, FIRES, STORMS, EARTHQUAKES ETC.)

FRED GOEDE

Senior Lecturer - Centre for Applied Risk Management (UARM), North-West University

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Extreme weather events and catastrophes have become the new normal to many countries and organisations around the globe. It becomes hard to view the catastrophes as natural, considering that climate science has predicted increased frequency and severity of these events due to man-made climate change exacerbated by poor resource management in some countries. We remain notoriously bad at predicting short term and seasonal weather events, but long term climate change has been on the cards since decades ago. Nevertheless, the respondent focus is moving away from the root causes such as emissions from fossil fuels and governance, towards resilience of our systems to deal with the increasing risk. Even if emissions reduce today, the consequences of elevated greenhouse gas emissions in the atmosphere will be with us for centuries to manage.

The resilience of our systems require attention to disaster management, systems and infrastructure. Since all of the latter are in dire need of upgrade in South Africa, combined with sluggish economic growth since 2008, extreme weather events and catastrophes are likely to have its impact felt in South Africa. Since reaching the NDP 2030 objectives are dependent on resilience especially in infrastructure, extreme weather and catastrophes pose a risk to the country.

Q. Give three primary causes of this risk.

- More than a century of greenhouse gas emissions from fossil fuel burning has elevated carbon dioxide concentrations to levels not seen for 800 000 years.
- The meteorological, physical, chemical, climate and natural impacts combined with feedback loops and tipping points are hard to predict from historic data, giving rise to major risks. Impact of governance failures are easier to demonstrate from the past.
- Typical human responses to this uncertainty such as ignorance, short-term ambitions, biases and incompetence can cause major losses due to insecurity of food and water supplies, and damage to national and organisational assets.

Q. What are the consequences if this risk materialises?

- Death, starvation, hunger with resulting conflict, war, and migration challenges can result for the ill-prepared countries, regions and organisations for extreme weather events.
- Not everyone will be losers- there will be a few winners too (through fate or plan) where some countries and organisations will profit from the demise of others.

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Petrochemicals, Oil and Gas |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Education |
| • Communications and Technology | • Healthcare |
| • Insurance and Reinsurance | • Wholesale and Retail |
| • Transport and Logistics | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

- Lack of leadership and ignorance
- Poor macroeconomics and economic stagnation
- Failure of the state, with a resultant focus on regime and political survival only
- Failure of inadequate infrastructure
- Poor governance in the public and private sector
- Fraud and corruption stalling investments
- Lack of innovation and resistance to change

Q. What is the effective risk response to treating the risk on a National level?

Implementation of the National Climate Change Response Plan launched in November 2011 at the United Nations Framework Convention on Climate Change Conference Of Parties (COP11) in Durban in the presence of more than 200 countries, is largely overdue, but contains all the elements of an effective risk response. The risk response includes attention to governance, resilience, financing, disaster management and oversight.

Despite ascribing accountability to relevant departments, the implementation of the climate change response remains to be seen as largely the responsibility of Department of Environment Affairs. Disaster management has been effective in some regions to respond to adverse weather events and catastrophes.

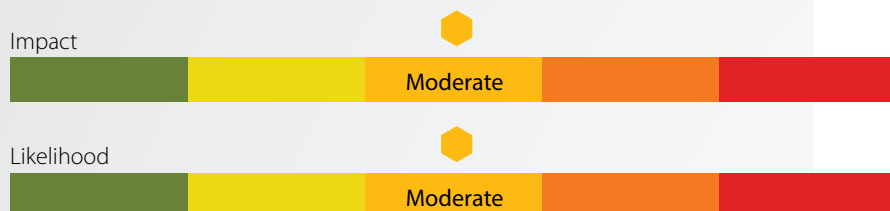
Opportunities to grow renewable energy in South Africa, remains to be seen as a risk by the large organisations with fossil fuel interests.

Competition for country resources in Africa have often lead to civil unrest, conflict, war, death and migration in the past. South Africa should jealously be protecting the resources of food, water, minerals and land the country offers, and manage the risk associated with adverse weather events and catastrophes.

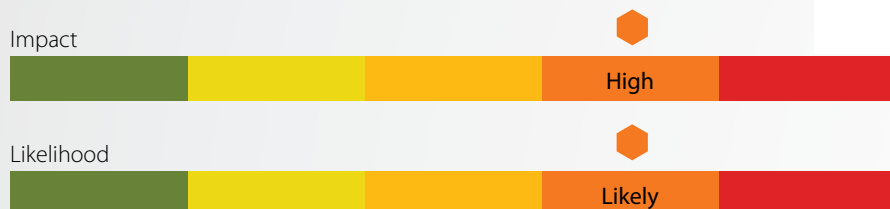
Q. What is the effective risk response to treating the risk on an Industry level?

- The energy, infrastructure and water industry have the opportunity to grow resilience into the system. Unfortunately, two of the largest energy industries in South Africa (one state owned, one private) have both opted to continue support for fossil fuel sector growth, while actively withdrawing support for renewable energy business growth.
- Continued support of industry to find innovative solutions and to cooperate with government is an effective response.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

None

ORGANISATION'S RISK CULTURE NOT SUCCESSFULLY ENABLING THE ACHIEVEMENT OF STRATEGIC AND OPERATIONAL OBJECTIVES

FRED GOEDE

Senior Lecturer - Centre for Applied Risk Management (UARM), North-West University

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

National cultures have been studied for decades and culminated in the 1960s in national dimensions of culture as defined by Hofstede, Schein and others- but these studies are complex in multicultural countries like South Africa.

Also in public and private organisations- from the most corrupt to the most exemplary organisations- have a prevailing risk culture, which intends to assist in achievement of objectives. Subcultures can also exist in large organisation departments, or in disciplines in the organisation such as internal auditors, for example.

During the past decade, major scandals rocked South African and international organisations and increasingly culture is blamed as a leading cause. Either shadow objectives were set for the organisation that were not part of the formal organisation systems, which would point to lack of integration of risk in the organisation culture. Or, risk culture demonstrated unacceptable practices in the organisation. These practices that reflect the underlying culture of organisations has become the focus of our NWU research, since culture cannot be measured per se and is very hard to change. But there is hope.

Typical organisational practices which instill a certain organisation culture includes incentives, tone from the top, management systems, structures and technological systems, to mention a few. Collectively, private and public enterprises can make the NDP goals for 2030 attainable by the careful selection of those practices that will ensure both country and company goals serve the long-term benefit of all stakeholders.

Q. Give three primary causes of this risk.

- Unrealistic (wrong) strategic and operational objectives (for example expecting organisation and country profits or growth in a depressed global economy); which leads to:
 - Development of a culture that manifests in practices such as inflated incentives, over promising tone from the top, inadequate systems and structures and unrealistic expectations; which can result in: Non-achievement of strategic and operational objectives as envisioned in the NDP for 2030.

Q. What are the consequences if this risk materialises?

- Public and private sector organisations' failure to develop an adequate culture can result in the manifestation of many other risk types as identified by IRMSA members:
 - Ongoing corruption, fraud, theft, weak rule of law; which leads to: Violence, instability, illicit trade, organised crime and labour unrest and eventually...and non-attainment of NDP objectives in 2030 or at worst, a failed state

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Petrochemicals, Oil and Gas |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Education |
| • Communications and Technology | • Healthcare |
| • Insurance and Reinsurance | • Wholesale and Retail |
| • Transport and Logistics | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

- Lack of trust: If all the actors do not cooperate and distrust prevails, the lack of cooperation will prevent that adequate practices are established
- Limited integration: If the NDP2030 is implemented in a haphazard way without a service delivery culture, associated infrastructure and maintenance, technology and systems will not be in place to achieve 2030 NDP goals
- Civil unrest: inclusion of all people and structures will be required to deliver on the NDP goals

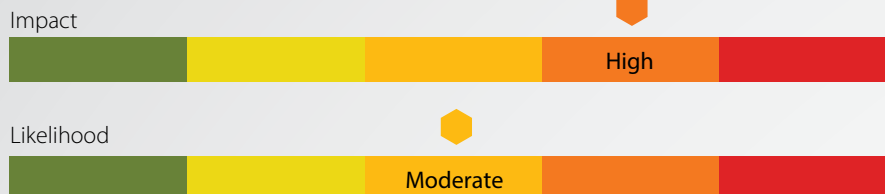
Q. What is the effective risk response to treating the risk on a National level?

While the culture could be inadequate in some organisations to obtain long term goals, an effective response may want to focus on cultures that get it right. For example, apply rule of law; focus on a positive risk culture to identify opportunities through innovation, hard work, flexibility and focus; caring and nurturing; agility and adaptation and using the success stories that exist.

Q. What is the effective risk response to treating the risk on an Industry level?

Compliance, agility and adaptation, productivity; innovation are some of the responses from industry required towards achieving 2030 NDP goals.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

None

S Y G O U R R A H

General Manager Actom Power Systems

With more than two decades of experience as an electrical engineer, Sy Gourrah also holds a number of qualifications including a Bachelor in Engineering (Electrical & Electronics), Masters in Business Administration and Government Certificate of Competency. Currently, she is the General Manager for the Power System division within Actom. In this role, she leads the division that is responsible for the designs and execution of turnkey projects, substations and projects ranging from 6.6kV to 400kV. Sy has also served as the president of the Association of Municipal Utilities (AMEU) from 2008 to 2010 and been on the executive council since 2001 until 2011. She was the first female president of the AMEU. She was instrumental in changing the AMEU constitution to include more women on the executive thus paving the way for the next female president. She is also a fellow member of the SAIEE and served as a council member since 2012 to date. She is the Chairperson of the Professional Development committee and newly elected Junior Vice President of the (SAIEE). She is a professionally registered Engineer and an active volunteer with the Engineering Council of South Africa (ECSA) where she is the Chairperson of the Engineering Program Accreditation Committee (EPAC). She is an international accreditor for engineering programs in Washington Accord recognised countries and participates in accreditation of South African University programs. She was also part of the advisory team to the Deputy President on the Eskom turnaround strategy in 2014.

Risks commented on:

- Failure of, and/or inadequate critical infrastructure



FAILURE OF, AND/OR INADEQUATE CRITICAL INFRASTRUCTURE

SY GOURRAH

General Manager - Actom Power Systems

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

- The risk of failure or inadequate critical infrastructure is a risk to the achievement of the NDP objectives. The objectives that will be affected would be the developmental growth in economic infrastructure, increase of GDP and safer communities
- Electricity supply is a catalyst to the above objectives and lack of critical infrastructure would lead to the non-achievement of the objectives as detailed in the NDP

Q. Give three primary causes of this risk.

- Not mitigating the risk
- Not assessing the vulnerabilities
- Non-implementation of appropriate measures
- Inadequate budgets to upgrade, replace and repair dilapidated infrastructure
- Lack of national policies on sustainable infrastructure guiding investments

Q. What are the consequences if this risk materialises?

- Without water, energy, food and sewage being pumped through the different arteries of infrastructure within a city, the city would be totally unviable
- Economic growth would be impacted and a steep decline would materialise
- The people in poverty and suffering inequality would persist or even increase

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Professional Services
- Energy, Water and Utilities
- Manufacturing
- Engineering and Construction

Q. What are the barriers that prevent us from solving this risk?

- Capacity of the role players
- Integrated approach and co-operation of the different role players
- Current levels of capital investment (estimated to be 37 billion in 2017) are insufficient to meet the infrastructure rehabilitation as required

Q. What is the effective risk response to treating the risk on a National level?

- Currently there is a critical infrastructure council that has been established in terms of the Critical infrastructure Protection Bill, section 4 where any infrastructure as declared to be critical in terms of Section 20(4) is to be identified and protected. This needs to be active and implementation plans developed
- The Integrated Urban development Framework by CoGTA also emphasises the need to establish national policies to protect and rehabilitate the infrastructure
- Financial funding for the backlogs identified have to be ring-fenced and allocated per critical infrastructure project.
- Diversification of energy sources and generation technologies

Q. What is the effective risk response to treating the risk on an Industry level?

- The implementation and interpretation of the national policies into critical infrastructure based upgrading and rehabilitation projects
- A system failure backup plan be implemented to avoid scenarios such as the blackouts in Toronto & Italy (2003), India (2012), Turkey & Pakistan (2015), Sri Lanka & California (2016)

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Unmanageable fraud and corruption
- Failure of governance (public and private)
- Skills shortage including the ability to attract and retain top talent

C H R I S G O W E R

Revenue Protection Manager
Buffalo City Municipality

His current occupation: Revenue Protection Manager: BCMM (Have 25 years' experience in the Revenue Protection Industry). Chris is the past President, honorary member, current Eastern Cape Chairman, past KZN Chairman, of the Southern African Revenue Protection Association (SARPA). He is an operational member of both the SAPS National Non Ferrous Crime Combatting Committee (NFMCCC) and Eastern Cape Provincial Committee (PFMCCC). He is also a member of the SABS SANS1741 committee (New cable marking standard), NRS055 committee (National standard for revenue protection), NRS091 committee (Calculation of technical losses), and NRS 101 committee (Guidelines for the reduction of the theft of utility service metals).

Risks commented on:

- Significant escalation in organised crime and illicit trade



SIGNIFICANT ESCALATION IN ORGANISED CRIME AND ILLICIT TRADE

CHRIS GOWER

Revenue Protection Manager: BCMM - Buffalo City Municipality

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

With an estimated +R10 billion per annum in stolen non-ferrous conductor, the non-ferrous metal theft trade is embedded into the local illicit trade market. Theft of copper conductor is highly valued by organised syndicates and the demand for copper is escalating especially from China. The impact of non-ferrous theft in a municipal environment is the effect that this has on the local economy as these businesses often have to down tools until network repairs are completed.

Q. Give three primary causes of this risk.

- Demand by the Chinese Market for local copper
- Escalating socio economic climate and availability of jobs is forcing people to become "bread and butter" criminals
- There is money to be made in a relatively "low risk" market

Q. What are the consequences if this risk materialises?

The Electricity Supply industry will suffer severe repercussions relating to service delivery standards and quality of supply to end users. The local economy in affected areas will also suffer

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Energy, Water and Utilities
- Engineering and Construction

Q. What are the barriers that prevent us from solving this risk?

- Stricter regulation in the non-ferrous trade
- The identification of stolen cables by supply authorities must be in place

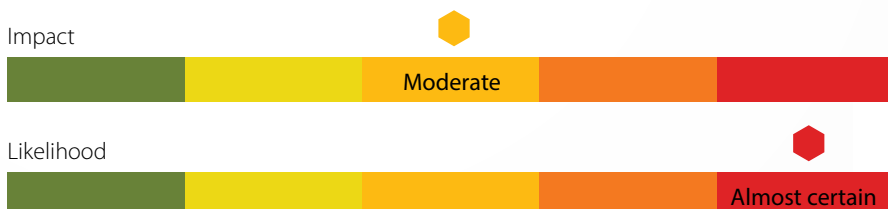
Q. What is the effective risk response to treating the risk on a National level?

- The SAPS and other key role stake-holders need to regulate this industry using a "top down" approach, instead of a "bottom up" approach when applying disruption exercises

Q. What is the effective risk response to treating the risk on an Industry level?

- The laser etching of copper core conductors, with identifiable markers, must be an industry standard for the procurement of copper cables in a municipal environment
- The full enforcement of the Second-Hand Goods Act and the Criminal Matters Amendment Act is critical to the collapse of this illicit trade market

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



B H E K I G U T S H W A

Vice President & Executive Committee Member
The Institute of Risk Management South Africa (IRMSA)

Director: Risk Management Support in the Office of the Accountant General within National Treasury. He holds MCom in Banking and Financial Risk Management with the private and public-sector experience in enterprise risk management. He assists government institutions to improve risk management maturity in all three spheres of government.

Risks commented on:

- Government policy, legislative and regulatory changes and uncertainty



GOVERNMENT POLICY, LEGISLATIVE AND REGULATORY CHANGES AND UNCERTAINTY

BHEKI GUTSHWA

Vice President & Executive Committee Member - The Institute of Risk Management South Africa (IRMSA)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The public policies are formulated with an intention to promote development of the state and its citizens. Therefore the changes ought to be effected with the same purpose. There is a sense from different sectors of society that legislation hinders socio-economic development, as much as its original objective was to enable it. Some of examples, that are cited, are Supply Chain Management with its broad-based black economic empowerment and labour with its minimum wage.

When looking at the past year or two, there has been no significant change. The country is still exposed to regulatory/ policy stagnation and misalignment. This will have a great impact in the achievement of building a capable state as aspired by the National Development Plan.

Issues of regulatory changes on mining and land reform are also good examples. These have created uncertainties and have adverse effects on the National Development Plan as they pose qualms to some parts of the society. Yet regulatory improvement in these areas is significant to the socio-economic development of the country that comes from the apartheid epoch which had laws that were exploitative in nature.

Q. Give three primary causes of this risk.

- Uncoordinated process of regulatory reforms whereby role-players initiate changes just to achieve their narrow interests. The acceptance or rejection of some changes is often based on small number of role players instead of a larger population
- Limited understanding of South African socio-political context by investors thus no proper cooperation between business and government in the macro-activities of the country
- Bureaucratic red-tapes in the legislative development process not responsive to the constant evolving global economic environment

Q. What are the consequences if this risk materialises?

- Economic disparity with exacerbated unequal distribution of wealth leading to incoherent society
- New legislation/ policies not achieving the intended objectives of building a capable state
- Adverse effects on skills development, economic growth, and creation of jobs

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Energy, Water and Utilities
- Communications and Technology
- Manufacturing
- Mining and Quarrying
- Education
- Healthcare
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Lack of universality on the formulation and application of public policies
- Highly competing government priorities
- Instable socio-political differences leading to inappropriate prioritisation
- Deteriorating public participation in the law making process

Q. What is the effective risk response to treating the risk on a National level?

- Tools to map legislation and assess the impact it has made on the envisaged economical redress and societal transformation.
- Central coordination of all the country laws in order to promote alignment and synergy in implementation
- Legislation review to identify bottlenecks that could be hindering the socio-economic development, This process should also take into the costs of compliance with the existing laws and those that are in the pipeline
- Monitoring and enforcement of the laws is paramount and this promotes deterrence of similar non-compliance

Q. What is the effective risk response to treating the risk on an Industry level?

- Continuous environmental scan which should identify and assist address bottlenecks in the application process
- Stakeholder inclusiveness – active engagement of communities, business, and other stakeholders in the policy/ regulatory development process
- Embed risk management principles in the policy making processes
- Conduct focused research to further enhance regulatory compliance. This will require continuous interaction between research institutions and those that facilitate the law development process

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Yes. The risk event of climate/ environmental change has not left the world.

Climate/ environmental change leading to exacerbated food insecurity as a result of degradation or erosion of the environment.

Z A N E L E H L O P H E

Chief Audit Executive
Commission for Conciliation, Mediation and Arbitration (CCMA)

Zanele Hlophe is the Chief Audit Executive (CAE) of the Commission for Conciliation, Mediation and Arbitration (CCMA). The CCMA is an independent, juristic body that helps to resolve disputes and offers advice and training on labour relations. Ms Z Hlophe holds a BCompt Degree from UNISA. She is a Certified Internal Auditor, and holds a Certification in Control Self-Assessment from the Institute of Internal Auditors respectively. She has been in the profession of auditing for fifteen (15) years, for both External and Internal Auditing. She has embarked in a process of implementing and embedding the Combined Assurance Framework principles within the CCMA, with the objective of ensuring that there is a sound risk governance structure over key organisational risks and also to satisfy the Governing Body, through the Audit Committee, that significant risks areas within CCMA are adequately addressed and suitable controls exists to mitigate and reduce the identified risks.

Risks commented on:

- Labour strike action



LABOUR STRIKE ACTION

ZANELE HLOPHE

Chief Audit Executive - Commission for Conciliation, Mediation and Arbitration (CCMA)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The risk is relevant to the topic as it has a direct impact on economic growth, labour market, stability and job creation. The strike coverage influences investors' confidence, international perception on South Africa as a developing country, labour costs as it has a direct bearing on the growth of various sectors and this has also been a factor in the increase in large scale retrenchments over the past 2-3 years. The pending proposals on collective bargaining to the Labour Relations Act, Code of Good Practice and code on Collective Bargaining seek to reduce this risk in the next 2 – 5 years. The tendency to revert to Industrial actions has reduced over the past 2 years.

Q. Give three primary causes of this risk.

- High demands of wage increases attributable to high cost of living
- Decline in union densities giving rise to competition for members that also inflates labour demands
- Industrial actions/strikes are regulated in terms of law
- Instability in economy contributes to high unemployment and creates an environment where there is an increase in demand for workers supporting extending
- Raising income disparities between lower and upper income employees, it places a burden on employers to breach this gap

Q. What are the consequences if this risk materialises?

- Low productivity
- Loss of income leading to high household debts
- Decline in economy which places pressure on the extended family support structure which in a climate of high unemployment also serves as a deterrent to investment
- Potential global and international investors may seek to move their operations to more stable countries

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Manufacturing |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Hospitality and Tourism |
| • Communications and Technology | • Education |
| • Insurance and Reinsurance | • Healthcare |
| • Transport and Logistics | • Wholesale and Retail |
| • Petrochemicals, Oil and Gas | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

- An adversarial model of collective bargaining
- Poor preparation for negotiations
- Predominately single year agreements do not provide for growth and stability
- Lack of training in negotiation skills, productivity bargaining or other innovations
- Lack of joint ownership to work towards common vision and outcome

Q. What is the effective risk response to treating the risk on a National level?

- Collective bargaining improvement processes customised for a particular sector or industry
- Negotiations Skills training
- Collaboration across different government entities to sustain industries
- Creation of safety nets such as expanding social benefits
- Environmental scans, both local and international, that have an impact or influence on negotiations
- Tracking collective bargaining disputes during pre, during and post wage facilitation support

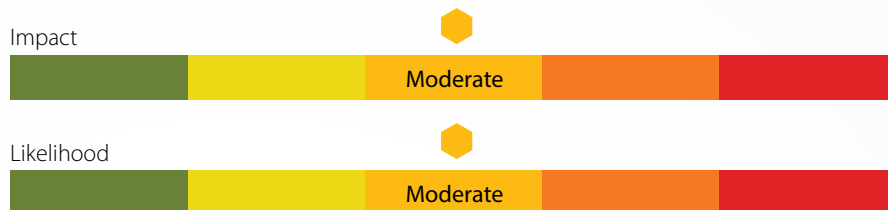
Q. What is the effective risk response to treating the risk on an Industry level?

- Prioritise collective bargaining challenges at NEDLAC - there have been proposals to legislate the changes in collective bargaining and pending implementation of minimum wages
- Explore industry sustainability initiatives and job creation to protect or create new jobs
- Social partners' (business, labour, government and community) commitment to joint consensus seeking initiatives to minimise industrial actions /strikes
- Acknowledgment of the risk across all stakeholders

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Increasing mechanisation in certain industries or sectors leading to high unemployment, skills shortages that contribute to labour market volatility.

MARTIN HOPKINS

Partner, PwC People and Organisation (Reward Consulting)
EXCO Member, SARA

Martin Hopkins is a partner at PricewaterhouseCoopers in South Africa with responsibility for the South African Reward Consulting Practice (Compensation and Benefits). He was previously Group Executive: Reward and HR Analytics at Vodacom. He has a Master of Science degree from Carnegie Mellon University in the USA and extensive experience in advising companies and their Board Committees, with a particular focus on executive remuneration, strategy development and evaluation, investment decisions, value driver models, balanced scorecards, performance management and information technology to deliver value. He also serves as an Executive Committee member at the South African Reward Association (SARA).

Risks commented on:

- Growing income disparity



GROWING INCOME DISPARITY

MARTIN HOPKINS

Partner - PwC People and Organisation (Reward Consulting)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

- Further stagnation of economic growth because of underutilisation of our human capital, and under-investment in education and capacity building initiatives
- Deterioration in local market demand

Q. Give three primary causes of this risk.

- Legacy employment practices that deprived the majority of citizens from participating in the formal economy at senior positions leading to a smaller pool of experienced, well paid employees
- Inadequate primary, secondary public education systems that do not provide a sufficient number of skilled employees
- Profound levels of unemployment (37%) which lead to many people not receiving any regular formal income

Q. What are the consequences if this risk materialises?

- A growing number of discontented members of society who are not benefiting from participation in the economic fruits of business and society, who have little to lose from crime, protest and other violent actions that destabilise society
- A breakdown of trust between management and executives on the one hand and workers and society on the other

Q. Which industry will be most affected if this risk materialises?

- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Education

Q. What are the barriers that prevent us from solving this risk?

- Lack of a coherent human capital building partnership between government, business and civil society especially in respect of primary, secondary and tertiary education
- Stagnant economic growth

Q. What is the effective risk response to treating the risk on a National level?

- Mobilisation of leadership to address the education and human capital deficits
- Clear national leadership to address political and regulatory uncertainty
- Challenge to business to address pay inequality in the formal sector

Q. What is the effective risk response to treating the risk on an Industry level?

- Determine sectoral and industry targets for improving the income for junior workers
- Exercise restraint in respect of Executive Pay

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No

CHANDU KASHIRAM

Independant Consultant

Chandu Kashiram is currently self-employed providing consulting services related to small business management, risk management, compliance and ethics, corporate governance, business optimization as well as internal control and financial management. He is currently serving as the Chairman of the CHIETA (Chemical and Energy Industry) SETA Audit Committee. Prior to retiring from Sasol he served as the Executive Assistant to Sasol Limited's Executive Director and Executive Vice President: Strategy and Sustainability. Prior to that he was Group Risk Manager where his responsibilities, in addition to Risk Management, included the Group Compliance and the Group Ethics Office. Through the various positions and companies over the past 35 years, Chandu has gained valuable insight and experience in the fields of Auditing, General and Corporate Finance, Corporate Governance, Risk Management, Legal Compliance, Ethics, Safety, Health and Environment, Brands, Communications & Marketing, Business Development, Government Regulation and Business Strategy. A qualified Chartered Accountant, Chandu also holds an MBA in Finance through Manchester Business School (UK). Chandu served on the board of directors at Black Top Holdings where he was also the Chairman of the Audit Committee as well as a member of the Remuneration Committee.

Risks commented on:

- Unmanageable fraud and corruption
- Profound political instability
- Growing income disparity



UNMANAGEABLE FRAUD AND CORRUPTION

CHANDU KASHIRAM

Independant Consultant

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

This risk has already materialised to the large extent. A major part of the ruling party and government officials at all level are regularly accused of being corrupt and captured. The NDP requires a government that is intent on delivering the poor from abject poverty. This cannot happen when fraud and corruption reaches the current significant levels in both government and the private sector.

Q. Give three primary causes of this risk.

- Unethical leadership
- Lack of proper governance
- Undermined democratic and Chapter Nine Institutions

Q. What are the consequences if this risk materialises?

- Further downgrades
- Loss of investor and consumer confidence
- Rising protests
- Growing disregard for the rule of law across the board
- Recession

Q. Which industry will be most affected if this risk materialises?

- Energy, Water and Utilities

Q. What are the barriers that prevent us from solving this risk?

- Continued appointments of leadership that perpetuate corrupt activities.
- Collusion between the private and public sector
- Lack of consequences for breaking the law

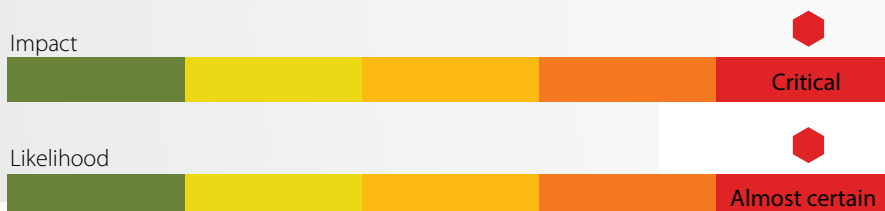
Q. What is the effective risk response to treating the risk on a National level?

Radical transformation of government at leadership level that is capable of dealing with corruption at all levels, respects and reinforces the rule of law, recognises and allows Chapter Nine Institutions to do their job. Leadership that leads by example and deals harshly with corrupt official at all levels.

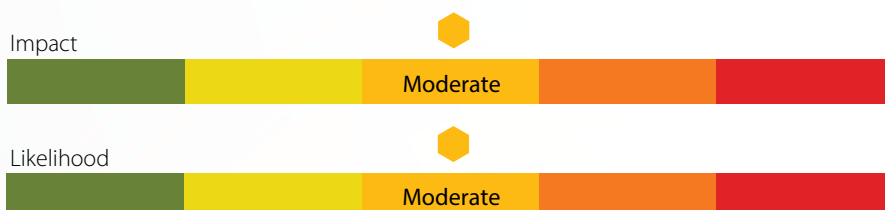
Q. What is the effective risk response to treating the risk on an Industry level?

Ethical leadership as envisaged in King IV. An industry that calls out corrupt companies and refuses to do business with them. Stop dealing with corrupt officials by using "golden handshakes" to preserve the company reputation.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Cyber-attacks and cyber-attack non-disclosures
- Failure of governance (public and private)

PROFOUND POLITICAL INSTABILITY

CHANDU KASHIRAM

Independant Consultant

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

This has been a reality since the last National Elections. Significant achievements made since 1994 have been undone in a short space of time due to this risk. Progress in achieving NDP objectives has been stifled.

Q. Give three primary causes of this risk.

- Poor leadership plagued by corruption and fractured ruling party
- Government undermining democratic institutions
- State capture

Q. What are the consequences if this risk materialises?

- Poor economic growth with risk of full recession
- Further ratings downgrades
- Further increases in already high protect action
- Low consumer and investor confidence
- Rising deficit

Q. Which industry will be most affected if this risk materialises?

- Mining and Quarrying

Q. What are the barriers that prevent us from solving this risk?

- Lack of credible opposition to ruling party
- Economies of the "stomach"
- Corrupt government and private individuals acting with impunity

Q. What is the effective risk response to treating the risk on a National level?

Radical transformation of government at leadership level that is capable of dealing with corruption at all levels, respects and reinforces the rule of law, recognises and allows Chapter Nine Institutions to do their job, reduce bloated government structures, curbs expenditure and wastage and introduces enabling policies that incentivise investments.

Q. What is the effective risk response to treating the risk on an Industry level?

Industry leverages enabling policies to create much needed jobs, increase expenditure in Research and Development and invests in new technology that makes it more competitive globally. Industry must develop longer term strategies that are aimed at improving the sociality in which they operate. They in turn must also radically transform leadership to that which is capable of leveraging diversity and dealing harshly with corruption.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Failure of governance (public and private)
- Unmanageable fraud and corruption
- Lack of leadership
- Government policy, legislative and regulatory changes and uncertainty

GROWING INCOME DISPARITY

CHANDU KASHIRAM

Independent Consultant

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Skilled people in South Africa find work more easily, which is supported by a growing black middle class. The risk of "growing income disparity" is felt most acutely at unskilled and lower education levels where the growth in jobs is seriously lacking if not zero. Based on the current economic trajectory the NDP objectives will therefore be extremely difficult to achieve.

Q. Give three primary causes of this risk.

- Low economic growth
- Poor labour relations
- Investor unfriendly Government Policies, specifically in Mining, Agriculture, Tourism and Manufacturing

Q What are the consequences if this risk materialises?

- Increased expectations and pressure on Government Grants
- Youth uprising
- Further increases in protest action

Q Which industry will be most affected if this risk materialises?

