

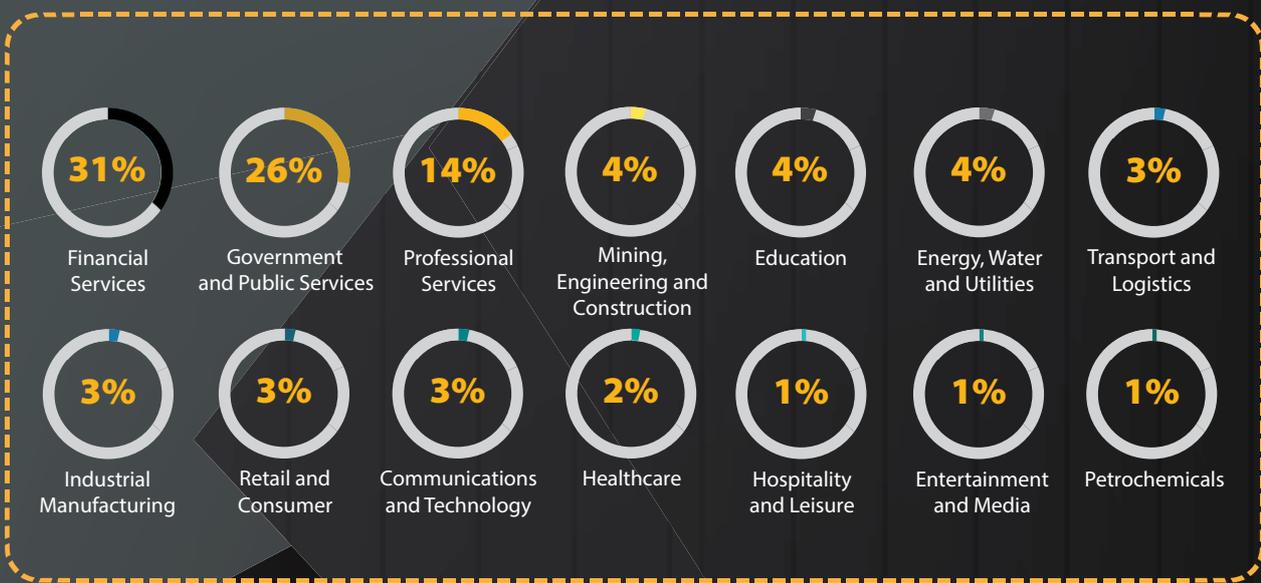


IRMSA Risk Report South Africa Risks **2017**

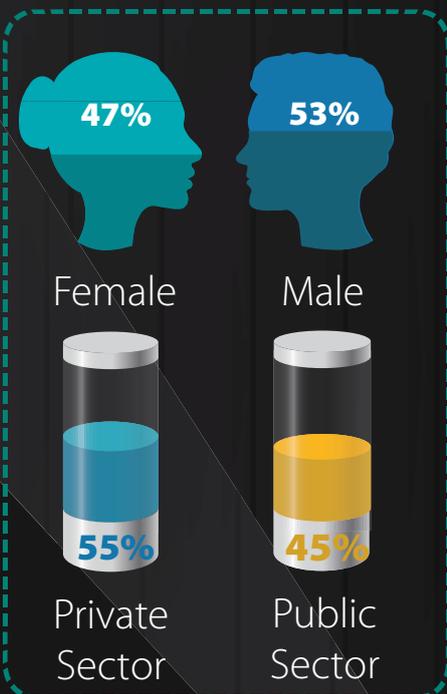
Third Edition



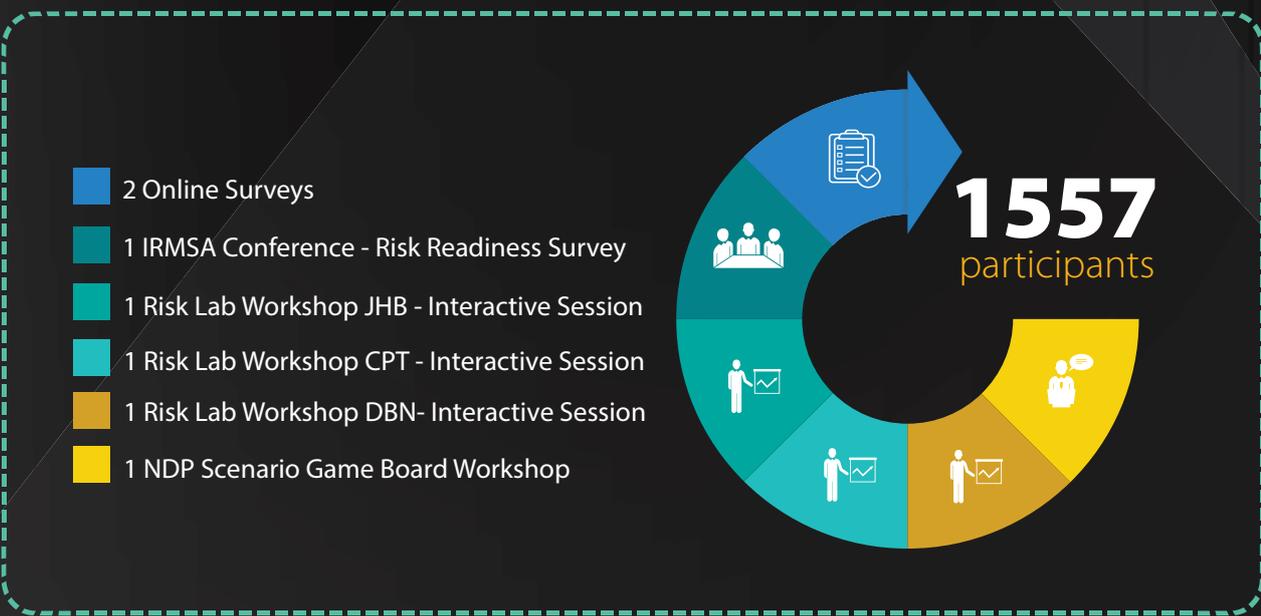
Industry participation



Who participated?



How we collected data



▶ Top 10 South African **Country** Level Risks



▶ Top 10 South African **Industry** Level Risks



▶ What does the IRMSA Risk Intelligence Committee do?



▶ Next milestones for this report

Financial Services

1. Fiscal Crisis/Credit Rating Downgrades
2. Economic Slowdown or Recession
3. Escalation in Large-Scale Cyber Attacks

Government and Public Services

1. Water Crises
2. Increasing Corruption
3. Massive Incident of Data Fraud/Theft

Consulting and Professional Services

1. Economic Slowdown or Recession
2. Skills Shortage
3. Increasing Corruption

Mining, Engineering and Construction

1. Water Crises
2. Economic Slowdown or Recession
3. Skills Shortage

Education

1. Increasing Strike Action
2. Skills Shortage
3. Failure/Shortfall of Critical Infrastructure

▶ Top 3 Industry Risks



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Gillian le Cordeur

Chief Executive Officer

The Institute of Risk Management South Africa



It is a great pleasure for the Institute of Risk Management South Africa (IRMSA) to release the third edition of the IRMSA Risk Report: South Africa Risks. After the decision to release a second report, following the successful first edition in 2015, we witnessed how the report released last year was read by more professionals and used by even more organisations in both their strategic and operational initiatives. What has been interesting is seeing how the report is being utilised not only in South Africa but by professionals globally and has been reviewed by the various risk management associations around the world who have highly regarded the report as world class.

IRMSA's theme in 2016 for all events and projects was FutureFit Risk Management. Most of our conversations were about the evolution of risk management and the paths our risk professionals are taking, and how these paths keep changing and adapting. You will see as you work through this report that it has also evolved since the 2016 edition. We constantly listen to the feedback from the business fraternity and endeavour to respond to the needs of professionals as we continue to work in an ever-changing environment.

During the year, we frequently spoke about how ERM, which is the well-known acronym for 'Enterprise Risk Management', should actually stand for 'Everybody is a Risk Manager'. Although this is said tongue in cheek, it is the reality of how all organisations should be evolving. It is not enough to only have strong risk practitioners within an organisation.

Each person in an organisation should be part of the full risk management process and really understand the interconnectedness of risks and how each individual plays a role. The report clearly shows how risks cannot be viewed in isolation and therefore is indicative of how risk professionals should not work in silos but be allowed to influence and assist in all areas of the business. If risk management is properly embedded within an organisation and a strong risk management culture adapted, we will see more organisations being able to maintain stability during times of difficulty and take the 'opportunities' that come their way in order to prosper.

Once again, the support and participation we received this year, from the business community, has been excellent. I am pleased that we have had even more participation from the business community and IRMSA Members. We have had various interventions, with strategists, futurists and other subject matter experts giving their opinions and insight. Throughout the year, meetings with experts from all industries and disciplines are held, and brainstorming sessions are continuously conducted. What is exciting about this report is that it will continue to evolve and be moulded by the business community and adapt as the landscape continues to change and throw surprises at us.

Gratitude goes to the IRMSA Membership for their invaluable input as much of the content of this report has been driven through member participation. This project would not have been possible without the contributions from the IRMSA Executive Committee and our Subject Matter Experts. My appreciation goes to the Risk Intelligence Committee, under the leadership of IRMSA's Chief Risk Advisor, Michael Ferendinos, who leads the South Africa Risk Report project and is also the author of much of what you will read.

Our intention is for this report to be used widely by risk managers and the business community in order for organisations to use it to influence and assist in decision making processes for 2017. Next year, should you wish to participate more in the report, then join the ever-growing team of participants as everybody is indeed a risk manager.

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Preface



Michael Ferendinos

Chairperson

IRMSA Risk Intelligence Committee



The third edition of the IRMSA South Africa Risks Report is presented at a time of profound change. The populist anti-globalization wave that produced majority votes for Donald Trump in the United States and for Brexit in the United Kingdom is the consequence of the “anti-establishment” flag that has been raising its head around the world. This flag has been discussed by Clem Sunter and Dr Chantell Ilbury at the IRMSA Risk Report launches over the past two years and represents the growing lack of faith in professional politicians in America, Britain, Europe, Australia and many other countries. Trends and events of this nature remind us that South Africa and organisations operating within its borders are exposed to a myriad of external threats and opportunities, beyond those that are solely internally driven.

South Africa’s risk landscape has been equally, or perhaps even more, volatile than the global environment during 2016. Recent uncertainties that have compromised the country’s international reputation, some of which ended up having a positive outcome, ranged from another Finance Minister debacle, the #FeesMustFall student protests and the fight against corruption and state capture, to the worst drought to hit the country in decades, and narrowly averting a credit rating downgrade. The horizon in 2017 and beyond remains worrisome when considering that most of the risks in the country’s risk profile do not only have a lengthy anticipated duration but are also expected to become even more of a concern in the next decade.

In order to evaluate the country’s risk landscape more accurately, the South Africa Risks Report 2017, Third Edition, undertook the journey toward quarterly risk profile monitoring, ensuring that the report and the monitoring platform that will be created, capture the country’s dynamic risk profile within shorter time periods. Both the 2015 and 2016 reports 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. I would like to thank Dr Dana Gampel for addressing this in the causal loop and risk interconnectedness section of the report. I would also like to thank Dr Chantell Ilbury for her contribution in the report pertaining to NDP implementation scenarios and the flags to watch during 2017.

I would encourage the reader to take the time to learn from these experts and to apply these learnings in your respective organisations. Every risk manager knows that the devil lies in the detail.

Insight provided by strategy and scenario planning experts will become increasingly important to the risk fraternity going forward as risk management professionals are required to incorporate opportunity management in their repertoire of skills.

This report captures the input from risk management professionals in both the public and private sectors as well as from Subject Matter Experts who provide exceptional insight as they unpack each of the risks. I would encourage the reader to take the time to learn from these experts and to apply these learnings in your respective organisations. Every risk manager knows that the devil lies in the detail. On behalf of the IRMSA Risk Intelligence Committee, I would finally like to thank the 1557 survey and workshop participants, without whose expert contributions this report would not have been possible. I trust that the report will encourage national and organisational resilience by sparking risk-related dialogue among public and private sector entities. It is also hoped that the report will bring the NDP objectives to life, through honestly communicating current challenges in order to create beneficial solutions for all South Africans.

Foreword





Chantell Ilbury

Celebrated Futurist and Scenario Planner
Mind of a Fox

If there was a brutal lesson taught to risk managers and strategists in 2016 it was this: exit polls don't work. No stream of data or information you have on a spreadsheet in front of you can capture the vagaries of human behaviour. This is why my partner Clem Sunter and I remain intrigued that those entrusted with a company's strategy normally wield the title CFO or COO, arguably those in the team less equipped for the unpredictability of what the future has in store for them.

During 2016 many of the organisations whose strategic conversations we facilitated, asked us about our predictions for Brexit and the US Presidential elections, and our answers were always the same: we can't predict the outcome, but we have to envisage a future with each outcome. That is the power of scenarios - working through possible futures and strategising accordingly, actively balancing those futures by weighing them against the flags heralding developments that could tip the scales in the favour of a specific scenario. It requires the strategy be fluid and adaptive, not cast as a cemented path.

This is why using scenarios in strategy goes hand-in-hand with risk management - they demand we consider a possible event, evaluate the outcomes, weigh-up the costs, and estimate the likelihood and probability. It is for this reason that the NDP implementation scenarios form such an important component of the IRMSA South Africa Risks Report 2017.

In my latest book, *A Fox's Tale - Insights from one of Africa's most creative strategic thinkers*, I explain how Clem and I are able to help companies do this, where we get our research that allows us to paint possible futures and provide some insight into how things may play out:

"The suggestion is that we must read a lot or watch a lot of news on TV. Whereas it's true that we both read a great deal, TV is unfortunately not a reliable source of news. I say 'unfortunately' because it would be a lot easier if we could sit back, relax, let the information flow over towards us and then just analyse it.

No, the reality is that Clem and I have to do things the hard way. There's a snappy academic term for it: 'grounded theory' - a form of research where theories are generated through continued interaction in the field. We work directly with the executive teams of companies, conglomerates and organisations with multiple disciplines, across all sectors of business, facilitating their strategic conversations through the development of scenarios - possible futures - for each specific organisation. We have also worked with different countries. Through the various processes that we designed we help the teams step back, reexamine their operations and the game they are in, and then guide them to identify the scenarios - and the flags that would signal changes in the game - through which they can configure the most adaptive strategy. We are not consultants, we are facilitators, so we spend most of our time listening and encouraging those present to talk openly. We believe the client sits with all the knowledge, albeit limited to their scope of operations, and our job is to guide them."

Together Clem and I have covered nearly every industry and mainstream sector of business, and thus in the process developed a vast - I would venture to say enviable - resource bank of knowledge of business from which to draw. And draw we must, because therein, we believe, lies part of our unique offering: connecting dots. Whereas most consultants can draw on their knowledge of a particular industry or style of management practice, we have to embrace diversity; through this we get to see a bigger, more connected picture. We know that there are similarities in different sectors, and, importantly, connections between them. I've seen those in the healthcare sector struggle with some challenges not dissimilar to those in logistics, which in turn echo those in resources or banking. And when there's a slump in the construction industry in north east China, I know it could have an impact on, say, house prices in Vancouver. Indeed, ahead of the 2007/2008 global economic downturn we were telling our clients to keep an eye on U.S. house prices.

If there's something I would encourage you to do in 2017, it is this: find the dots, connect them. The dots will not be immediately obvious, and some will be outliers. The dots will not be on a spreadsheet. They will be in the real world, and you will need to draw on a diversity of talents and insights within your company to identify them and connect them. Once connected they will paint a clearer picture of the future unfolding before you, giving you time to adapt accordingly and obviate any possible negative outcomes.

Good luck, and may the Fox be with you.

Insight



South Africa's risk landscape continues to evolve at a rapid rate. Political, economic and societal risks still dominate the national top 10 risk profile. Several negative consequences of these risks were experienced throughout 2016, making it increasingly difficult for the country's international reputation to remain in a positive light. These consequences also indicate that the achievement of the South African Government's National Development Plan (NDP) priorities and objectives for 2030 could become a more arduous task.

The political climate, described as 'noisy' by Moody's Investors Service, remains volatile as the country transitions to greater democratic maturity. Key institutions have remained resilient despite the profound political uncertainty, demonstrated by the National Prosecuting Authority of South Africa (NPA) dropping its charges against the Finance Minister Pravin Gordhan in October, followed by the Public Protector's office releasing an investigative report on state capture a few days later. The parties implicated in the State of Capture report, such as the Gupta family and former Eskom CEO Brian Molefe, reflects why widespread corruption in both the private and public sectors is such a concern for the South African risk management fraternity. It is not surprising that corruption has moved from the second highest national risk following surveys carried out between June – August 2016 to the highest risk after the November 2016 – January 2017 risk surveys.

Political and economic consequences seldom occur in isolation, and these events have not been ignored by international observers. Ratings agency Standard and Poor's, for example, downgraded Eskom's corporate credit from BB+ to BB in November demonstrating a vote of no confidence in the state power utility and its leadership. South African organisations have been on tenterhooks about the country's ratings in recent times, having narrowly escaped three downgrades within the past year. In November, Fitch revised its outlook for South Africa to negative, but kept its rating unchanged at BBB-, Moody's kept its sovereign rating unchanged at Baa2, and in December Standard & Poor's downgraded South Africa's local debt by one notch to BBB but kept its sovereign credit rating unchanged at BBB-, one level above "junk" status. The economic environment remains challenging, characterised by high public debt and low GDP growth, investment and trade. Growth of around half a percent was experienced during 2016, and is expected to pick up to just over one percent in 2017.

The societal context has been vibrant throughout 2016 and is expected to continue this path during 2017. Much of this centres around students that have been protesting at universities across South Africa for more than a year. #FeesMustFall is a student led protest movement that began in mid-October 2015 in response to an increase in fees at South African universities and is a reflection of divisions and inequality in society. The protests are showing no sign of stopping during 2017. Politically-motivated protests and industrial strike action can also flare up at any time, which makes the fact that the lack of leadership is a top five national risk more of a concern.

A worsening of the current drought affecting much of the country remains one of South Africa's greatest risks. Closely tied to this is the longer-term water crises risk which has been receiving increasing attention during 2016. El Niño (dry) and La Niña (wet) are opposite phases of the El Niño-Southern Oscillation (ENSO) cycle. La Niña is expected to continue to March 2017 and will be accompanied by extreme wet-weather conditions and floods. The dry phase is expected to resume after that again, which means that organisations need to be flexible enough rapidly transitioning to the opposite set of controls in a very short window.

Flexibility is a key requirement for South Africa, as well as for organisations operating within its borders, to remain resilient and thrive in an ever-changing context and associated risk landscape. A brief illustration of this uncertain environment is demonstrated by insufficient electricity supply shifting from its ranking as the top national risk in 2016 to a ranking of 20th a year later.

The Institute of Risk Management South Africa's (IRMSA) [South Africa Risks Report 2017](#) continues to adopt the improvements implemented in the 2016 second edition and has implemented several new enhancements through the provision of a causal loop diagramme, risk readiness assessment, NDP implementation scenario plotting, quarterly national risk profile monitoring, opportunity identification, and full risk descriptions.

The report remains the IRMSA Risk Intelligence Committee's flagship project and is carried out through a series of workshops and surveys throughout the year with 1557 of South Africa's top risk management professionals spanning every major industry within the public and private sectors. The risk management fraternity respondents examined South Africa's top risks over a two-year time horizon across five categories, namely economic, environmental, geopolitical, societal and technological risks. The report is created within the context of 51 identified global risks derived from the following key sources: 2015 and 2016 IRMSA Risk Reports, WEF Global Risks 2016 Report, World Bank Sub-Saharan Africa Outlook 2015, Aon Global Risk Management Survey 2015 and PwC Risk in Review 2015.

The report will continue to refer to the NDP in an effort to link the national risk profile to the country's developmental objectives. During the initial survey, risk management fraternity respondents were asked to select the top 10 risks from the list of 51 risks which they believed could adversely affect the achievement of the South African Government's NDP priorities and objectives, which aims to eliminate poverty and reduce inequality by 2030, as summarised overleaf. They were then asked to select the top 10 risks that could adversely affect the achievement of their organisation's objectives within their respective industries. The industry level risk ratings aggregate the ratings that each respondent provided for the industries in which they practice. The IRMSA Risk Intelligence Committee could compile a list of the top 20 national and industry-level risks following this without having prioritised or ranked them. Full risk descriptions were created prior to the initial survey so that they could be better understood by respondents.

Summary of the National Development Plan 2030

Interlinked Priorities

1. Uniting all South Africans around a common programme to achieve prosperity and equity.
2. Promoting active citizenry to strengthen development, democracy and accountability.
3. Bringing about faster economic growth, higher investment and greater labour absorption.
4. Focusing on key capabilities of people and the state.
5. Building a capable and developmental state.
6. Encouraging strong leadership throughout society to work together to solve problems.

Developmental Themes, with Summarised Objectives:

ECONOMY AND EMPLOYMENT

Unemployment; GDP Growth; Inequality; Exports; National Savings.

ECONOMIC INFRASTRUCTURE

Electricity; Water; Public Transport; Ports; Internet.

ENVIRONMENTAL SUSTAINABILITY AND RESILIENCE

Natural Resources; Land and Oceans; Greenhouse Gas Emissions; Waste Disposal; Disaster Preparedness; Agricultural Technologies; Renewable Energy.

INCLUSIVE RURAL ECONOMY

Additional Agricultural Jobs; Spatial Planning; Upgrade all Informal Settlements; Intra-regional Trade in Southern Africa.

SOUTH AFRICA IN THE REGION AND THE WORLD

Intra-regional Trade in Southern Africa.

TRANSFORMING HUMAN SETTLEMENTS

Spatial Planning System; Upgrade all Informal Settlements; Public Transport.

IMPROVING EDUCATION, TRAINING AND INNOVATION

Early Childhood Development; 80 – 90 Percent Pass Rate for Learners; Minimum Standards for Schools; Expand the College System; Increase Enrolment at Universities and more PhD Qualified Staff; Expand Science, Technology and Innovation.

HEALTHCARE FOR ALL

Increase Life Expectancy; Reduce Infant Mortality; Reduce Prevalence of Diseases; Reduce Injury, Accidents and Violence; Access to an Equal Standard of Care; Skilled Healthcare Staff.

SOCIAL PROTECTION

Minimum Standard of Living; Focus on Services to Children and Vulnerable Groups; Improve Social Welfare Sector Skills; Income Support for the Unemployed; Safe and Sustainable Pensions.

BUILDING SAFER COMMUNITIES

Safe Environment at Home, at School and at Work; Focus on Safety of Women and Children; Professional and Well-resourced Police Service.

BUILDING A CAPABLE AND DEVELOPMENTAL STATE

Developmental and Transformative State and Public Service; Well-equipped Staff; Improved Relations between National, Provincial and Local Government; Governance Structures support State-owned Enterprises (SOEs).

FIGHTING CORRUPTION

A Corruption-free Society; Ethical Society; Accountable Government.

NATION BUILDING AND SOCIAL COHESION

Equal Opportunities for all Members of Society; United, Prosperous, Non-racial, Non-sexist, and Democratic South Africa.

Figures 1 and 2 respectively show the prioritisation of the top 10 South African industry level and country level risks for 2017 - which were evaluated during three risk rating sessions held in Johannesburg, Cape Town and Durban respectively - as having the highest perceived combined likelihood and potential consequence over the next two years.

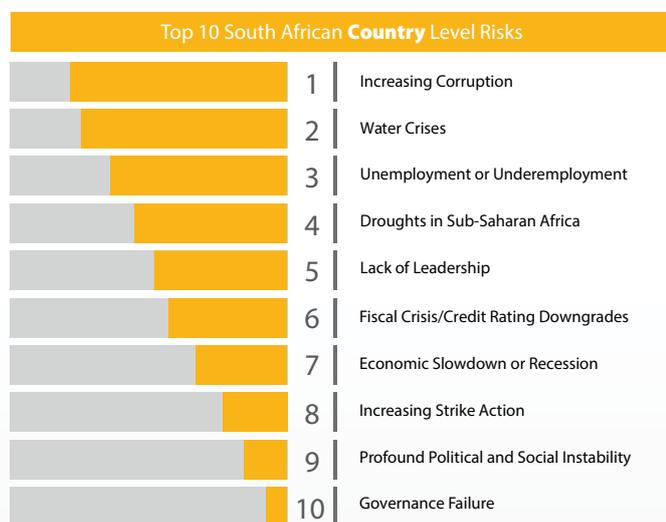


Figure 1: Top 10 South African Country Level Risks

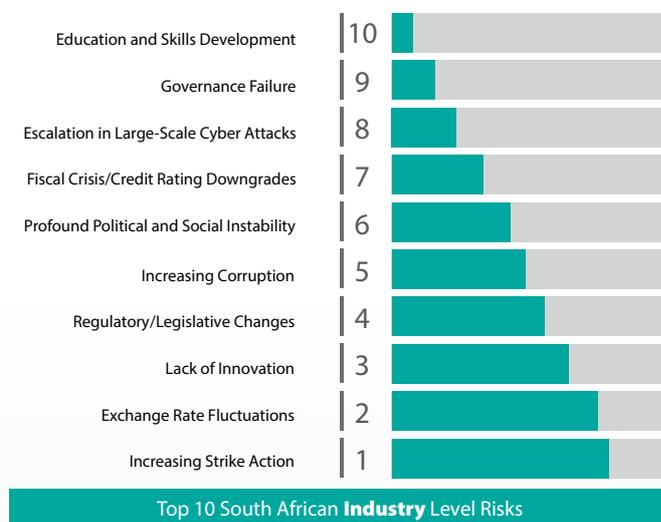


Figure 2: Top 10 South African Industry Level Risks

The following five risks appear both on the national and combined industry level top 10 lists:

- Increasing corruption
- Fiscal crisis/credit rating downgrades
- Increasing strike action
- Profound political and social instability
- Governance failure

Increasing corruption is the top South African risk for the second time in three years and is the fifth highest industry level risk for 2017. **Water crises** and **structurally high unemployment/underemployment** are the second and third highest national level risks for 2017, increasing modestly from their respective positions as the fifth and sixth most prioritised risks the previous year. Last year's top risk, **insufficient electricity supply**, has almost fallen out of the top 20 list of national risks completely. The top three industry level risks for 2017 have risen to prominence dramatically in the last year. **Increasing strike action** is the highest industry level risk, having climbed 17 places. **Exchange rate fluctuations**, the second highest industry level risk for 2017, did not feature in last year's top 20 and **lack of innovation** has risen from 20th to 3rd in one year.

South Africa has performed slightly better in the latest Transparency International Corruption Perceptions Index (CPI) which ranks countries/territories based on how corrupt a country's public sector is perceived to be. The country's ranking has moved positively from 67th to 61st out of 168 countries surveyed with a score of 44 out of 100 in the index. South Africa appears to be experiencing a positive trend by improving from 72nd to 61st over the last two years. The improvement should however be viewed with an understanding that there are countries close behind South Africa on the index where corruption is endemic and where little can be done to turn it around. The unemployment rate in South Africa is a ticking time bomb. The latest Statistics SA employment figures indicate that just over 27 percent of the population do not have jobs, the highest rate in 13 years. In addition, it is alarming that 47 percent of the South African population earn below the R3500 proposed minimum wage.

Water related concerns have rapidly shifted to the top of the agenda for most organisations operating in South Africa. As a greater number of people migrate into cities from rural villages the pressure for each city to meet its water demands is ever increasing. Water infrastructure investments have lagged behind rates of increasing water demand, ranging from the stalled construction of dams to old pipes not being maintained. The water crises risk has been exacerbated by the harshest drought to have hit the country in decades. This is reflected by the **droughts in Sub-Saharan Africa** risk being rated as the fourth highest South African risk for 2017 after entering the top 20 list of national risks for the first time. The South African Cane Growers' Association's brief update on the impact of the drought provided by David George from Illovo Sugar overleaf serves as an example of the level of concern that is held across several industries.

CANEGROWERS' DROUGHT UPDATE

Due to the drought being dynamic and environmental factors impact the industry at various times, this data shows the impact of the drought at this point in time. The data compares the current 2016/17 season crop estimates to the 2013/14 season data as this is seen as a normal season.

Table 1: Sugar Cane Production from a normal 2013/14 season to 2016/17 season

| Decrease in Production | | | |
|--------------------------------|----------------------|----------------------|--|
| Production (tons Cane) | 2013/14 | est2016/17 | % Decrease from 2013/14 Normal Season |
| Total - Dryland Areas | 14 648 823.00 | 11 121 500.00 | -24.08% |
| Total - Irrigated Areas | 5 428 255.00 | 3 870 919.00 | -29% |
| Total Industry | 20 077 078.00 | 14 992 419.00 | -25% |

The decrease in production over the drought period has led to a reduction in grower's gross revenue of just over R2 billion. This has a severe knock on effect into the rural areas and agricultural supply chains.

Table 2: Loss in Growers' gross revenue due to the drought

| Total decrease in Growers' Gross Revenue over Drought Period | |
|---|-------------------------------|
| Season | 2013/14 to est 2016/17 |
| Loss in Gross Revenue - Dryland | -R 1 392 922 677.84 |
| Loss in Gross Revenue - Irrigated | -R 684 477 983.09 |
| Loss in Gross Revenue - Industry | -R 2 077 400 660.92 |
| Loss of Revenue into the Rural Economies | -R 6 647 682 114.96 |

To put it into context the overall total industry loss in grower's gross revenue represents 7% of the total KwaZulu-Natal and Mpumalanga Agriculture, Forestry and Fisheries Gross Domestic Product (GDP) for 2015. The Loss of revenue into rural economies represents 0.79% of the total KwaZulu-Natal and Mpumalanga GDP for 2015.

Estimated drought effect on seasonal labour. Only seasonal labour that is directly affected by the amount of cane produced were taken into account here.

Table 3: Estimated effect the drought has on seasonal labour

| Scenario - Estimated Drought Effect on Labour | Industry |
|--|-----------------|
| Decrease in number of cutters | -2187 |
| Decrease in number of seasonal field workers | -4115 |
| Total Estimated Seasonal Jobs Lost | -6302 |

The evolving South African risk landscape, 2015 - 2017



Figure 3: Top 5 South African Risks in Terms of Likelihood



Figure 4: Top 5 South African Risks in Terms of Consequence



It is important to note that the respondents' perceptions of the country's top risks are influenced by the timing of key events in relation to when the surveys were conducted. Newspaper headlines emphasise these key events and often influence the perception of the general public, including the risk management fraternity, with regards to what the current pertinent risks are in the country. This could partly explain why insufficient electricity supply has shifted 19 places during the last year, after having been reported daily on a variety of platforms during 2015. The newspaper headlines overleaf could also explain why increasing corruption moved in rankings from second to first from the middle to the end of 2016. The headlines were extracted from the front pages of the top South African newspapers during October 2016. The headlines would have influenced the final risk report survey or rating session that was conducted at the end of 2016. The role that the media plays in shaping public perception pertaining to the severity of risks emphasises the need for responsible, factual reporting. The onus should also be on the reader to favour analysis and critical thinking over general commentary when evaluating risk-related events.

*The information was provided courtesy of PressReader.com

What is CraftsmanshipSM?

To be crafted is to meet exacting standards.

It's the human touch that combines art and science to create something unique.

We tend to think about craftsmanship in terms of physical things: fine wine, classic cars, custom furniture and iconic structures.

But what about the underwriting of insurance to craft protection for your unique and valuable things? And the service behind that coverage when you need it most – like claims and loss prevention?

For your business.

Your employees.

Your home.

The people you love.

Things that need a particular kind of protection and service.

The kind Chubb provides.

Not just coverage. CraftsmanshipSM.

Not just insured.

Chubb. InsuredSM.

South African Newspaper Headlines

October 2016

| DATE: | Daily reporting | | | | Weekly reporting | |
|--------|---|--|---|---|--|--|
| | THE STAR | SOWETAN | THE TIMES | BUSINESS DAY | CITY PRESS | MAIL & GUARDIAN |
| 3 Oct | Varsities open campuses | #FeesMustFall a waste of time: Caster Semenya slams violent protests for delaying her studies | On a knife's edge: Militants threaten guerrilla-style protest action to shut varsities | Discord over Steinhoff shares: Wiese under fire for excluding small investors from the deal | #FeesMustFall – State security says it will have zero tolerance: State to take a tougher approach and has urged authorities to set an example by imposing maximum sentences for violent protesters | Zuma Inc crumbles: SABC protection stripped Fightback in NEC, Cabinet Max Sisulu – Zuma must go |
| 4 Oct | ANC to dig into lifestyles: Members to be audited in bid to rein in corruption | Mbeki warns against thieving leaders | Gordhan talks SA up: But experts give the Finance Minister's upbeat assessment of economy a cool reception | Eskom lines up Chinese credit: Utility signs \$500m agreement and is in talks for much more | | |
| 5 Oct | WITS Meltdown: Student cops in violent clashes; Academic activities disrupted | Thuli interviews Gupta: Ajay goes to see public protector over probe into state capture | Wits ceasefire agreed: Classes closed until Monday as two sides enter negotiations | Protector moves to quiz president: Zuma to be interviewed as state capture investigation wraps up | | |
| 6 Oct | Hlaudi sweats in the House: But smirking as two SABC board members resign | Hlaudi's woes far from over: MPs call for dissolution of SABC Board | Faulty Towers shakes as execs jump ship: Motsoeneng 'paid R10m bonus for losing R2bn' | Behave, Zuma critics warned: Minister's threat ignored as fiery speech by Pityana gets applause | | |
| 7 Oct | Activist is set free: Israelis release her, she is flying home | New public protector declares 'I owe nobody favours' | Zuma stumps Thuli: President sidesteps questions on state capture | Business 'waits' to invest R600bn: The right signs from government crucial for unlocking of cash pile | | |
| 10 Oct | Khwezi hailed as heroine: Zuma rape accuser's death a tragedy | Zuma's rape accuser dies | Stress is eating us up: Overweight public servants risk of lifestyle diseases up by eight times | Sterling crash hits SABMiller investors: South African shareholders to lose most of takeover premium | | |
| 11 Oct | Thuli given an ultimatum: Zuma wants her to stall report, hand over evidence today | 'I killed your daughter': Family relives the chilling phone call a relative received after their child was murdered | At Wits end: Bystander and pastor shot in the face as police use 'appropriate force' on protesters | Energy sector gets two-handed boost: Private coal-fired power stations get the go-ahead | | |
| 12 Oct | Gordhan: Why now? | Gordhan on the ropes: Finance minister says the move is politically motivated | A question of timing: Suspicions raised that charging of Gordhan relates to Gupta probe | Politics behind NPA move – Gordhan: Finance minister to appear in court on fraud charges | State of crisis: #FeesMustFall State is so broke it wants older state employees to take early retirement Police plan targeted arrests to make an example of errant student leaders | Inside the state capture report: Plus how the plot against Gordhan has backfired |
| 13 Oct | Ruling puts JZ on the spot: 783 counts of graft-related claims | Struggle icon backs Pravin: Kathrada calls on former ANC leaders to join him as he accompanies finance minister to court of fraud charges | Zuma in the know about Gordhan: Justice minister told president about the decision to charge him | NPA Chief backtracks over Gordhan charges: Abrahams says he did not take decision and is willing to review it | Clergy want Zuma to declare a state of emergency, but he will be travelling | |
| 14 Oct | Zuma in bid to gag Thuli | Zuma fears for his job: Why the president is interdicting public protector from releasing draft report on state capture | 'Thula Thuli': Madonsela threatened me, Jacob Zuma claims | Zuma in bid to delay state capture report: President, Van Rooyen approach court to prevent release of findings | | |

South African Newspaper Headlines

October 2016

| DATE: | Daily reporting | | | | Weekly reporting | |
|--------|---|---|--|--|--|--|
| | THE STAR | SOWETAN | THE TIMES | BUSINESS DAY | CITY PRESS | MAIL & GUARDIAN |
| 17 Oct | Week of make, break: Cops sneak up, nab protest leaders | How DA plans to oust Zuma: Party will use Public Protector's report to urge Parliament to remove President | Where is Gupta R1.5bn stash? | Advice ignored in Zwane's bank push: Mining minister receives legal opinion of illegality | It's open war: Crunch time for SA as ANC factions sharpen battle spear Gordhan fires salvo over R7bn is 'suspicious' Gupta transactions SACP says Zuma 'will pay' if Gordhan goes and economy implodes | Secret Hawks doc: The case against Gordhan |
| 18 Oct | Gupta empire is shaken: R6.83bn illegal transactions and its CEO resigns | Guptas suffer another blow: Red flag on Oakbay's R1-billion transactions | JSE probes Gupta firm: Banks flag transactions of R1bn as 'suspicious' | Oakbay CEO resigns in midst of banking storm: Company denies looting Optimum rehabilitation fund | | |
| 19 Oct | Dlamini funding shock: MEC reveals who is footing bill for accused | Guptas mock Pravin: Family says minister's affidavit is fundamentally flawed and contains 'undiluted nonsense' | What's the best for kids?: Teacher unions oppose 'experiment' to partner education with private companies | PIC releases details of unlisted portfolio | | |
| 20 Oct | Bid for calm at WITS: Students rise up against bail denial | Two years to write matric: Struggling pupils not allowed to split exams into two sittings | Busi no Thuli – yet: There will be changes, says new public protector | Eskom forges ahead with nuclear project: Procurement to continue despite absence of updated energy blueprint | | |
| 21 Oct | Still no end in sight: Student shot 13 times in yet more clashes | Downs spend big to win big | 'Backstreet is best': Many SA women risk illegal abortion rather than state procedure | Gordhan faces tough task over budget deficit: Decline may trigger ratings downgrade | | |
| 24 Oct | 'Zuma must go!': Rivonia trialist lashes out at the ANC | Sundowns conquer Africa | Rape of elderly will get your life: Bill proposes 25 years behind bars for sexual assault of most vulnerable | State ditches plans to merge airlines: Minister backs creation of holding company | Leaked – SARS 'hostage' drama: SARS lawyer questions 'ethically dubious' Gordhan case Desperation to target Gordhan at all costs revealed JZ in a corner, say insiders | |
| 25 Oct | Fatal error: One of the drivers allegedly ignored danger signal | Bathabile in R300m tender wrangle | Robbers on hi-tech 'shopping spree': Cash-in-transit heists risky, so iPhones targeted | Gold Fields' Ghana mines get a lifeline: Government lowers tax and royalty payments | | |
| 26 Oct | 'I can't interfere on Pravin': SA would be banana republic - Zuma | ANC branches want Zuma out: Members across the country demand change of leadership | In a world of his own: Zuma says stopping Gordhan case would drive SA closer to being a banana republic | ANC regions wanted Zuma, NEC to resign: Branches want Zuma disciplined | | |
| 27 Oct | Do more with less, Pravin urges | Pravin budget – Students score big: There is not enough money for all demands as finance minister pacifies protesters | Big tax 'klap' coming: Gordhan paints grim picture, but finds some money to help poor students | Higher taxes and public sector job cuts on cards: Allocations to provinces and municipalities to be reduced | | |
| 28 Oct | President plays the victim: Zuma hints at conspiracy against him within ANC | 'We will kill you': Babysnatcher's chilling warning to mom | 'SARS drama staged': Hawks cry foul over 'hostage' video | Protector's report catches Denel's lie: Guptas' nephew director in joint venture | | |
| 31 Oct | Water drying up: Low reservoirs leave suburbs with no drop to drink | Reasons to drop Gordhan's case: Case against finance minister may be withdrawn today to avert planned marches | Students flush away our varsity millions: #FeesMustFall activists inflict crippling damages costs | Stuttafords submits to business rescue: Plan to be presented in February | Is Pravin off the hook?: Discussions under way to drop charges against Gordhan | |