- Mining and Quarrying

Q What are the barriers that prevent us from solving this risk?

- Poor leadership at Government and Corporate level
- Corruption
- Rising Government Debt

Q. What is the effective risk response to treating the risk on a National level?

- Investor friendly policies to encourage large scale investments
- Labour-market reform
- Overhaul State Owned Entities, including mass privatisation
- Incentivise SMME's by reducing regulatory burden
- Reduce deficit by reducing government spending and eliminating wastage
- Effective service delivery (Electricity, Water, Rates) and improve infrastructure, road, rail and ports

Q What is the effective risk response to treating the risk on an Industry level?

- Ethical leadership (King IV)
- Embrace real transformation i.e. don't chase numbers and comply for the sake of "ticking the box"
- Be more creative in saving jobs
- Invest in Research and Development as well as Technology

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood

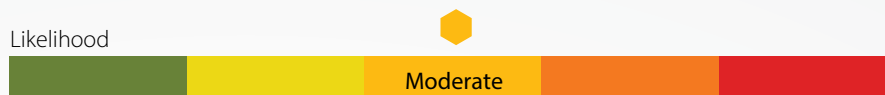


Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Failure of governance (public and private)
- Unmanageable fraud and corruption
- Lack of leadership
- Government policy, legislative and regulatory changes and uncertainty

NERINE KHAN

Chief Executive Officer
Employment Relations Exchange

Nerine Khan is currently the CEO at Employment Relations Exchange. She previously served as director of CCMA for ten years. Nerine, as leader and CEO brings a unique set of both practical and managerial skills to the Organisational Design arena. Nerine has honed these skills in a working career of more than twenty years.

Risks commented on:

- Labour strike action
- Skills shortage including the ability to attract and retain top talent
- Profound social instability
- Structurally high unemployment/underemployment



LABOUR STRIKE ACTION

NERINE KHAN

Chief Executive Officer - Employment Relations Exchange

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Strike action in the workplace has become almost a national feature in our labour arena. It is significant to note that there has been reduced industrial action in the last year. What has been clear is that the link of the non or inadequate delivery on the "social wage" expectations (social wage means health care, transport, housing, water, security & basic education) coupled with rising costs on basic goods has led to increased wage demands which in turn can't be met by employers, to obtain "buying power" to obtain these services. Hence this cycle is divisive as it entrenches rather than enhances apartheid economics, adds to poverty and inequality in the society. So workers then see that this may be a last resort to provide for their families, as the state has not met these with things such as strong social security etc. Hence NDP goals broadly will be at risk if the expectation of a better society (Education, jobs, infrastructure) are not met

Q. Give three primary causes of this risk.

- Workers have shifted expectations for societal improvements and delivery to business, hence they expect corporate citizenship to fulfill many of the roles of the state, or are at least confused as to whose role it is.
- Intra union rivalry, exclusion of new federation or unions from NEDLAC processes
- Inability of all bargaining partners to update, modernise and approach the bargaining process from a refreshed perspective.
- Strike violence is rewarded with increased offers

Q. What are the consequences if this risk materialises?

- Consequences are that there could be prolonged strikes, with increased violence
- The structure for bargaining in the labour arena could be compromised due to very different Trade Union styles, approaches and exclusion from the bargaining table
- Job losses and business closures

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Energy, Water and Utilities
- Communications and Technology
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Trade unions that are politically aligned
- Inequalities in the job market and skills shortages
- Failure to review negotiating patterns and styles, and make changes

Q. What is the effective risk response to treating the risk on a National level?

- The recognised social partner at NEDLAC have tried to develop further codes to guide parties when negotiating and striking. If this is finally implemented it could have a mitigating effect. This also has a provision for a strike ballot and other alternative dispute resolution mechanisms which could reduce the length and violence of industrial action
- Getting bargaining parties to review and update their behaviours in the preparation and actual negotiating process. Developing a better value and knowledge system between the bargaining partners
- Training bargaining partners in necessary skills and understanding of the process and consequences from both sides perspective
- Ensure that appropriate level of bargaining teams are in the bargaining process ,and reducing external interference in such a process

Q. What is the effective risk response to treating the risk on an Industry level?

In addition to incorporating the labour stability codes into industry practices, to agree clear and concise picketing rules per industry in advance of any industrial action.

Review and reconsider wage rate exemption process in bargaining councils, to assist small businesses

Communication and engagement with parties and then agreeing industry specific issues and areas

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

None

SKILLS SHORTAGE INCLUDING THE ABILITY TO ATTRACT AND RETAIN TOP TALENT

NERINE KHAN

Chief Executive Officer - Employment Relations Exchange

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

A key focus of the NDP should (and is) to enhance skills. The lack of focus in this area is in my view one of the biggest risks in the delivery of the NDP. The lack of review or constant review of the education system is problematic for the needs of the society. Reviewing the need for occupation based education again should be considered, as part of NDP. The over focus on academic as opposed to skills base education further exacerbate the risk of non- delivery. While the plan talks of education broadly it does not focus enough on challenge which are clearly a big risk in enhancing the economy, growing the society in employment equity targeting and skills combination, with much too big a focus on individual wealth growth. This is discouraging those who could and have advanced through self-development, skills attainment etc. This also creates an incorrect value and focus in the system, where people look to get rich and not stay in roles.

Q. Give three primary causes of this risk.

- Lack of planning and management
- Too experimental with school curriculum for the society
- Inappropriate evaluation of student body and support needs required which has lead to high drop out rates at all levels

Q. What are the consequences if this risk materialises?

- Insufficient skills to grow the economy
- High unemployment ,potential South African Spring
- Rise in social protest
- Rise in gen co efficient
- Rise in crime
- State crippled by even more social grant payments

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|-------------------------------------|
| • Government and Public Service | • Manufacturing |
| • Financial Services | • Engineering and Construction |
| • Professional Services | • Mining and Quarrying |
| • Energy, Water and Utilities | • Hospitality and Tourism |
| • Communications and Technology | • Education |
| • Insurance and Reinsurance | • Healthcare |
| • Transport and Logistics | • Wholesale and Retail |
| • Petrochemicals, Oil and Gas | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

- Poor planning
- Different political agendas
- Corruption
- Trade union interference

Q. What is the effective risk response to treating the risk on a National level?

- Review policy as it stands
- Better and stronger management and interventions in school sector, with strong accountability
- Parent education in relation to schooling
- Proper evaluation of student circumstances

Q. What is the effective risk response to treating the risk on an Industry level?

- Broker a deal where there is buy in from the professional body and Trade unions to end the crisis and to address this differently.
- Ensure Parents are empowered to support and manage children
- Evaluate curriculum in relation to societal goals

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

None

PROFOUND SOCIAL INSTABILITY

NERINE KHAN

Chief Executive Officer - Employment Relations Exchange

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Strike action, or rather protest action, since strikes are in the main associated with employment disputes but “protest has become wider and across many areas”, has become an almost monthly occurrence (authorised or not). The protesting is directly linked to non-service delivery in many instances by national and local government. In SA society the key method of voicing frustration or disillusionment is through protest. What we are seeing in this action are in direct contravention of the 6 objectives of the NDP. They demonstrate that there is frustration across communities in class, race and joblessness. So on the one hand it hampers the move towards the NDP goals, while on the other it allows citizens to express their views and grow leadership, but not really allowing them to move forward. Social instability and disillusionment is hampering the delivery of the goals and should be extreme cause for concern.

Q. Give three primary causes of this risk.

- Non delivery of basic services: Citizens have become tired of waiting for housing, water, electricity, transport to make their lives easier
- Poor education leading to high unemployment: Poor schooling and lack of access to opportunities
- Visible corruption at citizens expense of advancement: Communities see individuals being favoured due to influence, tribe, friendships

Q. What are the consequences if this risk materialises?

- Deeply divided society
- Higher levels of protest
- Crime
- Poverty and conflict escalation

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Energy, Water and Utilities
- Communications and Technology
- Transport and Logistics
- Hospitality and Tourism
- Education
- Healthcare
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Leadership inaction
- Loss of ethical/morality in society
- Not holding correct people to account

Q. What is the effective risk response to treating the risk on a National level?

Improved and accountable leadership is required to ensure that policies and promises are carried out. This would need to be on a prioritised level, such as basic service delivery and education focus from all parts of South Africa not just the state. Enhancing corporate citizenship and uniting in the goals. Proactive responses to social protest when arises by accountable people, with follow through actions. Creating a more tolerant and united society

Q. What is the effective risk response to treating the risk on an Industry level?

Such actions usually occur in municipal areas. Need a focused delivery program in the hotspot areas, with effective communication and visible leadership from local leaders on ensuring delivery of the social needs as identified in the area

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Collapse of primary education

STRUCTURALLY HIGH UNEMPLOYMENT/UNDEREMPLOYMENT

NERINE KHAN

Chief Executive Officer - Employment Relations Exchange

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

High unemployment (or non-meaningful jobs, under employment) are extremely high risk for the failure of the 2030 objectives of the NDP. The NDP actively encourages improving economic growth and being more labour absorbing. If the current statistics on unemployment and the state of economy is reviewed, there is a high chance of this being a key cause of unhappiness amongst citizens and leading to social protest and hence the objectives not being met.

This is exacerbated by people being employed in contract positions at low level or for short periods. This leads to insecurity as well as uncertainty. This doesn't encourage citizens to participate but rather puts them in continuous survival mode and more and more reliant on the state.

Q. Give three primary causes of this risk.

- Poor education system
- Poor management of economy (one of only ones in decline around the world)
- Corruption

Q. What are the consequences if this risk materialises?

- More protest action
- More people dependent on the state
- Rise in hunger and poverty
- Business decline due to insufficient skills

Q. Which industry will be most affected if this risk materialises?

- | | |
|---------------------------------|--------------------------------|
| • Financial Services | • Manufacturing |
| • Professional Services | • Engineering and Construction |
| • Energy, Water and Utilities | • Mining and Quarrying |
| • Communications and Technology | • Hospitality and Tourism |
| • Insurance and Reinsurance | • Education |
| • Transport and Logistics | • Healthcare |
| • Petrochemicals, Oil and Gas | • Wholesale and Retail |

Q. What are the barriers that prevent us from solving this risk?

- Poor planning in government
- Corruption
- Non strategic focus on delivery of some of the stated NDP objectives
- Overly focused society on compliance issues as opposed to substance in delivery

Q. What is the effective risk response to treating the risk on a National level?

The best response would be to look at improved skills enhancement, kick starting the economy reduction of bureaucracy in relation to the processes and access. Improved, accessible and cost effective transport system for job seekers and commuters. improving infrastructure to meet basic citizen rights such as housing, health care so that wage issue is not so pressurised.

Q. What is the effective risk response to treating the risk on an Industry level?

Industry already within their capabilities doing lost, but better co-operation between industries and government would assist. Reduction of red tape in many industries in so far as employment is concerned.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

None

MATTHEW LE CORDEUR

Fin24

Matthew is the former deputy editor of Fin24, South Africa's largest business publication. He was also an investigative journalist with a focus on the political economy, including stories on state capture, Eskom, nuclear and SAA. He recently completed his MBA at UCT's Graduate School of Business, where his thesis centred on the impact the UK's BREXIT vote and process had on South Africa's wine export strategy (which exports most of its wine to the UK). While Matthew will now do an MBA exchange programme in Europe in 2018, he will remain a Fin24 columnist.

Risks commented on:

- Failure of State, a State crisis or a State collapse



FAILURE OF STATE, A STATE CRISIS OR A STATE COLLAPSE

MATTHEW LE CORDEUR

FIN24

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

A failed state could impact on the NDP objectives severely, especially if it results in RSA seeking an IMF bailout. A bailout by the IMF would be necessary following the collapse of the state, as the country will fail to pay its debts and service costs. The funds would come with fiscal and budget requirements that would seek to limit spending on developmental goals, therefore creating a barrier between government and its own NDP objectives. While the NDP objectives would remain in place, the IMF would have to approve any spending with regard to the NDP. Therefore, there could be some areas in the NDP that the IMF sees as being beneficially to bringing the country back to a functional state.

Q. Give three primary causes of this risk.

- Moody's downgrade of SA's local and foreign ratings to junk status in its February review
- Tax revolt following a raise in taxes to accommodate free fees and other populist measures to help the ANC win the next general election
- Bankruptcy of Eskom following electricity customer revolt after increases to electricity price to accommodate a costly nuclear deal

Q. What are the consequences if this risk materialises?

- The country would experience hyperinflation of its currency, much like the Zimbabwean dollar following the farm invasions in 2000
- Unemployment would rise exponentially, causing violent civil unrest
- Economic growth would shrink rapidly, taking the country into a recession, which would result in businesses closing down, which would add to the above unemployment

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- If Zuma camp wins ANC elections, party would require populist policies to win back support for national general election.
- State capture acceleration if power of rent seekers is slipping away (from nuclear to other SOE contracts)
- Time frame of next national general election, should majority of country believe a change in leadership be required urgently to prevent risk

Q. What is the effective risk response to treating the risk on a National level?

- Return budget to conservative fiscal framework by cancelling populist measures such as a free fees and nuclear energy plan
- Speed up implementation of official state owned enterprise reform, by first breaking up Eskom using the Ismo Bill
- Urgently implement the State Capture inquiry and begin prosecuting of those who have allegations of corruption. Remove individuals from positions until legal process is complete

Q. What is the effective risk response to treating the risk on an Industry level?

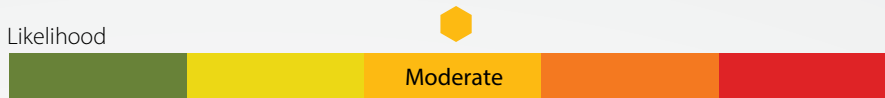
- Examine debt and equity levels in firm and aim to limit service costs until more political stability is gained
- Engage with government to find a way to solve problems in a less populist and extreme way
- Seek ventures in more stable countries to ensure survival of firm should state failure result in effects described above

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Rise of anti-globalisation (BREXIT, US & AGOA) limiting ability of South African industries to trade effectively in countries key for SA's export revenues.
- Bitcoin's effect on government and industry: if bubble bursts, what risks would this bring?
- Mass immigration of skilled workers to other countries resulting in more skills shortages

A L A N L O W

Chief Executive Officer
Pi

Alan is a UK Chartered Accountant by training but left the profession to sell for and then manage various office equipment companies in the City Group in London in 1980s. Alan became a partner in a small accounting practice in the late 1980s, specialising in assisting and advising small and medium sized businesses in many different industries. Arriving in SA in 1991, Alan worked as a consultant for nearly 6 years before starting Pi in SA in 1997. Alan is the CEO of Pi SA which provides risk and spend analysis services to South African organisations.

Risks commented on:

- Unmanageable fraud and corruption



UNMANAGEABLE FRAUD AND CORRUPTION

ALAN LOW

Chief Executive Officer - Pi

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Organisations do not have good visibility around spend with suppliers in terms of processes, behaviour and internal controls and this can lead to collusion, fraud and financial loss going unnoticed and unpunished. In the public sector this has led to massive loss of state funds and in the private sector to a reduction in profitability and money for re-investment. This has and will continue to affect the brand "South Africa" and individual private sector organisations.

Q. Give three primary causes of this risk.

- Staff and supplier collusion
- Inappropriate or insufficient visibility over the procure-to-pay processes and data
- Insufficient oversight and pro-active management

Q. What are the consequences if this risk materialises?

- Loss of funds for development or reinvestment
- The spread of a culture of corruption
- Reduced profitability

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Lack of visibility over the granularity of spend data
- Inappropriate or insufficient internal controls
- Inappropriate behaviour and/or vigilance of staff and management
- Collusion between staff and suppliers

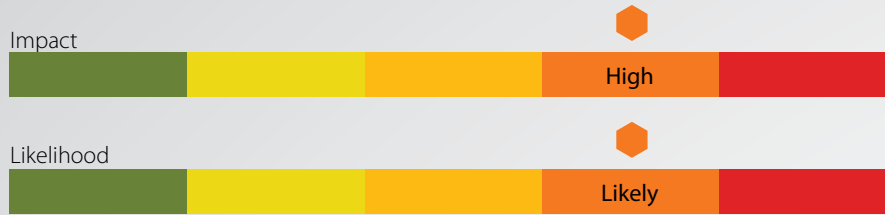
Q. What is the effective risk response to treating the risk on a National level?

Enforcement of legislation (PCP Act, UK Bribery Act, etc.) both in the public and private sector. Naming and shaming culprits.

Q. What is the effective risk response to treating the risk on an Industry level?

Visibility, investigation and prosecution leading to a continuous re-evaluation of policy, internal controls and proactive management.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Failure to prosecute fraud and corruption offenders will lead to a sense of impunity and embed this behaviour in the public and private sectors.

PETER LUKEY

Chief Policy Advisor: Strategic Environmental Intelligence
Department of Environmental Affairs

Peter Lukey is a Civil Engineering Technologist who, after nine years as a contractor, left the construction industry to pursue his environmental interests at Wits University where he completed his BSc Degree as well as co-founding the environmental activist organisation Earthlife Africa. Following a period of 'committed activism', Peter took up a position with the Danish development assistance agency DANCED. At the end of 2000, Peter left DANCED, after five years of working on environmental project support in the region, and became Project Manager for the Department of Environmental Affairs' Environmental Protection Support Unit. In 2003, Peter became the department's Chief Director: Regulatory Services where he was involved in conceiving and establishing the "Green Scorpions" as well as leading the development of new air quality management legislation. In 2005, Peter became the department's Chief Director: Air Quality Management and Climate Change. From 2005, Peter was also actively involved in the development and compilation of South Africa's National Climate Change Response Policy and in 2011, as the department's Acting Deputy Director-General for Climate Change, led the development and finalisation of this policy. As of January 2012, Peter has been the department's Chief Policy Advisor on strategic environmental intelligence.

Risks commented on:

- Extreme weather events/natural catastrophes (drought, fires, storms, earthquakes etc.)



EXTREME WEATHER EVENTS/NATURAL CATASTROPHES (DROUGHT, FIRES, STORMS, EARTHQUAKES ETC.)

PETER LUKEY

Chief Policy Advisor: Strategic Environmental Intelligence - Department of Environmental Affairs

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

If this risk is redefined as above in accordance with the footnote below then this is a significant and increasing risk to the achievement of the National Development Plan (NDP) objectives for South Africa.

As clearly stated in the 2011 National Climate Change Response Policy, government regards climate change as one of the greatest threats to sustainable development and believes that climate change, if unmitigated, has the potential to undo or undermine many of the positive advances made in meeting South Africa's own development goals and the Millennium Development Goals (MDGs). As the increase in the severity and frequency of extreme weather events and natural catastrophes is one of the key impacts of climate change, this risk must be seen as a key contributor to this threat to our development and well-being.

Recent international events have shown the devastating and tragic impacts of extreme weather events and natural catastrophes and South Africa is not immune. Indeed, given South Africa's high levels of inequality, the majority of South Africans are extremely vulnerable to even the most minor increase in the severity and frequency of extreme weather events and natural catastrophes.

According to a November 2017 paper in The Lancet medical journal, extreme weather caused some \$129 billion (111 billion euro - a figure roughly matching the budget of Finland) in economic losses last year and warned that the bill will keep climbing as climate change boosts droughts, storms and floods. The paper noted a 46% increase in weather disasters from 2010 to 2016, with 797 "extreme" events recorded last year. Losses were counted as damage to physical assets and did not include the "economic value" of deaths, injury or disease caused by extreme events. Although individual events cannot be related to climate change directly, the authors make it clear that climate change is fuelling the "frequency and severity" of tropical storms, droughts and flooding around the world. The finances of poor countries are disproportionately hard hit, said the report compiled by experts from 24 academic institutions and inter-governmental bodies including the World Health Organization and World Meteorological Organization. Their losses from freak weather events were more than three times higher in 2016 than in 2010, and as a proportion of GDP, much greater than in rich nations.

¹Firstly, the topic as currently defined is problematic from a risk management perspective due to its combination of extreme weather events (tropical storms, hurricanes, typhoons, heat waves, extreme cold, cloudbursts, hail storms, etc.) and the natural catastrophes (droughts, floods, storm surges, wild fires, earthquakes, tsunamis, etc.) that often result from extreme weather events. The problem is that it combines purely natural phenomenon, which require a risk management response (resilient infrastructure, improved emergency response, etc.), with natural phenomenon that are being exacerbated and intensified by human induced climate change, which require both a mitigation and an adaptation response. As, by definition, natural events are not new or emerging risks, but are the normal backdrop to human society, these should not be part of a risk report. However, if this risk is framed as "Increase in the severity and frequency of extreme weather events and natural catastrophes (droughts, floods, fires, heatwaves, storms, etc.)" then this is certainly a risk that has to be included in the IRMSA Risk Report 2018.

Q. Give three primary causes of this risk.

Although extreme weather events and natural catastrophes are 'natural' events, the increase in their severity and frequency is largely attributed to climate change which has one primary cause – the increase in the atmospheric concentration of greenhouse gases since the start of the industrial age. Globally, the three primary causes of these increased concentrations are emissions from the following sources –

- 65% of the greenhouse gases that are resulting in climate change is carbon dioxide (CO₂) emitted from the burning of fossil fuels (coal and oil-based fuels) and other industrial processes
- 16% is methane (CH₄) that is emitted by agricultural activities, waste management, energy use, and biomass burning; and
- 11% is carbon dioxide (CO₂) emitted from direct human-induced impacts on forestry and other land use, such as through deforestation, land clearing for agriculture, and the degradation of soils

Q. What are the consequences if this risk materialises?

The increase in the severity and frequency of extreme weather events and natural catastrophes will result in –

- Increased injury and loss of human life, especially the most vulnerable – the poor, the aged and the very young
- Increased negative impacts on property – houses, offices, shops, factories, etc.
- Increased negative impacts on infrastructure – roads, bridges, railways, electricity grid, telephony, etc.
- Increased cost of insurance
- Increased negative impacts on livelihoods, especially those based on renewable natural resources like small-scale subsistence farmers and fishers
- Increased negative impacts on biodiversity and ecological infrastructure
- The diversion of an increasing amount of public money from critical public services to disaster management

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

The principle barriers to the mitigation of the increase in the severity and frequency of extreme weather events and natural catastrophes are the same barriers to an urgent transition to a low-carbon society and economy, including –

- The lack of political will – the lack of willingness to make and implement the hard political decisions required to transition from current carbon-intensive and non-sustainable economies and lifestyles
- Powerful lobbies – lobbies for the maintenance of the status quo by many powerful and influential countries, companies and individuals who benefit directly from carbon-intensive and non-sustainable economies and lifestyles
- Resistance to change – the very human response to threats to “the comfort of the familiar”
- Cost – the perceived cost of the transition – a barrier that is often used as the principle justification for the ‘powerful lobbies’ referred to above
- Immature alternative technologies – the perceived lack of maturity of low-carbon technologies – another barrier that is often used as a justification for the ‘powerful lobbies’ referred to above
- Lack of awareness, acceptance and accountability – the fact that most people are not aware that the risk is human induced and, if they do, have not accepted the fact that their behaviours may be contributing to the risk

Q. What is the effective risk response to treating the risk on a National level?

The risk response to the increase in the severity and frequency of extreme weather events and natural catastrophes must include a mitigation component and an adaptation component. The mitigation component is largely covered above, namely –

- An urgent global transition to a low-carbon society and economy.

However, even if this transition were magically achieved tomorrow, the impacts of the current levels of greenhouse gasses mean that we have already committed to some level of change – what this means is, despite our best mitigation efforts, things are likely to get worse before they get better. Hence the adaptation risk response to deal with the ‘risk consequences’ listed above –

- Improved early warning, public awareness and emergency services, especially for the most vulnerable – the poor, the aged, the very young, people in informal settlements and rural communities
- Improved building standards and town planning (e.g. no building on or near flood plains)
- Improved planning and standards for infrastructure – roads, bridges, railways, electricity grid, telephony, etc.
- New forms of affordable insurance products
- Relocation or protection of vulnerable communities and the provision of alternative livelihoods, especially those based on renewable natural resources like small-scale subsistence farmers and fishers
- Increased protection, restoration and maintenance of biodiversity and ecological infrastructure
- Adequate government budget allocated to risk reduction and disaster management

Q. What is the effective risk response to treating the risk on an Industry level?

The risk response of industry to the increase in the severity and frequency of extreme weather events and natural catastrophes matches the national response in many ways. Firstly, industry must include a mitigation component and an adaptation component. The mitigation component must be –

- An urgent and meaningful contribution to the transition to a low-carbon society and economy.

In terms of industrial adaptation risk responses –

- Improved early warning systems, staff awareness and emergency responses, especially for the most vulnerable – field workers, the physically challenged, etc.
- Improved structures and resilient landscaping;
- Improved evacuation plans, shelters and refugees, etc.
- Adequate insurance
- Relocation or protection of vulnerable facilities
- Vulnerable process and input switches
- Increased contributions to the protection, restoration and maintenance of local biodiversity and ecological infrastructure
- Adequate company budget allocated to risk reduction, disaster management and disaster recovery

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

To reiterate the point made above with reference to the 2011 National Climate Change Response Policy - climate change is one of the greatest threats to humanity and the planet. If we do not urgently mitigate climate change and properly adapt to the changes we have already committed to, climate change will have disastrous impacts on our society, economy and environment. Although the risk that is the subject of this document deals with one of the more immediate and obvious climate change-related risks, there are many others that must be considered for inclusion in the current profile including, but not limited to –

- Sea-level rise – a significant risk to coastal cities, towns and communities
- Ocean acidification – a significant risk to the survival of marine life and the people who depend on marine living resources
- Climate refugees – the potential for millions of people to flee intolerable climates and climate change impacts
- Climate-related spread of disease – malaria, cholera, etc.
- Food security - the risk of reduced agricultural output due to climate changes
- Outdated (energy) technology – the risk that the South African economy misses out on the economic opportunities presented by the global transition to a low-carbon society and economy and is penalised for the continued use of outdated, polluting or non-sustainable technologies

MALEBU MAKGALEMELA

Executive for Enterprise Risk Management
Telkom

Malebu Makgalemela is an experienced professional in South Africa. She currently serves as an Executive for Enterprise Risk Management at a telecommunication service provider in South Africa. She is responsible for the Strategic Direction of Enterprise Risk Management. She is also an Executive at the Institute of Risk Management South Africa and chairs the events committee, a Professional Non-Profit Organization that enhances Risk Management Discipline. With over 15 years' worth of expertise across the public and private sectors under her belt, 7 of which involved Senior Management responsibilities, Ms. Makgalemela has successfully overseen the transition of youthful job seekers into gainful employment. A track record that is consistent all through the organizations she has served.

Risks commented on:

- Lack of leadership



LACK OF LEADERSHIP

MALEBU MAKGALEMELA

Executive for Enterprise Risk Management - Telkom

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The National Development Plan is defined to assist in the implementation of the vision and mission. For NDP to be a success, the country needs leadership skills and perspective for now and the future. It is also important to note that there are specific leadership skills required to drive NDP.

Lack of leadership can be detrimental to economic progress. Therefore it is vital that effective leadership be exercised to guide the implementation of the NDP for best results. Failure to appreciate and pro-actively mitigate the risk can have a direct and indirect impact on a good plan. To be able to execute and implement that is defined within the NDP, the country needs effective leadership that is ready to be held accountable, leadership that has got integrity, leadership that is capable of delivering on their mandate. It remains a concern if the current leadership across public and private sector we can meet future leadership requirements. The leadership skills required are that of participative leadership, as together we can achieve more.

It will be of utmost benefit to the country if the culture of accountability can be taken seriously and enforced consistently. Also, appreciate that the implementation requires synergy. The defined NDP requires synergy.

Q. Give three primary causes of this risk.

- Ineffective communication
- Resistance to change
- Leaders not held accountable for their decisions and actions

Q. What are the consequences if this risk materialises?

Lack of leadership:

- Threatens the economic progress
- Affects the morale standing of both the company and individuals within the company
- Inhibits the development of synergy in both Public and Private Sector
- Makes it impossible to achieve objectives, as there will be no effective leadership exercised by those empowered to do so

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

Dominant leaders that are exercising leadership instilling fear in employees.

Leaders that have no skill and knowledge on how to deal with strategic matters (i.e., no clear mission, vision) being reactive, which can be costly.

Q. What is the effective risk response to treating the risk on a National level?

- Nationally leadership cannot equate to an individual; it is everyone who is empowered to make sound judgment and decisions. There are some of the fundamentals that can assist in addressing leadership issues
- Consistency - There is a need for all leaders across different sectors to be consistent in their actions
- Communication - Leaders need to communicate openly and honestly, to gain trust from all key stakeholders
- Leaders to surround themselves with capable individuals that maintain their integrity all the time
- There is a need for accountable leaders. Leaders need to build a culture of accountability in their respective organisations

Q. What is the effective risk response to treating the risk on an Industry level?

- The industry needs to assume its position and also understand the role to be assumed for the benefit of all. There is nothing different in the manner to deal with the risk. The industry needs to also:
 - Consistency - There is a need for all leaders across different sectors to be consistent in their actions
 - Communication - Leaders need to communicate openly and honestly, to gain trust from all key stakeholders
 - Leaders to surround themselves with capable individuals that maintain their integrity all the time
 - There is a need for accountable leaders. Leaders need to build a culture of accountability in their respective organisations

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT
- Micro economic developments: Inflation, deflation, austerity measures, national economic slowdown
- Profound social instability
- Growing income disparity
- Extreme weather events/natural catastrophes (drought, fires, storms, earthquakes etc.)
- Lack of innovation including resistance to change
- Organisation's risk culture not successfully enabling the achievement of strategic and operational objectives

C H R I S T E L L E M A R A I S

Chief Risk Officer
Marsh

Since 1991, Christelle has been active in various roles within corporates such as Marsh Africa, Sasol, South African Post Office and various clients across Africa in governance, company secretarial services, risk management, ethics, business continuity management, insurance, cell captives, forensic investigations, economic crime, compliance, asset and liability management and treasury. She has served in various capacities at subsidiary, joint venture and group levels and has often been co-opted to conduct risk management for major organisational restructuring projects. Christelle's focus is to enable Boards, Risk Committees, Audit Committees, EXCOs and divisional teams through risk intelligent programs to govern risk and make informed decisions. She has developed risk management frameworks (policy, strategy, standards, processes and risk maturity evaluations) for various entities which have been recognised by industry bodies as best in class.

Risks commented on:

- Lack of leadership
- Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT
- Significant escalation in organised crime and illicit trade
- Organisation's risk culture not successfully enabling the achievement of strategic and operational objectives



LACK OF LEADERSHIP

CHRISTELLE MARAIS

Chief Risk Officer - Marsh

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Manifestation of this risk at different levels throughout the SA economy is the single strongest contributor to non-achievement of NDP objectives (all levels of government and private sector). Areas where this risk has been commendably managed (the judiciary, media, etc.) has demonstrated the value that can be derived throughout the economy, if courageously managed.