The table below unpacks the combined industry level top 10 list by identifying the top three risks by industry. Water crises and economic slowdown or recession appear in the top three list of risks in seven out of the 14 identified industries, followed by skills shortage and increasing corruption both appearing four times. This represents a major shift in industry-level risk prioritisation for 2017, considering that regulatory/legislative changes and insufficient electricity supply were the dominant risks in the previous year. The two risks in question only made it into a single top three list of risks by industry for 2017.



| Industry | Year | Key Risk 1 | Key Risk 2 | Key Risk 3 |
|--------------------------------------|------|---|---|---|
| Communications and Technology | 2017 | Economic slowdown or recession | Skills shortage | Education and skills development |
| | 2016 | Regulatory/legislative changes | Insufficient electricity supply | Skills shortage |
| Energy, Water and Utilities | 2017 | Water crises | Increasing strike action | Escalation in large-scale cyber attacks |
| | 2016 | Water crises | Increasing strike action | Skills shortage |
| Education * | 2017 | Increasing strike action | Skills shortage | Failure/shortfall of critical infrastructure |
| Entertainment and Media | 2017 | Reputational damage or adverse media/social media attention | Profound political and social instability | Water crises |
| | 2016 | Profound political and social instability | Water crises | Reputational damage or adverse media/social media attention |
| Financial Services | 2017 | Fiscal crisis/credit rating down-grades | Economic slowdown or recession | Escalation in large-scale cyber attacks |
| | 2016 | Regulatory/legislative changes | Insufficient electricity supply | Massive incident of data fraud/theft |
| Government and Public Services | 2017 | Water crises | Increasing corruption | Massive incident of data fraud/theft |
| | 2016 | Increasing corruption | Insufficient electricity supply | Lack of leadership |
| Healthcare | 2017 | Water crises | Massive incident of data fraud/theft | Education and skills development |
| | 2016 | Regulatory/legislative changes | Massive incident of data fraud/theft | Reputational damage or adverse media/social media attention |
| Hospitality and Leisure | 2017 | Water crises | Economic slowdown or recession | Lack of leadership |
| | 2016 | Regulatory/legislative changes | Water crises | State collapse or crisis |
| Industrial Manufacturing | 2017 | Economic slowdown or recession | Exchange rate fluctuations | Governance failure |
| | 2016 | Insufficient electricity supply | Failure/shortfall of critical infrastructure | Increasing strike action and Water crisis |
| Mining, Engineering and Construction | 2017 | Water crises | Economic slowdown or recession | Skills shortage |
| | 2016 | Increasing strike action | Skills shortage | Increasing corruption |
| Petrochemicals * | 2017 | Economic slowdown or recession | Skills shortage | Massive incident of data fraud/theft |
| Professional Services | 2017 | Economic slowdown or recession | Skills shortage | Increasing corruption |
| | 2016 | Insufficient electricity supply | Increasing corruption | Regulatory/legislative changes |
| Retail and Consumer | 2017 | Water crises | Education and skills development | Economic slowdown or recession |
| | 2016 | Insufficient electricity supply | Massive incident of data fraud/theft | Profound political and social instability |
| Transport and Logistics | 2017 | Insufficient electricity supply | Critical information infrastructure breakdown | Increasing corruption |
| | 2016 | Regulatory/legislative changes | Insufficient electricity supply | Government policy changes |

* new addition

Table 1: Top Three Risks by Industry: 2017 – 2016 Comparison

The Subject Matter Experts (SMEs) were asked to indicate which industries will be most affected if the risk that they were asked to review materialises. The percentage spread of the industries affected, should the top 20 South African and industry level risks materialise, is captured in figure 5. The three industries that are exposed the most by the South African risk landscape include the following:

- Government and Public Services
- Mining, Engineering and Construction
- Energy, Water and Utilities

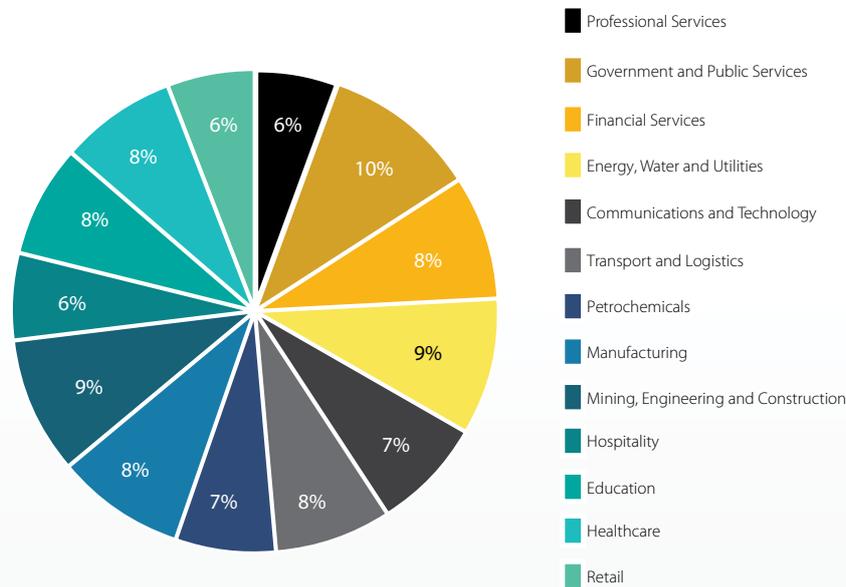


Figure 5: Percentage Spread of Industries Exposed to the Top 20 South African and Industry Level Risk Profiles

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The South Africa Risks Report 2017, Third Edition, represents the journey toward quarterly risk profile monitoring ensuring that the report and monitoring platform capture the country's dynamic risk profile within shorter time periods. Five of the top 10 risks in the 2016 report – **increasing corruption, unemployment/underemployment, water crises, lack of leadership** and **increasing strike action** – appear in the 2017 top 10 country level risk profile. Three of the five new entrants, didn't appear in the 2016 top 20 national risk profile, namely **droughts in Sub-Saharan Africa, fiscal crisis/credit rating downgrades** and **economic slowdown or recession**.

Interestingly when comparing the 2017 top 10 list of risks surveyed both in the middle and at the end of 2016, eight of the top 10 risks are repeated at the end of 2016. The two new entrants are **profound political and social instability** and **governance failure**. The risk ranking differentials are also minimal for the repeat risks which demonstrates a more modest national risk profile shift during the shorter, quarterly window. It would be interesting to compare quarterly risk profiles during 2017 to assess whether a larger divergence occurs. The symmetry in thought across both quarters is encouraging because it reflects a consistent view of the national risk profile that is held by the risk management community. These results, whether compared annually or quarterly, demonstrate that the environment from global to local is constantly evolving. This reemphasises the need for a quarterly review of the country's risk profile in response to this dynamic environment. Decision-makers in government, business and civil society should benefit from a more accurate and current view of the South African risk profile, ensuring that they are better informed and can make higher quality risk-based decisions within their respective spheres of influence.

Both the 2015 and 2016 reports 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. This will be addressed in the causal loop and risk interconnectedness section. It should not be forgotten that the increasingly interconnected nature of the South African risk profile is comprised of risks that can potentially cascade to create a "perfect storm" scenario.

This report aims to encourage national and organisational resilience by sparking risk-related dialogue among public and private sector entities. These conversations should foster a collaborative approach when managing these risks instead of choosing isolated action or treatment plans. It is also hoped that the report will bring the NDP objectives to life, through honestly communicating current challenges in order to create beneficial solutions for all South Africans.

Objective of the South Africa Risks Report 2017

As with any organisation, effective risk management is regarded as essential for the achievement of South Africa's developmental objectives. Only once we fully understand and proactively manage the country's risks will we be able to provide greater certainty and security for all three sectors that comprise South African society, namely government, business and civil society.

We will be better informed, more decisive and move with increased confidence to achieve our vision of creating a foundation for South Africa's competitive position which is sustainable from an economic, environmental and social perspective.

With this in mind, it is IRMSA's objective to provide, through its Risk Intelligence Committee, an annual South African Risk report that enables the country to become more proactive in identifying risks evolving on its landscape.

The 2017 report highlights the most significant risks relevant to South Africa as identified by public and IRMSA member participation, and in consultation with Subject Matter Experts and various industry bodies. A top 10 risk view by country and industry forms part of this report coupled with a greater understanding of these risks, provided by the Subject Matter Experts. Note that the views, opinions and positions expressed by the participants and Subject Matter Experts are theirs alone, and do not necessarily reflect the views, opinions or positions of IRMSA.

► **Part One** of the report provides a comparison between the results of the 2017 South Africa Risks Survey – assessing both country and industry level risks – and the WEF Global Risks Perceptions Survey. Respondents were asked in both cases to identify and prioritise the 10 risks that they thought were most likely and possessed the highest consequence. This is followed by a “causal loop and risk interconnectedness” section provided by Dr Dana Gampel. This views South Africa’s risk profile as a living system and as a continually shifting one. The causal loop diagramme has been created to explain the behaviour of this system by showing a collection of connected nodes and the feedback loops created by the connections.

A prediction pertaining to the trajectory of the top 20 South African risks in the near and longer term will be assessed next. Subject Matter Experts were asked to provide risk ratings for the risks assigned to them in the near term (18 months) and longer term (10 years). The exercise will assess whether the risks are likely to increase or decrease over time. This will be followed by an assessment of how exposed the NDP Interlinked Priorities and Developmental Themes are to the Top 20 Risks. The first high-level risk readiness assessment of the top South African risks will be provided thereafter. Risk readiness refers to the level of the country’s organisational risk preparedness - undertaking a formal review of risks and putting in place a comprehensive risk management plan. The results will highlight possible areas of exposure and will illustrate overall readiness for the full national risk profile coupled with the percentage readiness for each of the top 20 risks.

The final component of this section is written by Dr Chantell Ilbury who will evaluate how South Africa is progressing in relation to the four possible NDP implementation scenarios through the creation and interpretation of key political, economic, societal, environmental and technological indicators. These scenarios are closely tied to the South African and global risk profiles and to trends. The scenarios were formulated in 2016 during a workshop conducted with Dr Ilbury’s colleague, Clem Sunter, with key members of the IRMSA Executive Committee and the Risk Intelligence Committee. In relation to this theme, Subject Matter Expert feedback will be aggregated next uncovering the main global trends affecting the 2017 South African risk profile.

► **Part Two** presents the comments from the Subject Matter Experts associated with each of the top South African risks that were identified. IRMSA’s Risk Intelligence Committee posed the following questions to the experts:

- What is your opinion of this topic as a risk to the achievement of the National Development Plan (NDP) objectives for South Africa?
- In your view, what are the three primary causes giving rise to this risk?
- If not managed effectively, what would the three most significant consequences be impacting South Africa?
- Which industry will be most affected if this risk materialises?
- What are the barriers that prevent us from solving this risk?
- What do you believe the most effective risk response is in managing this risk on an industry level?
- What do you believe the most effective risk response is in managing this risk on a national level?
- Rate the Impact and Likelihood of the risk in the next 18 months.
- Rate the Impact and Likelihood of the risk in the next 10 years.
- Which global trends do you think will have a major impact on the risk going forward?

► **Part Three** delves into the methodology followed by the Risk Intelligence Committee prior to the compilation of the survey results.

► **Part Four** acknowledges the parties that were integral to the successful creation of the report and contains information about the project team.



▶ Part One

South Africa Risks 2017

Part 1:

1.1. Survey Results and WEF Comparison

The top 10 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 figures 6 and 7 below). South African respondents assessing national and industry level risks are predominantly concerned with economic, geopolitical and societal risks. The risk profile for WEF respondents is more evenly spread across the five risk categories. **Fiscal crisis/credit rating downgrades** and **profound political and social instability** are the only risks that appear in the top 10 lists of all three risk profiles. **Water crises** and **unemployment or underemployment** are the only other WEF.

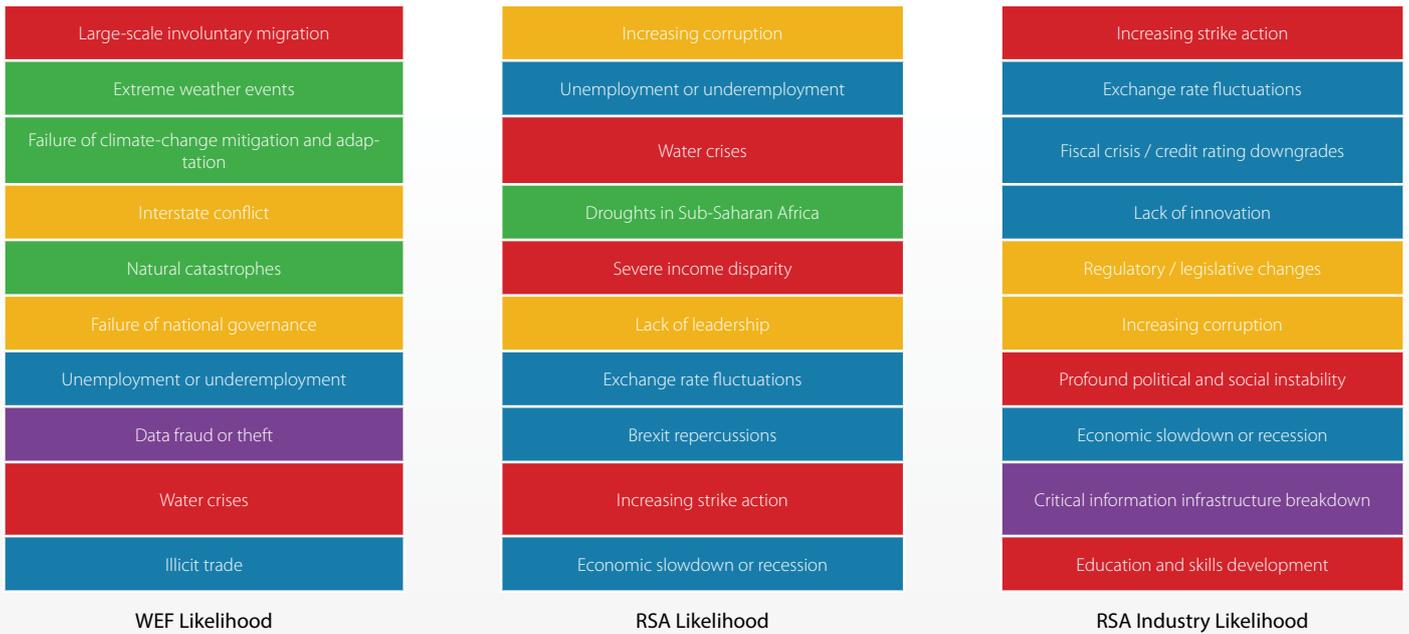


Figure 6: Comparison between Top South African (National and Industry Levels) and WEF Risks by Likelihood



Figure 7: Comparison between Top South African (National and Industry Levels) and WEF Risks by Consequence





Whilst this section demonstrates the unique nature of the South African risk landscape, it should be noted that future comparison will become increasingly difficult considering that the national risk profile has moved away from an annual snapshot view, coupled with the fact that the risk universe used for the profile contains a broader list of risks.

Refer to the WEF explanation of the five risk categories below.

Economic Risks

Risks in the economic category include fiscal and liquidity crises, failure of a major financial mechanism or institution, oil-price shocks, chronic unemployment and failure of physical infrastructure on which economic activity depends.

Environmental Risks

Risks in the environmental category include both natural disasters, such as earthquakes and geomagnetic storms, and man-made risks such as collapsing ecosystems, freshwater shortages, nuclear accidents and failure to mitigate or adapt to climate change.

Geopolitical Risks

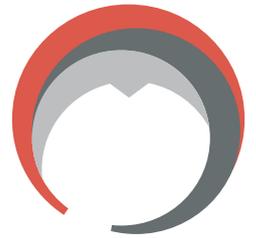
The geopolitical category covers the areas of politics, diplomacy, conflict, crime and global governance. These risks range from terrorism, disputes over resources and war to governance being undermined by corruption, organised crime and illicit trade.

Societal Risks

The societal category captures risks related to social stability – such as severe income disparities, food crises and dysfunctional cities – and public health, such as pandemics, antibiotic-resistant bacteria and the rising burden of chronic disease.

Technological Risks

The technological category covers major risks related to the growing centrality of information and communication technologies to individuals, businesses and governments. These include cyber-attacks, infrastructure disruptions and data loss.



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1.2 Analysis of South Africa's Top 20 Risks Causal Loop and Risk Interconnectedness

Dr Dana Gampel

Introduction

On two occasions this year, IRMSA members were asked to indicate, and rank, key risks that they felt were most significant to their business. This section of the report aims to assess these findings and to answer two key questions regarding these inputs: Firstly, what are the major risks - given IRMSA members' inputs - that need to be managed so that we can change the risk landscape? Secondly, how can these risks be effectively managed, given the resources at our disposal?