Q. Give three primary causes of this risk.

- Short-term profit-/ performance-targets ("short" being contextualised in terms of financial performance in the private sector and political performance in government)
- Large scale perception of personal inability to turn the tide, i.e. personal exposure incurred when going against "the way we do things" at all levels of leadership throughout organisations and society
- Conflicting generational interpretation of what good leadership means and what leaders should thrive for

Q. What are the consequences if this risk materialises?

- Poor organisational and societal performance (short-term existential considerations instead of achievement of aspirational goals)
- Non-sustainability (willful underestimation of the value of contributing in terms of different "capitals" vs financial performance only)

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Shortage of younger generation leaders and their exposure to deeply experienced organisational and societal leaders in SA economy
- Increased complexity of organisational activities and commensurate exposure for those in leadership positions
- Inappropriate focus on financial performance vs sustainable, longer-term focus on all elements that make up a successful societal and economic developmental structure

Q. What is the effective risk response to treating the risk on a National level?

- Going “back to basics” – developing/ recruiting the right skills and experience to deliver what government should deliver
- Trust between public and private sector leaders in terms of rooting out that which detracts from NDP outcomes, thereby emboldening young and upcoming leaders to build on strong leadership foundations

Q. What is the effective risk response to treating the risk on an Industry level?

Accepting higher levels of accountability for business’ role in the national leadership context (business leaders underplay their societal and economic leadership contribution to the detriment of building a sustainable leadership culture)

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No

MACRO-ECONOMIC DEVELOPMENTS - EXCHANGE RATE VOLATILITY, CREDIT RATING FLUCTUATIONS, GLOBAL ECONOMIC SLOWDOWN, COMMODITY PRICE VOLATILITY, BREXIT

CHRISTELLE MARAIS

Chief Risk Officer - Marsh

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Effective response to this risk is a critical input in enabling the SA economy as a firm foundation for sustainable implementation of NDP objectives. Turning a blind eye to obvious instances of corruption and/ or collusion that have a direct impact on the strength of the Rand, the country's credit rating and second round effects on revenue from commodities, is tantamount to willful mismanagement of this risk in the national interest.

Q. Give three primary causes of this risk.

- Lack of strong governance, political will and fiscal discipline at national, provincial and local government
- Shortage of critical skills and deep experience in determining and managing the country's response to macro-economic developments as they occur
- Global protectionist economic trends in almost all geographies

Q. What are the consequences if this risk materialises?

- Severe, negative impact on SA government's ability to deliver on social agenda as envisaged in NDP or in any other way
- Severe, negative impact on business in SA to continue and/ or to commit to longer term developmental initiatives
- Social dissatisfaction with government's and business's perceived lack of commitment to transformation and achievement of broader economic upliftment

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Energy, Water and Utilities
- Transport and Logistics
- Manufacturing
- Mining and Quarrying

Q. What are the barriers that prevent us from solving this risk?

- Uncertainty regarding outcome of December 2017 ANC Conference
- Embedded short-termism and opportunism vs servant leadership

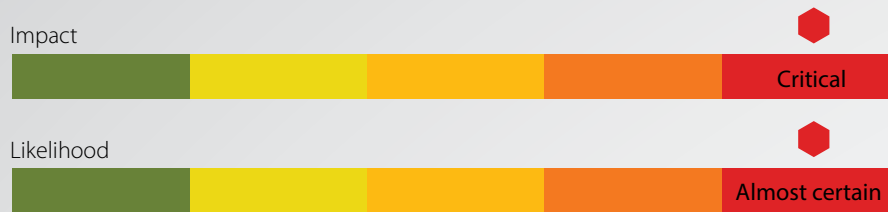
Q. What is the effective risk response to treating the risk on a National level?

- Accepting business as trusted partner in the macro-economic policy and response debate
- Strict commitment and discipline to achieve agreed end results as enablers of NDP

Q. What is the effective risk response to treating the risk on an Industry level?

- Accepting responsibility for business' role in working with policy makers vs passive receivers of policy outcomes (building trust and outcomes based relationships)

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No

SIGNIFICANT ESCALATION IN ORGANISED CRIME AND ILLICIT TRADE

CHRISTELLE MARAIS

Chief Risk Officer - Marsh

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Astronomical amounts of public funds misappropriated through occurrences where this risk materialises daily, severely hampers SA's ability to build a strong economic-social-foundation for future development and upliftment. In addition, private sector's contribution to economic growth is severely impacted negatively through its participation in untoward behaviour due to its perception that "this is how business is done in SA."

Q. Give three primary causes of this risk.

- Severe trust deficit between society and law enforcement bodies regarding bringing of perpetrators of organised crime and illicit trade before the courts
- Political interference in chapter 9 institutions that should form the bulwark of protection against this risk in SA
- Insufficient societal action against perpetrators of organised crime and illicit trade (trying to "live with" it instead of "uprooting it")

Q. What are the consequences if this risk materialises?

- Diversion of time, money and effort that should be directed towards achievement of NDP objectives
- Destruction of social fabric
- Increased burden/ carrying cost (including opportunity cost) of recovery and redress

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Energy, Water and Utilities
- Wholesale and Retail

Q. What are the barriers that prevent us from solving this risk?

- High level of permeation of "criminal"-type behaviour in the SA economy
- Lack of political and societal will to address root causes
- High level of poverty that breaks down societal resistance against organised crime and illicit trade

Q. What is the effective risk response to treating the risk on a National level?

- Zero tolerance towards non-compliance with legislation, corporate governance and internal control requirements
- Elimination of existing loopholes
- Strengthening of capacity and integrity of law enforcement and judiciary systems

Q. What is the effective risk response to treating the risk on an Industry level?

- Preparedness to forgo undue profits in the event that it is/ may be questionable or tainted with any aspect related to organised crime or illicit trade
- Strong governance and internal controls across the entire supply chain

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



ORGANISATION'S RISK CULTURE NOT SUCCESSFULLY ENABLING THE ACHIEVEMENT OF STRATEGIC AND OPERATIONAL OBJECTIVES

CHRISTELLE MARAIS

Chief Risk Officer - Marsh

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

It is difficult to evaluate the level to which risk culture would have contributed to achievement of NDP objectives in context of government's current performance in areas of health, education, crime, job creation, etc. My perception of the level of risk management skills and commitment in government is that it is commendable given the realities to be dealt with. In the private sector there are few organisations that have been able to achieve high levels of strategic performance based on a strong risk culture. These levels are not enough to have a significant impact on achievement of NDP objectives.

Q. Give three primary causes of this risk.

- Persistent inability of the risk management industry in general to demonstrate the real value add of risk management to the achievement of organisational objectives (focus on activities instead of risk content)
- Continued silo-approach between most organisational disciplines to strengthen cross-functional risk optimisation realities
- Insufficient understanding amongst directors' and executives' of enabling resources and conditions for effective risk management with unclear expectations of what good risk management should deliver

Q. What are the consequences if this risk materialises?

- Compliance based instead of value based approach to risk management and risk governance
- Lack of competitive advantage to be derived from integrated, holistic risk management approach
- Increased cost with diminished return on investment in risk management

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Perception that risk management brings increased activity vs increased value
- Risk management industry's rule-/ process-/ compliance-based approach
- Perception that "anybody" can be a risk manager, whereas it requires deep technical expertise, corporate experience, cross functional thinking and high personal maturity to facilitate an effective risk management process throughout an organisation
- Thinking of risk culture as a "soft"/ "peoples" issue vs understanding that many of the firm organisational processes are critical to underpin a strong risk culture (e.g. delegation of authority, roles and responsibilities, charters, terms of reference, business case requirements)

Q. What is the effective risk response to treating the risk on a National level?

- National Treasury has good risk management principles/ guidelines, but need to strengthen support as to the "how" to national, provincial and local government entities
- Understanding the purpose of risk management in context of social mandate of economic upliftment

Q. What is the effective risk response to treating the risk on an Industry level?

- Overcoming an approach of "penny-wise and pound-foolish" when it comes to risk management (allowing for investment time and money for the benefit of a strong risk culture to be demonstrated)
- Overcoming a "good news"-culture or tendency to underplay what is wrong, while overemphasising what is right – a strong risk culture requires organisational maturity and transparency regarding that which is detracting from achievement of objectives

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No

B R E N D A N M A S E T I

Group Risk Manager
Lonmin

Brendan Maseti is currently employed as the Group Risk Manager at Lonmin Platinum. He has collaborated effectively with various industry leaders in terms of ensuring an enabling process to address uncertainty, in the pursuance of the organisational objectives. This was achieved by simplifying risk management process, through the adoption and tailoring of risk management best practices, as well as the innovative use of tools such as systems theory and business improvement mechanisms and integrating it into the organisation's value chain. With an established track record of driving positive organisational culture change in highly competitive and demanding environments such as the Maritime, Rail, Aviation, Logistics and Mining sectors, he is the go-to-person in leading strategic projects or serving as a strategic risk management resource, during the development and execution phases of initiatives. The abovementioned successes were also due to his positive attitude towards life, energy to drive team work and his ability to constantly identify methods as to how the risk management process can be improved to enable an organisation to achieve its business objectives.

Risks commented on:

- Labour strike action
- Profound social instability



LABOUR STRIKE ACTION

BRENDAN MASETI

Group Risk Manager - Lonmin

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

"Long-term growth and investment requires a shared vision, trust and cooperation between business, labour and government. Today, the level of trust is low, and labour relations have become unduly tense (and sometimes violent). It is inconceivable that the economy will evolve in a more labour-intensive manner if these conditions persist. Promoting more rapid, job-creating growth means tackling these tensions in an honest and open manner" (National Development Plan : 2030).

Bringing about faster economic growth, higher investment and greater labour absorption is a key deliverable of the NDP. The risk of labour strike action will be a key inhibitor to achieving this objective.

Labour strike action erodes investor confidence as well as results in operational disruption. This also negatively impacts South Africa from an investment perspective as highlighted in the recently released Frasier investment index. A major consequence of this risk is also the associated violence and eventual cost of settlement. This increase in operating costs is transferred to the consumer, which fuels inflation and may in the long term result in businesses no longer being viable and thereby revert to retrenchments or closure.

Q. Give three primary causes of this risk.

- Higher unaffordable wage demands which do not take into account economic realities
- Union rivalry which results in more aggressive demands
- Poor employer/employee relations

Q. What are the consequences if this risk materialises?

- Operational disruption, loss of revenue and in some cases violence
- The cost of eventual settlement may potentially result in a long term unsustainable business model, which forces an employer to retrench employees
- Despite settlement employer and employee relations may remain strained post the strike and this will negatively impact organisational functioning
- A growing divide between the employed and unemployed, leading to greater social instability and "welfare" demands

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Energy, Water and Utilities
- Communications and Technology
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- The political influence on certain labour unions which has hampered efforts by the employer to address the root causes of improving employee relations
- Not all stakeholders involved may have an active interest in resolving the conflict and thereby achieve a common purpose
- Short term agreements which do not provide stability
- Adversarial relationships still exist between certain labour unions and employers
- Lack of effective and decisive leadership, both from a national government and business perspective
- Labour relations legislation which can be interpreted as being overly protective to labour

Q. What is the effective risk response to treating the risk on a National level?

- Government must provide platforms for ongoing engagement between key stakeholders such as labour unions and core industries to ensure that potential issues are identified proactively and addressed effectively
- Where possible, facilitation of major labour issues through NEDLAC or other key government bodies in historically more volatile industries
- Effective communication of the economic realities. In the current environment of low/no growth, many demands are simply unaffordable

Q. What is the effective risk response to treating the risk on an Industry level?

- Establish improved relationship building programmes which is focussed on ongoing communication and transparency with regard to business/industry performance
- Key industry players to formally engage at established platforms and actively pursue measures to prevent labour strikes

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

None

PROFOUND SOCIAL INSTABILITY

BRENDAN MASETI

Group Risk Manager - Lonmin

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Social Instability in the form of sustained protest action or civil disorder will have a major negative impact on the successful execution of the NDP objectives.

Ongoing service delivery protests, labour strikes or interest group driven mass action campaigns does have a disruptive impact on economic activity. These campaigns have at times also been associated with violence and damage to public property.

Q. Give three primary causes of this risk.

- Lack of or poor service delivery by government institutions which includes municipal services
- Increased anti-government sentiment due the perceived lack of accountability and ethical conduct
- Political infighting as well as rivalry between political parties
- Other factors includes poor economic performance which includes the lack of employment opportunities and the resultant social benefits

Q. What are the consequences if this risk materialises?

- Service delivery protests are often associated with violence and destruction of infrastructure and the severity of this is often escalated where there is a lack of or slow responses from government
- Protests related to labour strikes or broader social issues results in organisational disruptions
- Ongoing instability also erodes investor confidence as this risk does materially impact RSA as an investment destination

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Energy, Water and Utilities
- Communications and Technology
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- The perceived political will displayed by certain government functions to address its lack of effective service delivery
- The political infighting have superseded the importance to address issues of national interest
- Various stakeholders have lost interest in the belief that the RSA government will address their concerns
- Fragmentation within key institutions such as South African Police Services, National Prosecution Authority and Hawks which have not dealt effectively with crime and corruption

Q. What is the effective risk response to treating the risk on a National level?

- At a national level the South African government will need to enhance all its organs of state to improve delivery of its objectives
- Other requirements include a strong political will to improve its processes to address corruption. A final aspect includes the establishment of platforms to address potential issues before it escalates to some form of social unrest

Q. What is the effective risk response to treating the risk on an Industry level?

- Understanding of key stakeholders and how their objectives and interests may materially impact the organisation
- Establish appropriate engagement platforms with key industry stakeholders to address key issues and thereby prevent the escalation of it into civil unrest
- Promote ongoing communication and transparency with key stakeholders

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

None

T H U L A N I M K H U N G O

Chief Risk Officer and Chief Audit Executive
Special Investigating Unit (SIU)

Thulani Mkhungo worked for Transnet Freight Rail as the Senior Manager driving Infrastructure Capital Projects risks for more than 6 years before he moved to join Special Investigating Unit in February 2016 as the Chief Risk Officer & Chief Audit Executive where he established the Enterprise Risk Management & Internal Audit Department.

Risks commented on:

- Failure of, and/or inadequate critical infrastructure



FAILURE OF, AND/OR INADEQUATE CRITICAL INFRASTRUCTURE

THULANI MKHUNGO

Chief Risk Officer and Chief Audit Executive - Special Investigating Unit (SIU)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

With the new term radical economic transformation that the government has introduced if it's not managed properly to ensure that the skills transfer is done properly it can lead to critical failure of the infrastructure.

Q. Give three primary causes of this risk.

- Inability to fund key infrastructure programs due to down grading of financial borrowing status by rating agencies because of SA unstable economy
- Lack of good governance and leadership instability in the key State Owned Entities caused by political interference in the appointment of CEO's as a result of the none independent boards of directors
- Fraud and corruption in the procurement tendering system including state capture of key entities that are responsible to build and maintain the infrastructure programs
- Lack of planning for the key infrastructure as not aligned with the economic growth and population

Q. What are the consequences if this risk materialises?

- High rate of unemployment
- Further down grade to junk status by rating agencies
- Lack of service delivery
- Loss of revenue and decline in tax revenue
- Decline in the economy due to international investors being reluctant to invest in SA as a result of the poor status of SA key infrastructure
- Service delivery protests

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction

Q. What are the barriers that prevent us from solving this risk?

- Fraud and corruption
- Political interference
- Affordability
- Lack of skills

Q. What is the effective risk response to treating the risk on a National level?

- Increase government transparency on the tender procurement system
- Enhance strategy on the fight against fraud and corruption to zero tolerance
- Planning ahead by aligning the NDP with the objectives of the three phases of government departments and SOC's
- Invest in education for Artisans and Engineers
- Monitoring and evaluation department to be more effective to monitor the NDP
- NDP should be flexible adjusted as the economy changes

Q. What is the effective risk response to treating the risk on an Industry level?

- Government to encourage the Private Partnership Programs in building and maintaining the critical infrastructure
- Create capacity ahead of demand
- Planning ahead by aligning the NDP with the objectives of the government departments and SOC's
- Invest in education for Artisans and Engineers

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

All covered

DIKELEDI MNYANDU

Director: Risk Management
Department of Transport - KZN

Dikeledi Bertha Mnyandu is a Director for Risk Management at KwaZulu-Natal Provincial Department of Transport. Dikeledi has 12 years' experience working in Risk Management. She possesses a National Diploma obtained from The Tshwane University of Technology and is currently studying towards her B-Tech: Internal Auditing with the Durban University of Technology. She further possesses certificates in: Risk Management completed with the National Department of Treasury; a certificate in Project Management obtained from UNISA. Dikeledi worked for the Limpopo Department of Health and Social Development as an Assistant Director, in 2009 moved to the Department of Agriculture as a Deputy Director. Dikeledi is currently looking forward to participating in the Provincial Risk Management Committee planned to commence in March 2017.

Risks commented on:

- Structurally high unemployment/underemployment



STRUCTURALLY HIGH UNEMPLOYMENT/UNDEREMPLOYMENT

DIKELEDI MNYANDU

Director: Risk Management - Department of Transport - KZN

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

It is a fact that for activities to move every organization needs human resource with skills and competency. Therefore, the risk of structural high unemployment can bring about huge repercussions to achievement of national development objectives.

There is a need for skilled engineers to improve the economy of the country. Country needs additional safety officials to protect the wellbeing of its citizens. While ensuring the safety there is also the need of health care as well as social welfare.

All the above require human resource to carry out certain activities such as construction, securing enforcements, Health Practitioners and etc. But without the availability of Human Capacity these objectives will not be archived, When unemployment is high the output gap will become negative and have deflationary forces on outputs. The potential of economic growth gets damaged.

Q. Give three primary causes of this risk.

- International trades of services available in the Country - Importing of resources/services that are available in the country result in recession of local profit making businesses. Such companies remain with no choice but to retrench employees
- Economic factor – In terms of decline of rand value of resulting in cost of leaving too expensive for people to afford tertiary institution fees
- Lack of population control - Due to migration from other countries

Q. What are the consequences if this risk materialises?

- Criminal activities – e.g. people tend to be involved in theft, robbery, fraud, human trafficking, etc; in order to survive
- Reliance on prostitution – Possibility of HIV infection
- Poverty aggravation - as number of households increase

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Education
- Healthcare
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- The moratorium on filling of vacant posts
- Financial constraints
- Lack of adequate structural arrangements
- Poor development of service delivery models

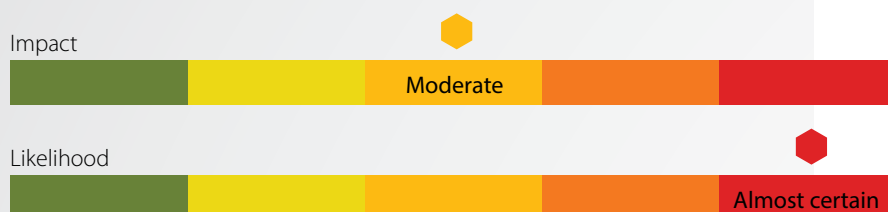
Q. What is the effective risk response to treating the risk on a National level?

- Provision of bursaries to develop different skills within the country. All Government Departments to provide bursaries according to the core/main objective of such departments. e.g. Health Departments to provide bursaries to students interested in medicine fields
- Consideration of risk identification and assessment during strategic/country's decisions making, particularly on foreign trades/migration
- Encourage Provincial Government on job creation to households with a lower income through allocation of targets
- SA being rich in natural resources, government to develop relevant skills to utilise such resources and produce goods or provide services to develop the country. E.g. Instead of exporting iron ore as raw material, rather develop skills to produce and export finished products at a higher rate than to buy back what was produced from the country's own material
- The education systems and approach be channelled to allow learners to identify their talent at a tender age and on the other hand teachers and parents to encourage such learners and assist them to follow the appropriate career path

Q. What is the effective risk response to treating the risk on an Industry level?

- Introduction of empowerment programmes to enable communities the opportunity of participating in Government Departments with a stipend
- The Empowerment Programme must be in line with Government's Expanded Public Works Programme (EPWP), which aims to draw significant numbers of unemployed people into productive work, accompanied by training, where possible, to enable them to increase their capacity to earn an income in the future

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Delayed completion of road infrastructure projects due to lack of quarry material resulting to unsafe road conditions and the possibility of accidents. This can partially be solved involving land owners to participate and allow mining if quarries by government to acquire quarry
- Lack of efficient, safe and reliable public transport as a result of insufficient coordination between state organs
- Loss of livestock caused by an outbreak of zoonotic diseases. Department of agriculture can mitigate by identifying and declaring boarder lines and provide close monitoring to prevent inflow of animals from neighbouring countries. To prioritize acquisition of vaccination equipment and ensure regular vaccine
- Advance in technology- although this is a good thing, organizations may find themselves not able to deliver due to changes in Technology

SOLLY MOENG

Managing Director and Senior Consultant
Don Valley

Solly Moeng is an experienced holistic Brand Manager and media professional with specialisation in Reputation Management, Strategic Communications, PR and Media Relations. Also French-speaking, he lived and studied in France (where he obtained a French Master's Degree) before working in Canada and the US as South African Tourism's marketing manager and country manager, respectively, managing South Africa's country image and, while in the US, rolling out SA Tourism's growth strategy in the US and Canada. He has also worked as Business Development & Marketing Manager of Mesure, a South African facilities management subsidiary of French Multinational Construction company, Bouygues Travaux Publics and Basil Read. This position also enabled him to return to France, where he was based at the company's vast campus in St-Quentin-en-Yvelines, just outside Paris. He also travelled to Nigeria with the company's special project negotiating team. He loves the cut the thrust of public affairs and thrives on good political and media debates. He has led strategy development processes and provided corporate communications and reputation management advice to a number of local and international brands in retail, oil & gas, nuclear energy, transport, destination management, lifestyle, logistics, etc. He has spoken at industry conferences and seminars in South Africa, Russia, Armenia, Switzerland, and India, where he was also invited as Co-host for the India Brand Summit in late 2016.

Risks commented on:

- Failure of State, a State crisis or a State collapse



FAILURE OF STATE, A STATE CRISIS OR A STATE COLLAPSE

SOLLY MOENG

Managing Director and Senior Consultant - Don Valley

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Given the sad, divisive, past under apartheid South Africa, as well as the lasting, negative, legacy of that period and its impact on the socio-economic well-being of the majority of South Africans, governments elected in the aftermath of apartheid have a particularly significant role to play. They have to use the resources available to them, most of which are collected through taxation, to lighten the yoke off the shoulders of poor South Africans and, generally, deliver programs (e.g. the National Development Plan) that will continue the process to build bridges over historic divides and consolidate a united nation with a shared vision.

The increasing avalanche of revelations of the extent and depth of corruption throughout many government ministries, departments and SOEs, as well as the more organised state capture that is said to involve very powerful politicians and their enablers, are the very ingredients "failure of State, a State crisis, or State collapse" is made of. Linked to the phenomenon of state capture has been the deliberate, systematic, repurposing and weakening of key state institutions in order, reportedly, to shield corrupt politicians from scrutiny, possible arrest and prosecution.

At the heart of such institutions that have been weakened is the South African Revenue Service (SARS), which used to be a shining example of good governance, integrity, high-level performance, and ethical leadership. SARS also used to enjoy high levels of trust by individual and corporate tax payers. The resultant high levels of goodwill it enjoyed enabled it to regularly exceed its revenue collection targets, supposedly enabling government to deliver on its programs.

Now, with a reputationally compromised and weakened SARS, taxpayer goodwill has been lost and revenue collection massively reduced. With no money to deliver services, there is a heightened risk of social unrest and political instability in South Africa. A failed State cannot attract the kind of investments, at home and abroad, that will sufficiently stimulate economic activity to help it create an inclusive economy.

As things stand, and if nothing gets done, South Africa remains vulnerable to potential civil unrest and political upheaval.

Q. Give three primary causes of this risk.

- Poor, unethical, divisive, leadership with no clear developmental vision
- Corruption and state capture
- Insufficient tax revenue and poor investor confidence

Q. What are the consequences if this risk materialises?

Increased levels of unemployment, poverty, and a bigger gulf separating those who have from those who do not have. South Africa is increasingly vulnerable to potential civil unrest and political upheaval.

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

The continued presence of ethically compromised leaders in government and key institutions. Such leaders no longer prioritise the interests of the country, but their own, as they seek to ensure that they never get brought to justice.

Q. What is the effective risk response to treating the risk on a National level?

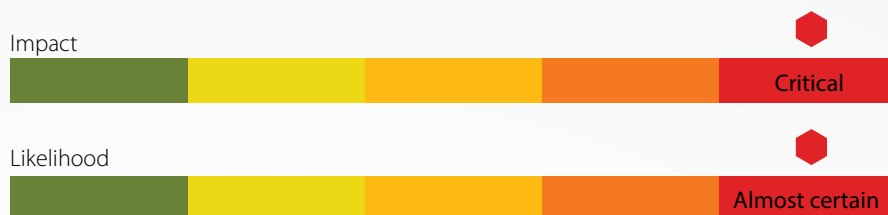
Given that South Africa's fortunes rely almost entirely on what happens within the ruling ANC, we should hope that more ethical leaders with a clear appreciation of the state in which the country finds itself get elected to lead the party and, if the ANC wins the 2019 general elections, the country.

At National level, credible, transparent, leadership cleaning-up will have to be done in order to begin what will surely be a slow process of regaining taxpayer and investor confidence. Recovery will remain hard while the country and its key institutions (The Presidency, National Treasury, SARS, NPA, Public Protector, other SOEs, etc.) are still led by ethically and, possibly, criminally compromised individuals.

Q. What is the effective risk response to treating the risk on an Industry level?

At Industry level, Business Leadership South Africa and other industry structures should continue alienating companies that have been found to be ethically wanting, having collaborated with corrupt politicians in the weakening of key state institutions and facilitating the stealing of public funds through corrupt tenders and sub-standard, manipulated, auditing services. Business leadership has to be clear about where it stands in regard to corruption.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Capital flight/outflows

EDWIN MPOFU

IT Security Operations Manager Wolfpack Information Risk

Edwin's information technology career spans 18 years, of which the last 8 years have been heavily focussed on information security. A Computer Science Honours graduate, Edwin's career has spanned various industries including information technology infrastructure work at 2 of the Big 4 Auditing firms, technology service providers, and a manufacturing organization.

Currently, he is employed by Wolfpack Information Risk and is responsible for the organization's information security operations as well as assisting clients on technology infrastructure issues at both strategic and tactical levels. As a member of the global organisation, (ISC)2, Edwin is an active participant in the information security industry and is committed to continuously improving his skills in this fast-paced profession. He holds the following industry certifications: (ISC)2 CISSP (Certified Information Systems Security Professional), CCSP (Certified Cloud Security Professional), Microsoft Certified Professional & Linux Professional Institute (LPI) - Advanced Level Certification.

Risks commented on:

- Cyber-attacks and cyber-attack non-disclosures
- Data fraud and data theft (including identify theft and theft of intellectual property)



CYBER-ATTACKS AND CYBER-ATTACK NON-DISCLOSURES

EDWIN MPOFU

IT Security Operations Manager - Wolfpack Information Risk

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Cyber-attacks have the potential to dramatically lower the productivity of organisations which would directly contribute to a decrease in economic output with a significant knock-on effect on the goals and objectives of the NDP.

Q. Give three primary causes of this risk.

- Crime pays, especially cybercrime
- Widespread technology adoption means that items of value are now available on technology systems and this attracts cyber criminals
- Not much attention is given towards securing technology systems, making them an attractive target

Q. What are the consequences if this risk materialises?

- Productivity losses, when key personnel are involved in stopping the attacks or attempting to clean-up after the attacks
- Catastrophic consequences when critical infrastructure is targeted
- Wholesale reduction of a country's competitiveness when the technology assets of a country are targeted by another nation-state actor

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service

Q. What are the barriers that prevent us from solving this risk?

- Lack of awareness amongst top level leadership
- Lack of skills required to bring the risk to a manageable level

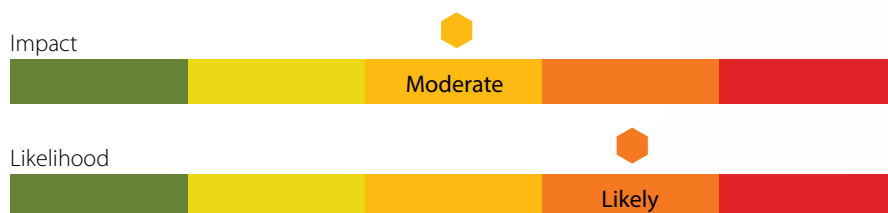
Q. What is the effective risk response to treating the risk on a National level?

It should start with awareness at the top, followed by a detailed diagnostic of the issues at play. When this is done, appropriately skilled personnel should be involved in mapping an effective response across different dimensions and involving both government and the private sector

Q. What is the effective risk response to treating the risk on an Industry level?

Industries need to co-operate and establish think-tanks that can share resources to deal with these issues. In addition, a minimum threshold of data protection standards need to be established within each industry and enforced.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

The lack of unified international laws that deal with cyber-crime is always going to be hindrance to solving a lot of the issues that arise. For example, it easy to launch an attack on Country X, using a computer located in Country Y, but being physical located in Country Z. Which jurisdiction applies?

DATA FRAUD AND DATA THEFT (INCLUDING IDENTIFY THEFT AND THEFT OF INTELLECTUAL PROPERTY)

EDWIN MPOFU

IT Security Operations Manager - Wolfpack Information Risk

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Data theft especially that which involves intellectual property has a negative impact on the capacity of local businesses to be self-sustaining, with the secondary impact of reducing the absorption of people into the workforce, especially the youth.

Q. Give three primary causes of this risk.

- Inadequate security controls
- Lack of executive awareness of the impact of these issues
- Explosion of data/information stores making it harder to secure

Q. What are the consequences if this risk materialises?

- Competitiveness of local organisations is hindered
- Privacy of citizens is compromised
- Broader economic participation by previously disadvantaged communities is reduced

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service

Q. What are the barriers that prevent us from solving this risk?

- Lack of awareness amongst top level leadership
- Lack of skills required to bring the risk to a manageable level

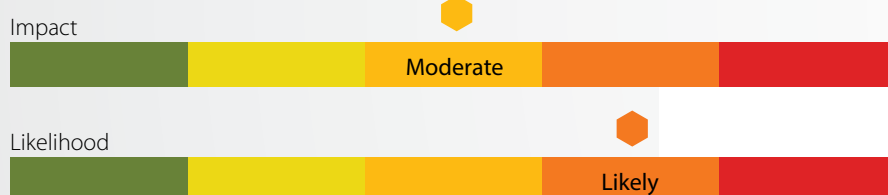
Q. What is the effective risk response to treating the risk on a National level?

It should start with awareness at the top, followed by a detailed diagnostic of the issues at play. When this is done, appropriately skilled personnel should be involved in mapping an effective response across different dimensions and involving both government and the private sector.

Q. What is the effective risk response to treating the risk on an Industry level?

Industries need to co-operate and establish think-tanks that can share resources to deal with these issues. In addition, a minimum threshold of data protection standards need to be established within each industry and enforced.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Widespread adoption of unchecked artificial intelligence (AI) and robotics technologies leading to a net decrease in employable people due to the automation of routine work activities and the increase in the skills threshold required for participating in the technology sector.