Methodological notes

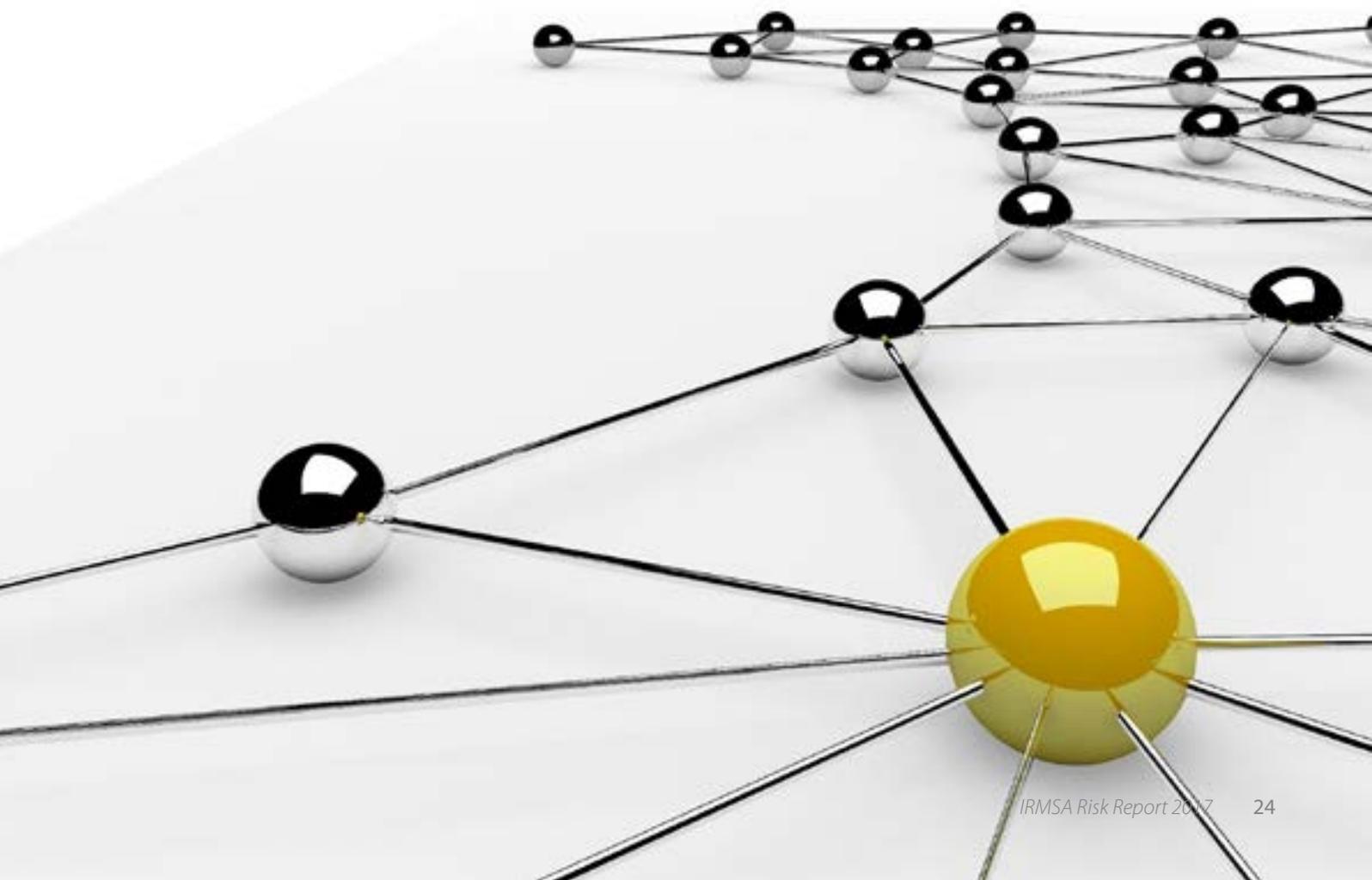
Key risks sourced from IRMSA members have been noted and prioritised into the top 20 risks by an IRMSA committee. The findings were ratified by members.

This analysis does not attempt to challenge the validity of these risks and takes them as given. The risks presented are, however, not equal. Some are clearly causes or drivers whilst others are the result of some of these driving forces. Understanding which risks are causes and which are outcomes is useful for three key reasons: First, drivers or risks that influence other factors are noteworthy because they usually are not in our direct control. Managing these risks or drivers usually manifests as managing the outcome of these forces. This is the second reason for differentiating between drivers and outcomes: understanding the outcomes helps to inform how the drivers manifest and what they could be like if effectively managed. Thirdly, those risks that are both causes and outcomes are strategic and significant areas to concentrate on regarding risk management. These are the "swing factors" that, if addressed differently, help to reshape the landscape as we know it.

For these reasons, the risks given by IRMSA members were analysed according to their relationship to one another to ascertain what are the major drivers; outcomes and "swing factors". Relationship mapping tools as well as correlation analysis to confirm these relationships were applied.

It is also important to determine which of these drivers are influenced by media focal points. To this end, media headlines were analysed from around the time when responses were submitted by IRMSA members. Word cloud analysis was the tool used in this regard. This highlights dominant themes and issues from which a correlation to the risks noted can be made.

The analysis of results used an issues mapping technique that groups issues and their relationship to one another. It effectively highlights what the central issues are, drawing on the techniques and methodologies cited above.



What are the key risks?

IRMSA members were asked to note their major risk areas in July and in October of 2016. Figure 1 below indicates which risks IRMSA members prioritised as being most significant.

The delta (Δ) indicates the shift (either as being more important – represented in blue – or less important – represented in red) between the two periods. The six significant shifts are increasing strike action; education and skills development and regulatory/legislative changes (all of which decreased in importance); unemployment/under-employment; political/social instability and commodity price fluctuations (all being increasingly significant).

| Overall Ranking | July 2016 Top 20 Risk Rankings: National Level | RI | RL | RR | Risk Sub Category | Δ | Overall Ranking | October 2016 Top 20 Risk Rankings: National Level | RI | RL | RR | Risk Sub Category |
|-----------------|---|------|------|-------|-------------------|----------|-----------------|---|------|------|-------|-------------------|
| 1 | Droughts in Sub-Saharan Africa | 4,93 | 4,1 | 20,21 | NDP | 3 | 1 | Increasing corruption | 4,31 | 4,44 | 19,14 | NDP |
| 2 | Increasing corruption | 4,15 | 4,3 | 17,85 | NDP | 1 | 2 | Water crises | 4,33 | 4,26 | 18,45 | NDP |
| 3 | Lack of leadership | 4,28 | 4,08 | 17,46 | NDP | 2 | 3 | Structurally high unemployment/underemployment | 4,09 | 4,37 | 17,87 | NDP |
| 4 | Increasing strike action | 3,83 | 4,41 | 16,89 | NDP | 4 | 4 | Droughts in Sub-Saharan Africa | 4,22 | 4,2 | 17,72 | NDP |
| 5 | Water crises | 4,15 | 4,06 | 16,84 | NDP | 3 | 5 | Lack of leadership | 4,22 | 4,15 | 17,51 | NDP |
| 6 | Economic slowdown or recession | 3,87 | 4,21 | 16,29 | NDP | 1 | 6 | Fiscal crisis/credit rating downgrades | 4,15 | 3,96 | 16,43 | NDP |
| 7 | Structurally high unemployment/underemployment | 3,94 | 4,01 | 15,8 | NDP | 4 | 7 | Economic slowdown or recession | 4,1 | 3,98 | 16,32 | NDP |
| 8 | Fiscal crisis/credit rating downgrades | 3,97 | 3,82 | 15,17 | NDP | 2 | 8 | Increasing strike action | 3,94 | 4,06 | 16 | NDP |
| 9 | Education and skills development | 3,92 | 3,85 | 15,09 | NDP | 5 | 9 | Profound political and social instability | 4,05 | 3,94 | 15,96 | NDP |
| 10 | Skills shortage | 3,82 | 3,94 | 15,05 | NDP | 3 | 10 | Governance failure | 4,09 | 3,79 | 15,5 | NDP |
| 11 | Governance failure | 3,99 | 3,71 | 14,8 | NDP | 1 | 11 | Exchange rate fluctuations | 3,76 | 4,12 | 15,49 | NDP |
| 12 | Severe income disparity | 3,64 | 4,06 | 14,78 | NDP | 0 | 12 | Severe income disparity | 3,6 | 4,18 | 15,05 | NDP |
| 13 | Exchange rate fluctuations | 3,71 | 3,88 | 14,39 | NDP | 2 | 13 | Skills shortage | 3,86 | 3,82 | 14,75 | NDP |
| 14 | Regulatory/legislative changes | 3,64 | 3,7 | 13,47 | NDP | 5 | 14 | Commodity price fluctuations | 3,68 | 3,94 | 14,49 | NDP |
| 15 | Failure/shortfall of critical infrastructure | 3,92 | 3,43 | 13,45 | NDP | 2 | 15 | Education and skills development | 3,85 | 3,76 | 14,48 | NDP |
| 16 | Profound political and social instability | 3,66 | 3,54 | 12,96 | NDP | 5 | 16 | Major escalation in organised crime and illicit trade | 3,73 | 3,65 | 13,61 | NDP |
| 17 | Brexit ("British Exit" from the EU) | 3,44 | 3,69 | 12,69 | NDP | 1 | 17 | Failure/shortfall of critical infrastructure | 3,76 | 3,52 | 13,24 | NDP |
| 18 | Commodity price fluctuations | 3,61 | 3,45 | 12,45 | NDP | 4 | 18 | Brexit ("British Exit" from the EU) | 3,19 | 4,09 | 13,05 | NDP |
| 19 | Major escalation in organised crime and illicit trade | 3,53 | 3,49 | 12,32 | NDP | 3 | 19 | Regulatory/legislative changes | 3,64 | 3,51 | 12,78 | NDP |
| 20 | Insufficient electricity supply | 3,6 | 3,36 | 12,1 | NDP | 0 | 20 | Insufficient electricity supply | 3,71 | 3,26 | 12,09 | NDP |

Figure 8: IRMSA Members' Top 20 Risks

Interestingly, the risks that have become increasingly significant are all beyond the control of individual organisations. Furthermore, those that have been revised downwards – i.e. are deemed to be less of a significant risk – all impact operations significantly and can generally be managed and or directly addressed at a company level. What will be important to track, going forward, is the extent to which organisations will manage these risks effectively. They certainly call for creative measures and direct engagement between government, business, labour and civil society.

The extent to which media events at the time influenced respondents' priorities is important to determine as this indicates the extent to which we are focused on both internal and external risk areas. Figure 9 overleaf indicates what issues were dominant in October 2016 and could have shaped the responses and the shifts noted above.

What influences these risks?

Issues pertaining to leadership; political risk and corruption feature prominently. These could have influenced the significant shift upward in these risks' rankings. Education and access to higher education, legitimacy issues and governance also feature as key events. With the #FeesMustFall campaign being so prominent, it is interesting that education and skills actually decrease in priority for IRMSA members. This indicates that human capacity issues are probably being addressed in-house more than externally. That our regulatory and constitutional structures such as the Chapter 9 institutions (which includes the Public Protector) are active and work effectively, could also indicate why regulatory risks are deemed to be less significant. However, the increased political uncertainty that emanates from these developments explains the significant increase that this risk received.



Figure 9: October 2016 Headline Analysis

What is not reflected in the headline analysis are the concerns around capacity constraints and profit drivers such as commodity prices and unemployment. This could be an area where media attention may be needed to highlight the significance – and needed treatment - of these issues. This will also have implications for upcoming policy revisions in the minerals sector (viz. Mining Charter and MPRDA revisions); beneficiation efforts (viz. IRP and IEP revisions as well as the Gas plan and Strategic Infrastructure Projects) and manufacturing arenas (viz. IPAP and localisation efforts).

Advocacy efforts to address the noted risks above may be needed and could be coordinated through IRMSA and industry structures. Although water based risks were prioritised, other climate change related risks have not been noted – such as the commitments made at the signing of the Paris Agreement and what these will mean for sectors and companies alike. The costs of mitigation and the lack of coordinated systems / efforts were also surprising omissions.

As part of the analysis determining what influences these risks, a causal loop technique and relationship mapping tools were applied to the 20 risks noted by members. The challenge is to determine which issues are drivers or causes, and which risks are actually outcomes of these drivers. This analysis is useful as it helps to distil which risks need to be managed first and how these can be effectively managed and their effects mitigated.

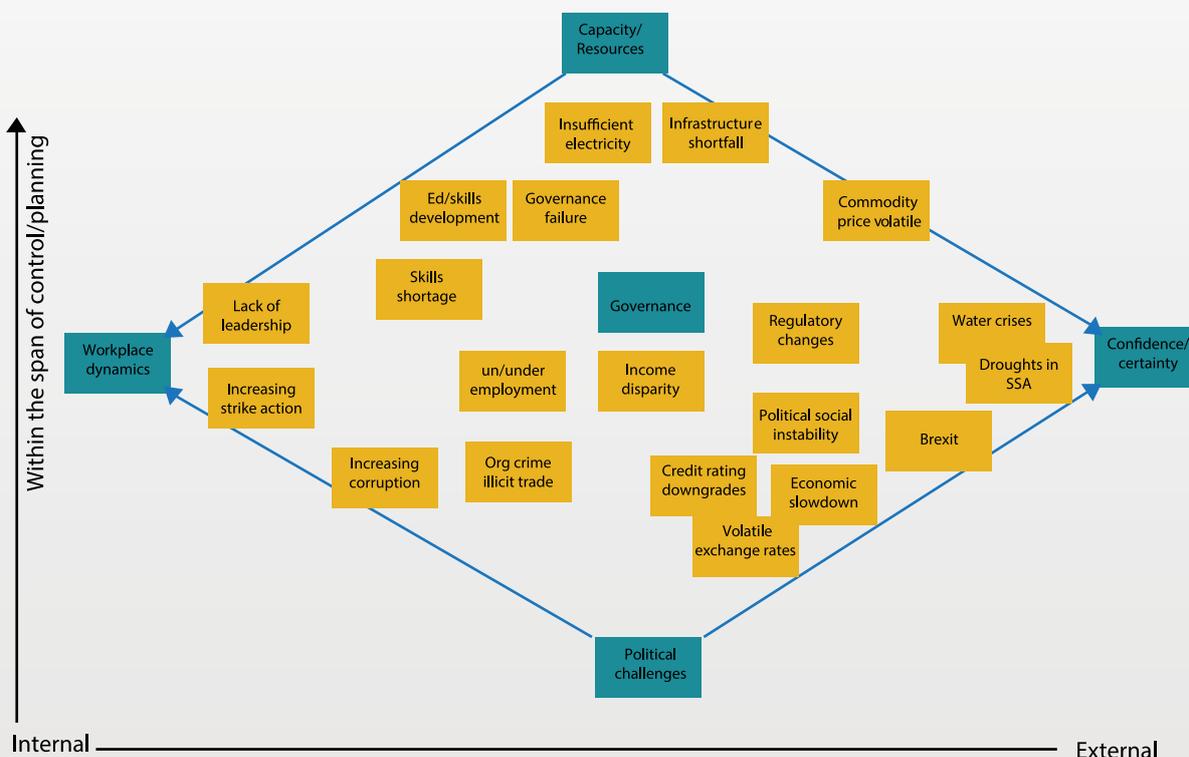


Figure 10: The Relationship Between the Top 20 Risks

Figure 10 highlights the relationship map developed using the risks prioritised by IRMSA members. Risks are positioned on the graphic according to whether they are internal or external to the organisation. They are also grouped according to whether the organisation can or cannot plan and / or control these risks. Water scarcity, for example is an external risk to the organisation, however, how we manage water usage can be planned and control measures can be taken. Commodity price volatility, on the other hand, is also beyond the scope of the organisation, but is not really within the means of the organisation to influence it. It is thus positioned more extremely on the vertical axis than water scarcity as a risk. A lack of leadership is certainly internal to the organisation and also within the ambit of control - as development and opportunities for leadership arise first within the company. The position of this risk, is thus very "close" to both axes.

The risks noted have been grouped into five key areas:

1. Workforce dynamics which is very internally focused and refers to issues and risks that can be easily managed and planned for within the organisation.
2. Confidence / certainty exists at the other extreme to workforce dynamics. These refer to macro-economic issues that often are beyond the control of the organisation and emanate from developments beyond the organisation itself.
3. Capacity / resources refers to issues that can be managed but are rooted externally. The actions employed for this group of risks are usually mitigating responses rather than risk avoiding options.
4. Political challenges speak to risks that stem from beyond the organisation and which are not easily mitigated or controlled by the organisation alone.
5. Governance is positioned centrally given that it highlights how we respond and what mechanisms can be used both internally and externally to address the risks noted.

Figure 10 indicates that many risks can be addressed within the organisation. Even though some of these risks arise externally – such as education and skill crises – addressing and managing these, can be done internally. As organisations increasingly deal with such risks from within their structures, the potency of that risk will shift both externally and internally. For example, scarce skill retention is increasingly being tackled through collaborative efforts to ensure win-win solutions whilst similar skills are nurtured jointly. Much needed welding skills; high tech programming and specialised inputs for the SKA are cases that refer. Although skills remains a risk that needs attention, efforts such as these have decreased its significance from previous years.

At a country level, managing key risks would positively impact the levels of confidence and certainty. Addressing confidence is fundamental for investment and growth, and deserves some discussion given the risks of a possible downgrade in 2017, and the impacts this could have on debt repayments; growth and sustainability. Treating the risks associated with confidence has begun at a national level: Responding to the rating agencies' concerns has successfully averted a downgrade – albeit in the short term. The recent developments at NEDLAC and increasing cooperation between labour and business show that sectoral responses can also be used to effectively address more macro, externally-based risks such as confidence. Coordinated efforts such as these, bode well for country based initiatives which will still need to be actively driven to address the risks noted on the far right of the scale. Sectoral risks would be interesting to assess, to determine how inter-related these are and to ascertain if these can be tackled more effectively at a country rather than industry level. This is a challenge that will be taken up in the following year.

Three key messages arise from the analysis shown in Figure 10: First, many risks can be managed internally by the organisation. How these are managed differentiates companies rather than the risks themselves. Second, at a country level, there is much that can be done to manage the risks that, when mature, deeply affect organisations and often whole sectors. The energy and water sectors are cases to cite. Managing these risks requires significant coordination. Both energy and water-sector success cases show how coordination throughout the value chain have yielded significant successes, despite significant capacity constraints. That insufficient electricity remains at the bottom of the Top 20 list is evidence of how coordinated efforts addressed a significant risk noted in IRMSA's 2015/6 annual report. If the risks on the far right are to be effectively managed, collaboration and coordination will be needed. Players such as industry bodies and IRMSA can support in this challenge. Third, governance has been placed at the centre of the graphic. It points to the need for behaviour shifts: both internally and externally – with greater transparency; legitimacy and purpose being called for. Coordinated efforts that address macro-based risks are often not successful without effective governance and guidance derived from a clear objective and agreed to trade-offs. Crises in the region's financial sectors, future investments in key resources such as gas and pipelines and job creation efforts locally all refer.

The analysis thus far has highlighted what are the major risks, what has shifted in significance and what are the drivers influencing these risks. The challenge now is to explore how these risks can be managed

How can these risks be effectively managed?

Which risks do we tackle first? Despite the prioritisation of the risks by IRMSA members, an analysis was undertaken when compiling the relationship map to determine which risks are actually drivers and which are outcomes. The analysis also looked at which risks displayed features of both drivers and outcomes, making them "swing factors". These "swing factors", once addressed can shift the risk landscape significantly given their relationship to both drivers and outcomes. Figure 11 shows the results of this analysis.

Conclusions

From the results shared above, three key findings arise:

First, that despite a very volatile and dynamic risk landscape in South Africa, there have not been significant shifts in what is deemed to be priority risks for IRMSA members over the year. There have also not been any new risks noted that urgently needed to appear later on in the year. The risks noted, generally cover the array of developments that have shaped the South African socio-political and economic terrain. This indicates that members are aware of the major risks impacting their organisations and are generally informed of internal and external issues that need to be addressed. Secondly, that many of these risks can be adequately addressed both at a company and at a country level. Sectoral coordination in addressing these risks has been proposed, given the successes noted, with more inclusive and collaborative efforts suggested.

Placing governance at the centre of risk management is the third key finding. This highlights the importance of transparent and legitimate positions for organisations, together with the inevitable trade-offs that will need to be made, given the increasing likelihood of further resource constraints and a possible downgrade. The centrality of good governance as a risk management and resilience tool, could go far in addressing the much-needed deliverable of “managing confidence” in the challenging year ahead.

The top 20 risks all speak to issues that also impact the realisation of the National Development Plan. The socio-economic drivers shaping the prioritised risks can be addressed with “new rules of the game” – or, put another way, a new approach to governance. The impasse that arose with the #FeesMustFall campaign and the likely re-occurrence of calls for transformation in education and specific industrial sectors, is tantamount to how inherent systemic risks need to be addressed with new approaches. Failing which, they are expected to resurface – usually with a fiercer accent and greater urgency. Coordinated efforts and collaborative approaches with clear governance and all parties’ interests noted, have been seen to work successfully – the cases of the recent NEDLAC agreement (addressing strike action and confidence risks); eThekweni being awarded the 100 Resilient City status – given its innovative approach to integration and good governance (addressing leadership risks); the successful, albeit early trials of an HIV vaccine – spurred on through transparent collaborative efforts; and Naspers’ impressive gains, made essentially through sound governance and relevant delivery, all refer. With the World Economic Forum’s theme of responsive and responsible leadership being proposed for Davos 2017, governance is certain to take centre stage. New approaches to our challenges are needed. They need to be inclusive; innovative and transparent, making governance a centrepiece in the new narrative of implementing actions to realise the NDP objectives.

In addressing the “new rules of the game”, it is essential to determine who is influencing policy. Policy is the means through which the rules of the game are determined and shaped. Organisations traditionally do not get involved in shaping this contested terrain, and instead, tend to react once policies are passed. The risks associated with several policies under review currently, and the governance concerns that may arise subsequent to their implementation, are likely to be more difficult to manage, if involvement is not forthcoming from affected parties before they are signed into law. Advocacy is thus expected to become a further area of growth in managing and mitigating risks as we reconstruct some of the “rules of the game” to address the unfolding environment.

The findings indicate that South African players are astute and current with regards to understanding the risks in their respective arenas. The art now, is how we effectively address these in the most efficient and innovative ways. IRMSA can assist in supporting its members’ collaborative efforts and can act as a platform to coordinate and track risk and resilience management through better governance. With economic growth being challenged, resources under increasing constraints and inequality urgently needing resolutions, doing more with less – also known as effective risk management – will undoubtedly become that much more significant.

1.3. Unfolding of the Top 20 Risks - 18 Month and 10 Year Horizons

IRMSA asked respondents and SMEs to predict how the top 20 South African risks were likely to unfold in the next 18 months and 10 years by providing risk ratings for both points in time. The average risk ratings are provided below and combine the often contrasting views of all respondents and SMEs. The risk ratings are derived by multiplying the average likelihood and consequence / impact ratings using a standard 1 to 5 rating scale. This scale is presented in the risk assessment methodology section.

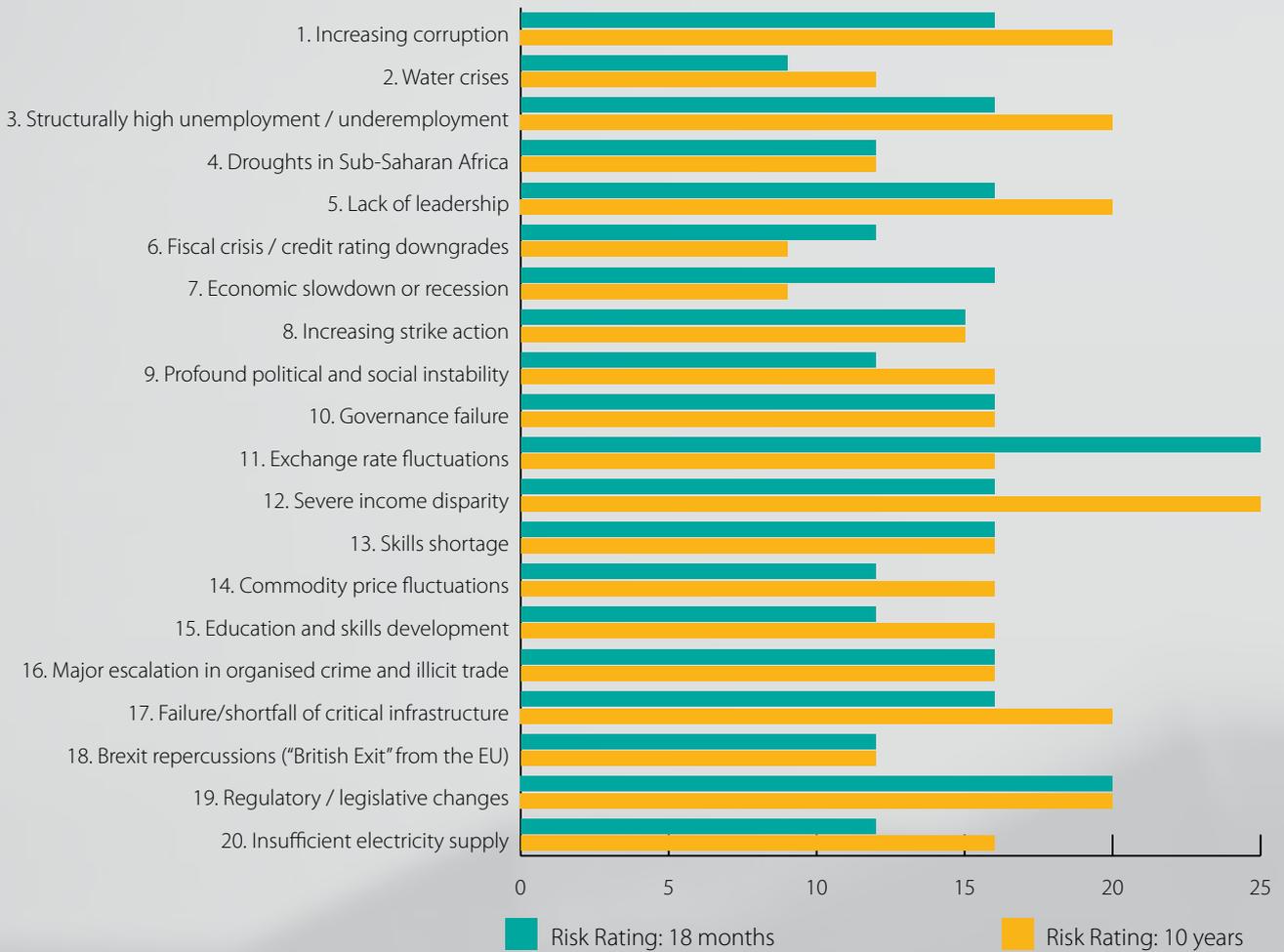


Figure 13: Future Projected Risk Ratings for the Top 20 South African Risks for 2017

The scatter diagramme below illustrates that half of the top 20 risks (10 in total) are expected to become even more of a concern over the next ten years. Four out of the top five South African risks in 2017 are expected to increase over time. Severe income disparity is the risk that is projected to increase the most during the period, whilst it is anticipated that the other nine risks should only increase modestly.

Interestingly, two risks are expected to reduce significantly during the next ten years, namely economic slowdown or recession and exchange rate fluctuations. Fiscal crisis / credit rating downgrades is expected to reduce modestly and the remaining seven risks are projected to be equally important in ten years. That means that respondents and SMEs do not see any long-term improvement or worsening in droughts in Sub-Saharan Africa, strike action, governance failure, skills shortage, organised crime and illicit trade, Brexit repercussion, and regulatory / legislative changes.



Figure 14: Scatter Diagramme Illustrating Future Trajectory of Top 20 South African Risks for 2017

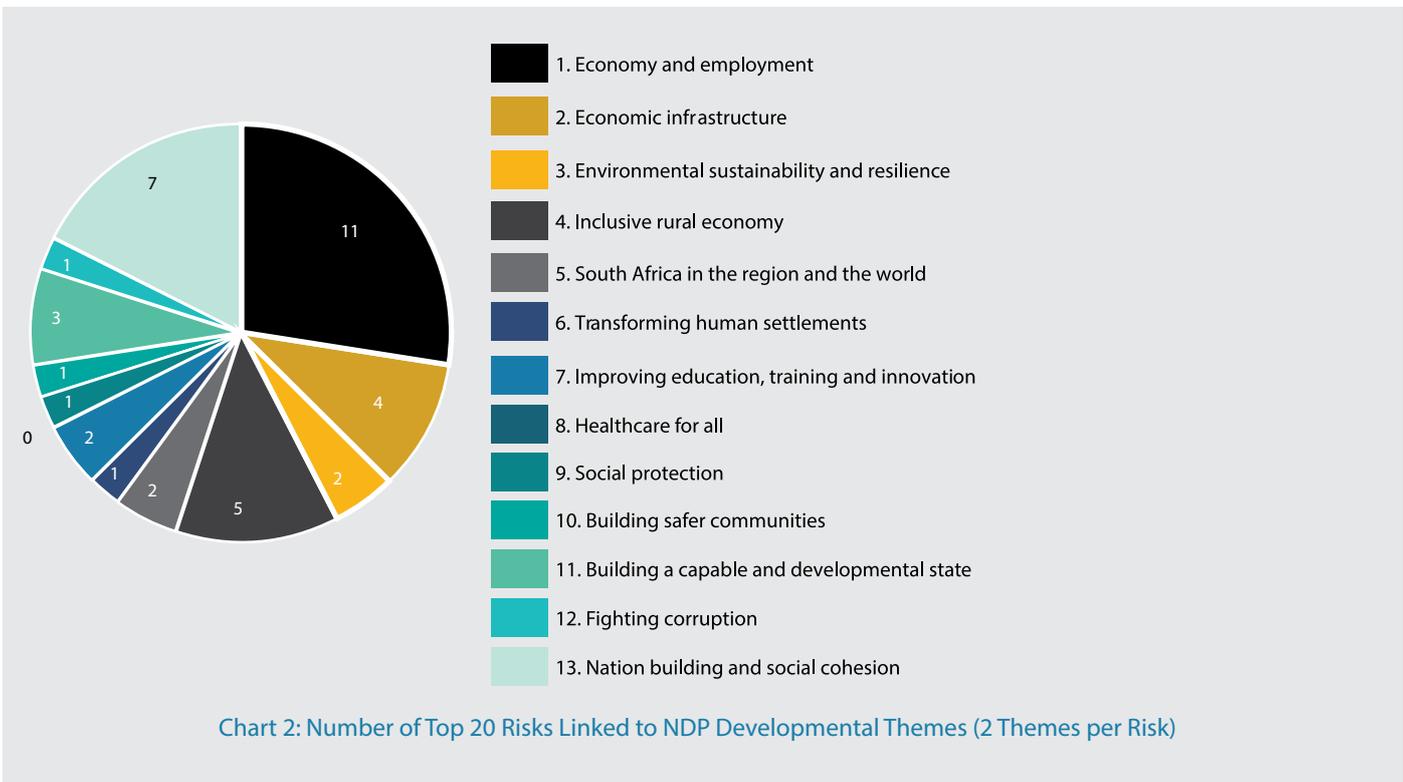
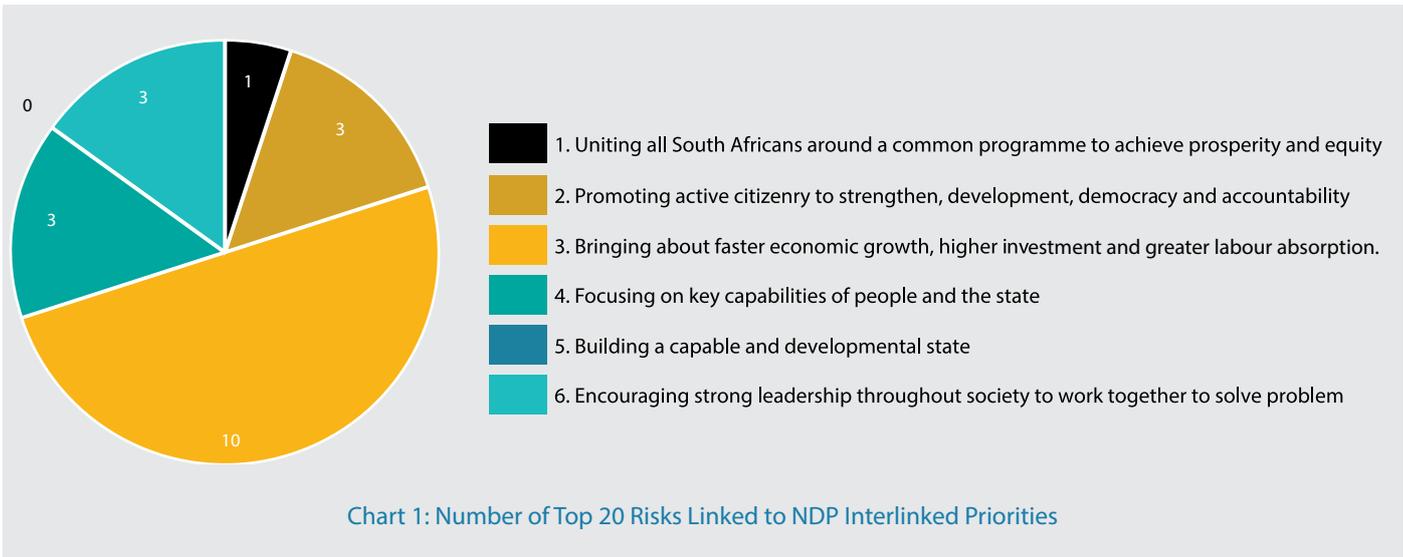
1.4. Exposure of the NDP Interlinked Priorities and Developmental Themes to the Top 20 Risks

This section seeks to gain an understanding of which NDP interlinked priorities (six in total) and developmental themes (13 in total) are exposed the most to the top 20 South African risks for 2017. The assessment is provided in the table below. Each risk is connected to a single interlinked priority and is also linked to two developmental themes. Even though most of the risks affect several developmental themes, only the two most relevant themes have been indicated for the purpose of this assessment.

| No | Risk Name | 6 NDF Priorities (1 selection per risk) | | | | | | NDP Developmental Themes (2 selections per risk) | | | | | | | | | | | | |
|----|---|---|--|--|--|--|---|--|-------------------------|---|-------------------------|--|--------------------------------|--|--------------------|-------------------|----------------------------|--|---------------------|-------------------------------------|
| | | Uniting all South Africans around a common programme to achieve prosperity and equity | Promoting active citizenry to strengthen development, democracy and accountability | Bringing about faster economic growth, higher investment and greater labour absorption | Focusing on key capabilities of people and the state | Building a capable and developmental state | Encouraging strong leadership throughout society to work together to solve problems | 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 |
| | | 1 | 3 | 10 | 3 | 0 | 3 | 11 | 4 | 2 | 5 | 2 | 1 | 2 | 0 | 1 | 1 | 3 | 1 | 7 |
| 1 | Increasing corruption | | | | | | | | | | | | | | | | | | | |
| 2 | Water crises | | | | | | | | | | | | | | | | | | | |
| 3 | Structurally high unemployment / underemployment | | | | | | | | | | | | | | | | | | | |
| 4 | Droughts in Sub-Saharan Africa | | | | | | | | | | | | | | | | | | | |
| 5 | Lack of leadership | | | | | | | | | | | | | | | | | | | |
| 6 | Fiscal crisis / credit rating downgrades | | | | | | | | | | | | | | | | | | | |
| 7 | Economic slowdown or recession | | | | | | | | | | | | | | | | | | | |
| 8 | Increasing strike action | | | | | | | | | | | | | | | | | | | |
| 9 | Profound political and social instability | | | | | | | | | | | | | | | | | | | |
| 10 | Governance failure | | | | | | | | | | | | | | | | | | | |
| 11 | Exchange rate fluctuations | | | | | | | | | | | | | | | | | | | |
| 12 | Severe income disparity | | | | | | | | | | | | | | | | | | | |
| 13 | Skills shortage | | | | | | | | | | | | | | | | | | | |
| 14 | Commodity price fluctuations | | | | | | | | | | | | | | | | | | | |
| 15 | Education and skills development | | | | | | | | | | | | | | | | | | | |
| 16 | Major escalation in organised crime and illicit trade | | | | | | | | | | | | | | | | | | | |
| 17 | Failure/shortfall of critical infrastructure | | | | | | | | | | | | | | | | | | | |
| 18 | Brexit repercussions ("British Exit" from the EU) | | | | | | | | | | | | | | | | | | | |
| 19 | Regulatory / legislative changes | | | | | | | | | | | | | | | | | | | |
| 20 | Insufficient electricity supply | | | | | | | | | | | | | | | | | | | |

Table 2: Primary NDP Interlinked Priorities and Developmental Themes exposed by each of the Top 20 South African Risks for 2017

The two charts below indicate the spread of NDP exposure to the top 20 South African risks. 'Bringing about faster economic growth, higher investment and greater labour absorption' is the most exposed interlinked priority again this year and is affected by fifty percent of the top 20 risks. The same two developmental themes 'economy and employment' and nation 'building and social cohesion' are dominant again and are exposed to almost half of the top 20 risk profile.



1.5. Risk Readiness Assessment for the South African Risk Profile

The first high-level organisational risk readiness assessment for the top South African risks has been provided below. The first question posed to survey respondents was whether their respective organisations have a plan in place, or whether they have undertaken a review, to address each of the top 20 national risks. The results are presented below.

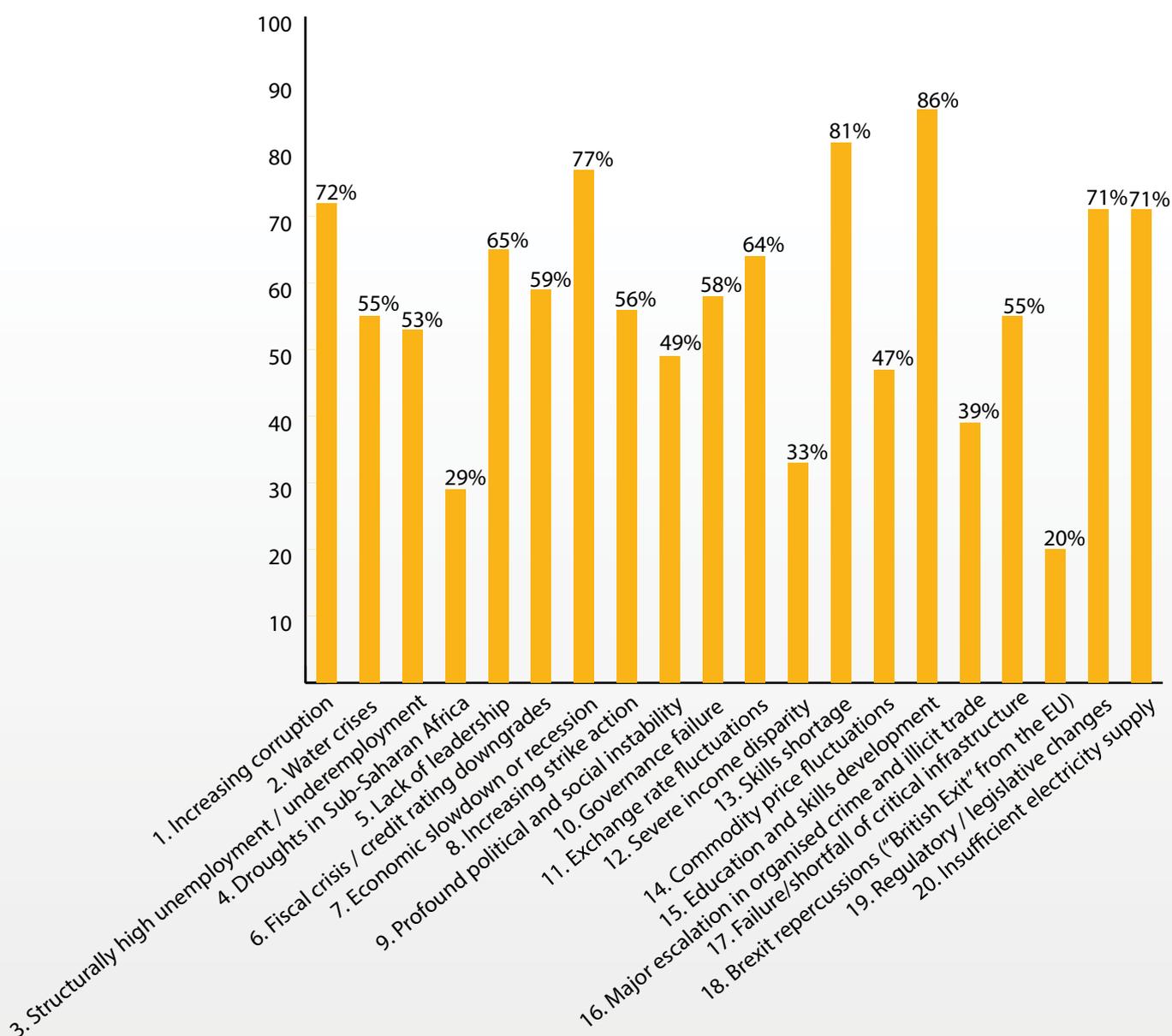


Figure 15: Risk readiness for the top 20 South African risks

The overall organisational readiness for the top 20 South African risks stands at 57 percent following the survey. The result is neither overly positive or negative and will be tracked for comparative purposes going forward. One would expect an uptick in percentage points going forward as organisations operating in South Africa increase their risk maturity levels. IRMSA can attest to the fact that organisational leadership is taking a more active role in managing risks. Interestingly, less than fifty percent of organisations are prepared for six out of the top 20 national risks. The highest reported organisational readiness is for education and skills development, most likely because organisations have a degree of control in this area.