L W A N D L E M Q A D I

Specialist, Climate Change and Sustainable Development
Group Risk and Sustainability
Eskom

Lwandle Mqadi is a Senior Consultant (Specialist on Climate Change and Sustainable Development) for South Africa's state owned electricity company, Eskom. Her work focus has been on managing the development, review and implementation of Eskom's climate change strategy including it's the Adaptation to climate change sub-strategy. She manages the current Eskom climate change science research programme portfolio. Ms Mqadi is also a negotiator for South Africa at the United Nations Framework Convention on Climate Change. Her latest work has focused on developing tools and procedures for the Eskom business to integrate climate change science and its impacts into the Eskom systems utilising GIS and other various forms of technology for maintenance, standard development and long term planning initiatives. In addition to this, she has been part of the national steering committee responsible for the development of the South Africa's national adaptation strategy whilst also independently reviewing some of the chapters which form part of the national adaptation strategy. Lwandle holds an MSc in Agricultural Economics (Resource Economics and Policy) from the University of Pretoria.

Risks commented on:

- Extreme weather events/natural catastrophes (drought, fires, storms, earthquakes etc.)



EXTREME WEATHER EVENTS/NATURAL CATASTROPHES (DROUGHT, FIRES, STORMS, EARTHQUAKES ETC.)

LWANDLE MQADI

Specialist, Climate Change and Sustainable Development: Group Risk and Sustainability - Eskom

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Lack of appropriate integrated risk and resilience management practices and adaptation to climate change impacts initiatives due to this risk will directly affect the objectives of the NDP especially increasing vulnerability of the related systems and thus directly impacting the limited resources the country has.

With increased vulnerability of various systems due to this risk, goals set for 2030 will not be achieved or will be delayed. Therefore to tackle this inevitable and constantly increasing risk, coordinated immediate disaster risk management and long term adaptation strategies is required. These may include (but not limited to) the establishment and availability of forecasting systems and long term climate science projections and analysis skills for the vulnerable systems etc. All of this may contribute to the achievement of NDP goals and shared long-term strategic framework within which more detailed planning can take place in order to advance the long-term goals set out in the NDP.

Q. Give three primary causes of this risk.

- Inevitable and increased impacts of climate change
- Lack of or inadequate vulnerability assessments
- Uncoordinated short term disaster management strategies
- Lack of integrated risk management and resilience strategies and long term climate change adaptation strategies

Q. What are the consequences if this risk materialises?

- Increased vulnerable systems and displacement
- Negative impact on limited resources, people, skills and infrastructure
- Direct negative impact on sustainable development goals and specifically national development goals for the country

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Lack of information, skills and resources to identify risk and contextualise the risk due to competing objectives
- Lack of a coordinated response from a disaster management perspective to integrated risk and resilience management to long term adaptation to climate change impact strategic initiatives to overall organisational strategy and long-term sustainability
- Competing risks and objectives

Q. What is the effective risk response to treating the risk on a National level?

A coordinated integrated risk management and resilience response which will take issues on adaptation to climate change and immediate disaster management into its core: in terms of information provision, skills development, identification of the most vulnerable systems, alignment with national objectives, coordinated implementation and resource allocation and monitoring and evaluation programme to monitor, measure and report on progress.

Q. What is the effective risk response to treating the risk on an Industry level?

Same as national levels but dealt with from a sector perspective: A coordinated integrated risk management and resilience response which will take issues on adaptation to climate change and immediate disaster management into its core: in terms of information provision, skills development, identification of the most vulnerable systems, alignment with national objectives, coordinated implementation and resource allocation and monitoring and evaluation programme to monitor, measure and report on progress.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Increase in "climate change" refugees from a regional perspective into both rural and city centres
- Increased dependence by the Southern Africa region in terms of natural resources and specifically energy/electricity resources due to the region's dependence on hydro power plants which will be affected by the impacts of climate change
- High costs and high prices leading to inability to pay for basic services by communities thus leading to lack of maintenance of infrastructure and provision of basic services i.e. electricity, water, waste management etc.

P A R M I N A T E S A N

Executive: Centre of Director Development
The Institute of Directors Southern Africa (IoDSA)

Parmi Natesan is an Executive at the Institute of Directors in Southern Africa (IoDSA) who oversees their Centre for Corporate Governance and Director Development departments. This role includes management and oversight of all IoDSA thought leadership (including the King Reports), board appraisals, governance advisory, governance research as well as technical forums and committees. Parmi is an executive director on the board of the IoDSA as well as a member of the King Committee, among other forums and committees. Parmi is a qualified Chartered Accountant, registered with the South African Institute of Chartered Accountants, with BCom (cum laude) and BCom (honours) degrees.

Risks commented on:

- Failure of governance (public and private)



FAILURE OF GOVERNANCE (PUBLIC AND PRIVATE)

PARMI NATESAN

Executive: Centre of Director Development -The Institute of Directors Southern Africa (IoDSA)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The risk of failure of governance does pose a significant threat to the achievement of the National Development Plan (NDP) objectives for South Africa, as sustainable business (in all sectors) has a significant role to play in achieving the NDP goals of poverty reduction, economic growth, economic transformation and job creation, amongst others.

King IV defines corporate governance as ethical and effective leadership. What this means is that just ticking the boxes by having the recommended practices/structures/documents/controls does not in itself ensure good governance. We need leaders to function ethically and effectively in order to see progress in our organisations and consequently in the country as a whole.

This talks to the relevance of the IoDSA's tagline - Better Directors Better Boards Better Business – and I would add, ultimately a better South Africa.

Leadership cannot exist in a vacuum and King IV supports it through setting sustainable development as the ultimate goal for organisations. The NDP objectives give content/ effect to the quest for sustainable development, so there is a good fit between corporate governance and NDP.

Q. Give three primary causes of this risk.

- Absence of ethical and effective leadership, as espoused by ICRAFT – Integrity, Competence, Responsibility, Accountability, Fairness, Transparency. Governing bodies need to be held to account for maintaining these in their roles
- Lack of stakeholder inclusivity i.e. not taking the broader stakeholder interests into consideration when setting strategy and making decisions
- Following the tick-box approach to applying governance, i.e. not focussing on leadership and the achievement of outcomes, but rather mindlessly applying practices for the sake of it

Q. What are the consequences if this risk materialises?

- Corporate collapses
- Reputation damage
- In some cases, further pressure on the economy/ taxpayers as a result of government bailouts
- Negative impact on stakeholders (employees, customers, suppliers etc.)

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Viewing governance as systems, structures and processes only that need to be “complied” with, governance is more and more about leadership and behaviours. Corporate governance is in fact essential for long-term performance and it not being recognised as such poses a significant barrier
- Director appointment processes in some sectors should be improved. We need more of a focus on director competence prior to appointment. Thorough due diligences should be performed to ensure that potential director have the necessary knowledge, skills, experience and personal competencies to be able to serve effectively. Too often we see board appointments being made for political and other reasons
- Lack of ethics, as manifested through greed/corruption is a barrier to ethical leadership

Q. What is the effective risk response to treating the risk on a National level?

- Adequate and robust director appointment processes, including thorough consideration of director competence. Ongoing CPD for directors to keep up to date on expectations and duties once appointed
- A focus on governance outcomes as advocated in King IV should move us away from a tick box approach
- Holding governance role players to account for lack of ethical and effective leadership. The awareness amongst stakeholders of their role in holding organisations accountable in a constructive manner should be raised

Q. What is the effective risk response to treating the risk on an Industry level?

- Adequate and robust director appointment processes, including thorough consideration of director competence. Ongoing CPD for directors to keep up to date on expectations and duties once appointed
- A focus on governance outcomes as advocated in King IV should move us away from a tick box approach
- Holding governance role players to account for lack of ethical and effective leadership. The awareness amongst stakeholders of their role in holding organisations accountable in a constructive manner should be raised

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No

V A L L Y P A D A Y A C H E E

Strategic Adviser

The Association of Municipal Electricity Utilities of Southern Africa (AMEU)

Vally Padayachee is a seasoned power and energy executive and has over 35 years' working experience in these sectors (includes power, oil, gas and petrochemical). He is recognised as a leading international and one of South Africa's foremost experts and thought leaders in power and energy. Vally started his career in the petrochemical industry and after approximately nine years he then moved to Eskom Generation Head Office as an Executive Manager responsible for Operational Engineering from a Generation Group Corporate perspective. Vally was also appointed Eskom Generation's first Senior Business Development Manager in the late 1990's with primary responsibility for promoting, marketing and developing Eskom's business into the rest of Africa at the time. Vally then spent the next nine years at City Power JHB and regularly acted as President and CEO, among other roles. After leaving City Power, Vally became the Executive Director and Sector Leader at Gibb Engineering and Architecture and later the CEO of PDNA Mott MacDonald Resources and Energy. For the last few of years Vally became a Board Member and Group Executive Director of Altron Power (Powertech). He also was a Board member and Executive Director of Powertech QuadPro Pty Ltd. He also served as an EXCO and Board / Council Member of ECSA for approximately seven years. Vally is also a registered professional director i.e. a Chartered Director (SA), CD (SA) and a Fellow of The Institute of Directors of SA i.e. a FInstD. Vally was also an Executive Council Member and the first "black" President of the now just over 100 years old The Association of Municipal Electricity Utilities of Southern Africa ("AMEU") for two years.

Risks commented on:

- Failure of, and/or inadequate critical infrastructure
- Breakdown of critical information infrastructure & networks



FAILURE OF, AND/OR INADEQUATE CRITICAL INFRASTRUCTURE

VALLY PADAYACHEE

Strategic Adviser - The Association of Municipal Electricity Utilities of Southern Africa (AMEU)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The NDP reflects on the importance of South Africa to maintain and expand its electricity, water, transport and telecommunications infrastructure in order to support economic growth and social development goals. As a further elaboration a top notch and robust economic infrastructure is an absolute necessity or precondition for providing basic services such as electricity, water, sanitation, telecommunications and public transport, to meet the reasonable industrial, commercial and household needs.

Q. Give three primary causes of this risk.

- Lack or inadequate maintenance and/or refurbishment of the infrastructure
- Lack or inadequate investment in the maintenance, refurbishment and/or expansion of the infrastructure (includes OPEX & CAPEX)
- The increasing cost(s) of producing and/or accessing these basic services especially electricity and water by primarily the less affluent and/or so called "poor" people

Q. What are the consequences if this risk materialises?

- Poor service delivery of basic services
- The conditions of the especially the less affluent and poor people ("the have nots") will get worse – people living in poverty will increase
- Inflation, job losses, unemployment, cost of essential goods and services (especially food, fuel) will sky rocket uncontrollably

Q. Which industry will be most affected if this risk materialises?

- Energy, Water and Utilities
- Transport and Logistics
- Manufacturing

Q. What are the barriers that prevent us from solving this risk?

- Lack of and/or access to cost effective funding, finance or capital to acquire, maintain and expand the relevant infrastructure
- Lack of skilled, qualified, experienced and competent manpower to acquire, maintain and/or expand the relevant infrastructure
- Poor planning and increasing costs of the basic services i.e. electricity, water, transports, telecommunications, etc.

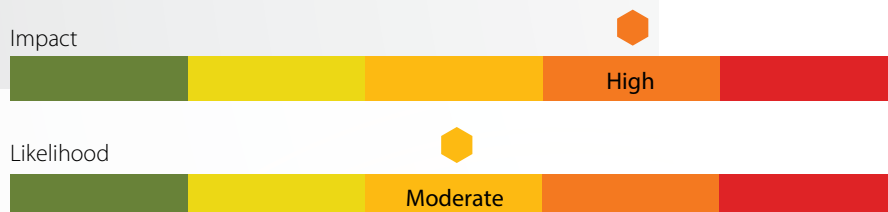
Q. What is the effective risk response to treating the risk on a National level?

Proper planning and policy formulation by government and the associated stakeholders to effectively address the various challenges, reasonable needs and aspirations of those that rely on the output delivered by having a sound and robust economic infrastructure

Q. What is the effective risk response to treating the risk on an Industry level?

To essentially come up with policies, procedures and standards that will ensure the integrity and robustness of the said economic infrastructure. To also assist and/or facilitate the availability of resources that will ensure the sustained good performance of the infrastructure

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



BREAKDOWN OF CRITICAL INFORMATION INFRASTRUCTURE & NETWORKS

VALLY PADAYACHEE

Strategic Adviser - The Association of Municipal Electricity Utilities of Southern Africa (AMEU)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

According to the NDP the main contribution of critical information infrastructure and networks to economic development is to enhance communication and information flows that improve productivity and efficiency thus enhancing competitiveness to the commercial/ industrial sectors and service delivery to the general populace. Hence the value proposition of having a reasonably sound and robust information infrastructure and networks will also be key to the NDP achieving its aims and objectives and therefore cannot be put at risk for whatever reason(s).

Q. Give three primary causes of this risk.

- Poor returns for investors especially from the state's investment in Telkom
- Little evidence of an effective strategy to ensure that connectivity in South Africa keeps up with its peers
- Policy constraints, weaknesses in institutional arrangements, conflicting policies, regulatory failure and limited competition

Q. What are the consequences if this risk materialises?

- SA's competitiveness will be compromised. A country that seeks to be globally competitive must have an effective ICT system, as this "infrastructure" provides the backbone to a modern economy and its connections to the global economy
- The knowledge economy we live in will be severely negatively affected - ICT underpin the development of a dynamic and connected information society and a vibrant knowledge economy that is more inclusive and prosperous
- Our stated intent to move or migrate to a digital economy will also be drastically compromised given that its dependent on a robust and sound communications infrastructure and networks

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Communications and Technology

Q. What are the barriers that prevent us from solving this risk?

- The ability of the regulator, the Independent Communications Authority of South Africa, to enable a more open market
- Lack of and/or access to cost effective funding, finance or capital to acquire, maintain and expand the relevant infrastructure
- Lack of skilled, qualified, experienced and competent manpower to acquire, maintain and/or expand the relevant infrastructure

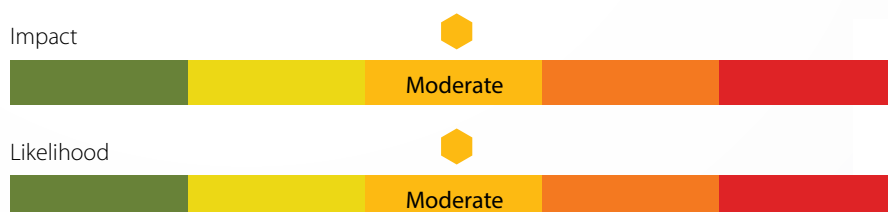
Q. What is the effective risk response to treating the risk on a National level?

A national e-strategy that cuts across government departments and sectors.

Q. What is the effective risk response to treating the risk on an Industry level?

Reviewing the market structure and analysing the benefits and costs of duplicating versus sharing infrastructure, given that the radio spectrum on which mobile networks depend is limited.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



N I C K P I P E R

Director
Signal Risk

Nick Piper is a director at Signal Risk, a South Africa-based risk management company specialising in travel security, business continuity, and crisis management. Mr. Piper oversees Signal Risk's core mandate of provide intelligence and support to its broad-based clientele travelling, residing, and operating across the African continent. These include international NGOs, mining consultancies, major banks, Fortune 500 companies, and SMEs. Mr. Piper is also a co-founder at My Travel Risk, a web-based platform for travellers to identify risks in their destination and which generates country-specific safety and security advice to minimise these risks. Mr. Piper is also a regular contributor to newspapers such as the Cape Times, Business Day and the Mail and Guardian, where he shares his insights on the myriad security risks afflicting South Africa and the wider African continent. Mr. Piper's observations in this regard are often sought by media houses such as Voice of America, ENCA, the BBC and Radio France International.

Risks commented on:

- Labour strike action



LABOUR STRIKE ACTION

NICK PIPER

Director - Signal Risk

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Much of the NDP centres on an improvement in the provision of services. Strike action directly compromises these services. Furthermore, labour unrest in the form of strike action has the potential to stymie efforts to increase employment opportunities.

Q. Give three primary causes of this risk.

- Income inequality and the apparent disparity of salaries within organisations and industries
- Political opportunism that harnesses labour unrest in a self-serving capacity
- Contagion, in the sense that strike action in one company or industry often acts as motivation for unrest in other companies/industries

Q. What are the consequences if this risk materialises?

The consequences are often short term, as strike action is not sustainable for employers or employees (both parties require an expedient solution to the issue). However, the effects of a strike can be significant and irreversible for those involved. Furthermore, in the longer-term, strike action has the potential to become cyclical, which exacerbates the problem.

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Energy, Water and Utilities
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Mining and Quarrying
- Education
- Healthcare

Q. What are the barriers that prevent us from solving this risk?

- Unwillingness to resolve the disparity in salary income
- The politicisation of labour unions
- Overtly pro-labour policies and legislation
- No common platform of negotiation that both employer and employee see as impartial

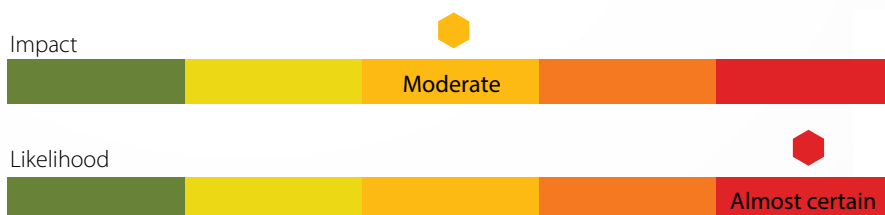
Q. What is the effective risk response to treating the risk on a National level?

- De-politicise labour unions
- Reform the CCM and other arbitration structures to be (potentially) industry specific and deemed impartial

Q. What is the effective risk response to treating the risk on an Industry level?

- Application of industry-specific minimum wages
- Reform the CCM and other arbitration structures to be (potentially) industry specific and deemed impartial

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



RENISHA RAJPAUL

Principal Specialist: New Business Risk Management
Vodacom

Renisha is an expert at new product risk management and has over 16 years' experience the telecommunications industry. Renisha holds an MBA and is currently employed at Vodacom as a Principal Specialist: New Business Risk Management. Renisha has a vast range of experience ranging from Information Technology, Business Process Improvements, Business Strategy and Risk Management. She is currently responsible for managing a high performing team whose main focus is managing risk related to new innovative customer-facing products and services. She is responsible for owning the process of identifying, measuring and management of risks on all new products launched by Vodacom across Vodacom's local market operations. Additionally she is responsible for developing risk requirements and benchmark standards for product risk management across the Vodacom group of companies that is pre-emptive, agile and fail fast focusing on risk by design principles. Renisha has also worked extensively with executives locally and across Africa to drive risk implementation and the value thereof.

Risks commented on:

- Disruptive technologies



DISRUPTIVE TECHNOLOGIES

RENISHA RAJPAUL

Principal Specialist: New Business Risk Management - Vodacom

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Disruptive Technologies which create new markets and displace existing ones, are the new normal. Disruptive Technologies can be an immense advantage to countries that have a relatively healthy economy and a flexible regulatory environment. The pace at which technology is transforming is exponential. Entire industries are being disrupted as new business models emerge. Examples of these are the vehicle industry with Uber, the hotel industry with Airbnb and the health environment with Robotics.

Disruptive Technologies would have a significant impact on the National Development Plan as it has the ability to drive exponential economic transformation and disruptions in the coming years. The main impact of these disruptions will be the effect on jobs. For example traditional jobs such as in manufacturing will be exhumed out by a combination of labour-saving technologies, robotics and artificial intelligence also known as the Fourth Industrial Revolution (4IR). Previously technology was always seen as a job creator, however with disruptive technology new jobs will not necessarily materialise and if it does, it won't necessarily be in the same location as a person previous job. This could erode entire communities and cause domestic migration which could have multiple economic and social impacts. This example clearly illustrates that disruptive technologies can be a major risk to the NDP especially in situation where the disruptions take over market segment making traditional companies redundant resulting in job loss as well as general economic decline.

On the hand, proper treatment and preparation of disruptions could allow it to be a major pillar in achieving the NDP by embracing the many benefits it can generate which are in line with the objectives of the NDP such as building capabilities by creating new business value chains as well as contributing to the overall capabilities of the country. Research indicates that countries are better off and wealthier and they grow faster when they creatively disrupt. Disruptive technologies often create platform economies that allow for easier access at a micro level, thereby supporting entrepreneurship (i.e. Airbnb).

Q. Give three primary causes of this risk.

- The rapid advancement of technology and globalization, which allows new business models to be introduced at an ever-increasing rate and with rapidly declining cost
- Misalignment between technological advancement and skills development
- Lack of investment in research and development as a country (sciences, innovation etc.)

Q. What are the consequences if this risk materialises?

- Loss of jobs: Job loss will be experienced; however the extent of the job loss will be dependent on how disruptive to the value chain the disruptive technology is. Certain highly skilled workers will prosper in new environments but far more may be displaced into lower paying service industry jobs
- Breakdown of Traditional Barriers: Disruptive business will break down traditional barriers between industry segments, creating completely new value chains and business opportunities
- Redundancy: Traditional South African businesses such as banks, taxis, delivery services and the mechanical industries will be threatened with redundancy
- Ethical Issues: Ethical issues such as the acceptability of certain innovations such as medical advancements or the conscious of driverless cars will be challenged by society
- Challenge of Regulation: Due to most disruptive innovations being unregulated in South Africa, owners of these innovations could potentially misuse regulation or halt disruptive innovations by hiding behind regulation

Q. Which industry will be most affected if this risk materialises?

- Financial Services
- Communications and Technology
- Transport and Logistics
- Manufacturing
- Hospitality and Tourism
- Healthcare

Q. What are the barriers that prevent us from solving this risk?

- Knowledge Gap or Lack of awareness: Almost all South African sectors are not adequately preparing for the work of the future. This causes uncertainty and instability among the workforce as they are not equipped to react to disruptive technologies
- Legacy: Most organizations have a large infrastructure, which makes them unwilling or slow to change as they have "Legacy" technology that gets in the way of positive and productive change
- Regulation: Regulation that does not cater for the disruptive technologies which will result in it being in unregulated environment

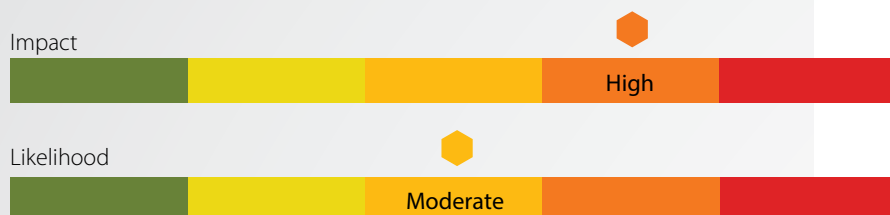
Q. What is the effective risk response to treating the risk on a National level?

- Government needs to increase its investment in support of innovation. They should focus on programs such as enhanced innovation for businesses, research science and technology
- Revise regulation to take disruptive technologies into account and derive policy paper indicating how the government will react to different types of technologies
- In order for South Africa to reap the opportunities presented by disruptive technologies, businesses will need to be innovative and collaborative. Business leaders need to encourage organisations to be 'thoughtful integrators' and to partner with non-traditional players. Government support in key
- Pre-empt rather than respond to change. Focus on how future disruptions could affect the South African economy and put plans in place to deal with the consequences

Q. What is the effective risk response to treating the risk on an Industry level?

It is critical that policy-makers and other stakeholders: across Government, civil society, academia and the media collaborate to create more agile and adaptive forms of local, national and global governance and risk and treatment that deal specifically on disruptive technologies. Additionally the traditional ways of doing risk management needs to be revised. Disruptive innovation will call for agile, fail fast risk containment as well as pre-emptive risk management.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No

A N N E R E E D

National Risk Manager
Binder Dijker Otte (BDO)

Anne Reed is a National Risk Manager in Johannesburg. She has work experience in both local and international markets; professional firms, corporates, medium sized and small businesses.

Anne's background includes accounting, risk management and compliance. Her current focus is enabling business leaders to ask the right questions, so that they are strategically placed to lead a sustainable business. This also involves the transfer of knowledge to ensure that the staff are equipped with a "how to do" and "can do" approach, and therefore achieve goals within the prescribed time frames.

Risks commented on:

- Cyber-attacks and cyber-attack non-disclosures
- Data fraud and data theft (including identify theft and theft of intellectual property)
- Breakdown of critical information infrastructure & networks



CYBER-ATTACKS AND CYBER-ATTACK NON-DISCLOSURES

ANNE REED

National Risk Manager - Binder Dijker Otte (BDO)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The objectives of the NDP are to unite South African, grow the skills of our citizens and ensure that our future workforce is well equipped for the dynamics of the fourth industrial revolution.

Today's digital systems, the daily functioning and sound security access to the systems is fundamental to the success of an entities deliverables to their clients. These systems are continuously evolving.

South Africa as a whole face many challenges with networks and their infrastructures. Risks include down time, reputational damage, legal implications and industry consequences.

Many of the cyber-attacks go undetected for months, sometimes years. Leadership, therefore, may not be able to have a comprehensive understanding of what data has been stolen.

Leaders also are reluctant to share with other what data has been stolen as they fear reputational risks, client leaving their environment.

Leaders need to be brave and recognise that cyber-attacks are an integral part of business and need to be transparent so that these attacks can be pro-actively managed, and reduced.

In my opinion this risk is significant to the achievement of the NDP. The Fourth Industrial Revolution is here. 3D printing is advancing, medical technology in 3D printing is advancing. Cyber-attacks focus our attention on negative matters of technology. If leaders focussed their attention on positive aspects of technology, growth of the country can be achieved.

Q. Give three primary causes of this risk.

- Lack of qualified teachers
- Transparency and honesty
- Cyber resilience
- Education – Government needs to take a bold step and disempower the South African Teachers Union. Teachers need to be appointed on merit. Teachers need to be part of a CPD programme.

Q. What are the consequences if this risk materialises?

- Lacks of funds for Government, less taxes paid, more off-shore borrowing, higher amounts paid in interest because of off-shore borrowing
- Migration of citizens
- Not globally competitive

Q. Which industry will be most affected if this risk materialises?

- Financial Services
- Energy, Water and Utilities
- Communications and Technology
- Hospitality and Tourism
- Education
- Healthcare

Q. What are the barriers that prevent us from solving this risk?

- Leadership
- Mature risk management discussion at Board Level
- Education, particularly mathematics and science subjects

Q. What is the effective risk response to treating the risk on a National level?

- Change of leadership and a change of the tone at the top. As Bob Garratt stated “the fish rots from the head”
- Companies need to be pro-active, prevent threats (policies and procedures), scenario planning
- Be cyber resilience and robust

Q. What is the effective risk response to treating the risk on an Industry level?

- Leaders need to be courageous and a change their tone at the top. As Bob Garratt stated “the fish rots from the head”
- Middle management need to be pro-active, prevent threats (policies and procedures), scenario planning
- Be cyber resilience and robust

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Terrorism
- Geo-political risks, for example Russia controlling the Cape Sea Route

DATA FRAUD AND DATA THEFT (INCLUDING IDENTIFY THEFT AND THEFT OF INTELLECTUAL PROPERTY)

ANNE REED

National Risk Manager - Binder Dijker Otte (BDO)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The objectives of the NDP are to unite South African, grow the skills of our citizens and ensure that our future workforce is well equipped for the dynamics of the fourth industrial revolution.

Today's digital systems, the daily functioning and sound security access to the systems is fundamental to the success of an entities deliverables to their clients. These systems are continuously evolving.

South Africa as a whole face many challenges with networks and their infrastructures. Risks include down time, reputational damage, legal implications and industry consequences.

In my opinion the removal of this risk critical to achieving the NDP. "Data is the new gold". Trend analysis, market edge, industry leadership all has its foundation in sound data mining. Accurate data, using of sensor on tractors for farming. Maximum use of soil. Food security. Productivity of the work force is poor. A hungry nation is nation ready to revolt.

Q. Give three primary causes of this risk.

- Unemployment
- Performance – too much emphasis placed on monetary rewards
- Neo-liberalism ideology backlash

Q. What are the consequences if this risk materialises?

- Lacks of funds for Government, less taxes paid, more off-shore borrowing, higher amounts paid in interest because of off-shore borrowing
- Not globally competitive
- An angry nation

Q. Which industry will be most affected if this risk materialises?

- | | |
|-----------------------------|-------------------------------------|
| • Financial Services | • Healthcare |
| • Insurance and Reinsurance | • Wholesale and Retail |
| • Education | • Agriculture, Forestry and Fishing |

Q. What are the barriers that prevent us from solving this risk?

- Leadership
- Skills
- Honesty

Q. What is the effective risk response to treating the risk on a National level?

- Promote and reward transparency
- Change legislation and regulations

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Terrorism
- Geo-political risks, for example Russia controlling the Cape Sea Route

BREAKDOWN OF CRITICAL INFORMATION INFRASTRUCTURE & NETWORKS

ANNE REED

National Risk Manager - Binder Dijker Otte (BDO)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The objectives of the NDP are to unite South African, grow the skills of our citizens and ensure that our future workforce is well equipped for the dynamics of the fourth industrial revolution.

Today's digital systems, the daily functioning and sound security access to the systems is fundamental to the success of an entities deliverables to their clients. These systems are continuously evolving.

South Africa as a whole face many challenges with networks and their infrastructures. Risks include down time, reputational damage, legal implications and industry consequences.

A breakdown may comprise one of the following - a hardware breakdown, a software applicable breakdown or a data corruption or data theft breakdown. Or it may comprise more than one of the above.

A breakdown of such infrastructure and networks, in my opinion, is a significant risk and depending on which network failed be catastrophic to the achievement of the NDP. For example, if the Department of Water and Sanitation's networks collapsed, and they were unable to monitor the quality of water in the rivers and dams may lead to illness, loss of work days for a significant number of the workforce, which may impact on the productivity of the relevant companies and their deliverables to their clients.

This may impact sales, which may impact cash flow and taxes paid by those company to SARS.

So the chain reaction, the monetary value, measured both as tangible and intangible which impact the delivery of the NDP.

Political risks would increase, foreign investment may be reduced and a spiral of negative scenarios unfold which would also impact the achievement of the NDP objective taking South Africa down a path that would be difficult to return to before the downward movement.

Q. Give three primary causes of this risk.

- Cyber-attack - terrorism
- Skills of the staff
- Data integrity

Q. What are the consequences if this risk materialises?

- Lacks of funds for Government, less taxes paid, more off-shore borrowing, higher amounts paid in interest because of off-shore borrowing
- Migration of citizens
- Not globally competitive

Q. Which industry will be most affected if this risk materialises?

- Energy, Water and Utilities
- Hospitality and Tourism
- Education
- Healthcare

Q. What are the barriers that prevent us from solving this risk?

Leadership – lack of visionary leadership:

- The ANC party comes before the country
- Entitlement
- The current ANC leadership needs to take a bold and courageous leap of faith and accept that there are some matter that we need to tolerate, but there are some matters that are intolerable and need to be remedied swiftly and decisively. On matter that needs to be swiftly remedied is the recall of the President of South Africa. Ethics and integrity need to become a priority. Because the law allows for a process to be followed, does not mean that this process has to be followed to the nth degree
- The Fourth Industrial Revolution is happening. South Africa needs to be part of this Revolution. Children need to be educated. Blockchain, Artificial Intelligence is critical to the success of South Africa. It is the future that is important. Other countries, for example Japan, we able to made themselves great against the backdrop of dramatic destruction
- The willingness to go without for the greater good is fundamental to solving this significant risk

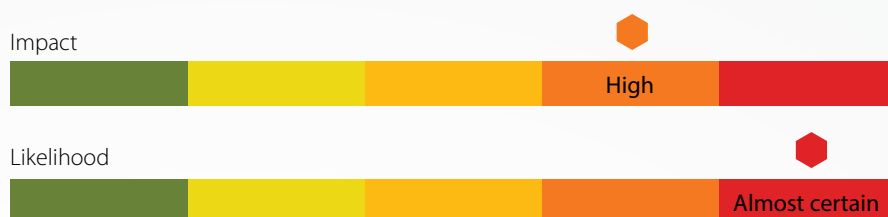
Q. What is the effective risk response to treating the risk on a National level?

- Leadership
- "Ubuntu"
- A respect of sound economic principles
- A critical change in the mind set of all South Africans need to take place. One can learn from the past, one cannot change the past.
- Government and business need to work as a united team. It is a given that they have different outcomes, but these outcomes can be accommodated
- The NDP is sound, there needs to be an appetite to deliver. Sound project management skills are needed
- As Clem Sunter is suggested an "Economic Codesa"

Q. What is the effective risk response to treating the risk on an Industry level?

- Taking each objective and breaking each objective in small manageable projects
- Determining the mission critical steps in each and every project.
- Achieving the deliverables
- Celebrating once achieved
- Sharing lesson learnt

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Terrorism
- Geo-political risks, for example Russia controlling the Cape Sea Route

G A B R I E L L E R E I D

Associate: Risk Analysis and Security
S-RM

Gabrielle is an associate within S-RM's Risk Analysis and Security team, specialising in sub-Saharan Africa. She has over six years' experience assessing political and security dynamics across the continent and has worked on numerous bespoke projects assisting clients from a diverse spectrum of industries navigate the political, commercial and security challenges of complex operating environments. Her recent areas of focus include Mali, South Sudan, Somalia, Angola and Kenya, among others. Gabrielle holds a Bachelor of Social Sciences in Politics and Psychology, a Bachelor of Social Sciences (Hons) in Justice and Transformation (Conflict Studies), and a Master's Degree in International Relations, focusing on terrorism in East Africa, from the University of Cape Town.

Risks commented on:

- Profound political instability
- Significant escalation in organised crime and illicit trade



PROFOUND POLITICAL INSTABILITY

GABRIELLE REID

Associate: Risk Analysis and Security - S-RM

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Profound political instability is a critical threat to the achievement of the NDP. Any severe changes in government are likely to lead to policy shifts. Recent efforts to revitalise the NDP are likely to be disrupted in this scenario. Although we are unlikely to see undemocratic or violent regime change, a ruling administration beleaguered by infighting, rapid policy changes or a failure to develop new policies to support the current economic, commercial and social environment, is unlikely to be equipped to deliver large objectives such as those detailed in the NDP. In this regard, the December 2017 African National Congress (ANC)'s national conference is central to determining the stability of the party, and by corollary, the South African government.

However, the pillars of democracy remain entrenched in South Africa, and political battles are likely to remain confined to the courts and to the ballot box. As such, risks such as government policy, legislative and regulatory changes and uncertainty, a failure of governance and corruption are likely to be more pertinent threats to the achievement of the NDP goals. Nevertheless, early warning signs of episodic political violence are emerging, and the detrimental impact of developments such as the political assassinations in Kwa Zulu Natal, should not be underestimated. Low-intensity politically-motivated violence is likely to continue in the absence of a unified ANC.

Moreover, when we consider major movements disrupting political stability, negatively impacting populations and economic activity, the recent lack of leadership experienced in South Africa could pave the way for more profound political instability. Any profound political instability could prove detrimental to South Africa economically, particularly with regard to likely revisions by international credit rating agencies, discouraging the requisite investment needed to drive economic growth in the country. In this regard, South Africa is entering a watershed year, which will ultimately determine whether the country is moving closer to or further from profound instability.

Q. Give three primary causes of this risk.

- Poor government delivery, exacerbated by rampant corruption and the deterioration of key state infrastructure and institutions
- Infighting within the ANC, which distracts from ineffective governance and the erosion of governance frameworks
- Growing socio-economic grievances drive anti-government sentiment, which could increase the demand for government accountability, action and potential change

Q. What are the consequences if this risk materialises?

- Political uncertainty, driven by profound political instability, negatively affects investor perceptions as well as the economic outlook for the country, which can curb available funding to back nationwide development drives. As such profound political stability will have detrimental effects on economic growth, which is already dampened in South Africa
- The further entrenchment of poor governance and deteriorating governance infrastructure

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Energy, Water and Utilities
- Communications and Technology
- Transport and Logistics
- Education
- Healthcare
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- The absence of political will to address poor governance and corruption and ensure accountability
- A lack of political leadership, which has facilitated political infighting
- Available and appropriate resources to redress the deterioration of key state infrastructure and institutions as well as challenges in reducing socioeconomic inequality, improving government service delivery and encouraging economic growth

Q. What is the effective risk response to treating the risk on a National level?

- Initiatives aimed at reducing the impact of party politics and political infighting need to be introduced in order to limit the impact of political uncertainty, particularly on investor perceptions
- The government must work to reduce corruption and inefficiencies, increase interdepartmental coordination as well as prioritise key development tasks within policy frameworks that can be easily transferred across ruling administrations to facilitate a long-term response

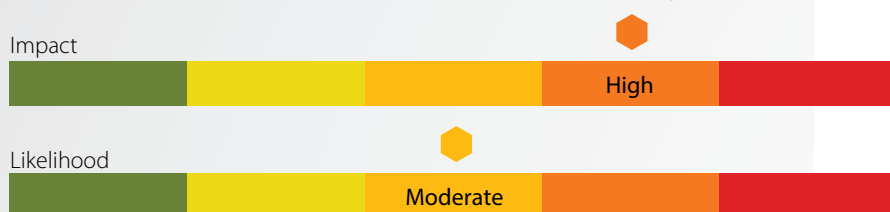
Q. What is the effective risk response to treating the risk on an Industry level?

- An effective response is dependent on understanding how these risks impact your specific operations, often driven by your exposure to and toleration for instability. Knowing your environment is also key in determining the best response measures
- Industries will need to be willing to work with state institutions to encourage socio-economic growth but will also need to ensure that their operations are in line with the relevant labour regulations in order to reduce the level of dissatisfaction at a ground level
- Established communication channels are also key in maintaining these relationships

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Country:

- Growing social divisions along racial and socio-economic lines
- Increase in violent crimes

SIGNIFICANT ESCALATION IN ORGANISED CRIME AND ILLICIT TRADE

GABRIELLE REID

Associate: Risk Analysis and Security - S-RM

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Organised crime and illicit trade remain indirect threats to the achievement of the NDP by targeting the most vulnerable sectors of society and pilfering funds through illegal trade that could be generated within the legitimate economy in the absence of these illegal networks. In this regard, organised crime networks have the capacity to launder their profits, overshadowing legitimate means of revenue generation through taxation and economic activity in the country. These activities also divert much needed resources away from development objectives towards security-based mitigation. The number of organised crime syndicates operating in the country has increased since 2008 and it is likely to become a protracted threat to achieving the NDP goals.

Organised crime and illicit trade are also underpinned by wider inadequacies and vulnerabilities in South Africa's security structures, including border control and management and tax controls. Overall, the police and security services' ability to combat these crimes are hampered by poor intelligence capabilities and limited resources. These activities help to undermine efforts at improving South Africa's security infrastructure through low and high level corruption and bribery. Political corruption can be used to shield individuals from prosecution, in an interdependent system that threatens the social fabric of South Africa.

Furthermore, the link between organised crime syndicates and terrorism should not be overlooked, including in the South African context. Interpol, for example, has noted globally that terrorist actors can transcend different types of organised crime, including weapons and drug trafficking as well as production of fraudulent documents. South Africa's vulnerabilities to organised criminal activity will make it increasingly vulnerable to other security threats and while this is not to say the country is vulnerable to an immediate attack, it does expose South Africa to other illegal activities. These could serve to create new barriers for development in the country.

Q. Give three primary causes of this risk.

- Poor response infrastructure remains the primary driver of this risk. These include limitations in the criminal justice system and government corruption, which have allowed organised crime and illicit trade to proliferate
- The already-established sophistication and fluidity of criminal networks in South Africa further fuels the organised crime economy in which all levels of organised crime can flourish
- Poor border patrol, including patrol of our coastlines, means South Africa is easily penetrable by transnational operations, particularly given the country's geographical vulnerability to trafficking routes

Q. What are the consequences if this risk materialises?

The consequences of this risk manifest at multiple levels. These include:

- National: Nationally, an entrenched organised crime environment makes South Africa vulnerable to other illicit activities, including terrorism. In this regard, there is growing evidence of interlinkages between these spheres through funding and logistical networks. Furthermore, as previously mentioned, the need to combat organised crime diverts resource from other development agendas
- Society: Organised crime impacts the social fabric of a community, whereby organised criminals are able to embed themselves within the structures of society, and in the absence of or limited presence of legitimate governance, offer an alternative governance structure on which a community can become dependent
- Individual: the most vulnerable sectors of society are often targeted in trafficking syndicates. The lack of available alternative legitimate opportunities makes South Africa's youth particularly vulnerable

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Education
- Hospitality and Tourism

Q. What are the barriers that prevent us from solving this risk?

- The nature of organised crime also results in multiple agencies and actors being involved in response mechanisms, which requires a high level of effective coordination that is rarely achieved
- Police and security services ability to combat these crimes are hampered by poor intelligence capabilities and limited resources
- Finally, the covert nature of this threat often means the extent to which it is impacting development goals, such as the NDP, is not immediately clear. Data collection is hampered, which can make it difficult to produce the requisite evidence to rally sufficient political will to prioritise resources for a response

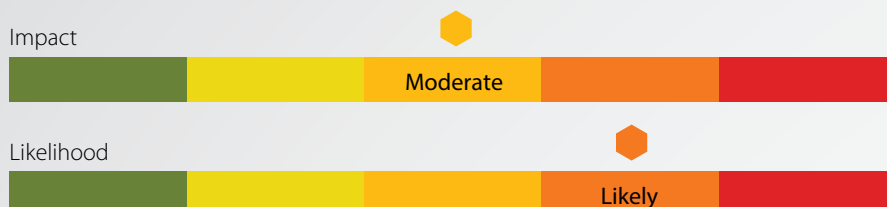
Q. What is the effective risk response to treating the risk on a National level?

The primary response requires improving South Africa's security apparatus, including the criminal justice system. Greater coordination is required at an investigation level right through to prosecution, where transparent laws and regulations makes navigating the combatting of organised crime significantly easier.

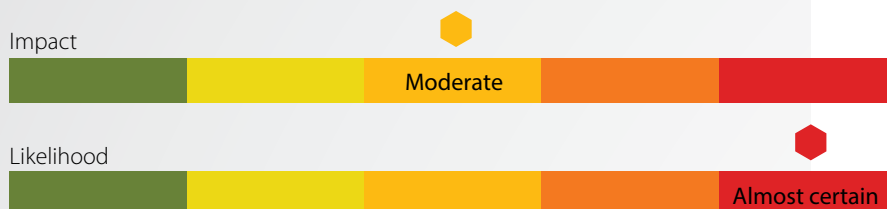
Q. What is the effective risk response to treating the risk on an Industry level?

At an industry level, entities need to be acutely aware of the risks at hand and their own respective vulnerabilities to them. By accurately assessing these two factors, the appropriate mitigation measures can be identified and implemented.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Country:

- Growing social divisions along racial and socio-economic lines
- Increase in violent crimes

ALEX ROBERTS

Regional Director
Cura Risk Management Software

Alex has been involved in the enterprise software space for the past 14 years and in the risk space for 10 Years. Alex is the Regional Director for Sales and Operations for Cura Software South Africa. Cura offers a variety of Governance, Risk, Compliance and Audit Software Solutions and has in over 250 enterprise customers worldwide across a number of verticals including global 500, Insurance, Financial Services and Utilities Companies. Cura Software was awarded the 2017 IRMSA Risk Management System Provider of the year as well as the winner in the Da Vinci Technology Top 100 Awards Programme for Excellence in the Management of Technology.

Risks commented on:

- Breakdown of critical information infrastructure & networks



BREAKDOWN OF CRITICAL INFORMATION INFRASTRUCTURE & NETWORKS

ALEX ROBERTS

Regional Director - Cura Risk Management Software

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

A breakdown of critical information infrastructure and networks will not only significantly impact the ability for South Africa to meet its objectives stated in the NDP but will also seriously jeopardise the country's ability to function as a stable economy. In an age of dependence on technology, any significant impact to the backbone of this technology would place us in a state of inability to function.

Q. Give three primary causes of this risk.

- Poor Maintenance
- Sabotage & Cybercrime
- Natural Disasters

Q. What are the consequences if this risk materialises?

- Impact on the country's ability function as normal
- Shut down in areas of the economy
- Credit ratings downgrades
- Reputational damage to the country

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Petrochemicals, Oil and Gas
- Education
- Healthcare

Q. What are the barriers that prevent us from solving this risk?

- Political instability and manipulation
- Lack of budget and funding for backup infrastructure
- Lack of accountability
- Lack of and poor planning

Q. What is the effective risk response to treating the risk on a National level?

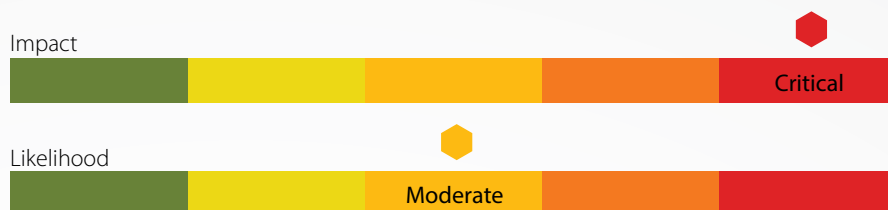
- A plan to enable collaboration between public and private sectors
- Government should adequately budget to continuously monitor and maintain critical information infrastructure to ensure that national services are always protected
- Reduce and remove the reliance on single infrastructure components
- Upskilling in addressing of modern cybercrime threats and methodologies

Q. What is the effective risk response to treating the risk on an Industry level?

Accurately understanding the internal and supplier dependencies on various critical infrastructures, followed by mapping business continuity plans to manage accordingly.

Where industry plays a role in creating and managing critical infrastructure and networks, they need to ensure this infrastructure and networks are managed in accordance to best practice.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Political interference\manipulation of the national fiscus

PROF ANDRE ROUX

Head: Future Studies Programme
University of Stellenbosch Business School (USB)

André Roux was the Director of the Institute for Futures Research (IFR) at the University of Stellenbosch from 1996 to August 2015. In this capacity, he ran various workshops and other strategic interventions sessions with and for leaders and strategists in business and government. The IFR has more than 110 corporate and government department clients. André is now in the full-time employ of the University of Stellenbosch Business School (USB) where he lectures on economics and futures thinking on numerous programmes at MBA level and on executive education programmes in South Africa and, from time to time, in Australia, Belgium, Namibia, Swaziland, Tanzania, Ghana and Nigeria. He is a guest lecturer on post-graduate programmes at the Dept of Industrial Psychology (Stell), School of Public Management (Stell) and Post-graduate diploma in Managing HIV and AIDS in the work-place. He is also the initiator and still programme head of two postgraduate programmes in Futures Studies. André holds a PhD in Economics (Stell) and is responsible for more than 150 popular publications; 1 book (11th edition); 3 chapters in scientific books; 9 publications in scientific journals; 20 papers presented at domestic and international conferences. He is a regular guest on radio and television programmes. He has supervised 1 PhD thesis; 80 postgraduate students, and is currently supervising 18 masters' students, and 4 PhD students. André was awarded the Rector's award for excellence in teaching at the University of Stellenbosch in 1999, and gives more than 100 talks/presentations each year.

Risks commented on:

- Micro economic developments: Inflation, deflation, austerity measures, national economic slowdown
- Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT
- Capital availability/credit risk
- Growing income disparity



MICRO ECONOMIC DEVELOPMENTS: INFLATION, DEFLATION, AUSTERITY MEASURES, NATIONAL ECONOMIC SLOWDOWN

PROF ANDRE ROUX

Head: Future Studies Programme - University of Stellenbosch Business School

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Although economic growth is not the panacea for all our socio-economic woes, it is generally accepted that a necessary condition for a considerable improvement in the socio-economic conditions of South Africans is a growth path of 6% per annum, sustained for at least 20 years.

The predicament in which the South African economy finds itself can be attributed to a combination of external forces and internal, self-inflicted weaknesses. Regarding external forces, the desired economic growth path of 6% per annum for a period of at least 20 years has to be achieved in a global economic environment that is less friendly and more volatile than 10 years ago.

In the last 35 years economic growth only came close to a 6% growth rate between 2005 and 2007. Since then growth has averaged 1.8%, resulting, in 2015 and 2016, in the first decline in real GDP per capita since 1992, and accompanied by a higher-than-ever unemployment rate, high budget and current account deficits, rising public and household debt levels, rampant poverty, and wide income and spending disparities.

Q. Give three primary causes of this risk.

- Over-indebtedness
- Productivity constraints
- Poor, uninspiring, and unimaginative political leadership
- A tacit willingness to accept mediocrity as a norm; reinforced by a growing psychosis of entitlement

Q. What are the consequences if this risk materialises?

- The temptation of creating the illusion of wealth creation by resorting to macro-economic populism, e.g., extravagant government expenditure and artificially low interest rates; which will be accompanied by high inflation rates and the total distortion and disruption of the allocation of scarce production factors;
 - Rise of potentially draconian policy measures to prevent economic decay and disaster
 - Remaining stuck in a middle-income trap, with limited redistribution of wealth and income.
 - Poverty and unemployment become entrenched, and spending power is confined to a relatively small group of middle-class consumers

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Virtual absence of coherent long-term visionary planning by all actors in the economy
- Hubris/ignorance/ impatience
- Productivity constraints

Q. What is the effective risk response to treating the risk on a National level?

- Long-term visionary plans.
- Greater co-operation between public and private sectors
- Restoration of social capital
- Effective bureaucracy

Q. What is the effective risk response to treating the risk on an Industry level?

Becoming more vocal in matters of national interest

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- The implications of the 4th Industrial Revolution

MACRO-ECONOMIC DEVELOPMENTS - EXCHANGE RATE VOLATILITY, CREDIT RATING FLUCTUATIONS, GLOBAL ECONOMIC SLOWDOWN, COMMODITY PRICE VOLATILITY, BREXIT

PROF ANDRE ROUX

Head: Future Studies Programme - University of Stellenbosch Business School

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The overarching and cross-cutting implication of the growing indebtedness of SA is that the country lives in perpetual hope that its various deficits will be financed by non-residents, at an affordable cost. Until about five years ago this outcome was generally achieved, as foreign savers found the country to be sufficiently attractive to warrant a meaningful investment in shares, bonds, plant, equipment and other forms of direct investment. But this might have been not so much a vote of confidence in South Africa, but rather a motion of no confidence in the short-term economic outlook then prevailing in the USA, Western Europe, and Japan.

Today, investors are probably finding it more difficult to formulate good reasons for financing South Africa's fiscal, household, foreign and savings deficits. The growing risk of further sovereign debt downgradings will have a range of adverse effects on the country's ability to attract foreign investment, generate a faster growth trajectory, create jobs, and allocate public funds to the social wage.

Although the terms and conditions are currently uncertain, we do know that the UK is one of SA's most important trade, investment, and tourism partners. The effect of BREXIT on the UK will therefore be mirrored in SA.

Q. Give three primary causes of this risk.

- Loss of fiscal discipline
- Erosion of institutional capacity and integrity
- Lack of international competitiveness, especially in manufacturing, and an over-reliance on unprocessed natural resources as a source of export revenue

Q. What are the consequences if this risk materialises?

- Failure to achieve meaningful development, viz., an increase in the autonomous competence of society to sustain itself and be prosperous under changing conditions
- Remaining perpetually vulnerable to the vagaries of non-South African decision-makers

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Ad hoc and short-term planning

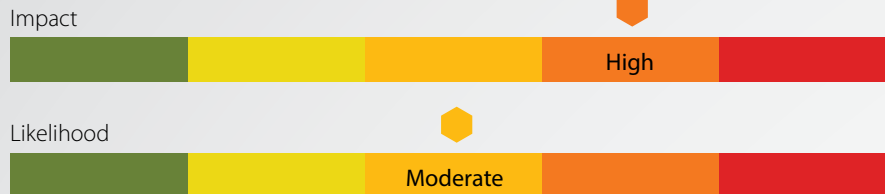
Q. What is the effective risk response to treating the risk on a National level?

- Diversifying the country's product range
- Encouraging domestic beneficiation
- Exploring new bilateral trade relationships
- Reducing the unit costs of labour

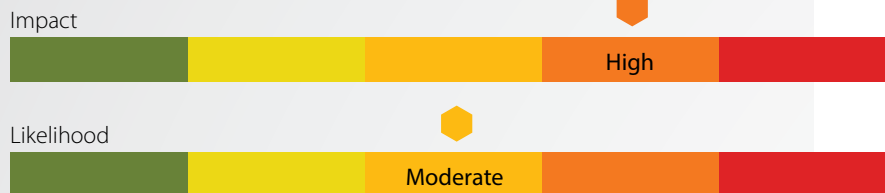
Q. What is the effective risk response to treating the risk on an Industry level?

Seeking new trade partners

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- The implications of the 4th Industrial Revolution

CAPITAL AVAILABILITY/CREDIT RISK

PROF ANDRE ROUX

Head: Future Studies Programme - University of Stellenbosch Business School

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Along with the education crisis and the depreciation in the stock of social capital, the fact that the country is living beyond its means is arguably one of the primary obstacles to sustained growth, development and job creation. One of the implications is a severe savings deficiency, making it increasingly difficult to finance growth-inducing investment spending. In the absence of sufficient domestic savings, there is a growing dependence on a regular flow foreign capital inward investment, which demands, amongst others, a safe, reliable and predictable macro-economic, social and political environment.

Q. Give three primary causes of this risk.

- Inadequate domestic savings
- Policy and political uncertainty (including state capture)
- Low and stagnating productivity of labour

Q. What are the consequences if this risk materialises?

- Failure to reach and maintain a sustained growth path of 5% (and therefore continued high unemployment, poverty and inequality)
- Volatile exchange rate of the Rand (due to large swings on the capital account of the balance of payments)

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Education
- Healthcare
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Propensity by both government and households to spend more than they earn
- Entrenched current account deficits (due to competitiveness shortcomings)
- Uncertain and/or inappropriate policy (e.g. state capture, SOEs)

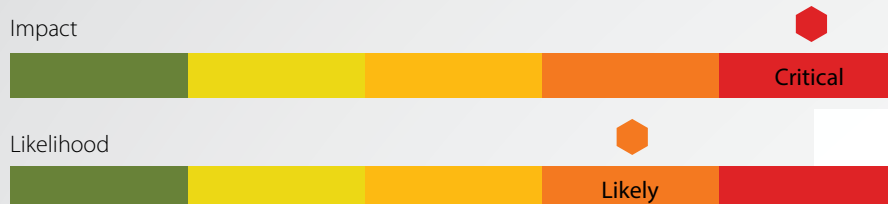
Q. What is the effective risk response to treating the risk on a National level?

- Long-term planning, transparent planning
- Matching remuneration increases to productivity increases
- Fiscal discipline
- Reducing fiscal wastage
- Reducing government spending on current outlays (e.g., civil servant wage bill) in favour of capital spending

Q. What is the effective risk response to treating the risk on an Industry level?

- Channelling corporate savings to productive investment avenues
- Rand hedging

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- The implications of the 4th Industrial Revolution

GROWING INCOME DISPARITY

PROF ANDRE ROUX

Head: Future Studies Programme - University of Stellenbosch Business School (USB)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Income disparity (and even the perception thereof) threatens to amplify the feeling of exploitation, resulting in potential conflict, and ultimately a sense of alienation, polarisation, and widespread corruption. And a society cannot develop (in a holistic and sustainable fashion) if it is plagued by a state of maldistribution.

One of the greatest challenges facing policy-makers over the next few years, especially while economic growth is sluggish, is to avoid the temptation of creating the illusion of wealth creation by resorting to macro-economic populism, e.g. extravagant government expenditure and artificially low interest rates. The success of attempts to 'spend your way into growth' will be cut short by the accompanying hyper-inflationary tendency and the total distortion and disruption of the allocation of scarce production factors. Sooner, rather than later, draconian policy measures will have to be introduced to prevent economic decay and disaster.

Q. Give three primary causes of this risk.

- Self-enrichment (private and public sector)
- The structural mismatch between the nature of the economy (services account for 70% of gross value added) and the appropriateness of labour force skills, results in chronic unemployment
- BEEE is not broad-based

Q. What are the consequences if this risk materialises?

- Alienation, polarisation, and corruption
- Economic growth remains exclusive
- Macro-economic populism (which, in the longer term, is self-defeating)

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Insurance and Reinsurance
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Education
- Healthcare
- Wholesale and Retail

Q. What are the barriers that prevent us from solving this risk?

- Inappropriate/ inadequate education and training
- Growing sense of entitlement
- Inefficient/ wasteful expenditure by government

Q. What is the effective risk response to treating the risk on a National level?

- Appropriate skills development programmes
- Fostering a sense of national cohesion

Q. What is the effective risk response to treating the risk on an Industry level?

- In-house skills development programmes

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- The implications of the 4th Industrial Revolution

ROSS SAUNDERS

Director Global Technology Services
Cura Risk Management Software

Ross Saunders, Cura's Director of Global Technology Services, has a passion for process and what makes business tick. He holds a Masters Degree in the Management of Technology and Innovation, and is a certified Managing Successful Programmes practitioner. Ross believes in using a systemic approach to business, in that everything is connected and no function should be seen in isolation. Ross' has a keen eye for technology, and is a firm evangelist of using modern technologies in business.

Risks commented on:

- Disruptive technologies



DISRUPTIVE TECHNOLOGIES

ROSS SAUNDERS

Director Global Technology Services – Cura Risk Management Software

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Disruptive technology, while a risk, may also be seen as a tremendous opportunity should it be embraced. Given the broad spectrum of technology, the risks of entire industries being disrupted are present, and as such, sufficient controls and programmes need to be in place both from a technological and training perspective, but also that of a legislative perspective.

Disruptive technologies such as Artificial Intelligence may on the surface derail employment due to automation “taking” jobs, however this could be an opportunity to upskill and train existing workforces into disruptive techniques and workloads further down the value chain – should the government and private sector be prepared.

As we have seen with other disruptions, there is the possibility of violence and civil unrest between groups should legislation be seen to unfairly favour or penalise a particular group. It is important that legislation and compliance thereof is updated at a rapid enough pace to contain these issues before they escalate.

Building on existing pillars of the NDP, partnerships both locally and abroad should be leveraged to address the challenges and opportunities that arise with disruptive technology.

Q. Give three primary causes of this risk.

- Development of disruptive technology for deliberate competitive advantage
- Rapid Adoption of Technology which bypasses legal processes
- Freedom of consumer to purchase or utilise technology outside established norms

Q. What are the consequences if this risk materialises?

- Job Losses
- Civil Unrest
- Legislative bypass
- Security hazards due to rapid adoption of fledgling technologies

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Lack of knowledge of incoming technological advancements
- Slow processes and adaptation by authorities
- Refusal to acknowledge a problem before it has been adopted into the mainstream

Q. What is the effective risk response to treating the risk on a National level?

On a national level, collaborative programmes with institutions such as universities may be seen to educate and inform on upcoming technologies and disruptions. A forward thinking approach on the technology coming, coupled with training and upskilling of people affected would go a long way to mitigate the risks.

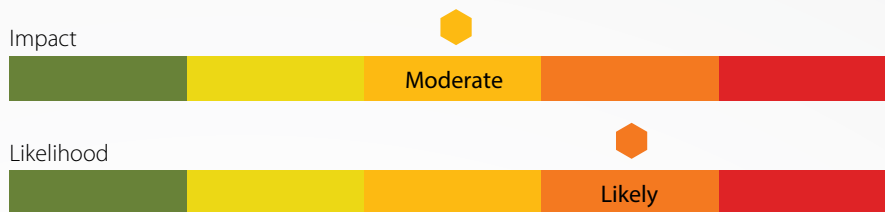
Unfortunately, many of the disruptive innovations that have come to be have moved incredibly quickly – often too quickly for appropriate bodies and organisations to keep up – and as such, agility and awareness are key.

Q. What is the effective risk response to treating the risk on an Industry level?

Similarly, to a national level, organisations need to be aware of the technological innovations on the horizon, and make appropriate plans to cross- or up-skill individuals in order to avoid any redundancies or negative socio-economic growth.

Within an industry, organisations, professional bodies, and industry regulators should be monitoring upcoming technologies, as well as the adoption by their members, in order to ensure that opportunities are taken advantage of and risks are mitigated.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Security of IoT devices, leading to increased cyber attacks caused by adoption of low-cost mass produced hardware. IoT Implementations should be monitored and secured.

JOHN SANEI

Trend and Innovation Specialist

John Sanei is a trend specialist, business strategist, keynote speaker, author, entrepreneur, and a Singularity University Faculty Member, working with clients across industries and around the world with over 20 years' experience. He addresses the contextualisation of trends that have a direct impact on how executives and business owners innovate at every touch point of their organisations – focusing on the future of industries, consumers and employees. He advises on strategic thinking and future innovative growth imperatives to drive sustainable growth and long term relevance in a changing world. His experience has given him a deep understanding of a wide range of industries from retail, farming, media, textile manufacturing, skin care, hospitality, food manufacturing and the financial services to name a few.

Risks commented on:

- Lack of innovation including resistance to change
- Loss of reputation and severe brand damage



LACK OF INNOVATION INCLUDING RESISTANCE TO CHANGE

JOHN SANEI

Trend and Innovation Specialist

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

For me, the problem is not that leaders don't want to change, it's that we, as a society of business, are celebrated by quarterly profits/goals. Shareholders determine whether we can innovate or not. So as leadership and as CEO, everyone wants to be on the cutting edge of their sector, but what you require is a more mature and elegant way of reporting profitability.

If you look at the major brands around the world that are innovating, they are not calculating their profits month by month or quarter by quarter, but rather by long term processes. For example, Elon Musk, who has a 30-year goal of having cheap electric cars to the whole world. What he did initially, was to launch a very expensive electric sports car, where he made no money and in fact might have lost money in order to learn through the process of developing a car for the masses. The second thing he decided to do was build the largest building on earth to bring extreme economies of scale to battery production. Again, not about making a profit, but preparing for the long-term goal.

The problem with risk and the problem with innovation do not lie with leadership, it lies with shareholder pressure. What shareholder pressure does – it says, “We want you to be innovative but you must still be giving us double digit profits”. So, what happens is a schizophrenic relationship – a schizophrenic culture is created within organisations because you have, on one end this whole value system that says we must be all about team work, integration, innovation, excellence and integrity, but on the other end we measure you on profitability. Then companies wonder why don't we have a great culture. This is because you are schizophrenic and you want one thing, but really what you are celebrating is shareholder returns. I don't think it is a leadership problem, it's a shareholder problem.

Innovation is not about a product or a service, what we require today in the world is institutional innovation. Its new ways of leading from a shareholder's perspective; to have a more elegant, long term, patient approach in order to bring real innovation to the market place. When you bring about small iterations they are not really innovations, when you bring a new app out it is not innovation. Innovation is about something brand new that could hamper profitability in the short term but bring extreme profitability in the long term. But because we are hampered by, I call it the “Horny Teen-Age Boy” syndrome, there are no long-term thoughts, but a short-term/right now paradigm. They want instant gratification – it's not about EXCO it's about shareholders.