Respondents also identified three risks as "the most difficult to manage and the least ready for." The risks that made the top three the most frequently include: profound political and social instability making the top three lists of 32 percent of respondents, droughts in Sub-Saharan Africa at 25 percent, and economic slowdown or recession at 24 percent. All three risks are external in nature which explains why they are difficult to manage.

1.6 South African Scenarios and Flags to Watch for 2017

Chantell Ilbury

The advantage of using scenarios in strategy is that they encourage fluidity of thinking - they demand constant vigilance and a scanning of the playing field for flags that could herald a shift in the playing field. With that in mind, let's reexamine the IRMSA Scenario Gameboard and assess the current probabilities of each scenario playing out.

Firstly, a refresher of the forces shaping the scenarios. These are the resilience of South Africa to global shocks - either resilient or vulnerable, and the implementation, or not, of the NDP - and the stability of the global social, political and economic landscape. Expressed as intersecting axes, these produce four different scenarios for IRMSA, as below.

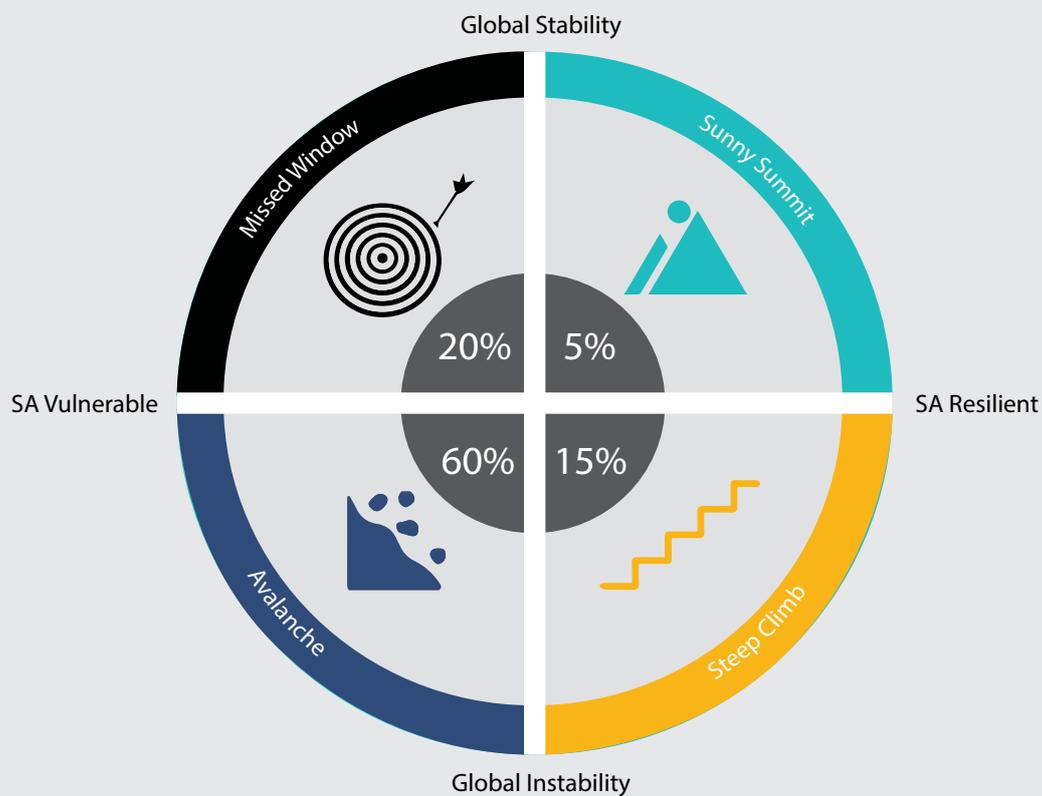


Figure 16: Projected NDP Implementation Scenarios

Working clockwise from the best-case scenario - Sunny Summit - we estimate the current probabilities of the different scenarios playing out to be as follows:

- Sunny Summit 5%
- Steep Climb 15%
- Avalanche 60%
- Missed Window 20%

The current position is in the 'Avalanche' scenario, meaning strategic thinking will be even more important in 2017. But things can change. Let's have a look at the global and local flags that, if raised, could suggest a change in probabilities is in the offering.

Firstly, the global flags that would signal a shift further down the vertical axis:

1. The Religious Flag

This flag is flying high, and has made prospects for the Middle East increasingly troubling. Of special interest should be the growing tension between Russia and the US over events in Syria. The two countries have aligned themselves with different sides in the war there, a war which is growing increasingly violent. At the same time the old rivalry between predominantly Sunni Saudi Arabia and its Shia foe Iran shows no sign of abating, and proxy wars are taking hold across the region. There is an historic rivalry of beliefs, and military action will not solve it. It needs an economic solution.

2. The Red Flag of Russia and China

The flag flies strongly, and has changed the risk profile for America and Europe. It poses an existential threat to the West because of Russia's formidable nuclear arsenal, and its populace that's grown testy over the economic sanctions imposed upon them. Relations between America and China have grown increasingly thorny over issues in the South China Sea, specifically China's occupation of islands there. If President Trump acts on his promise to impose tariffs on Chinese imports and punish American companies manufacturing there instead of at home, expect a worsening of relations.

3. The Grey Flag

This refers to an ageing population - a growing problem in a number of countries, and therefore a global issue. It has already dragged the Japanese and European economies down to a virtual standstill. China's economy is now beginning to feel the brunt of decades of a one-child policy - its population is ageing very quickly. There is hope in its southern neighbour, India. Like Africa, its population is largely young, and its youthful energy could push it into one of the top three economies in the near future.

4. The Anti-establishment Flag

As long as the middle- and working-class grow increasingly restless about the growing income gap between themselves and the super-rich, the anti-establishment flag will fly high and be the rallying call for disrupting the economic and political status quo. Big business certainly isn't safe. They too must understand that the financial and other penalties for not complying with their own governance codes are likely to be much higher, putting more emphasis on better internal audit and risk management processes.

5. The Green Flag

Climate change: it's a reality, and its effects are wide-spread. That's why it has four sub-flags:

- a. Temperature - hence fresh water conservation and water management are set to become two of the critical disciplines for farmers, municipalities and companies in the future.
- b. Rising sea levels - this has dramatic consequences for coastal urban areas.
- c. Increasing frequency of extreme weather events - this is powered by global warming, especially of the oceans.
- d. Increased human migration - as climate change disrupts weather patterns it will force the migration of people relying directly on, especially subsistence, agriculture.

6. The Porous Border Flag

Linked to point 5d, the ease with which people can cross borders will encourage migration from developing countries to those that can offer to close the gap between their standards of living.

And now the South African Flags for 2017 that will signal a shift along the horizontal axis:

1. The Geopolitical Flag

This would be wide-scale governance failure. This could play into the country's continued global competitiveness and whether, in light of the current levels of mistrust between business and government, it can deliver a cohesive National Development Plan.

2. The Societal Flag

This is flying high, and is expected to remain so as long as the issues of the student protests remain unsolved, and political and social instability simmers, only a spark away from violence. Trade and labour strike action are never far away, and are expected to increase as a shifting skills demand finds supply wanting.

3. The Economic Flag

This will primarily be a credit rating downgrade; and there have been too many near misses to take our eye off this. Innovation is key to a growing economy, as well as infrastructure, electricity and water.

4. The Environmental Flag

The flag will remain high as long as the drought and accompanying scarcity of water grips the land. Food security will become a major issue, as will our future energy mix.

5. The Technology Flag

This includes cyber threats and disruptive technologies that have no qualm for traditional labour-intensive operations. Think Uber and Airbnb applied to other sectors. South Africa may be behind the curve in technology.

It is easy to consider the flags, especially when combined, as providing an increasingly complex set of risks, but for the foxy thinker therein lies opportunity. Having said that we doubt it is sufficient to secure a 'Sunny Summit'.

1.7. Global Trends Affecting the 2017 South African Risk Profile

The analysis of South African scenarios is conducted within the context of the significant global trends provided below which were identified in the 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.

| | |
|--|---|
| Ageing population | Ageing of populations in developed and developing countries driven by declining fertility and decrease of middle-and old-age mortality |
| Climate change | Change of climate attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability |
| Environmental degradation | Deterioration of quality 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 positions |
| Increasing polarisation of societies | Inability to reach and agreement on key issues within countries due to diverging or extreme values, political or religious views |
| Rise of chronic diseases | Increasing rates of non-communicable diseases, also known as chronic diseases, leading to long-term costs of treatment threatening recent special gains in life expectancy and quality, placing a burden on economies |
| Rise of hyperconnectivity | Increasing digital interconnection of people and things |
| Rising geographic mobility | Increasing mobility of people and things due to quicker and better performing means of transport and lowered barriers |
| Rising income disparity | Increasing socio-economic gap between rich and poor in major countries and regions |
| Shifts in 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. |
| Urbanisation | Rising number of people living in urban areas, resulting in the physical growth of cities |
| Weakening of international governance | Weakening or inadequate global or regional institutions (e.g. the UN, IMF, NATO, etc.) agreements or networks and loss of trust in them, increasing the global power vacuum |

Figure 17: Global Trends Identified by the WEF

The SMEs were asked to indicate which global trends have a material impact on each of the risks that they were approached to analyse. The percentage spread of the global trends affecting the top 20 South African and industry level risk profiles is captured in figure 18. Interestingly, the previous year's six most influential global trends affecting the South African risk landscape are repeated this year, and in the same order. They include the following:

- Rising income disparity
- Shifts in power
- Increasing polarisation of societies
- Urbanisation
- Growing middle class in emerging economies
- Climate change

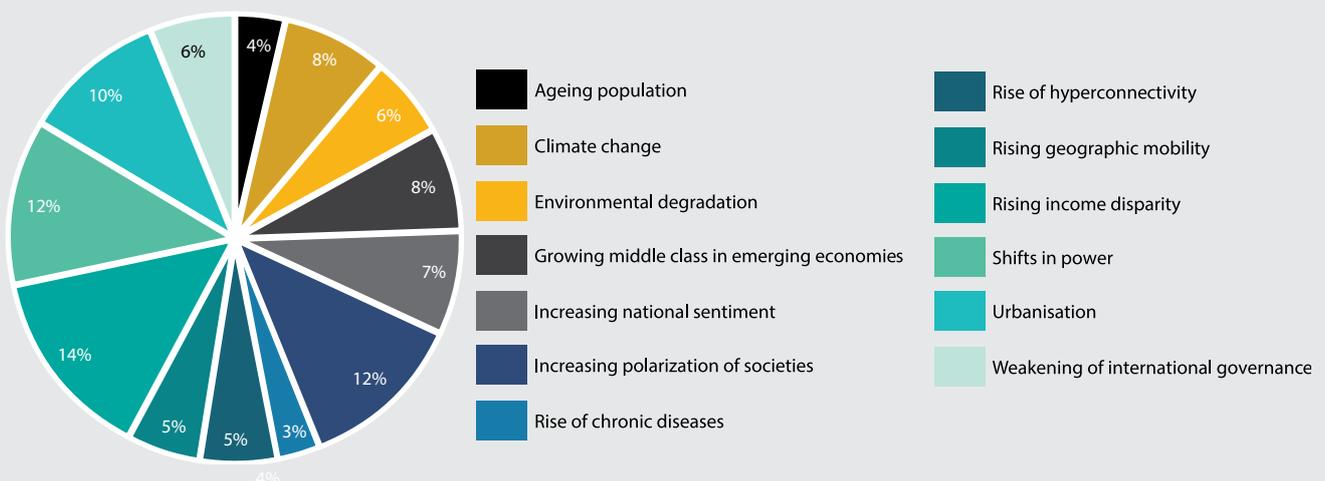


Figure 18: Percentage Spread of Global Trends Significantly Impacting the Top 20 South African and Industry Level Risk Profiles



Through a process of continuous improvement, IRMSA aims to ensure that the Risk Report remains at the cutting edge of collective understanding of the country's risks. In response to the objective of improving the analysis, IRMSA will ensure that the approach and methodology is regularly updated.

1.8. Further Action

Through a process of continuous improvement, IRMSA aims to ensure that the Risk Report remains at the cutting edge of collective understanding of the country's risks. In response to the objective of improving the analysis, IRMSA will ensure that the approach and methodology is regularly updated. The 2018 report will continue to engage with the South African risk management community, corporate leaders and members from other institutes to gain a holistic and current view of the country's evolving risk landscape. During the review of this report by a number of risk experts we have identified a few initial enhancements for the next report:

- Moving beyond an annual snapshot view of the aggregated and individual industry risk profiles, IRMSA will provide ongoing monitoring of the manner in which these risks are unfolding by assessing whether their likelihood and impact is increasing or decreasing from quarter to quarter.
- An annual or biannual positioning related to the four possible NDP implementation scenarios through the monitoring of key political, economic, societal, environmental and technological indicators.
- The 2018 report will contain a more detailed risk readiness assessment of the top South African risks. It will also unpack industry risk readiness in relation to each industry's risk profile. Risk readiness refers to the level of the risk preparedness - undertaking a formal review of risks and putting in place a comprehensive risk management plan.
- In order to answer the so what question, IRMSA will ask organisations operating in South Africa whether they have reported a loss of income in the past 12 months from any of the risks found within a combined list of the national and their specific industry risks. The follow-up question will be whether those losses were brought about due to control failures. This will provide an initial view on how well organisations are responding to their respective dynamic external risk environments.
- In addition to understanding the 18 month and 10-year trajectory of the national risks, an analysis will be undertaken to assess their respective velocities. The risk velocity scale used for the assessment will consider the speed of onset, the duration of impact as well as the duration of the response required.

1.9. Conclusion

The South Africa Risks Report has developed a methodology over the past two years to improve the prioritisation and analysis of interconnected national and industry level risks. The quarterly monitoring the national risk profile introduced in this year's report will also be displayed on an online monitoring platform going forward. This should ensure that dynamic shifts in the country's risk profile is identified within shorter time periods. Interestingly when conducting the first quarterly risk profile comparison, eight of the top 10 risks were repeated. The risk ranking differentials of the repeat risks were also minimal which demonstrates a more modest national risk profile shift during the shorter, quarterly window.

The symmetry in thought across both quarters is encouraging because it reflects a consistent view of the national risk profile that is held by the risk management community. These results, whether compared annually or quarterly, demonstrate that the environment from global to local is constantly evolving. It will be interesting to compare quarterly risk profiles during 2017 to assess whether a larger divergence occurs. Symmetry in thought was also demonstrated by the Subject Matter Experts that identified the same six global trends with highest influence on the South African risk landscape, and in the same order. When considering NDP exposure to the top 20 South African risks, they identified the same interlinked priority and two developmental themes as last year.

Confronting a broad spectrum of risks each with a unique trajectory requires a collaborative country- and industry - wide effort. Healthy debate regarding the ordering of the top South African risks is encouraged and is expected to continue throughout 2017. There appears to be general consensus that the isolated or combined impact of the majority of these risks would be devastating. In 2017, the major risks obstructing NDP implementation include increasing corruption, water availability, higher levels of unemployment as well as prolonged droughts. Dr Chantell Ilbury demonstrated that the implementation of the NDP is becoming increasingly difficult in the current local and global contexts and risk landscapes. The probability of the Avalanche scenario occurring currently sits at 60 percent.

Dr Dana Gampel suggests that many of the risks identified in the report can be adequately addressed both at an organisational and at a country level. She proposes greater sectoral coordination in addressing these risks with more inclusive and collaborative efforts. Not addressing these risks will become tougher going forward considering that half of the top 20 risks are expected to become even more of a concern during the next ten years.

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Analysis of Top Risks: Feedback from Subject Matter Experts

The top South African risks have been placed under the spotlight in this section. Each risk contains the applicable feedback provided by the Subject Matter Experts that were asked to address the country's top risks. A summary table has been provided overleaf indicating the sum of the Subject Matter Expert feedback per risk for the 18 month and 10 year risk rating projections, affected industries and the global trends likely to influence the risks.

| No. | Risk Name | Likelihood Rating: 18 Months | | | | | Impact Rating: 18 Months | | | | | Likelihood Rating: 10 Years | | | | | Impact Rating: 10 Years | | | | |
|--|---|------------------------------|----------|----------|--------|----------------|--------------------------|-------|----------|------|----------|-----------------------------|----------|----------|--------|----------------|-------------------------|-------|----------|------|----------|
| | | Rare/Remote | Unlikely | Moderate | Likely | Almost certain | Insignificant | Minor | Moderate | High | Critical | Rare/Remote | Unlikely | Moderate | Likely | Almost certain | Insignificant | Minor | Moderate | High | Critical |
| 1 | Increasing corruption | | | 1 | 1 | 2 | | | 2 | 2 | | 1 | 1 | 2 | | | | | 1 | 3 | |
| 4 Respondents: Kris Dobie - Kevin Malunga - Terry Booysen - Chandu Kashiram | | | | | | | | | | | | | | | | | | | | | |
| 2 | Water Crises | | 1 | 1 | 1 | | | 2 | 1 | | | 1 | 2 | | | | | 1 | 2 | | |
| 3 Respondents: Ingrid Cawood - Fred Goede - Clémence McNulty | | | | | | | | | | | | | | | | | | | | | |
| 3 | Structurally High Unemployment / Underemployment | | | 1 | | 2 | | 1 | 1 | 1 | | | | | 3 | | | | 2 | 1 | |
| 3 Respondents: James Hall - Allan Tumbo - Dr Mark Bussin | | | | | | | | | | | | | | | | | | | | | |
| 4 | Droughts in Sub-Saharan Africa | | | 1 | 1 | | | | 2 | | | 1 | | 1 | | | | | 1 | 1 | |
| 2 Respondents: Fred Goede - Ingrid Cawood | | | | | | | | | | | | | | | | | | | | | |
| 5 | Lack of Leadership | | | | 1 | 1 | | 1 | 1 | | | | | 2 | | | | | 1 | 1 | |
| 2 Respondents: Ernest Boateng - Terence Singh | | | | | | | | | | | | | | | | | | | | | |
| 6 | Fiscal Crisis / Credit Rating Downgrades | | | 1 | 1 | | | | 1 | 1 | | 2 | | | | | | 2 | | | |
| 2 Respondents: Professor Andre Roux - Nicky Weimar | | | | | | | | | | | | | | | | | | | | | |
| 7 | Economic Slowdown or Recession | | | | 3 | | | 2 | 1 | | | 2 | 1 | | | | 2 | 1 | | | |
| 3 Respondents: Nicky Weimar - Professor Andre Roux - Dr Francois van Dyk | | | | | | | | | | | | | | | | | | | | | |
| 8 | Increasing Strike Action | | | | | 2 | | 1 | 1 | | | | | 2 | | | | 1 | 1 | | |
| 2 Respondents: Nick Piper - Zanele Hlophe/Haroun Docrat | | | | | | | | | | | | | | | | | | | | | |
| 9 | Profound Political and Social Instability | | | 3 | 1 | 1 | | | 4 | 1 | | 1 | 3 | 1 | | | | | 3 | 2 | |
| 5 Respondents: Raeesah Cachalia - Chandu Kashiram - Gabrielle Reed - Ryan Cummings - Trevor Channing | | | | | | | | | | | | | | | | | | | | | |
| 10 | Governance Failure | | 1 | 2 | 1 | 2 | | 1 | 3 | 2 | | 2 | 2 | 2 | | | | 1 | 2 | 3 | |
| 6 Respondents: Coen van Wyk - Michael Judin - Parmi Natesan - Ryan Cummings - Walter Ehrlich - Terry Booysen | | | | | | | | | | | | | | | | | | | | | |
| 11 | Exchange Rate Fluctuations | | | | 1 | 2 | | | 2 | 1 | | | 1 | 1 | 1 | | | 1 | 1 | 1 | |
| 3 Respondents: Nicky Weimar - Professor Andre Roux - Dr Francois van Dyk | | | | | | | | | | | | | | | | | | | | | |
| 12 | Severe Income Disparity | | | | 3 | 3 | | | 5 | 1 | | | 1 | 5 | | | | | 2 | 4 | |
| 6 Respondents: James Hall - Chandu Kashiram - Querida Saal - Professor Andre Roux - South African Reward Association - Trevor Channing | | | | | | | | | | | | | | | | | | | | | |
| 13 | Skills Shortage | | 1 | 1 | | 2 | | 2 | 2 | | | 1 | 1 | 2 | | | | | 2 | 2 | |
| 4 Respondents: Jody Cedras - SAQA - Dr Mark Bussin - Dr Whitey Van Der Linde | | | | | | | | | | | | | | | | | | | | | |
| 14 | Commodity Price Fluctuations | | | 2 | 4 | 1 | | 4 | 2 | 1 | | 3 | 3 | 1 | | 1 | 2 | 3 | 1 | | |
| 7 Respondents: Nicky Weimar - Mark Robins - Professor Andre Roux - Ogi Williams - Lyal White - Reshma Ramkumar - Tap Van Der Berg | | | | | | | | | | | | | | | | | | | | | |
| 15 | Education and Skills Development | | 1 | | 1 | 3 | 1 | 1 | 2 | 1 | | | 1 | 2 | 2 | | | 1 | 1 | 3 | |
| 5 Respondents: Peter Bosch - Jody Cedras - Claudelle Von Ecke - Dr Whitey Van Der Linde - Reshma Ramkumar | | | | | | | | | | | | | | | | | | | | | |
| 16 | Major Escalation in Organised Crime and Illicit Trade | | | | 3 | 1 | | 1 | 3 | | | | 2 | 2 | | | | 1 | 3 | | |
| 4 Respondents: Christelle Marais - Gabrielle Reed - Raeesah Cachalia - Chris Gower | | | | | | | | | | | | | | | | | | | | | |
| 17 | Failure / Shortfall of Critical Infrastructure | | | 1 | 1 | 4 | | 2 | 2 | 2 | | 1 | | 5 | | | | 1 | 1 | 4 | |
| 6 Respondents: Dikeledi Mnyandu - Lyal White - Sy Gourrah - Thabile Nyaba - Ogi Williams - Thulani Mkhungo | | | | | | | | | | | | | | | | | | | | | |
| 18 | Brexit Repercussions | 1 | | | 1 | 2 | 1 | 1 | 2 | | | 1 | 1 | 2 | | 1 | 1 | 2 | | | |
| 4 Respondents: Lyal White - Christelle Marais - Coen van Wyk - Dr Francois van Dyk | | | | | | | | | | | | | | | | | | | | | |
| 19 | Regulatory / Legislative Changes | | | | | 2 | | | 1 | 1 | | | | 2 | | | | | 2 | | |
| 2 Respondent: Nathi Mhlongo - Bheki Gutshwa | | | | | | | | | | | | | | | | | | | | | |
| 20 | Insufficient Electricity Supply | | | 3 | | 1 | | 1 | 2 | 1 | | | 1 | 3 | | | | 1 | 2 | 1 | |
| 4 Respondents: Chris Gower - Les Carlo - Sy Gourrah - Vally Padayachee | | | | | | | | | | | | | | | | | | | | | |
| 21 | Lack of Innovation | | | 1 | | 2 | 1 | | | 2 | | | | 3 | | | | | 1 | 2 | |
| 3 Respondents: Terence Singh - Davis Cook - Mdu Zakwe | | | | | | | | | | | | | | | | | | | | | |
| 22 | Escalation in Large-Scale Cyber Attacks | | | 2 | 1 | 1 | | | 2 | 2 | | | 1 | 3 | | | | | 1 | 3 | |
| 4 Respondents: Anne Reed - Edwin Mpofu - Matome Bopape - Mdu Zakwe | | | | | | | | | | | | | | | | | | | | | |
| 23 | Government Policy Changes | | | | 2 | 1 | | | | 3 | | 1 | 2 | | | | | | | 3 | |
| 3 Respondents: Bheki Gutshwa - Sheralee Morland - Nathi Mhlongo | | | | | | | | | | | | | | | | | | | | | |
| 24 | Critical Information Infrastructure Breakdown | | | 1 | 3 | | | | 1 | 3 | | | 3 | 1 | | | | | 1 | 3 | |
| 4 Respondents: Malebu Makgalemla - Hannes Grey - Mdu Zakwe - Anne Reed | | | | | | | | | | | | | | | | | | | | | |

Table 3: Summary of SME Rating and Selection Feedback

| No. | Risk Name | Industries most affected if the risk materialises | | | | | | | | | | | | | Global trends that will have a major impact on the risk going forward | | | | | | | | | | | | | |
|-----|---|---|--------------------------------|--------------------|-----------------------------|-------------------------------|-------------------------|----------------|---------------|--------------------------------------|-------------|-----------|------------|--------|---|----------------|---------------------------|--|--------------------------------------|--------------------------|----------------------------|----------------------------|-------------------------|-----------------|--------------|---------------------------------------|--|---|
| | | Professional Services | Government and Public Services | Financial Services | Energy, Water and Utilities | Communications and Technology | Transport and Logistics | Petrochemicals | Manufacturing | Mining, Engineering and Construction | Hospitality | Education | Healthcare | Retail | Ageing population | Climate change | Environmental degradation | Growing middle class in emerging economies | Increasing polarization of societies | Rise of chronic diseases | Rise of hyper connectivity | Rising geographic mobility | Rising income disparity | Shifts in power | Urbanisation | Weakening of international governance | Increasing national sentiment | |
| 1 | Increasing corruption | 3 | 4 | 2 | 4 | 2 | 3 | 2 | 3 | 4 | 3 | 3 | 3 | 2 | | 1 | 1 | 2 | 1 | 1 | | 1 | 3 | 4 | 1 | 1 | 3 | 4 Respondents: Kris Dobie - Kevin Malunga - Terry Booysen - Chandu Kashiram |
| 2 | Water Crises | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | | 3 | 1 | 2 | 1 | | | | 2 | 1 | 2 | 1 | 1 | 3 Respondents: Ingrid Cawood - Fred Goede - Clémence McNulty | |
| 3 | Structurally High Unemployment / Underemployment | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 1 | | | 1 | 3 | | | 1 | 3 | 1 | 2 | | | 3 Respondents: James Hall - Allan Tumbo - Dr Mark Bussin | |
| 4 | Droughts in Sub-Saharan Africa | | 1 | 1 | 2 | | | | 1 | | | | 1 | | 2 | 1 | | | | | | | | | | | 2 Respondents: Fred Goede - Ingrid Cawood | |
| 5 | Lack of Leadership | | 2 | | | | | | | | | | | | | | 1 | | | | | 1 | 1 | 1 | | 1 | 2 Respondents: Ernest Boateng - Terence Singh | |
| 6 | Fiscal Crisis / Credit Rating Downgrades | | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | | | | | 1 | 1 | | | 2 | 2 Respondents: Professor Andre Roux - Nicky Weimar | |
| 7 | Economic Slowdown or Recession | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | 1 | 1 | | 1 | 2 | 3 Respondents: Nicky Weimar - Professor Andre Roux - Dr Francois van Dyk | |
| 8 | Increasing Strike Action | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | | | 1 | 2 | | | 1 | 2 | 1 | 1 | 1 | | 2 Respondents: Nick Piper - Zanele Hlophe/Haroun Docrat | |
| 9 | Profound Political and Social Instability | 2 | 5 | 2 | 4 | 3 | 2 | 3 | 3 | 4 | 1 | 5 | 4 | 1 | | 2 | 1 | 2 | 4 | 1 | | | 5 | 3 | 3 | 1 | 2 | 5 Respondents: Raeesah Cachalia - Chandu Kashiram - Gabrielle Reed - Ryan Cummings - Trevor Channing |
| 10 | Governance Failure | 4 | 6 | 4 | 5 | 4 | 4 | 4 | 5 | 5 | 3 | 6 | 4 | 3 | 1 | 3 | 4 | 1 | 4 | | 1 | | 5 | 6 | 1 | 5 | 3 | 6 Respondents: Coen van Wyk - Michael Judin - Parmi Natesan - Ryan Cummings - Walter Ehrlich - Terry Booysen |
| 11 | Exchange Rate Fluctuations | | 1 | 2 | | 1 | 1 | 1 | 2 | 2 | 2 | | 1 | 1 | 1 | | 1 | 1 | | | 1 | 1 | 2 | | | 2 | 3 Respondents: Nicky Weimar - Professor Andre Roux - Dr Francois van Dyk | |
| 12 | Severe Income Disparity | 3 | 4 | 4 | 4 | 3 | 4 | 4 | 5 | 5 | 3 | 5 | 4 | 4 | 1 | 1 | 2 | 4 | 3 | 1 | 2 | 3 | 4 | 4 | 5 | 2 | 6 Respondents: James Hall - Chandu Kashiram - Querida Saal - Professor Andre Roux - Lindiwe South African Reward Association - Trevor Channing | |
| 13 | Skills Shortage | 3 | 4 | 3 | 2 | 3 | 3 | 2 | 2 | 4 | 2 | 4 | 4 | 2 | 3 | 1 | 1 | 2 | 3 | 2 | 2 | 3 | 4 | 3 | 3 | 1 | 1 | 4 Respondents: Jody Cedras - SAQA - Dr Mark Bussin - Dr Whitey Van Der Linde |
| 14 | Commodity Price Fluctuations | 1 | 3 | 2 | 3 | 1 | 4 | 2 | 4 | 7 | 1 | 2 | 2 | 1 | 1 | 4 | 2 | 4 | 4 | | 1 | | 2 | 4 | 4 | 2 | 2 | 7 Respondents: Nicky Weimar - Mark Robins - Professor Andre Roux - Ogi Williams - Lyal White - Reshma Ramkumar - Tap Van Der Berg |
| 15 | Education and Skills Development | 4 | 4 | 5 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 4 | 3 | | 1 | | 5 | 2 | 2 | 1 | 5 | 2 | 1 | 1 | 1 | 5 Respondents: Peter Bosch - Jody Cedras - Claudelle Von Ecke - Dr Whitey Van Der Linde - Reshma Ramkumar | |
| 16 | Major Escalation in Organised Crime and Illicit Trade | 2 | 4 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | | 1 | 1 | 1 | | 2 | 1 | 3 | | 2 | 3 | | 4 Respondents: Christelle Marais - Gabrielle Reed - Raeesah Cachalia - Chris Gower | |
| 17 | Failure / Shortfall of Critical Infrastructure | 3 | 6 | 3 | 5 | 4 | 6 | 4 | 4 | 5 | 2 | 2 | 2 | 2 | 2 | 1 | | 2 | 2 | | 2 | 3 | 2 | 3 | 4 | | 6 Respondents: Dikeledi Mnyandu - Lyal White - Sy Gourrah - Thabile Nyaba - Ogi Williams - Thulani Mkhungo | |
| 18 | Brexit Repercussions | 1 | | 2 | | 2 | 2 | 3 | 2 | | 2 | | | 1 | 2 | | 1 | 3 | 3 | | 2 | 1 | 3 | 3 | 1 | 2 | 2 | 4 Respondents: Lyal White - Christelle Marais - Coen van Wyk - Dr Francois van Dyk |
| 19 | Regulatory / Legislative Changes | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | | 2 | 1 | | 1 | 2 | | | 1 | 2 Respondent: Nathi Mhlongo - Bheki Gutshwa | |
| 20 | Insufficient Electricity Supply | 1 | 2 | 1 | 3 | 3 | 2 | 1 | 4 | 3 | 1 | 1 | 1 | 2 | | 3 | 2 | | 2 | 1 | | 1 | 2 | 3 | 3 | 1 | 2 | 4 Respondents: Chris Gower - Les Carlo - Sy Gourrah - Vally Padayachee |
| 21 | Lack of Innovation | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | | 2 | 2 | 1 | 1 | 2 | | 2 | | 2 | | | 3 Respondents: Terence Singh - Davis Cook - Mdu Zakwe | |
| 22 | Escalation in Large-Scale Cyber Attacks | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | | | 2 | 2 | | 3 | 1 | 2 | 2 | 3 | 2 | | 4 Respondents: Anne Reed - Edwin Mpfu - Matome Bopape - Mdu Zakwe | |
| 23 | Government Policy Changes | 1 | 3 | 1 | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 3 | 3 | 1 | 1 | 2 | 2 | 1 | 3 | 2 | 2 | 2 | 3 | 1 | 2 | 2 | 2 | 3 Respondents: Bheki Gutshwa - Sheralee Morland - Nathi Mhlongo |
| 24 | Critical Information Infrastructure Breakdown | | 2 | 3 | 3 | 4 | 2 | 1 | 1 | 1 | 2 | | 2 | | 2 | 1 | 1 | 1 | | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 4 Respondents: Malebu Makgalemla - Hannes Grey - Mdu Zakwe - Anne Reed | |

Table 3: Summary of SME Rating and Selection Feedback



► Increasing
Corruption

2.1

Increasing Corruption

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. Should corruption increase – specifically at the political level – it would cause political instability and weak government institutions. This translates to lack of clear policy direction and weak implementation, as well as a low trust environment that would make achievement of the NDP objectives highly unlikely.

Q. Give three primary causes of this risk.

*A. Ethical leadership vacuum and lack of commitment to fight corruption
Inequality and lack of opportunities
Greed*

Q. What are the consequences if this risk materialises?

*A. Political instability
Higher cost of service delivery
Lower standards of service delivery
Politicising of, and rendering key state institutions dysfunctional*

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

*A. Lack of political will
Dysfunctionality of key state institutions
Lack of active engagement
Party loyalty trumping corruption concerns
Proportional representation system undermines accountability to citizens*

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

*A. Industry partners joining forces against corruption (Collective action)
Promotion of industry ethical standards*

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

*A. Committed ethical leadership
Restoring the integrity of key institutions*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Growing middle class in emerging economies
Increasing polarization of societies
Rising income disparity
Shifts in power
Weakening of international governance
Increasing national sentiment*



Kris Dobie
Manager, Organisational Ethics
Ethics Institute

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

Impact Scale:

D. High



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

B. Unlikely



Increasing Corruption

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. Chapter 14 of the NDP is entitled 'Promoting Accountability and Fighting Corruption. The NDP is premised on an ethical, corruption free society and posits a direct link between corruption and the undermining of the rule of law and socio-economic transformation. A culture where blatant theft from the fiscus or where the private sector lacks integrity can only destroy every sector of the society, in particular the rule of law and the economy'

Q. Give three primary causes of this risk.

*A. Absence of consequences for wrongdoing/corrupt behaviour
Critical institutions not optimally performing their mandate
Greater focus on public sector corruption as opposed to both private and public sector corruption*

Q. What are the consequences if this risk materialises?

*A. Decline of credibility of state institutions
Economic decline/ rating downgrades
Lowered quality of life*

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

*A. Government and Public Services
Energy, Water and Utilities
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare*

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

A. Lack of consequences for wrongdoing and corruption / bribery having infiltrated the most basic tenets of national life. Those who receive ill-gotten gains through undeserved tenders get to keep them.

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

A. Increased vigilance from the private sector, the judiciary and other state institutions. This would include meting out strong disciplinary measures including stronger asset forfeiture in the case of those who have received ill-gotten gains and corrupt officials from both the private and public sectors.

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

A. Increased vigilance from the private sector, the judiciary and other state institutions. This would include meting out strong disciplinary measures including stronger asset forfeiture in the case of those who have received ill-gotten gains and corrupt officials from both the private and public sector.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Rising income disparity
Shifts in power
Increasing national sentiment*



Adv Kevin Sifiso Malunga

Deputy Public Protector of South Africa

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Increasing Corruption

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. With the amount of dubious talk that South Africa has become the 'corruption capital' in the world, and with a President accused of over 700 counts of alleged corruption; the country and its leading ANC political party has lost much of its 'Madiba magic'.

There has been a rapid downhill spiral in South Africa's previous much enjoyed, glory of a peaceful democratic election and transition since 1994. Today the country and its citizens are counting the costs of corruption, as opposed to the promises of equality amongst the other freedoms espoused in the Constitution and the Bill of Rights. This has led to a general decay across most areas of civil society and business sectors, public services and even attitudes across cultural lines.

All the core elements contained in the National Development Plan (NDP), which speak to providing all South African citizens a decent standard of living, are essentially seriously undermined by the continuous, unprecedented levels of corruption currently being unearthed one case after the next.

By simply citing one case; the now infamous 'Nenegate' affair which occurred in December 2015 -- which cost the country over R500 billion -- begs the question how this money could have positively contributed to many of the NDP's goals? But Nenegate is just one example, there are many more cases where corruption has been cited as the underlying cause where taxpayer's money has been (and continues to be) haemorrhaged and there is still no end in sight of this evil scourge (e.g. SABC, SAA, PRASA, Eskom, etc.).

"State capture", as articulated by the outgoing Public Protector, Adv. Thuli Madonsela in her final report which was released on 02 November 2016, fingers a number of the political elite who have allegedly personally and financially benefitted from the state's coffers. Whilst much investigation will still be required to understand the extent of these initial findings, there is no doubt that governance processes and procedures were broken in order for these events to have occurred. Indeed with this in mind, countless risks emerge and such which affect not only the moral fabric of our society, but also the economic well-being of the country and all its citizens.

The adage that fraud and corruption do not physically hurt people because it is mostly a non-violent crime is simply untrue; people's lives are affected for example when state money has been pilfered and there is none left for the elements required to achieve a decent standard of living - as espoused in the NDP - which include:

- housing, water, electricity and sanitation;
- quality education and skills development;
- safety and security;
- quality health care;
- social protection;
- clean environment, and
- adequate nutrition.

Whilst it is very difficult to accurately state how much corruption has cost South Africa, experts seem to think it could be as much as 20% of the annual procurement budget which tallies to approximately R25 billion a year (circa R550bn since 1994 to 2016). This is a great deal of money!