Q. Give three primary causes of this risk.

Irrelevance, because we get caught in something I call “the ironic rut of success”, where we become both the prisoner and the warden of our success. We become both the person that celebrates our past and does not want to change too much into the future. Nokia got caught in this, it's called the “innovators dilemma”. What happens is we have been successful doing X,Y and Z, we don't want to change it too much, but just enough to be seen as innovative but really, we are not being innovative and we get caught in “innovators dilemma”. Nokia launched the smartphone two years before Apple did, but the shareholders determined where the focus of the organisation should go. What they decided was to focus on the billion-dollar business of feature phones and forget about this small, inconsequential million-dollar smart-phone industry and this caused Nokia to go from a hundred-billion-dollar company to seven billion dollars in six years.

Q. What is the effective risk response to treating the risk on a National level?

- Celebrate new metrics
 - Bring new ways of celebrating success inside organisations
- Organisations need to become more like laboratories and less like factories; looking for new ways of getting sales without really innovating puts you on a steep slope to nowhere. So, what you need to do is celebrating new ways of going about behaving in a new way as an organisation, so we not only celebrating profits and skill, but you are starting to celebrate a new behaviour that is about agility, flexibility and experimentation.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



When rating these questions, we must first look at the framework of how the digitisation works and how technology affects organisations, sectors globally. Singularity University have developed a framework which details 6 D's where technology and disruption take place in this process.

Firstly, a sector or a business becomes digitised and as soon as this occurs it dematerialises, whatever you are selling goes into thin air, like the music industry, photography and movies. When digitisation occurs, it goes into the most important "D" and becomes deceptive. When digitisation, products and service move through the deceptive stage, us as human beings, who think linearly, always think "Nah that's never coming back" Like 3D printers, like Google Glass, Autonomous Vehicles and Artificial Intelligence. All of these things, people think, "Nah these things are going to take so long" Look at what happened with Kodak in 1976 when they first launched the first digital camera, it weighed 8kgs in total and took 23 seconds a 0.1-megapixel photo and when it first got launched, people was like "what are we going to do with this heavy, cumbersome camera when we have these other film cameras that can take 12 photos in no time. But after 20 years of that digital growth started happening and technology doubled on itself and halved on itself on an annual basis and when the digital camera pop out on the other side after 20 years after the deceptive stage and it demonetised and once this has occurred it democratises so that everyone can now take part. Once it has democratised at a very cheap level it disrupts the sector. Telecoms is going through the same thing, Skype disrupted the telecoms industry by 37 billion dollars, where Skype benefited 2 billion dollars where 35 billion just vanished. WhatsApp is now disrupting the telecoms industry like crazy. I can only imagine those figures to be double because all of us are making free calls. There is no longer a point in having a telecoms business anymore because that's now what Skype has done. So when I say it is critical for leaders and organisations looking at this risk, what I am saying is because most of the technology siting with right now that are in deceptive stage. They are about to pop out and demonetise whole sectors.

Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Is this risk a short term or a short into the long term put on the South Africa and Industry risk register?

I think that there is three layers of risk.

- 60-70% of your business energy should be on your current business where you are paying the lights and bills
- 20-30% should be used to keep yourself one step ahead of your current industry competitors
- 10-15% should be spent and investment should be spent on total disrupting what your current sector does and also focusing on what your consumer wants rather

LOSS OF REPUTATION AND SEVERE BRAND DAMAGE

JOHN SANEI

Trend and Innovation Specialist

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

South Africa as a country is immature in its Leadership. Countries that have immature leadership are very much based on what shareholders do, short term goals that they operate in. Because of this brand new leadership, we have in the country, the problem is that turnaround specialists hardly ever good managers and the ANC where excellent and absolutely necessary turnaround specialist to bring down Apartheid because it was a disgusting process and structure. You never have a good turnaround specialist who becomes a good manager and the country is missing a new type of energy about bringing new more mature leadership to the country and I think we just have to wait it out to see new strength of power and a maturing of our Leaders moving into the next phase of South Africa's adulthood. Yes, there has been damage to our country and without a doubt will have to fix over the next few years, but we must not forget that our country is young and our country can't be compared to mature countries around the world. We needed and required Apartheid to fall away and wait a little bit longer until we evolve to a more responsible society and a society that looks at forgiving the past, because I think black people are very upset about what has happened and rightfully so. White people are petulant about why it is not the way it used to be. There is this underling tonality that is still going on and I think it has to wait a while before it phases out and it is unfair to tell Africans and South Africans to get over it, because I don't think that is fair. It is also unfair for white South Africans to say, it used to be like this. We just need to mature as a society and I think all along we have to wait it out, there is no rushing maturity and the more frustrated we get the less elegant we become and we need to be approaching this with a much more elegant view point and allow this to fade out systematically.

Q. What are the consequences if this risk materialises?

If we look at the opportunity versus challenge space and we look at shifting ourselves into a more positive space as South Africans, what would be the consequence of that would be:

- We start becoming leaders in a space
- A much better opportunity for South Africa
- An opportunity for South Africans to become global thought leaders in their space

The ramifications if we do not adopt this:

- A Downward spiral into self-pity into creating a persona of ourselves that I call "South Africanism". Where we think we are not as good as the world and this process becomes something that crushes us.

Q. What is the effective risk response to treating the risk on a National level?

On a high-level overview:

- Bring in Maturity
- Replace our Turn-Around Specialists

Practically:

- Embracing the future
- Start to heal the past

We need to ask ourselves how often, how much effort, money and focus are we putting into exposing ourselves to the future and how we are becoming global citizens rather than South Africans. This idea/notion that we are South African and that we position ourselves and box ourselves with this South African campus Bulls%!@t. We are global citizens with the advent of free energy and communication 5 to 7 years away, we really are global players. When we box ourselves as just South Africans, we become that, just that.

First and foremost, how often do we expose ourselves to the future and as we start exposing ourselves to the future, what starts happening, our optimism and confidence start growing. When our confidence and our mindset starts to become more optimistic about the future, because we are exposing ourselves to the future, we start to move in an upward spiral of energy and you can see this in a very individual level. If you yourself are exposing yourself to technology, you learn about and get excited about it, this upward spiral moves into a higher energetic space into a more optimistic view point. Everything starts looking like an opportunity and not a problem or a challenge. So, there are two very clear things that are important. One, how often do we as South Africans expose ourselves to the future, how often do we become comfortable with seeing ourselves as global players and not South Africans and this symbiotically shifts ourselves into an optimistic viewpoint and this together will help South Africa move into a more profitable, more relevant and more fluid future that we require. When we are stuck on our old ways, when we want to defend old ways of thinking, we become just that stuck and we are never able to move forward. I think our own culture requires from each individual that we stop blaming the Government, we stop blaming the economic situation, we stop blaming and take responsibility as individuals because I think we are very quick to blame the Government and the economy. Truth be told we create our own reality bubbles and I am sitting in Dubai getting paid dollars to do talk and I am from Cape Town, so how did that happen? I urge South Africans in their individual capacity to start acting with the way future South Africa should be perceived and acting. Let's stop blaming and complaining. Stop thinking about the past and exposing ourselves to the future to develop ourselves to this optimistic view point.

Q. What is the effective risk response to treating the risk on an Industry level?

This movement should be an individual movement because organisation's are made up of individuals and as individuals if we need to practice something called accretion, which is word used in space when a rock is moving and over time the rock connects with another rock and eventually becomes a star. As individuals need to become responsible moment by moment and decision by decision that we have inside our heads. This internal dialogue that we are having is either blaming Zuma or taking responsibility for ourselves, blaming the rand/dollar exchange or taking responsibility for our own economic abundance and so what happens in the moment by moment behaviour that we have in our mind over time becomes our habits and our habits become our behaviours and our behaviours become who we are and as individuals. If we keep blaming and not taking responsibility we become part of this mass consciences that puts South Africa on a back foot.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



T E R E N C E S I N G H

Director
Ruhi Consulting

Terence is currently a director of Ruhi Consulting, a strategic consultancy focusing on strategy consulting, deal origination and fund raising for small business. He spends some of his time at an internet startup, Matchi, which sources innovative financial technologies and matches these technologies to financial institutions globally. He also spent a year contracting part time to Deloitte Corporate Finance as a Strategic Deal Originator. He was previously the Head of Research in the Coverage and Origination team at Nedbank Capital, the investment banking arm of Nedbank as well as an executive Head of Strategy, Marketing and HR. He has an MSc in Chemistry (from UKZN), an MBA (from Wits Business School) and assorted courses and unfinished degrees ranging from Computer Science, Commerce and Statistics to Religious Studies and is preparing to restart a PhD in Strategy.

Risks commented on:

- Lack of innovation including resistance to change



LACK OF INNOVATION INCLUDING RESISTANCE TO CHANGE

TERENCE SINGH

Director - Ruhi Consulting

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The challenge of meeting the aspirations of a previous disenfranchised majority as well as the tragedy of a substantial population that survives only on government grants has placed significant pressure on the ability of the state to adequately invest in the country's future. The continuing instability in government wracked by factionalism and distracted by political jostling amidst widespread corruption has resulted in a declining economy along with lower government revenues. The poor outcomes of many of its relatively well funded programmes, notably primary school education, indicates that throwing more money at a problem (from a shrinking pot) will not solve it. Rather, an investment in innovative models are required, not just the adoption of solutions that may have been successful in different societies. Underlying this should be a strong commitment to creating an enabling environment for innovation to flourish, especially in improving educational outcomes and access to funding as well as incentivising the development of social innovation in particular.

Q. Give three primary causes of this risk.

- Lack of funding from the public and private sectors
- Poor access due to a bureaucratic system of administering innovative programmes
- A reluctance by the private sector to invest in innovation

Q. What are the consequences if this risk materialises?

- More expensive solutions to meet NDP objectives
- Unsustainable solutions that rely on continued financial investment

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Education

Q. What are the barriers that prevent us from solving this risk?

- Ineffective government and bureaucracy
- Inadequate mechanisms to access funding and support
- A risk averse private sector towards supporting innovations

Q. What is the effective risk response to treating the risk on a National level?

An investment into improving educational outcomes by both the public and private sectors
Creating a supportive ecosystem for innovation to flourish, e.g. collaboration between education and small business ministries

Q. What is the effective risk response to treating the risk on an Industry level?

Overhaul the institutions that oversee the innovation support programmes and create partnerships with the private sector

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



PIETER SMITH

Independent Researcher and Analyst
Viridis Insights

Pieter Smith is an independent researcher and analyst at Viridis Insights. He has a degree in chemical engineering, an honours degree in industrial engineering, a degree in information and knowledge management and is a Certified Competitive Intelligence Professional. He worked at Sasol for 20 years in a variety of roles, including in manufacturing, logistics, information management, strategy and risk. He currently co-lectures at WITS Business School on the topics of Industry Foresight and Systems Thinking.

Risks commented on:

- Breakdown of critical information infrastructure & networks



BREAKDOWN OF CRITICAL INFORMATION INFRASTRUCTURE & NETWORKS

PIETER SMITH

Independent Researcher and Analyst - Viridis Insights

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

A breakdown of critical information infrastructure and networks could impact negatively on many of the NDP objectives. The significance of this impact will depend on the extent, fall-out and duration of such a breakdown. In a worst-case scenario, such a breakdown could quite plausibly disrupt, for example, government, transport systems, industrial production, power generation and distribution, financial markets, retail and supply chains, telecommunications, regional and global trade, healthcare and water-supply.

At the very least, it could lead to NDP objectives being delayed or not being met at all. More importantly, if such a breakdown is sustained over a long period of time, it could result in the country becoming less competitive against its regional and global peers.

From my perspective as a competitive intelligence professional, I am particularly concerned about issues that impact on the long-term competitiveness of the country. Areas of specific concern, in my view, are NDP goals in the following categories:

- Improving education, training and innovation
- SA in the region and the world in terms of trade
- Economic and employment goals
- Economic infrastructure
- Healthcare for all
- Environmental sustainability and resilience
- Social protection and safer communities
- An inclusive rural economy
- Transforming human settlements

Although there are initiatives and programmes aimed at raising awareness of this risk, at educating and equipping people with the required skills, and at putting supporting legal frameworks in place, a lot remains to be done to sufficiently mitigate this risk, both from an industry, national and regional level.

There is a possibility that this risk might mostly viewed as requiring mitigation against malicious attacks and other catastrophic failures. It is, however, also about having the foresight and appropriate level of planning and coordination to ensure the timely and effective roll-out of infrastructure and networks to cope with rising demand.

Q. Give three primary causes of this risk.

- Lack of foresight and preparedness to make timely investment in and adequately coordinate new infrastructure, especially in a scenario of rapid demand growth
- Society and industry are increasingly becoming reliant on data, processes and decision-making embedded in complex, interdependent information infrastructure and networks ('cyber-dependency')
 - Increasingly, industries and other institutions are moving their computing infrastructure and services into the cloud, driven by efforts by companies like IBM, Amazon and Microsoft to offer software, infrastructure and services as solutions supported by advanced analytics
 - This poses a severe risk to industries and government, especially where these services are hosted overseas since many of these companies do not yet have big data centres in South Africa
- Lack of awareness in business, industry, government and general society about the risk and how to mitigate the risk

Q. What are the consequences if this risk materialises?

Aside from the potential disruptive impact on the economy, employment and critical infrastructure like water and power supply, I would like to highlight a few areas that might be less immediate in terms of impact but that may impact on the long-term competitiveness of the country:

- Improving education, training and innovation
Higher education institutions are increasingly using ICT as a means for teaching and sharing of educational resources via the Internet and there are initiatives to allow all universities to use distance education to reach more learners. Over the past six years over 8,000 different courses globally have been made available online for free to anyone who wants to take them. A breakdown in Internet infrastructure could severely limit opportunities for accessible and affordable education and training. The SA National Research Network is a critical part of the research and innovation capability of the country. Its bandwidth will be upgraded over the next 3 years, to support the MeerKAT and SKA projects. A breakdown in this and other research-enabling information infrastructure and networks could detrimentally affect NDP objectives around the number of doctoral graduates, and research and innovation in general

- Inclusive rural economy
There is huge potential for the use of advanced analytics in agriculture together with e.g. remote sensing, accurate spatial data, the Internet of Things and drones to enable so-called precision farming for large as well as small-scale farmers

A 2015 study in Zimbabwe found that the use of mobile phone ICT can promote better production, marketing, food security and livelihoods of smallholding farmers . accessing advisory services over mobile phone. 51.1% utilised various mobile phone services including accessing market information on inputs and produce, advisory services, weather data, mobile phone money transfers for transaction and crop insurance. By using mobile phones farmers made informed decisions and saved time and transport cost.

A breakdown in information infrastructure could have a devastating impact on farmers who come to rely on it for day-to-day decision making.

- Healthcare for all
The introduction of ICT-enabled healthcare solutions may be delayed, or its benefits adversely impacted, if there is a breakdown. Drone delivery of medicine, remote diagnosis and remote patient monitoring systems are just a few examples. Failure of a national health information system can lead to loss of life. Unreliable power and water supply as a result of CII (Critical Information Infrastructure) failure can also lead to a loss of life.
- Digital Divide
If sustained for a long period of time, a breakdown could cause the digital divide in South Africa to worsen significantly.

According to the International Telecommunications Union, 52% of South Africans currently use the internet. The 2015 General Household Survey of Statistics South Africa showed that only 9.6% of households had access to the Internet at home. A 2016 estimate put this figure at 49.4. However, fixed broadband descriptions per 100 inhabitants amount to only 3.2.

The Internet for All project, which was announced earlier this year, aims to bring millions of South Africans, including those in rural areas, onto the internet for the first time through new models of public-private collaboration. There are also initiatives to implement low or no-cost services .

A breakdown of critical information infrastructure & networks could derail this project and could also result in an increasing digital divide where only the privileged would be able to afford or gain access to secure, or any remaining, infrastructure

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Transport and Logistics
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Research and innovation

Q. What are the barriers that prevent us from solving this risk?

- A lack of awareness and competence in terms of identifying and managing this risk (refer to previous research by Wolf)
- A lack of leadership and co-ordination from a government perspective
- Lack of a clear and effective legal framework. The Critical Infrastructure Protection Bill as published in Government Gazette No 41114 of 15 September 2017 contain some noteworthy elements, e.g. the need to ensure resilience. However, the bill is not very clear on the issue of information infrastructure. The Cybercrimes and Security Bill is much more specific, but has raised privacy concerns

Q. What is the effective risk response to treating the risk on a National level?

Public-private cooperation is required in the identification and protection of critical infrastructure. Government must drive regional efforts and cross-industry collaboration in order to assess of vulnerabilities and progress on the implementation of appropriate measures.

Appropriate legal frameworks will also go a long way to ensure this matter is taken seriously.

It is good to see that there are already a number of centres at universities working on this issue. However, there are still relatively few courses on the subject, and there is clearly a need for government to step in.

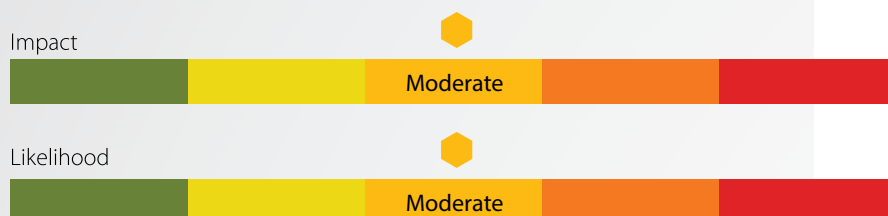
Q. What is the effective risk response to treating the risk on an Industry level?

Industry bodies should raise this risk with their members, facilitate workshops with experts and promote the adoption of suitable risk mitigation measures.

Industry players should raise their risk within their companies and participate in industry efforts to understand and mitigate this risk.

Industries should also collaborate with other industries and with regional initiatives.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

The industry risk of Disruptive Technologies could perhaps also be classified as a country risk. There is a risk that artificial intelligence, geo-engineering or synthetic biology experiments or activities 'gone wrong' could cause large-scale human, environmental and economic damage

That said, disruptive technologies can also have a significant impact on industries. There is a risk that disruptive technologies could result in certain South African industries becoming unnecessary. This could result in a large-scale increase in unemployment

Shortage of essential minerals and base metals. A paper published in Nature journal in March 2017 concluded that mining exploration is not keeping up with future demand for minerals and recycling in and of itself would not be able to meet the demand either. This could lead to serious global challenges. International coordination is needed

P A U L S T I F F

Head of Client Engagement & Multinational – Africa
AIG

Paul Stiff is AIG's Head of Client Engagement & Multinational - Africa. Paul is a client-focused leader, with a background in Insurance and Risk Management developed over 20 years in the industry. Paul manages AIG's interaction with, and service delivery for, AIG's largest and most important client accounts. Paul specialises in the Aerospace & Defence and Manufacturing sectors but has deep experience of clients in diverse industries from Food & Drink to Medical Products.

Risks commented on:

- Disruptive technologies



DISRUPTIVE TECHNOLOGIES

PAUL STIFF

Head of Client Engagement & Multinational – Africa - AIG

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

South Africa has striking technology expertise at a global level in many fields – banking, coding, Artificial Intelligence, Surgical procedures etc. Disruptive Technologies could be both leverage to enhancing SA's position on the global stage e.g. through the ability to be nimble around change (limited constraints and significant appetite for entrepreneurship), but there are also considerable risks that other global markets offer a more financially and geopolitically stable platform for investment which could stifle “home grown” opportunity. South Africa presents a dichotomy – it sits on “knife edge” - it is both future focused and ready for change whilst also stuck in tradition and suffering from underinvestment in equal measure. How the future plays out will largely be dictated by the next government and their ability to tackle key topics – financial stability, fraud/crime and investment in sustainable technologies and resources – this in turn allows for credible foreign investment and opportunity which is most likely to come from emerging or disruptive technologies.

Q. Give three primary causes of this risk.

- Political instability – lack of focus/investment on future sustainability or economy but also impacting the appeal of SA to foreign investment
- Impact on workforce – with already high unemployment, disruptive technologies, such as Automation and Artificial Intelligence, could increase unemployment...some stats point to 20% of today's jobs not existing in 10 years
- The Kodak moment - “just doing what we did last year, maybe a bit more” – lack of preparedness/awareness and consideration of “what next”; many businesses will disappear as they become unable to react to change, or didn't see it coming

Q. What are the consequences if this risk materialises?

- Increased unemployment
- Long term financial and political instability
- Increasing gap between SA and other economies resulting in SA reliance on others as opposed to having others rely on SA

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Petrochemicals, Oil and Gas
- Manufacturing

Q. What are the barriers that prevent us from solving this risk?

- Failure to consider and correctly identify impact of Disruptive Technology to SA and individual businesses – particular at Board/Strategic level
- Lack of investment/backing from government
- Geopolitical instability leading to limited/decreasing foreign investment

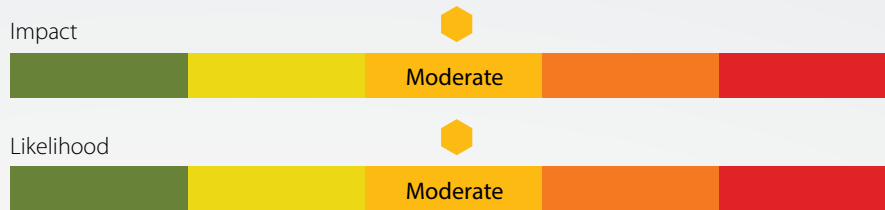
Q. What is the effective risk response to treating the risk on a National level?

Government to provide a long term sustainable platform underpinned by investment in technology infrastructure back up with a strategic plan for employment in an AI world

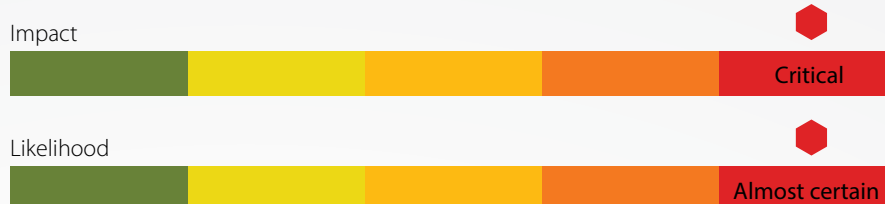
Q. What is the effective risk response to treating the risk on an Industry level?

Implementing regular strategic review of Disruptive technologies and changing landscape at board level. Particular attention to workforce sustainability and “new blood” competition e.g. companies stealing competitive advantage through technology – “what happens when Amazon does insurance?” or “...when Telsar do taxis”.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- The Risk of "new blood" competition – conglomerates like Amazon, Google, Teslar, deploying new ideas, capacity, technology, capital, and considering risk in a different/game changing more end to end/more holistic manner. Increasingly these companies are not just going to challenge the status quo, their strategies are going to see them "re-write the books"

T A P V A N D E N B E R G

Senior Manager: Enterprise Risk Management
Sasol

Tap is a Senior Manager: Enterprise Risk Management, responsible for upstream operations (oil, gas and mining) and has more than 30 years' experience in Enterprise Risk Management covering the following industry sectors, namely: mining, chemicals and upstream oil and gas. He has extensive Enterprise Risk Management experience in strategic, tactical and operational risks across the full enterprise value chains of the above industry sectors and includes business development and mega projects (projects in excess of 1 billion USD).

Risks commented on:

- Micro economic developments: Inflation, deflation, austerity measures, national economic slow-down



MICRO ECONOMIC DEVELOPMENTS: INFLATION, DEFLATION, AUSTERITY MEASURES, NATIONAL ECONOMIC SLOWDOWN

TAP VAN DEN BERG

Senior Manager: Enterprise Risk Management - Sasol

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The biggest risk to the NDP plan is that Government and specifically the Fiscus / Treasury does not have enough Technocrats to develop an effective strategy to roll out the NDP. The ability to fund the NDP initiatives is also curtailed due to the high National Debt levels (making the Credit Agencies very concerned) and the guarantees provided to the major SOE whose balance sheets are under pressure and in some cases technically insolvent and considered not to be going concerns anymore, if it was not that Government provided guarantees for their debt. Matters are also complicated further due to poor governance in the Government and SOE, potential further downgrade of the debt, the dysfunctional conflict in the ANC and between key Government Departments who are critical role players to give effect to the NDP. This creates huge uncertainties with the private sector that sit with large amounts of cash on their Balance Sheets and is currently not willing to participate in the NDP due to unclear policies and regulations. The cost of debt is also increasing and is making many of the NDP initiatives unviable.

Q. Give three primary causes of this risk.

- The dysfunctional conflict in the ANC cascading into the Government and Governmental Departments
- Unclear laws, regulations and policies
- Corporate Governance and evidence of state capture
- Unclear Macro-economic policy
- Treasury and SARS losing critical skills/ technocrats

Q. What are the consequences if this risk materialises?

- Low investor confidence resulting in a downward spiral of Direct Investment
- Lower Consumer confidence resulting in a downward consumption spiral buying less products / service from businesses
- Increase in unemployment
- Stagflation
- Increase in supply chain costs making the South African businesses less competitive

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Petrochemicals, Oil and Gas
- Engineering and Construction

Q. What are the barriers that prevent us from solving this risk?

- Unwillingness of the private sector to invest in South Africa
- Unwillingness of the private sector, government, organised labour and NGO to develop a National Strategy to make South Africa an attractive investment destination
- Unclear laws, regulations and policies making it difficult to do business or invest in South Africa
- State capture
- Disruptive technologies and digitisation
- Higher inflation as a result of a very weak Rand against a basket increasing the cost of doing business in South Africa

Q. What is the effective risk response to treating the risk on a National level?

The private sector, Government, Organised Labour and NGOs should create another CONDESA to address unemployment, landlessness, poverty, income disparities between the rich and the poor and corporate governance in the Government and Private Sector. Implement the NDP and employ high quality Technocrats to initiate the NDP initiatives and work together with the private sector to second the required project management skills to ensure that the NDP is effectively executed.

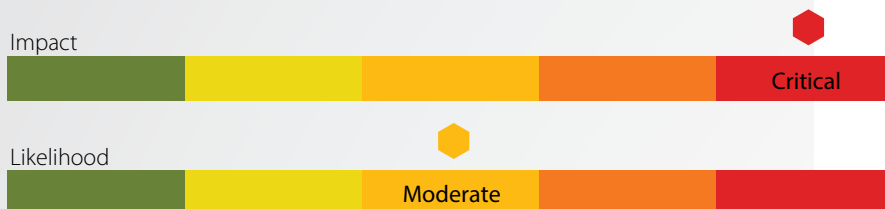
Q. What is the effective risk response to treating the risk on an Industry level?

- The private sector should be encourage to investigate business opportunities within the RDP and commit resources to these initiatives so that they can grow their business footprint and at the same time participate effectively in the BBBEE policies
- This will create employment opportunities and increases the tax base in south Africa making it possible both Government and Private Sector to effectively roll out the NDP
- The private sector will grow to the extent where more investment opportunities are considered in neighbouring, especially after the latest developments in Zimbabwe.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

None

DR WHITEY VAN DER LINDE

Senior Lecturer
University of Johannesburg

Whitey (Tjaart Nicholaas) van der Linde is a senior lecturer in the Department of Business Management at the University of Johannesburg holding a D.Com (RAU). His knowledge areas ranges from Strategic Management, Financial Management, Operational Management and Risk Management. Work experience include being a financial manager and Business consultation. He is a SAP FI/CO certified consultant. In the academia he is a consistent contributor to double-blind peer reviewed journals and conferences. He is a life-member of IRMSA and serving on the IRMSA Education and Technical Committee as well as the Professionalisation Committee.

Risks commented on:

- Skills shortage including the ability to attract and retain top talent
- Inadequate and/or sub-standard education and skills development



SKILLS SHORTAGE INCLUDING THE ABILITY TO ATTRACT AND RETAIN TOP TALENT

DR WHITEY VAN DER LINDE

Senior Lecturer - University of Johannesburg

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

This is not a risk – a risk is an uncertainty. Skills shortage is a reality (See various international reports). The question is what are employer's doing to negate the effect. Tertiary institutions add to the problem in that the current crop of students study slides and regurgitate the facts.

Q. Give three primary causes of this risk.

- Attitude (entitlement) from students
- Poor economic environment
- Quality of educational policies, plans and outcomes

Q. What are the consequences if this risk materialises?

- Educated unemployment
- Lower economic growth
- More political interference

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Unwillingness of the private sector to invest in South Africa
- Societal/country culture
- Political gaming
- Rise of populism

Q. What is the effective risk response to treating the risk on a National level?

- Political will

Q. What is the effective risk response to treating the risk on an Industry level?

- Creating own organisational educational institutions

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Exploitation of natural resources
- Growing gap between “haves and have-nots”
- Social inequality

INADEQUATE AND/OR SUB-STANDARD EDUCATION AND SKILLS DEVELOPMENT

DR WHITEY VAN DER LINDE

Senior Lecturer - University of Johannesburg

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Again – I query if this is a risk as we already see the results of sub-standard education (unemployable graduates).

Q. Give three primary causes of this risk.

- Entitlement
- Socio-economic pressure
- Rise of populism – political will

Q. What are the consequences if this risk materialises?

- 0% economic growth
- Increased social dis-order
- South Africa keep on sliding down international (Africa) accepted world ranking indicators

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Social culture
- Education system
- Growing GAP between needed skills and what educational institutions offer

Q. What is the effective risk response to treating the risk on a National level?

- An immediate change to the educational system. Won't happen – too much power by trade unions

Q. What is the effective risk response to treating the risk on an Industry level?

- In-house training, but that is training an employee to leave the organisation

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Exploitation of natural resources
- Growing gap between "haves and have-nots"
- Social inequality

SCHALK VAN DER MERWE

Executive Manager
Innoxico

Schalk, a professionally registered engineer with the Engineering Council of South Africa, was born in Cape Town. He holds a BEng from the University of Stellenbosch and a postgraduate Project Management degree from the University of Pretoria. Awarded a study bursary from Eskom, Schalk gathered experience working for the SOE on numerous of its most prestigious projects, gaining exposure to all facets of the project life cycle. In 2011, Schalk was seconded to the Medupi Power Station project receiving leadership awards as Eskom's youngest Lead Project Engineer. Schalk joined Innoxico in 2013.

Risks commented on:

- Unmanageable fraud and corruption



UNMANAGEABLE FRAUD AND CORRUPTION

SCHALK VAN DER MERWE

Executive Manager - Innoxico

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Chapter 14 of the NDP deals specifically with fighting corruption and the actions that will be taken to produce "a corruption-free society, a high adherence to ethics throughout society and a government that is accountable to its people." Given the rates of economic crime and corruption as witnessed e.g. in the Guphtaleaks, the indications are that we are still far from this ideal and it remains a sad reality that unmanageable fraud and corruption is diminishing the impact of the NDP by draining its resources.

As long as this issue remains unresolved, a vicious circle persists, where fraud and corruption restrict economic and social development and erode the trust in the institutions that drive the NDP - which in return breeds more fraud and corruption.

Q. Give three primary causes of this risk.

- Unethical leaders in both the public and private sector using a variety of implicit and explicit rationalisation narratives (e.g. "white monopoly capital")
- Weak corporate governance cultures within certain sectors and organisations
- The lack of transparency, driven by a lack of actionable data, to measure and manage compliance proactively in organisations, creating opportunities for undetected fraud and corruption

Q. What are the consequences if this risk materialises?

- A lack of external investment in our economy leading to subdued GDP growth
- Erosion of trust in public and private institutions

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service

Q. What are the barriers that prevent us from solving this risk?

Simply put, unethical leadership and funding. In a tough economic environment, it is difficult for organisations to deploy budget to functions such as risk and compliance management (that's if they have leaders with such intentions).

Q. What is the effective risk response to treating the risk on a National level?

Effectively and systematically enforcing corporate governance and procedural guidelines (e.g. in procurement) and holding implicated staff as well as (especially) leaders accountable for breaches.

Q. What is the effective risk response to treating the risk on an Industry level?

For starters, the measuring of compliance to processes and policies already in place at most private and public-sector organisations. This will eventually lead to the improvement of corporate cultures.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

No. I believe the lack of governance and the product thereof, fraud and corruption, currently are our biggest challenges and risks as a country and corporate South Africa.

COEN VAN WYK

Consultant
In On Africa

Coen van Wyk has considerable experience in international affairs, foreign policy, diplomacy, governance, conflict and terrorism, and development, gathered over the last three decades in the field. Coen draws his extensive experience from positions at the South African Department of Foreign Affairs, as well as councillor posts in the DRC, Mauritius, Republic of Congo and Uganda. He has also participated in the UN Mission in the Western Sahara as an observer. Additionally, Coen has lectured and taught various peacekeeping programs at South African military colleges. More recently, Coen has also participated in the public briefings for the Institute for Security Studies. Coen is currently a freelance consultant and writer with a keen focus for developments in Central Africa, and an interest in economic development issues, Africa-wide development and agro-industrial opportunities.

Risks commented on:

- Failure of governance (public and private)
- Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT



FAILURE OF GOVERNANCE (PUBLIC AND PRIVATE)

COEN VAN WYK

Consultant - In On Africa

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

There is growing evidence that governance based on a western-style trust-based democracy is failing. Reports by the Auditor-General suggest that a growing number of Government institutions are at risk of failing due to corruption, inability to meet self-defined targets, and lack of governance and technical capacity.

South Africa is moving towards a power-based, command-style economy and society, which is inherently less flexible than a society and economy based on trust and full political and economic participation. This has resulted in low economic growth, structural inefficiencies, and political distrust leading to an inability to face up to external changes. Political elites are increasingly disconnected from the societal base.

Policies are less certain, less stable and less aimed at the needs of the electorate.

In the private sector organisations are often in a defensive mode, seeking to protect market share, reduce damage from political and other changes, and preparing for uncertainties. Policy directives are handled as threats and effort is expended to find ways to mitigate the effects. Innovation is de-emphasised, and risk investment discouraged. Small enterprises suffer from an increased lack of qualified, experienced, and committed staff.

At Government level an increased level of corruption and governmental inefficiency is met by an increased activism, also in Parliament. This leads to a more confrontational approach, rather than a development based on mutual trust and reassurance.

The result is an increasingly inefficient economic and political structure, with more dependence on Foreign Direct Investment, which exacerbates vulnerability to external influences.

Lack of trust on the side of citizens and tax-payers lead to the risk of tax evasion, a rising export of productive initiative outwards, and outward brain drain. This should be countered by measures to reduce corruption, prosecuting corrupt and inefficient officials, and reducing the regulatory and tax burden. Economic and social actors should be left free, and encouraged, to make decisions based on innovation, perceived interest and imagined profit. Economic and political certainty, lack of corruption and a lower tax and regulatory load will enable entrepreneurs to operate at lower margins, create more growth and employ more people.

Q. Give three primary causes of this risk.

- Growing command style in governance
- Breakdown in trust between an increasingly remote political elite and voting masses
- Incompatible political styles.

Q. What are the consequences if this risk materialises?

- A rigidified, and increasingly inefficient economy and social structure

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Transport and Logistics
- Manufacturing
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Political style and structure
- Political culture

Q. What is the effective risk response to treating the risk on a National level?

- Political pressure on Government to reform the political structure and governance style
- Pressure to prosecute corruption vigorously

Q. What is the effective risk response to treating the risk on an Industry level?

- Development of more effective lobbying mechanisms, development of internal training and governance ethics
- Activism to prosecute businessmen who promote and participate in corruption at every level

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

- Inappropriate political structures leading to poor, unaccountable governance and lack of responsibility.

MACRO-ECONOMIC DEVELOPMENTS - EXCHANGE RATE VOLATILITY, CREDIT RATING FLUCTUATIONS, GLOBAL ECONOMIC SLOWDOWN, COMMODITY PRICE VOLATILITY, BREXIT

COEN VAN WYK

Consultant - In On Africa

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The South African economy remains vulnerable to external influences. Weakening regional economies depress SA exports, and weak agricultural sectors also result in less export potential. Global economic instability may make foreign investors less likely to take risks. With looming BREXIT South African traditional export routes to the EU markets seem less secure. Western partners seem inclined to retreat behind nationalistic barriers and the successful western-dominated economic sector seems destined to decline. A global pivot to the east suggest new markets, but these operate on significantly different bases than the traditional markets. Centralised political decision making instead of a free market approach prejudices traditional entrepreneurs and decision making processes.

Q. Give three primary causes of this risk.

- Weak economy due to structural flaws and endemic corruption
- Low employment also regionally due to poor policy choices
- Lack of strong domestic manufacturing base

Q. What are the consequences if this risk materialises?

- Low growth and lack of economic resilience leaves the economy vulnerable to external effects
- Currency volatility will result in domestic economic uncertainty, which exacerbates weak economic performance
- Lack of local manufacturing base leaves the economy exposed to foreign economic developments

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Energy, Water and Utilities
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Hospitality and Tourism
- Healthcare
- Wholesale and Retail

Q. What are the barriers that prevent us from solving this risk?

- Poor policy choices, lack of education and over-dependence on rent-seeking economic models

Q. What is the effective risk response to treating the risk on a National level?

- Remove measures that inhibit development, free entrepreneurs from over-regulation, lower taxes, remove corruption

Q. What is the effective risk response to treating the risk on an Industry level?

- Develop mechanisms to lobby for policy changes, take measures to develop internal training

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Global realignment of economic groups may leave South Africa exposed to non-traditional investors and markets. BREXIT may inhibit SA marketing into the EU, while a slowdown of the British economy may also reduce imports. The US withdrawal behind economic barriers may likewise discourage US-based or –challenged financial flows, while Chinese markets and financial flows are unfamiliar to SA private sector decision makers.

CLAUDELLE VON ECKE

Chief Executive Officer
Institute of Internal Auditors South Africa (IIASA)

Claudelle is currently the CEO of the Institute of Internal Auditors. In addition to her responsibility of implementing the strategic imperatives of the Institute locally, she is also responsible for the Institute's international relations. Claudelle joined the IIA SA on 18th September 2006, filling the position of COO. Her key responsibilities at the time included overseeing the Education and Training, Administration and Finance departments as well as deputising for the CEO from time to time. She also fulfilled the role of Company Secretary. Before joining the Institute, her last position was that of Project Director: Business Initiatives at the South African Institute of Chartered Accountants where her portfolio of responsibilities included the strategic alliances, business partnerships, seminars and events, broadcasts and other CPD products. Internationally she serves on the IIA's Global Executive Leadership Team and the Global Professional Development Committee. She has been a speaker at many conferences and other events, both locally and internationally. She is also a published author. She has served on the Unisa School of Business Leadership (SBL) Board and Audit Committee. She also chaired the SBL's Alumni Committee. She is currently serving on the SBL Alumni Association's Executive Committee as Past Chair. She has served on the Unisa Council as well as its Audit Committee. She serves on the Advisory Board of the Business and Economic Sciences faculty of the University of Pretoria. She serves as Chair of the Unisa College of Accounting Sciences Advisory Board. She is a member of the Public Sector Audit Committee Forum's executive committee and chairs the Anti-Intimidation and Ethical Practices Forum. She currently serves on the South African Qualifications Authority's Qualifications and Standards Committee. Her academic record includes a BA degree obtained through the University of the Witwatersrand, a 3 year business management diploma obtained through the Institute of Administration and Commerce, a MBL degree obtained through Unisa's School of Business Leadership and a DPhil obtained through the University of Johannesburg.

She is a member of the Institute of Internal Auditors South Africa and the Institute of Directors. She is a Certified Director under the IoD. She is the 2016 Country (SA), Regional (SADEC South) and Continental winner of the Africa's most Influential Women in Business and Government awards in the category Agents and Regulatory Authorities.

Risks commented on:

- Inadequate and/or sub-standard education and skills development
- Lack of leadership



INADEQUATE AND/OR SUB-STANDARD EDUCATION AND SKILLS DEVELOPMENT

CLAUDELLE VON ECKE

Chief Executive Officer - Institute of Internal Auditors South Africa (IIASA)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The single most important ingredient in achieving the NDP objectives is the human capital in South Africa. This goes right from leadership to the lower rung workers in the economy. In order to implement the NDP, commitment is needed across all sectors and levels of seniority. Commitment on its own is however not enough. In order to produce the results needed at optimal level, we need a highly skilled workforce.

The sub-standard education system in South Africa contributes to the significant skills shortage, which in turn has an impact on our ability to ensure that the principles enshrined in the NDP can be implemented.

The skills shortage is only half of the problem. An uneducated population is also less able to hold the leadership accountable around all the complexities that need to be addressed.

A significant contributing factor is access to quality education. The average South African child cannot access education due to lack of funding. In addition, there are too many businesses that prefer to employ skilled individuals while doing very little in upskilling individuals for the South African economy.

A significant concern is the rate at which technology is advancing as it is creating an even greater gap between where the workforce currently is and where it needs to be in relation to the realisation of the NDP principles. As the South African workforce falls further behind, the country loses further credibility and its status on the competitiveness index.

Q. Give three primary causes of this risk.

- Lack of political willpower to transform the education system and adequately and smartly invest in the education system
- Legacy of the past – same teachers who themselves have come through an inferior system
- Unions driving the agenda with self-interest – teaching now seen as a job and no longer a noble profession

Q. What are the consequences if this risk materialises?

Increased unemployment rate

- SA not able to compete in the global village – i.e. workforce underutilised and underperforming resulting in less than optimum output and wastage
- SA workforce behind the technology curve

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Lack of leadership in both the private and public sectors
- Lack of understanding of how far behind we are in our education system, in particular when it comes to educating for the future.
- Lack of commitment to the NDP

Q. What is the effective risk response to treating the risk on a National level?

- Education system should be overhauled with the aim to produce a future-fit workforce
- More investment in transforming the education system
- Re-education of teachers
- Increased access to quality education for the poor as well as the missing middle

Q. What is the effective risk response to treating the risk on an Industry level?

- Education system should be overhauled with the aim to produce a future-fit workforce
- More investment in transforming the education system
- Re-education of teachers
- Increased access to quality education for the poor as well as the missing middle

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

None

LACK OF LEADERSHIP

CLAUDELLE VON ECKE

Chief Executive Officer - Institute of Internal Auditors South Africa (IIASA)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Leadership is fundamental to the achievement of any objectives. More so for objectives designed for the growth of a country that has to navigate through some stormy waters while self-correcting after a torrid past.

Leadership is needed to effectively action the principles enshrined in the NDP as well as inspire every South African to positively contribute to the realisation of those principles. Good leadership is needed in all dimensions of our society, with the right narratives being driven in order to mobilise the people in the interest of the country. Good leadership in our context must be diverse to ensure a deep understanding of the societal challenges.

It is clear that the leadership layer is hopelessly too thin and the quality of leadership leaves a lot to be desired across all sectors in South Africa.

Leadership can make or break organisations and countries. KPMG is a great example of the actions of a few leaders vibrating through a whole profession and putting an organisation at risk of failing.

This is therefore a high risk area for the country.

Q. Give three primary causes of this risk.

- Self-interest and financial success being more important than doing the right thing. The AEPF survey shows that less than 30% of professionals believe that for South Africans doing the right thing is more important than financial success
- Lack of a deep understanding of the complexities that are at the heart of the South African societal vulnerabilities
- Lack of leadership training

Q. What are the consequences if this risk materialises?

- Inequality gap widening. This would be fatal for South Africa. The current situation is already both untenable and has the ingredients for a revolution. While the have-nots go to bed hungry the haves cannot sleep soundly. This effectively means that an increase in protest actions is inevitable and that it is not in the interest of the ones who classified among the haves.
- South Africa losing more ground on competitiveness index. The 2017 Corporate Governance Index point to only 28% of SA organisations' output being at optimal level, given their resources. At the time of writing this South Africa is facing another downgrade by the ratings agencies to junk status
- Infrastructure and institutions on which the economy depends for its survival, crumbling. There are already signs of significant cracks in some critical SOEs
- Decrease of ethical fibre of society and organisations

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing
- Non-Profits

Q. What are the barriers that prevent us from solving this risk?

- Lack of political will
- Lack of understanding of the NDP and the complexities that come with implementing the principles.
- Cadre deployment over competence
- Patriarchal system prevents women from entering leadership positions, thus robbing SA from the female dimension of leadership which is important in a balanced approach.
- Lack of accountability
- Lack of understanding of the responsibility that comes with leadership

Q. What is the effective risk response to treating the risk on a National level?

- Ensuring competence when appointing leaders
- Recruiting for values, in other words employing ethical leaders
- Train leaders and in particular for ethical courage
- Ensure commitment to the implementation of the NDP principles
- Accountability. Stakeholders should hold leaders accountable

Q. What is the effective risk response to treating the risk on an Industry level?

- Apply EE with skills development. Too many are thrown into the deep end based on their race without proper leadership training
- Recruiting for values, in other words employing ethical leaders
- Train leaders and in particular for ethical courage
- Accountability. Stakeholders should hold leaders accountable
- Ensure commitment to the implementation of the NDP principles

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

None

NICKY WEIMAR

Senior Economist
Nedbank

Nicky Weimar has been Nedbank's Senior Economist since 2000. She received her Masters in Economics from the University of Stellenbosch in 1994 and soon advised government on economic procedures and policies in her capacity as an economist in the Central Economic Advisory Service, since integrated into the President's Office. Her experiences in the banking-, securities- and brokering industries ensured her a broader knowledge of a wide range of fields within economics, including sector analysis, fixed investment trends and the relationship between real economic trends and developments within the financial markets. At Nedbank, Nicky has focused most of her energies on trends in the overall economy, looking at cycles in the economic growth, inflation and interest rates. She regularly does talks all over South Africa to a variety of audiences like Business Forums, Property Groups, large Corporate firms, Government entities, etc.

Risks commented on:

- Micro economic developments: Inflation, deflation, austerity measures, national economic slowdown
- Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT
- Capital availability/credit risk



MICRO ECONOMIC DEVELOPMENTS: INFLATION, DEFLATION, AUSTERITY MEASURES, NATIONAL ECONOMIC SLOWDOWN

NICKY WEIMAR

Senior Economist - Nedbank

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

- Inflation:
 - Renewed inflationary pressures present a significant risk over the medium-term. Rising inflation would result in higher interest rates, which would increase the cost of capital to consumers and businesses, hurting consumer spending and fixed investment. The latter remains elusive and the key to unlocking faster growth and employment
- Deflation:
 - The risk of deflationary domestic spiral seems unlikely. This risk is more likely to emanate from the global economy, where significant deflationary pressures still linger as a result of the high debt burdens accumulated in the build up to the global financial crisis in 2007/08
- Austerity measures:
 - Given SA's poor fiscal position, austerity measures will eventually be required. At this stage, it seems more likely that higher taxes will be expected to do most of the heavy lifting, but ultimately significant cuts in government spending will be required. Such austerity measures would result in slower growth and compromise the achievement of NDP goals
- National economic slowdown:
 - SA is already stuck on a low growth path (less than 1% GDP growth predicted for 2017), which has made the achievement of the NDP goals virtually impossible. Despite this, downside risks remain. Political turmoil, further sovereign risk ratings downgrades and continued corruption could easily trample already fragile confidence, resulting in a vicious downward cycle, of falling confidence, lower consumer spending, shrinking fixed investment, rising unemployment, rising budget deficits and mounting public debt, followed by higher taxes, severe cuts to government spending, more pressure on household and company income and further declines in domestic spending.
 - The balancing force is the world economy, which is gathering pace, resulting in some baseline demand for SA production and exports

Q. Give three primary causes of this risk.

- Inflation:

Renewed, prolonged and severe rand weakness is the most likely cause.
A sharper-than-expected rise in global oil prices.
A reversal in the food inflation cycle. Another good summer rainfall season has reduced the chances of this risk materializing
- National economic slowdown:

Continued political turmoil or increased interference in key institutions could hit confidence and trigger a relapse in economic activity.
A further deterioration in government finances and large-scale bailout of financially distressed SOEs could also trigger a collapse in confidence and economic activity.
Further sovereign risk rating downgrades, especially by Moody's, which would take SA to universal junk status, potentially triggering substantial capital outflows, hurting the rand, triggering inflation and forcing interest rates higher.
- Austerity measures:

A downgrade of SA's sovereign risk rating by Moody's to junk status. This would push up the cost of funding for government, which could ultimately force stricter spending cuts and harsher tax hikes to reduce the budget deficit more meaningfully and help contain the rate of debt accumulation.
A political leadership which takes the return to fiscal sustainability more seriously than is currently the case.
- Deflation:

This risk appears unlikely at the moment, but could result from renewed global financial market turmoil, which, in turn, could be brought about by escalating geopolitical tensions between the US and North Korea.
Increased protectionism could also trigger deflationary pressures.
Too rapid a rise in US interest rates could bring about a setback in global growth and thereby reignite deflationary concerns.

Q. What are the consequences if this risk materialises?

- The consequences of inflation are well documented:
 1. Rising cost pressures in the economy, ultimately eroding the country's international price competitiveness
 2. Distort price signals, encourage consumption over savings and investments
 3. Benefits borrowers at the expense of lenders
 4. Hurt the poor more than the rich, who has the knowledge and means to protect against inflation. In the process, this worsens inequality
 5. Drive up interest rates (the cost of capital), thereby undermining fixed investment, employment and economic growth
- Deflation has the opposite effects to those described above. It depicts an environment where the prices on good, services and assets are falling. It tends to result in delayed consumption, as households and business expect prices to be lower in the future. It hurts borrowers more than lenders, as collateral gets eroded by falling prices and the real value of debt increases over time
- A key consequence of fiscal austerity is slower economic growth, placing pressure on the most vulnerable members of society by cutting government services, reducing households' disposable income through higher taxes, reducing company profits through higher taxes, which could convince many to diversify assets out of South Africa, while also potentially undermining fixed investment, dimming growth and employment prospects in the process
- The consequences of a domestic economic slowdown are fading wealth levels, rising unemployment and increased inequality

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Insurance and Reinsurance
- Wholesale and Retail

Q. What are the barriers that prevent us from solving this risk?

- The barriers to achieving lower inflation are mostly structural:
 1. Inefficient labour markets characterised by a massive skills premium and low productivity.
 2. Expensive economic infrastructure from power, transport, telecommunication to information technology.
 3. An ineffective state which drives up the cost of production for private firms.
 4. Inadequate competition in most industries within the domestic market, which gives companies too much pricing power.
- The barriers to avoiding austerity measures:
 1. A lack of political will to tackle corruption and restore fiscal discipline
 2. High levels of poverty, unemployment and inequality increases the burden on the state to alleviate suffering.
- The barriers to preventing an economic slowdown:
 1. The lack of strong and consistent political leadership
 2. Corruption
 3. Destructive economic policy debates and proposals
 4. The lack of trust between business and government

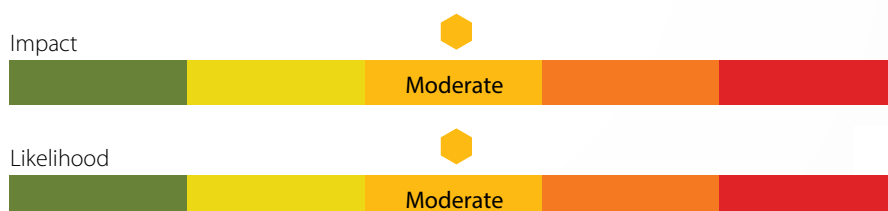
Q. What is the effective risk response to treating the risk on a National level?

- Inflation:
 1. Protect SARB's independence
 2. Apply sound and consistent monetary policies
- Economic slowdown and fiscal austerity:
 1. Improve political leadership.
 2. Improve accountability of the public sector to the public.
 3. Establish policy and legislative certainty through consultation with the private sector.
 4. Reform state-owned enterprises.
 5. Tackle corruption and state capture.
 6. Set a credible path to reduce the budget deficit and contain the rise in government debt.
 7. Improve government delivery of general economic and social infrastructure
 8. Invest more effectively in the training and education of the population to improve the quality of labour and encourage entrepreneurship.
 9. Reduce red tape and regulation for start-ups and small businesses.

Q. What is the effective risk response to treating the risk on an Industry level?

- Improve macroeconomic and sector analysis – understand the causes and nature of the risk, whether than be inflation, the economic slowdown or austerity measures.
- Identify exposures to those industries and markets most affected by the risk.
- Put measures in place to deal with the risks – adjust lending standards to offset any risk of bad debts

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



MACRO-ECONOMIC DEVELOPMENTS - EXCHANGE RATE VOLATILITY, CREDIT RATING FLUCTUATIONS, GLOBAL ECONOMIC SLOWDOWN, COMMODITY PRICE VOLATILITY, BREXIT

NICKY WEIMAR

Senior Economist - Nedbank

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

- Credit rating fluctuations:
Changes to SA's credit rating pose the most significant risk over the short to medium term.
Over the short-term, the key worry here is that Moody's downgrades the country's sovereign risk rating to junk status around March 2018, which would take SA to universal junk status. This would also result in the exclusion of SA sovereign bonds from Citi's World Government Bond Index (WGBI), which would force investors with narrow mandates to sell SA government bonds. Nobody is a 100% sure exactly how large these forced sales would be. Estimates in the market range from R100 billion to R150 billion. The SARB estimates forced sales at anything between \$8 billion-\$12 billion. Nonetheless, it will be substantial, resulting in renewed rand weakness, which would impact on liquidity and force inflation higher over time. Combined, these two factors could force the SARB to act to restore financial stability and counter the impact of a sharply weaker rand on inflation. Interest rates would probably increase early in 2018, hurting indebted consumers, and resulting in either very weak growth or outright recession.

Over the medium to longer term, any further ratings downgrades would push up borrowing costs for all agents: government, banks, companies and households. If corrective measures are not taken by government to reduce budget deficits and slow debt accumulation, it could result in a debt trap, a situation where a country has to borrow simply to service the interest on its debt. In this situation, debt service costs eat up more and more of government's revenue, leaving less for social and economic priorities, thereby undermining the achievement of the NDP objectives.
- Exchange rate fluctuations
SA has long lived with a volatile exchange rate. The central bank, commercial banks and companies have measures in place to counter the disruptions caused by extreme currency volatility. However, the risk remains real. The most worrying impact would be rand capitulation, which tends to result in rising inflation and higher interest rates, hurting confidence, containing credit demand, stalling capital expenditure and harming economic growth in the process. Under the current circumstances, the two most likely triggers of renewed rand weakness will be a move to universal junk status and/or a change in global investor's risk appetites for emerging market assets from the current 'risk-on' to 'risk-off'.
- Commodity price volatility
As a commodity producing and exporting country, SA remains vulnerable to changes in the global commodity price cycle. Commodity prices turned the corner in 2016 after a prolonged slump. Much of this recovery was driven by the global economic upswing, and particularly a relatively robust China, the world largest consumer of commodities. There are early signs that China's growth is slowing as the authorities have tightened up financial regulations and are starting to withdraw its fiscal stimulus. If China relapses in 2018, the recovery in commodity prices will probably come to an end, placing renewed pressure on SA's production and exports, hurting growth in the process.
- Global economic slowdown:
SA is a small and open economy. If the global economy slows, SA's economy follows. Fortunately, the world economy looks relatively healthy at the moment. There are downside risks though, including:
 - a. If the move to normalise monetary policy in the US and other advanced countries is overdone, it could derail global growth.
 - b. If China's stumbles, potentially hit by unexpected defaults resulting from its total debt burden, which is approaching 300% of GDP.
 - c. BREXIT could also slow growth in the UK and potentially the EU, but it is unlikely to derail the entire world economy.
 - d. Geopolitical risks are significant and growing. The escalating tensions between the US and North Korea pose a significant threat.

Q. Give three primary causes of this risk.

On the domestic front, most of these risks have come about as a result of:

- Poor political leadership
- Weak governance in the broader public sector
- Rising corruption
- Worsening government finances

On the global front, the key causes could be:

- Escalating global tensions and conflicts
- Increased protectionism among advanced countries
- High debt burdens in China and other emerging economies

Q. What are the consequences if this risk materialises?

The consequences would be rand weakness, higher inflation, rising interest rates, weak economic growth and higher unemployment.

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Energy, Water and Utilities
- Insurance and Reinsurance
- Manufacturing
- Mining and Quarrying
- Wholesale and Retail

Q. What are the barriers that prevent us from solving this risk?

- Poor political leadership
- Corruption
- SA cannot solve the turn in the global commodity cycle or slower global growth

Q. What is the effective risk response to treating the risk on a National level?

- Political solution to establish better leadership
- Tackle corruption at SOEs and within government. Hold people accountable for their actions and recover as much of the lost billions as possible
- Restore fiscal prudence
- Maintain sound monetary policies
- Improve economic policy and legislative environment

Q. What is the effective risk response to treating the risk on an Industry level?

- Understand and quantify the risk. Run scenarios and stress tests
- Make adequate provisions to hedge downside where possible: Capital adequacy & liquidity coverage
- Control costs across the board

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

None

CAPITAL AVAILABILITY/CREDIT RISK

NICKY WEIMAR

Senior Economist - Nedbank

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Capital availability does not present a serious risk to the NDP. Commercial banks will happily fund viable projects related to the NDP, provided there is transparency, good governance and a sound rationale for the project.

Credit risk is more of a problem. Given the weak state of the economy:

- Company earnings are increasingly under pressure, which increases the risk of default
- High levels of unemployment, slower income growth and still relatively high levels of indebtedness continue to pose the risk of rising bad debts
- The weak state of government finances, characterised by budget deficits exceeding 3% of GDP and a gross debt burden rising above 50% of GDP, has resulted in a serious of sovereign risk rating downgrades, which reflect the rising risk of default. Two major ratings agencies now consider SA as sub-investment grade on both local and foreign currency sovereign debt

Q. Give three primary causes of this risk.

- Weak economic growth, limited fixed investment and job creation
- High household debt burdens, the result of looser credit standards and rapid growth during the previous business cycle
- Poor political leadership and poor fiscal policy choices

Q. What are the consequences if this risk materialises?

Higher credit risk tends to reduce access to credit and increase the cost of credit to compensate for the risk. This generally results in slower credit growth, undermining new business ventures and limiting expansionary investment.

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Energy, Water and Utilities
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Engineering and Construction
- Mining and Quarrying
- Wholesale and Retail

Q. What are the barriers that prevent us from solving this risk?

- There is no one single barrier as relatively high levels of credit risk relates to a complex and interrelated factors have resulted in weak growth, high unemployment, high household and government debt burdens
- Faster growth and employment is needed to overcome this underlying problem

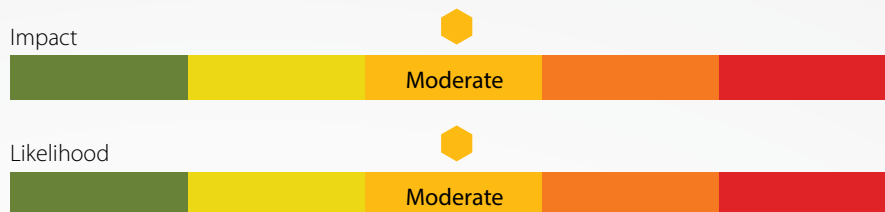
Q. What is the effective risk response to treating the risk on a National level?

- Improve fiscal management
- Build confidence and adopt growth-friendly economic policies
- Remove political and policy uncertain
- Make labour attractive to business and adopt other measures that will encourage employment growth

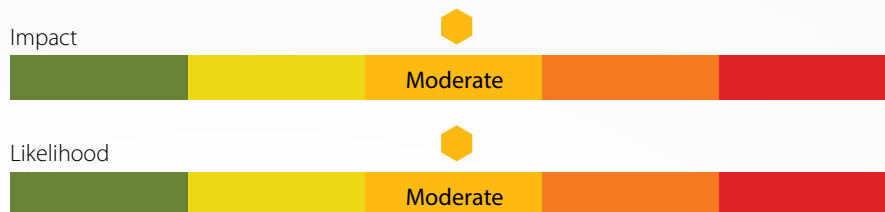
Q. What is the effective risk response to treating the risk on an Industry level?

- Financial education
- Proper credit risk procedures

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

None

O G I W I L L I A M S

Senior Research Analyst In On Africa (IOA)

Ogi Williams is a senior research analyst at IOA and handles various projects that the company is involved with on a day-to-day basis. His work has covered the majority of the continent and has touched on various facets of market research in sectors such as energy, financial services, banking, automotive, critical communications, terrorism and waste management. He has been published through a number of platforms including IOA, ChinAfrica magazine, International Policy Digest, Polity.org, Atlantic Community and Adams & Adams, and in journals such as ERAS and Taylor & Francis' Defence and Security Analysis. Ogi has also conducted media appearances on CNBC, Classic FM and SAfm, and provided commentary and insights on various industries and IOA initiatives. Ogi holds an MPhil in International Relations and a BA in Psychology from Monash South Africa.

Risks commented on:

- Failure of, and/or inadequate critical infrastructure



FAILURE OF, AND/OR INADEQUATE CRITICAL INFRASTRUCTURE

OGI WILLIAMS

Senior Research Analyst - In On Africa (IOA)

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

One area of the country's infrastructure that is generally overlooked, but given recent events is likely to take greater centre stage going forward, is disaster management infrastructure. The severe storms that battered South Africa over the month of October 2017 highlighted how ill-prepared the country is to take on big weather events. The increasing severity of storms and natural disasters globally will mean that South Africa will need to be better equipped to not only 'weather' the storm, but also have in place mechanisms for periods of opposite, but equally dangerous events, such as drought.

The situation in the Western Cape province, and the events in Gauteng and Kwazulu-Natal, are clear indicators that the country does not have sufficient infrastructure to tackle the rising impacts of global warming. Going forward, more will need to be done in this regard including more effective weather warning systems, better safety precaution mechanisms being put in place, and taking a long-term view on water management and the effective use of this resource.

Overall, South Africa's lacking ability to effectively manage disasters is a problem that will have a knock-on effect on numerous other key areas of the economy including; energy, transportation, water, education, healthcare, communications and manufacturing to name a few. Though other infrastructure issues still persist – like those within the state power utility - they are more marginal than the impact that severe weather patterns will have across the country.

Q. Give three primary causes of this risk.

- Lack of investment in disaster management systems
- Poor forward planning regarding disaster management – such as ways to solve the water crisis in the Western Cape
- Inadequate preparedness for severe storms across all sectors of the economy

Q. What are the consequences if this risk materialises?

- Rising pressure on government to provide solutions to previously untackled problems e.g. sufficient supply of water
- Rising public debt given little to no available funding for disaster management
- Rising food, electricity, and other prices
- Rising cost of insurance given unpredictability in weather patterns

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

- Insufficient funding for yet another area of the country that requires immediate attention
- Lacking innovation in terms of water management specifically
- Not taking the problem of global warming seriously enough at the government level, given more pressing issues such as poverty and unemployment

Q. What is the effective risk response to treating the risk on a National level?

At a national level, more needs to be done to prepare both the industrial as well as the residential sector, in tackling the challenges of climate change. There are a number of responses that could prove valuable going forward including:

- Investment in new technologies for weather warning systems
- Developing a strong base of disaster management systems
- Working with key institutions in developing effective solutions
- Strengthening global partnerships and learning from other countries that are more experienced and better equipped in disaster management; e.g. United States
- Playing an active role in reducing GHG emissions to combat climate change in the long-term. This will involve increasing the pace of introducing more efficient and less polluting power generation systems

Q. What is the effective risk response to treating the risk on an Industry level?

The view from industry should mirror the national outlook. Industry will need to take similar steps in ensuring that it too is prepared to take on period or drought or severe storms. These could include, but are not limited to:

- Investment in internal disaster management systems
- Innovation in better using critical resources such as water
- Given lack of government preparedness, industry should also look to play an active role in protecting communities to key operations as the impact on the community could be equally, if not more severe, than on the industry itself

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Perhaps one addition that could be tied in to the very last risk – skills shortage – is one of strengthening the basic as well as tertiary education sector. The long chain reaction of a weak education system is evident in our inability to supply a high caliber of trained and qualified graduates. This problem permeates right through the entire education system and is unlikely to be resolved without greater privatisation within the education space. Though a portion of the country will not be able to afford this education, leaving the fate of the youth in the hands of public institutions will not be the best route forward.

HERMIEN ZAIMAN

Associate Professor and Manager
Centre for Applied Risk Management (UARM), North-West University

Associate Professor and Manager of the Centre for Applied Risk Management (UARM) in the Faculty of Economic and Management Sciences at the North-West University's Vaal Triangle Campus. Research focus: risk culture. Thirty plus years of experience in a number of sectors: academia and scientific research as a physicist; trading, investment and financial risk systems – software developer, risk project and programme manager, head of risk change, business architect and project risk consultant.

Risks commented on:

- Organisation's risk culture not successfully enabling the achievement of strategic and operational objectives



ORGANISATION'S RISK CULTURE NOT SUCCESSFULLY ENABLING THE ACHIEVEMENT OF STRATEGIC AND OPERATIONAL OBJECTIVES

HERMIEN ZAAIMAN

Associate Professor and Manager - Centre for Applied Risk Management (UARM), North-West University

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Achieving the NDP's objectives relies on a strong culture of accountability in South Africa as prioritised in the plan. Unfortunately, current news reports indicate serious accountability issues in the South African public and private sectors. Risk management culture forms an integral part of an organisation's culture. Risk culture could therefore be a vehicle for strengthening and interrogating the accountability of role players for the impact of their decisions on reaching the NDP objectives. At UARM, we take a decision-focused view of risk culture. Accountability for how well risk was taken into account when leaders take decisions that should enable their objectives is one of the organisational risk culture indicators in our model. Accountability is also one of the Financial Stability Board (FSB)'s main indicators of a sound risk culture. To allow for optimal inclusion of risk during decision-making, public and private sector leaders should ask themselves how well they have actively considered the potential impact of the decision on their accountability for achieving the organisation's objectives as related to the NDP's aims. The NDP citizen stakeholders must also hold decision-makers accountable by asking these leaders to show proof of how they included consideration of risk during decisions that impact the future of our country.

Q. Give three primary causes of this risk.

- Unclear definition of risk culture
- Organisations unaware of what their perceived risk cultures are
- Organisational management teams using the term risk culture as a buzzword rather than taking the concept seriously as a management tool

Q. What are the consequences if this risk materialises?

- Failure of the NDP with corresponding negative impact on the long-term futures of organisations
- Financial and resource investment would have been wasted

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Petrochemicals, Oil and Gas
- Manufacturing
- Engineering and Construction
- Mining and Quarrying
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail
- Agriculture, Forestry and Fishing

Q. What are the barriers that prevent us from solving this risk?

Risk culture as a concept not understood and not taken seriously

Q. What is the effective risk response to treating the risk on a National level?

The risk of public sector risk culture negatively impacting the achievement of the objectives of the NDP should be mitigated by evidence that the leaders of our national government take their accountability to the people of South Africa seriously.

Q. What is the effective risk response to treating the risk on an Industry level?

The risk of organisational risk culture negatively impacting the achievement of the objectives of the NDP should be mitigated by evidence that the board members and senior management teams of organisations across sectors take their accountability to the people of South Africa seriously.

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

I would highlight inadequately enforced leadership accountability as a cause of governance failure.

STANDARD BANK

Standard Bank Group is the largest African banking group by assets offering a full range of banking and related financial services. "Africa is our home, we drive her growth" Our vision is to be the leading financial services organisation in, for and across Africa, delivering exceptional client experiences and superior value. This sets the primary goals and standard of excellence we intend to achieve in the medium term. With a heritage of over 150 years, we have an on-the-ground presence in 20 countries in sub Saharan Africa; fit-for-purpose representation outside Africa; and a strategic partnership with the Industrial and Commercial Bank of China (ICBC).

Risks commented on:

- Lack of innovation including resistance to change



Standard Bank

LACK OF INNOVATION INCLUDING RESISTANCE TO CHANGE

STANDARD BANK

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

The lack of innovation is not the problem but rather the pace of acceptance of change. The current challenges noted in the NDP rely on customer needs based thinking. The resistance to this thinking results in slowing down or people spending time trying to by pass the system, rather than seamlessly working to eradicate it.

Q. Give three primary causes of this risk.

- Uncertainty and lack of understanding
- Fear of failure
- Seed capital

Q. What are the consequences if this risk materialises?

- Unemployment
- Expensive "old" services provided, where more affordable solutions exist
- Global cannibalisation of solutions that should be developed locally

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Professional Services
- Energy, Water and Utilities
- Communications and Technology
- Insurance and Reinsurance
- Transport and Logistics
- Manufacturing
- Hospitality and Tourism
- Education
- Healthcare
- Wholesale and Retail

Q. What are the barriers that prevent us from solving this risk?

- Low volume of STEM students coming out of high school
- Lack of understanding and exposure
- Seed funding
- Support by large corporations in adoption of local solutions

Q. What is the effective risk response to treating the risk on a National level?

Education. It is important to review the education structure based on the skills required for the country. Secondly, it is important to focus on the building an artisan culture in the country.

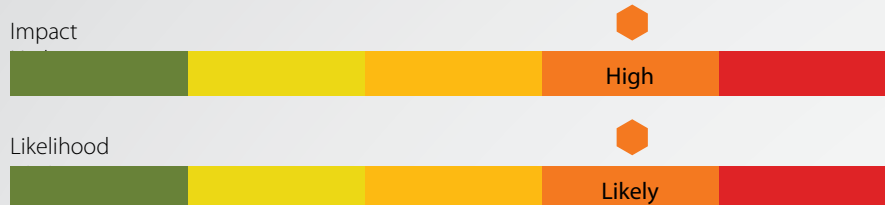
Q. What is the effective risk response to treating the risk on an Industry level?

Adopting schools and universities where the industry is strongest and funding the production world class students to support the specific industry

Q. Rate the Impact and Likelihood of the risk in the next 18 months.



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

Failure of the insurance model (there will not be enough people contributing to the pool).

THE COMPLIANCE INSTITUTE

The Compliance Institute SA is the recognised, independent professional body for the compliance profession. The Compliance Institute SA has developed a Generally Accepted Compliance Practice © (GACP) framework which consists of principles, standards and guidelines that act as a benchmark for compliance best practice that organisations and their Compliance Officers should apply. It sets, maintains and promotes best practice standards for the compliance profession and develops the compliance through and accreditation for its members. The Compliance Institute SA is a South African Qualifications Authority (SAQA) recognised professional body and has two registered professional designations Compliance Practitioner (CPrac) and Compliance Professional (CProf).

Risks commented on:

- Government policy, legislative and regulatory changes and uncertainty



GOVERNMENT POLICY, LEGISLATIVE AND REGULATORY CHANGES AND UNCERTAINTY

THE COMPLIANCE INSTITUTE

Q. What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?

Without policy certainty, the achievement of meeting the NDP objectives is at risk.

South Africa's tendency to prioritise meeting international standards across legislation and being an early adopter in several instances, despite being an emerging market economy, poses risk to meeting the objectives NDP.

The volume and pace of change affecting industry is significant and all happening at the same time, which increases operational impact and decreases business certainty. Changes in policy and law may detract resources and time negatively in the successful implementation of the NDP.

The NDP requires Government to engage with all sectors to understand how they are contributing to implementation, and particularly to identify any obstacles in fulfilling their role effectively.

These initiatives consume resources and effort, and could compromise other initiatives that are more important for the domestic economy.

Q. Give three primary causes of this risk.

- The state of the macro-economic and political environments
- Alignment with international legislation
- The volume and pace of change

Q. What are the consequences if this risk materialises?

- Increased negative operational impact on business and decreases business certainty
- Investor confidence will continue to reduce
- Our economy will deteriorate and the South African credit rating will remain in the junk status
- Export will reduce and there is a linkage between export earnings and job creation which is one of the key elements of the NDP

Q. Which industry will be most affected if this risk materialises?

- Government and Public Service
- Financial Services
- Insurance and Reinsurance
- Mining and Quarrying

Q. What are the barriers that prevent us from solving this risk?

- Low Levels of trust
- Investor confidence
- Lack of leadership

Q. What is the effective risk response to treating the risk on a National level?

- Strong leadership promote the vision of the Constitution. A united people and a more cohesive society are not only national objectives, they are also means to eradicating poverty and inequality
- Adopt appropriate response to global initiatives using a 'country first' mindset

Q. What is the effective risk response to treating the risk on an Industry level?

Adopt a 'country first' mindset and approach

- involving communities, youth, workers, the unemployed and business in partnership with each other, in collaboration with government
- developing the capabilities of individuals and of the country, and to create opportunities for all South Africans

Q. Rate the Impact and Likelihood of the risk in the next 18 months.

Impact



Likelihood



Q. Rate the Impact and Likelihood of the risk in the next 3 to 5 years.

Impact



Likelihood



Q. Given the 20 identified risks for both country and industry; are there any other risks that you believe that are more relevant and should be added to the current profile?

None

SECTION 4

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ANNEXURE A

Energy Industry Risk Report 2017/18

Introduction

Using primarily electricity, liquid fuels, coal, and biomass in our economy, South Africa is one of the most energy intensive countries in the world according to the International Energy Agency. This fact when coupled with security of supply issues such as limited available electricity importation potential and high levels of liquid fuel imports makes energy risk a critical consideration in the national risk landscape.

The energy industry also impacts on every other industry in the country and thus its risks are drivers of other national and industry level risks.

The South African National Energy Agency (SANEA), a member of the World Energy Council (WEC) has embarked on a process to unpack the energy risks facing South Africa at a country and industry level. The aim of unpacking our energy risks is to identify key focal points for action that will address the risk of unreliable, unaffordable energy supply for the country and ensure that the optimal mixes of technology and fuel supply are pursued.

Integrated analysis

It is critical when doing a Risk analysis to ensure that a holistic approach is taken that allows analysis of the complexity of the energy system. The expert group developed a systems diagram (Diagram 1: Energy Systems Diagram) showing how the top 20 risks inter-relate to each other, both positively and negatively.

At a high level, clusters or sub-systems of risks that impact on each other were identified. This analysis shows that the major industry risks are related to technology drivers which are changing the industry fundamentally as markets and consumer preferences and choices shift. Policy and regulation and governance issues at a national and industry level are also key, as they influence investor confidence and longer term financial sustainability and will impact on the implementation of the NDP. Socio-economic issues which influence demand and product needs are also important, especially given the need for economic growth, social upliftment and the need to treat the negative impact of rising energy prices.

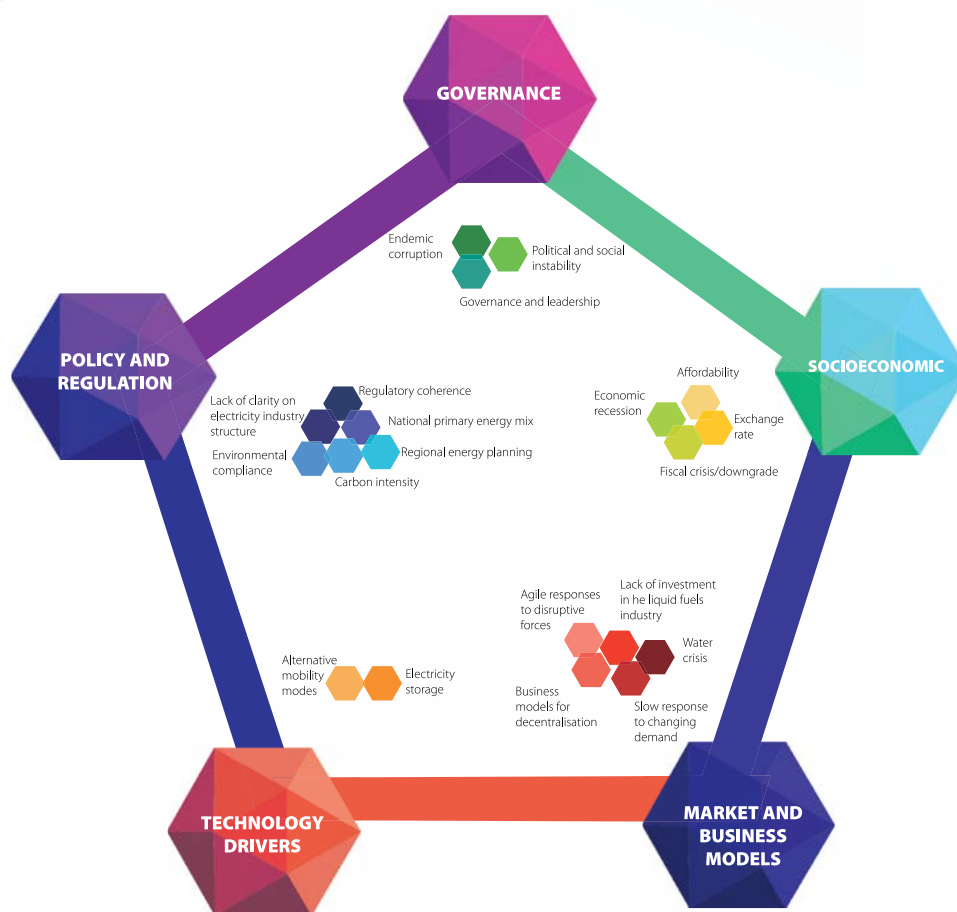


Diagram1: Energy Systems Diagram

To understand where to place effort in dealing effectively with the energy risks, an active passive analysis was also carried out. This aims to simplify the systems diagram above and highlight the major drivers, “active issues” (Diagram 2: Active / Passive Analysis) and outcomes, “passive issues” and those issues that act as pivots. All of these risks need to be treated, but by categorising them differently, it allows their relative importance, and the strategies to treat them, to be differentiated.

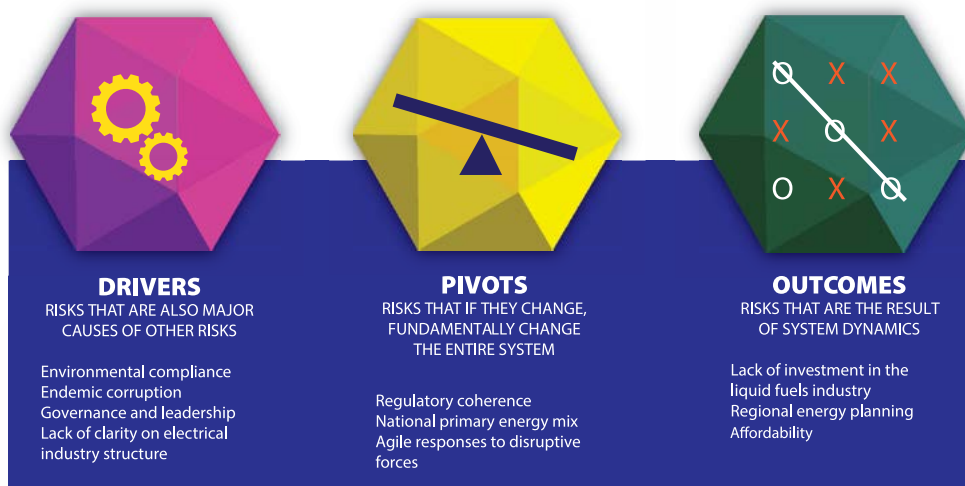


Diagram 2: Active/Passive Analysis

The analysis shows that the **major drivers** of the current energy system in South Africa are **environmental compliance** due to the impact on price and associated demand, **endemic corruption, governance and leadership and lack of clarity on the electricity industry structure** due to their impact on investor confidence and certainty. The **major outcomes** are shown to be **lack of investment in the liquid fuel industry, regional energy planning and affordability**.

The **pivots** are split into national issues and industry issues. The national issues relate to regulatory coherence and national primary energy mix. These two issues, if addressed, would enable better decision making by all players in the industry and would include the alignment between environmental, energy, fiscal and pricing policy. In addition, given the impact of the energy industry in South Africa, alignment with numerous other policies is also required such as education to ensure the right level of skills; science and technology to focus and align the national research and development effort; and fiscal policy to ensure the right level of funding and guarantees. This alignment will bring certainty around the longer-term energy mix for the country enabling both up and downstream investment and decision making for the most optimal integrated energy plan. One of the concerns raised by the experts is how the transition to a different energy mix is managed. For example, the coal sector is already being impacted by the shifts in the national (and international) energy mix towards lower carbon sources and resulting impacts on jobs, local businesses and suppliers. Transition plans should factor in these issues and manage them proactively. There are also opportunities in changing the energy mix to create new industries and supply chains, as well as for example, shift away from burning biomass to electricity. Integrated and coherent policy is required to ensure that the opportunities are fully explored and exploited.

There are two industry level pivots. The first of these relates to industry players being responsive to the many factors impacting on them and changing their business models to reflect the new markets and products as they emerge. The second pivot relates to new technologies shifting the landscape in the same manner that Photo-Voltaic (PV) and smart meters have already done in the electricity industry. E-mobility (electric vehicles) is of particular interest as it has the potential to fundamentally shift demand away from liquid fuels and change the way in which we generate, store and consume electricity. This particular risk has a wide-ranging impact as it will change not only the energy industry, but also manufacturing, transport and infrastructure industries as well as require new policy and regulatory approaches.

Top ranked energy risks in terms of impact and likelihood

The energy experts ranked the top 20 risks in terms of impact and likelihood and chose the top 5 risks at both a country and industry level.

Rank	Country		Industry	
	Impact	Likelihood	Impact	Likelihood
1	Water crisis	Water crisis	Water crisis	Water crisis
2	Governance and leadership	Endemic corruption	Fiscal crisis/downgrade	Carbon intensity
3	Endemic corruption	Fiscal crisis and downgrade	Lack of investment in liquid fuels	Economic recession
4	Fiscal crisis/downgrade	Exchange rate fluctuations	Environmental compliance	Slow response to changing demand
5	Political and social instability	Governance and leadership	Business models for de-centralisation	Business models for de-centralisation

Table 1: Top 5 energy related risks at a country and industry level

The highest ranked energy risk in the top 5 for impact and likelihood and at both a country and industry level are that of a water crisis, with a medium risk readiness at an industry level and low risk readiness at a national level.

The fiscal crisis features in both the country and industry top 5 in terms of impact but the industry perspective is that the economic recession is more significant than the exchange rate fluctuations. Governance and leadership together with endemic corruption and political and social instability are highlighted at the country level. At the industry level more sector specific risks such as environmental compliance, carbon intensity and business model and investment related risks are deemed to be more impactful and likely.

Priority energy risks for 2018

The experts debated which should in their view, be highlighted as being priority risks for addressing in 2018. The priority energy risks for 2018 were narrowed down to 8 risks. For each of these risks, the SANEA subject matter experts developed a deep dive analysis.

Rank	Country		Industry	
	Impact	Likelihood	Impact	Likelihood
1	Water crisis	Water crisis	Water crisis	Water crisis
2	Governance and leadership	Endemic corruption	Fiscal crisis/downgrade	Carbon intensity
3	Endemic corruption	Fiscal crisis and downgrade	Lack of investment in liquid fuels	Economic recession
4	Fiscal crisis/downgrade	Exchange rate fluctuations	Environmental compliance	Slow response to changing demand
5	Political and social instability	Governance and leadership	Business models for de-centralisation	Business models for de-centralisation

Table 2: Priority energy risks for 2018

The risk of a water crisis is deemed to be particularly significant, as it will severely impact the attainment of the NDP, given that it cuts across all sectors of society and business. The energy industry is a relatively large water user and, so it also impacts the ability to supply energy to customers. It is also driven by forces outside of the industry's control, such as droughts and relies on consumers being more efficient in their use of water as one of the major risk responses. It will thus require responses at both a national and industry level and will remain a priority risk for some time into the future.

The fiscal crisis/downgrade also scores high in both the country and industry perspectives with a low risk readiness at an industry level. The fiscal crisis and potential downgrade is being driven by a number of other risks, including the economic recession. If this risk occurs it will severely impact the achievement of the NDP and the energy sector objectives, particularly given the level of indebtedness and the potential for reduction in revenue. At the country level, a potential downgrade of the sovereign rating will have a knock-on effect across the economy. Effective risk responses to this risk will thus require long term policy certainty and coherence from government and efficient energy players that have optimised their cost structures. This risk will be influenced by technological trends that support growth areas, as well as global economic trends and will continue to be a priority risk for the next decade.

At the country level, endemic corruption, governance and political and social instability are areas where the experts feel there is low risk readiness and a high impact as well as likelihood of occurrence. These risks will impact across the entire energy value chain, as well as the ability of the country to meet the objectives of the NDP. If these risks worsen, they will further exacerbate investor confidence and thus economic growth. Effective risk responses will include a higher level of transparency and accountability as well as accelerated service delivery and protection of the poor.


At an industry level, business models for decentralisation is a priority risk and is driven by technological and market drivers. Effective responses to this risk are coordinated planning, enabling regulatory frameworks and market rules and an integrated approach to all market players. The likelihood of this risk materialising increases over time as global trends continue to drive the sector.

The energy industry has traditionally been long term, capital intensive, with long lead times for new capacity. Thus, the risk of slow responses to changing demand is critical. Driven by some of the technology drivers as well as unpredictable economic growth, the risk of over or under supply is increasing and will continue to keep this risk a priority for some time. Undersupply impacts the whole country and will significantly impact the achievement of the NDP objectives whereas over-supply can impact the financial sustainability of energy industry players. Effective risk responses include proactive planning, an understanding of the interconnectedness of the industry and shifting to technologies where smaller, incremental decisions can be taken which reduce risk and allow more agile responses at an industry and country level. This risk has strong global drivers which are fundamentally shifting the energy sector such as e-mobility, energy storage and efficiency improvements.

A key concern in the liquid fuels industry is the risk of a lack of investment in liquid fuels infrastructure. This risk, like the one relating to slow responses, will impact at country level and across all sectors. In particular, the transportation sector will be significantly impacted. Effective risk responses are a clear and consistent policy framework that is long term in nature and industry players developing effective strategies that optimise their investments and reduce risks. Global trends will impact this risk in the longer term, such as alternate transportation modes and increasing pressure for improved environmental performance. This is a long-term risk and is expected to increase in impact and likelihood over the next 10 years.

Emerging, cross-cutting and longer-term risks





Two risks which were not included in the 2018 top 8 energy risks are those associated with environmental compliance and carbon intensity. These risks are flagged as key risks to monitor across all energy forms in the industry, given the large impact that they would have on energy prices and associated technology choices going forward. It is however the consensus of the group that they will not have as much of an impact during 2018 as the other risks outlined above, given their longer-term nature.

Risks that cut across the entire energy industry, or that feature in a number of the SME reports as common themes are highlighted as particularly significant. These include the trade-off between regulated energy prices and the resulting impact on the economy versus the need for an adequate return on investment for all players on the market. It is also evident that energy businesses are having to fundamentally relook their business models due to disruptive innovation and decentralisation, as well as their investment choices, given the uncertainty in long term demand. A lack of leadership and poor governance are key drivers of and barriers to the implementation of other risk responses, across all facets of the industry. The level of indebtedness of the industry, mainly in the electricity industry, but also to a lesser extent in other energy industries, and the associated risk to the sovereign, is also highlighted as being a cross-cutting issue to note.

There are also a number of longer term risks identified that are technological in nature and the two that the group highlighted as being significant, are related to e-mobility and storage. These risks also need to be tracked and proactive strategies for their inclusion in the energy landscape as specific opportunities, developed at both a country and industry level.

Conclusions and way forward

This is the first energy risk report developed by SANEA and it has highlighted key risks at a country and industry level. The overall risk landscape is one of high change and uncertainty. Given the level of impact of the sector on the country, it is highly sensitive to country risk which impacts primarily on investor confidence, but which can be shifted through policy certainty. At an industry level, technological and consumer drivers are resulting in the need to change related business models and this is fundamentally shifting the market. The risks identified in this report will be tracked as they play out over time and trends for the industry in South Africa developed.





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ANNEXURE B

Full risk descriptions

Risk Descriptions for Top 20 Country and Industry Risks


Government policy, legislative and regulatory changes and uncertainty	Significant or unforeseen global or local regulatory/legislative changes, resulting in a tremendous cost to an organisation, creating uncertainty in hiring and restricting expansion, possibly also affecting investor sentiment
Failure of governance (public and private)	Inability to govern a nation, caused by weak rule of law, corruption, illicit trade, organised crime, impunity or political deadlock
Unmanageable fraud and corruption	Increasing public and private sector corruption, leading to reduced investor confidence, mistrust, protests and credit rating downgrades
Lack of leadership	Increasingly poor leadership, leading to failure to implement policy, greater unemployment, social instability and reduced economic growth
Structurally high unemployment/underemployment	Sustained high level of unemployment/underutilization of the productive capacity of the employed population, leading to the inability for the economy to attain high levels of employment
Profound political instability	Major movements disrupting political stability, negatively impacting populations and economic activity
Macro-economic developments - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility, BREXIT	Volatility in global financial markets and currencies may create significant economic challenges and may restrict growth opportunities at national and organisational level - exchange rate volatility, credit rating fluctuations, global economic slowdown, commodity price volatility etc.
Cyber-attacks and cyber-attack non-disclosures	Large-scale cyberattacks or malware, leading to large economic damages, geopolitical tensions or widespread loss of trust in the Internet
Micro economic developments: Inflation, deflation, austerity measures, national economic slowdown	Volatility in domestic financial markets and currency may create significant economic challenges and may restrict growth opportunities at sector and organisational level - inflation, deflation, austerity measures, national economic slowdown etc.
Labour strike action	Increasingly prolonged and intense strike action, leading to violence, destruction, economic repercussions, reputational damage and man-days lost
Skills shortage including the ability to attract and retain top talent	Inadequate quality and affordable skills, leading to reduced competitiveness, increased unemployment, social unrest and the need to import skills
Profound social instability	Major social movements or protests disrupting social stability, negatively impacting populations and economic activity
Failure of State, a State crisis or a State collapse	State collapse of geopolitical importance due to internal violence, regional or global instability, military coup, civil conflict, failed states.
Inadequate and/or sub-standard education and skills development	Inadequate provision of or access to education and skills development initiatives, leading to a country's skills requirements not being met
Significant escalation in organised crime and illicit trade	Large-scale activities outside the legal framework (tax evasion, human trafficking, organised crime etc.) undermining social interactions, regional or international collaboration and global growth
Data fraud and data theft (including identify theft and theft of intellectual property)	Wrongful exploitation of private or official data that takes place on an unprecedented scale, leading to reputational backlash, security concerns and lawsuits
Growing income disparity	Rising inequalities between and within nations, leading to migration, protests, disillusionment and revolutions
Increase in the severity and frequency of extreme weather events and natural catastrophes (droughts, floods, fires, heatwaves, storms, etc.)	Major property, infrastructure and/or environmental damage as well as loss of life caused by extreme weather events
Failure of, and/or inadequate critical infrastructure	Failure to adequately invest in, upgrade and secure infrastructure networks, leading to pressure or a breakdown with system-wide implications
Loss of reputation and severe brand damage	Inability to manage the risk around brand and reputation caused by actions of the company itself; indirectly due to the actions of an employee or employees; or tangentially through other peripheral parties, such as joint venture partners or suppliers.
Lack of innovation including resistance to change	Resistance to innovate/change may restrict companies from making the necessary adjustments to the business model and core operations
Organisation's risk culture not successfully enabling the achievement of strategic and operational objectives	Organisation's risk culture may not sufficiently encourage the timely identification and escalation of risks that have the potential to significantly affect the core operations and achievement of strategic objectives
Disruptive technologies	Intended or unintended consequences of technological advances such as interconnectivity developments, Nano technology, artificial intelligence, geo-engineering and synthetic biology causing human environmental and economic damage
Breakdown of critical information infrastructure & networks	The "world of internet dependency" increases vulnerability to outage of critical information infrastructure and networks (internet, satellites, telecoms, power distribution etc.), leading to widespread disruption.



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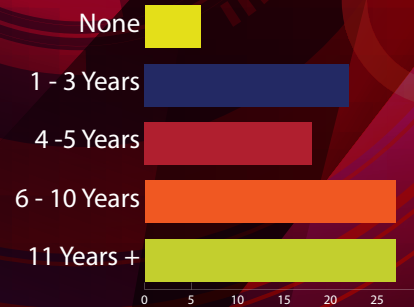
GENDER



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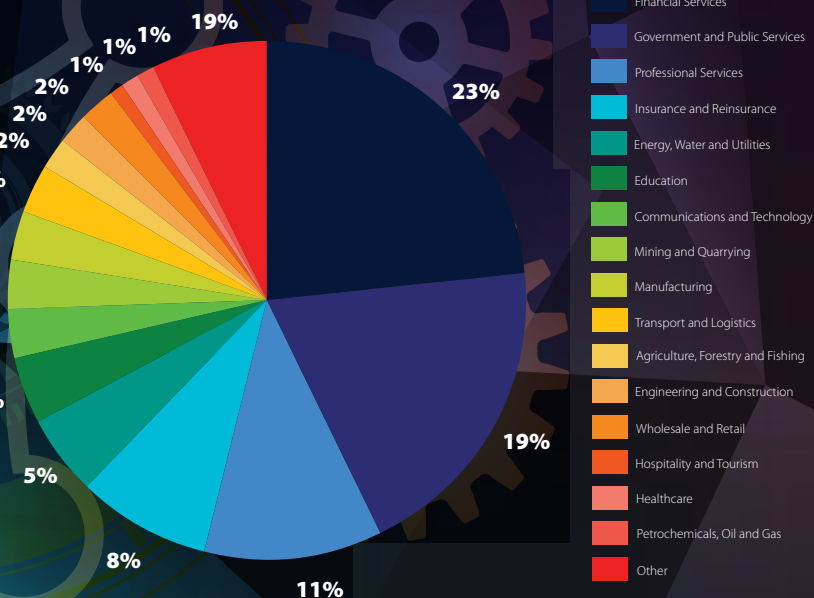
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