Let us not forget the immortal words of Lord Acton, a late 19th century British historian who said, "Power tends to corrupt; and absolute power corrupts absolutely".

Q. Give three primary causes of this risk.

- A. Immoral leadership
- Weak controls
- Little consequences



Terry Booyesen

Co-founder and Executive Director
CGF

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Q. What are the consequences if this risk materialises?

- A. Further corruption, becoming engrained in and across government and various industries (fuelling nepotism/cronyism thereby making NDP more difficult to attain)
Increased business and personal taxes to fund NDP
More desperate campaigns to attract foreign investment, ultimately to complement/fund NDP objectives
Negatively impacted society, especially upon the poorest of poor
Negative impact upon SA's reputation and credibility
Negative impact on cost of raising capital (including FDI) and servicing national debt

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

- A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail

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

- A. Insufficient ethical leadership
Lack of accountability
Vulnerable processes and controls
Insufficient consequences
Poor disclosure
Few case studies exposing perpetrators

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

- A. Vigilant hiring and / or appointment processes
Training and awareness
Increased policing
Holding perpetrators to account
Dealing swiftly with perpetrators

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

- A. Placing credible leaders into positions of trust
Removing under-performing leaders
Holding the country accountable to international bodies and / or agencies (e.g. legal, economic and humanitarian)
Harsh and swift sanctions against perpetrators

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

- A. Growing middle class in emerging economies
Increasing polarization of societies
Rise of chronic diseases
Rising geographic mobility
Rising income disparity
Shifts in power
Urbanisation
Increasing national sentiment



Increasing Corruption

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. NDP goals are compromised by corruption since wealth moves to a few people. Poverty alleviation, education, health and service delivery suffer.

Q. Give three primary causes of this risk.

*A. Lack of ethical leadership in both government and business
Lack of consequences
Abuse of the judicial system and executive powers*

Q. What are the consequences if this risk materialises?

*A. Economic downgrades leading to weaker currency, reduced investment and poor economic growth
Increasing poverty
Increased income disparity
Lack of service delivery
Increased social unrest*

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

*A. Professional Services
Government and Public Services
Energy, Water and Utilities
Transport and Logistics
Mining, Engineering and Construction*

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

*A. Lack of consequences of corrupt behaviours
Flawed democratic structures that relies on ethical leadership to execute executive powers
Abuse of judicial system*

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

*A. Ethical Leadership
Enforce internal behaviour codes and /or legislated consequences for corrupt behaviour
Increased resources in the Ethics and Compliance departments, reporting directly to the CEO*

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

*A. Ethical Leadership
Revisit executive powers to further separate "Church and State". The President cannot make unilateral decisions to appoint e.g. Public Protector, Minister of Finance
Enforce consequences of corrupt behaviour at all levels
Use technology to uncover supply chain (tender fraud)
Enforce the PSA and PFMA
Remove leadership responsible for poor AG Office reports/findings. E.g. PRASA losing R14bn*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Climate change
Environmental degradation
Shifts in power*



Chandu Kashiram
Consultant

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain





Water Crises

2.2

Water Crises

Q. Give three primary causes of risk.

- A. Aging infrastructure
- Poor operations and maintenance
- Climate change and drought

Q. What are the consequences if this risk materialises?

- A. Loss of life (large pipe bursts can kill)
- Loss of income

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

- A. Energy, Water and Utilities
- Manufacturing

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

- A. Financial – maintenance requires money
- Political – funds are not prioritised towards infrastructure projects, policies are not developed to ensure correct maintenance and operation of infrastructure

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

- A. Proper planning, maintenance and replacement programmes

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

- A. Reactive by the Department of Water and Sanitation

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

- A. Climate change
- Rising income disparity
- Shifts in power
- Urbanisation
- Increasing national sentiment



Umgeni Water

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

Impact Scale:
C. Moderate

Likelihood Scale:
B. Unlikely

Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:
C. Moderate

Likelihood Scale:
B. Unlikely

Water Crises

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. Water shortages can stymie economic growth if not addressed in time.

Q. Give three primary causes of this risk.

*A. Climate change
Increasing water demand by users
Infrastructure maintenance (lack of) and losses*

Q. What are the consequences if this risk materialises?

*A. Political instability
Higher cost of service delivery
Lower standards of service delivery
Politicising of, and rendering key state institutions dysfunctional*

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

A. Energy, Water and Utilities

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

*A. Economic slow down
Social awareness lacking*

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

*A. Water conservation
Technology*

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

A. Infrastructure maintenance

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Growing middle class in emerging economies
Increasing polarization of societies
Rising income disparity
Shifts in power
Weakening of international governance
Increasing national sentiment*



Fred Goede

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

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



Water Crises

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. The NDP aims to eliminate poverty and reduce inequality by 2030, with specific objectives around fair and equitable access to water defined in the plan. It is undeniable that water is core to sustainable socio-economic development, and as recognised by the UN's Sustainable Development Goal # 6 which calls for access to sanitation and water for all – "water scarcity, poor water quality and inadequate sanitation negatively impact food security, livelihood choices and educational opportunities for poor families across the world". This is reflected in the concept of the "water, energy and food nexus" whereby these three areas are inextricably linked with actions in one area more often than not having impacts in one or both of the others. Without access to water, achieving the aims of the NDP will be challenging.

Q. Give three primary causes of this risk.

A. South Africa is a semi-arid and water-scarce country, where mean annual rainfall is half the world average (490mm). In the last two to three years, the situation has been exacerbated as South Africa has been suffering from a drought, with 2015 noted as the driest since rainfall records began in 1904. Whilst a recovery from drought levels can be expected (though it will likely take some time), the lack of investment in water infrastructure and focus on driving water efficiencies in industry and agriculture will remain.

Q. What are the consequences if this risk materialises?

A. In a certain sense, this risk is already materialising with many impacts having been recorded in the last year from over R500m reprioritised by the Department of Water and Sanitation (DWS) to mitigate drought-related water impacts, significant impacts to the agricultural sector, water restrictions applying across a wide range of municipalities and above inflation tariff increases for water. Based on DWS reconciliation studies (2013), 30% of municipalities in South Africa are already facing shortages with almost 30% to face water resource shortages in next 10 years.

From a business point of view specifically, there are a wide range of potential consequences. The most prominent currently seems to be around business continuity with loss of water supply impacting ability to operate (shutting down offices/production) and increased water tariffs leading to higher costs of production. Water issues can also impact supply chains (e.g. higher costs for commodities, disruptions to supply due to extreme weather events such as floods/storms), reputation and stakeholder relationships when there is competition for a scarce shared resource, and lead to regulatory risks around compliance with extended periods to get licenses/permits.

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

- A. Professional Services
- Government and Public Services
- Financial Services
- Energy, Water and Utilities
- Communications and Technology
- Transport and Logistics
- Petrochemicals
- Manufacturing
- Mining, Engineering and Construction
- Hospitality
- Education
- Healthcare
- Retail

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

A. Water is a shared resource and there is global recognition that "solving the water challenge" requires coordination across multiple stakeholders at varying levels (national, catchment/basin and site level). This is not a comfortable or typical space for a lot of corporates. In addition, the "true costs" of water from costs of abstraction, treatment, monitoring, or community liaisons are often not recognised – this means that making the case for innovative solutions to the water challenge is difficult.



Clémence McNulty
Principal Consultant
ERM Southern Africa

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

D. Likely



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

*A. Industry needs to ensure good information to support good decision making – understanding baseline consumption, risks and opportunities for improving performance and using systematic management systems to drive performance improvements
Partnerships
Innovation/good practice sharing*

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

A. In September 2016, nine Water Management Areas (WMAs) were declared in accordance with the National Water Resource Strategy 2 (NWRS2, 2014). These nine WMAs were consolidated from an initial 19 WMAs under the first NWRS. This should streamline and facilitate improved management at catchment level. However, clarity on other items such as the proposed Norms and standards for water tariffs published at the end of 2015 and proposed infrastructure investments in coming years.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Climate change
Environmental degradation
Growing middle class in emerging economies
Increasing polarization of societies
Rising income disparity
Urbanisation
Weakening of international governance*



▶ Structurally
High Unemployment/
Underemployment

2.3

Structurally High Unemployment/Underemployment

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. Unemployment has been built into an unequal economic and class system, which requires fundamental change for the NDP to move forward to achieve its objectives.

Q. Give three primary causes of this risk.

*A. Lack of training and education
Low acceleration of black empowerment
Inept government economic policy*

Q. What are the consequences if this risk materialises?

A. Higher crime, and social unrest manifested by protests. Unemployed youth are present at riots when these occur although the cause of the rioting may have nothing to do with youth unemployment.

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

*A. Government leadership ineptness
Conservative business community
Lack of original solutions tailored to the South African situation*

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

*A. Instil awareness in business community of its need to reform
Accelerate skills training and management reform*

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

A. Put in place a competent government

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Growing middle class in emerging economies
Increasing polarization of societies
Rising income disparity
Shifts in power
Urbanisation*



James Hall
Consultant
In On Africa

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

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



Structurally High Unemployment/Underemployment

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. Unemployment presents a key risk in terms of reaching not only the goals of the NDP but also the society that the NDP aims to build. In reality unemployment casts individuals, households, and communities in a trap, whereby they have to find other means of income to sustain their livelihoods. Unfortunately, opportunities for other streams of income are few and this possess a great threat.

Q. Give three primary causes of this risk.

*A. Macro-economic policies
Lack of job creation
Lack of meritocracy*

Q. What are the consequences if this risk materialises?

A. A large proportion of the society will be unemployed, and the levels of poverty and crime will increase as a result.

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

*A. Government and Public Services
Financial Services
Energy, Water and Utilities
Hospitality
Healthcare*

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

*A. Prioritisation of the youth
Systemic faults in the education and employment system*

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

A. Creating more entry level opportunities

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

A. Promoting entrepreneurship in the country

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Increasing polarization of societies
Rising geographic mobility
Rising income disparity
Urbanisation*



Allan Tumbo
Researcher
SAHRC

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

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



Structurally High Unemployment/Underemployment

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. 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.

*A. Ill-conceived regulatory environment
Too many blunders in the education space
No GDP growth*

Q. What are the consequences if this risk materialises?

*A. No growth
Poor education
Politicians acting with impunity for self-gain
Skills flight*

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

*A. Education
Healthcare*

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

*A. Poor education
Ill-conceived regulatory environment
Cadre deployment exacerbating incompetence
Slow GDP growth
No political will
These all lead to lower international investment*

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

*A. Create intern positions at a 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 South Africa*

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

*A. 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 South Africa*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Increasing polarization of societies
Rising income disparity*



Dr Mark Bussin

Chairperson
21st Century

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain





▶ Droughts in
Sub-Saharan Africa

2.4

Droughts in Sub-Saharan 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?

A. Droughts will stymie economic growth in sub-Saharan Africa

Q. Give three primary causes of this risk.

A. Climate Change
Water infrastructure growth is lagging population growth
Land degradation

Q. What are the consequences if this risk materialises?

A. Food security
Economic decline
Social instability

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

A. Government and Public Services
Energy, Water and Utilities

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

A. Economic slow down
Education lacking

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

A. Drought tolerant crops

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

A. National Framework on Climate Services

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. Climate change
Environmental degradation



Fred Goede

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

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Droughts in Sub-Saharan Africa

Q. Give three primary causes of this risk.

- A. Drought brought on by El Nino or simply changing weather patterns
- Insufficient infrastructure to accommodate drought conditions (e.g. dams not constructed in time and the resource therefore not sufficient to meet required return periods)
- Incorrectly managed infrastructure exacerbating drought conditions (e.g. too great a release made from dams, restrictions not implemented in a timely manner)

Q. What are the consequences if this risk materialises?

- A. Loss of income
- Loss of livelihood (farming practices affected)
- Local economy affected
- Possible loss of life

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

- A. Financial Services
- Energy, Water and Utilities
- Manufacturing
- Retail

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

- A. Financial. Water resource infrastructure comes at a high price
- Reluctance to climate change mitigation
- Lack of capacity within municipalities to manage drought situations

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

- A. Management of water resources
- Water resources developed to mitigate drought impacts
- Restrictions implemented to mitigate drought responses

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

- A. Monitoring and management of water resources from the Department of Water and Sanitation

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

- A. Climate change



Umgeni Water

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

Impact Scale:
D. High



Likelihood Scale:
C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:
D. High



Likelihood Scale:
B. Unlikely





▶ Lack of
Leadership

2.5

Lack of Leadership

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 leadership will result in difficulty in achieving the NDP objectives of eradication poverty, reducing inequality and creating more employment opportunities.

Q. Give three primary causes of this risk.

*A. Widespread corruption
Misguided policies
Non-delivery of services*

Q. What are the consequences if this risk materialises?

*A. High crime rate
Poorly educated and semi-skilled youth, as well as joblessness*

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

A. Government and Public Services

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

*A. Endemic corruption
Lack of government policy direction
Weak government institutions*

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

A. Create awareness of the risk impact on industry growth and adopt stringent policies to ensure that sound leadership principles become part of industry norms.

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

A. Strengthen national institutions to address issues of leadership and corruption.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Rising income disparity
Shifts in power
Urbanisation
Increasing national sentiment*

South African Institute for Entrepreneurship

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

Impact Scale:
C. Moderate

Likelihood Scale:
D. Likely

Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:
D. High

Likelihood Scale:
E. Almost Certain

Lack of Leadership

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. It is the most crucial aspect for delivering on the NDP objectives. The current lack of leadership is directly responsible for the current precarious state of affairs that South Africa finds itself in.

Q. Give three primary causes of this risk.

A. Corruption. A strong system of patronage that prevents the appointment of skilled leaders. An outdated and irrelevant political system that vacillates between rules of a credible liberation movement but irrelevant to a modern democracy. A societal view that leadership is about self-serving individuals rather than society serving individuals.

Q. What are the consequences if this risk materialises?

A. It already has materialised. Corruption, poor country prosperity measures, deterioration of services, poor business confidence, low society morale.

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

A. Government and Public Services

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

A. A strong and entrenched system of patronage within government and SOEs.

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

A. Strong industry bodies that engage and challenge leadership.

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

A. Political revolution and a strong active citizenry.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. Increasing polarization of societies.



Terence Singh

Director
Ruhi Consulting

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain





▶ Fiscal Crisis/
Credit Rating
Downgrades

2.6

Fiscal Crisis / Credit Rating Downgrades

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. *This is a major risk.*

Q. Give three primary causes of this risk.

A. *Low growth environment
Rapid recent growth in government debt (often to finance current spending)
Political in-fighting*

Q. What are the consequences if this risk materialises?

A. *More difficult and more expensive to borrow money (government)
Prime overdraft rises
Tarnished reputation*

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

A. *Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Education
Healthcare*

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

A. *Low growth environment (low productivity)
Political pressure on fiscus for "populist spending"
Inadequate domestic savings*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. *Shifts in power
Increasing national sentiment*



Professor Andre Roux

Head: Future Studies Programme
University of Stellenbosch Business School

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

Impact Scale:

E. Critical



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



Fiscal Crisis / Credit Rating Downgrades

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. It was the preoccupation of 2016. With all three rating agencies with South African debt on negative outlook, the risk of a downgrade is still high over next 12 months.

Q. Give three primary causes of this risk.

*A. Political turmoil – rising corruption, state capture, and lack of accountability of the political leadership. Ruling party's elective conference in December 2017.
Fiscal strain - with almost no economic growth the pressure to reduce deficit and contain debt will increase as tax revenue disappoints.
No meaningful progress with structural reforms and faltering economic growth.*

Q. What are the consequences if this risk materialises?

A. Trigger renewed rand crisis, as foreign funding leaves, raise the cost of borrowing (interest rates) and fuel domestic inflation, undermine economic growth.

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

*A. Government and Public Services
Financial Services
Manufacturing
Mining, Engineering and Construction
Retail*

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

*A. Ineffective government – factionalism in the ruling party
Rising corruption – tremendous amount of wasteful spending at all levels of government
Financial bankrupt and poorly managed state-owned enterprises
Run-away civil service employment and pay.
Poor economic growth*

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

*A. Limit foreign borrowing, especially short-term
Diversify earnings to include other jurisdictions and currencies
Improve efficiencies – cut costs and improve productivity without sacrificing long-term sustainability and flexibility*

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

A. Address rating agencies' concerns in a material way over the next 12 months – political infighting, political leadership, policy certainty, structural reforms from SOE to labour market reforms, improve energy stability, reduce production costs for the economy as a whole and build business confidence.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Ageing population
Climate change
Increasing polarization of societies
Rising income disparity
Increasing national sentiment*



Nicky Weimar
Senior Economist
Nedbank

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate





▶ Economic Slowdown or Recession

2.7

Economic Slowdown or Recession

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. We are currently in an economic slowdown based on the South African Reserve Bank's official definition and classification. The worst of the downturn is probably over. However, the economy remains very fragile. Consequently, the risk of renewed setbacks remains high.

Q. Give three primary causes of this risk.

*A. Increased political turmoil, fuelling rand collapse, higher inflation and rising interest rates
Sovereign risk rating downgrade to junk/speculative status by two or more rating agencies
Global growth setback and relapse in international commodity prices*

Q. What are the consequences if this risk materialises?

*A. Financial instability – weaker rand, rising inflation, higher interest rates
Stagnant or shrinking economy – falling fixed investment, increased job losses, weaker overall demand
Greater social and political instability*

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

*A. Energy, Water and Utilities
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction*

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

*A. Lack of effective political leadership
Lack of clear and complementary economic policies
Lack of vision and effective planning in government's investment strategies
Inefficient and financial constrained state-owned enterprises
Lack of creative solutions to social problems
Lack of business confidence
Poor industrial relations
Limited competitions in many industries
High cost of production in most industries*

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

*A. Business has to improve efficiencies, cut costs without sacrificing long-term sustainability
Business also needs to be more adventurous, looking for new markets*

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

*A. Resolve leadership concerns
Improve governance and transparency
Improve accountability to the public/ restore public trust
Reform state-owned enterprises
Establish energy certainty
Establish economic policy certainty
Build relationship between government, business and labour
Accelerate labour market reform towards a system that is flexible, adaptable to changing economic and financial realities, and where financial rewards align with productivity gains*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Ageing population
Climate change
Increasing polarization of societies
Rising income disparity
Increasing national sentiment*



Nicky Weimar
Senior Economist
Nedbank

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



Economic Slowdown or Recession

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. By its very definition, it is highly relevant.

Q. Give three primary causes of this risk.

*A. Global sluggishness and uncertainty
Very tepid expansion in total factor productivity
Political and policy uncertainty*

Q. What are the consequences if this risk materialises?

*A. NDP objectives not achieved
Living standards stagnate
Poverty remains persistently high
Chronically high unemployment persists
Inequality becomes further entrenched
Social unrest*

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

*A. Inadequate/ irrelevant education (70%+ schools are effectively dysfunctional)
Labour market and other regulatory barriers
Nation is living beyond its means (inadequate savings to finance investment)*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Growing middle class in emerging economies
Shifts in power
Increasing national sentiment*



Professor Andre Roux

Head: Future Studies Programme
University of Stellenbosch Business School

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



Economic Slowdown or

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. Given a recession, the achievement of the NDPs' objectives will be materially impacted and/or influenced.
The impact of a recession and/or material economic slowdown will certainly influence achieving the NDPs' objectives within the set timeframes.*

Q. Give three primary causes of this risk.

*A. Political risks and or instability
Fiscal issues and or pressure
Potential credit rating downgrade*

Q. What are the consequences if this risk materialises?

*A. Given the current economic conditions/climate and the high potential risk of a credit rating downgrade to non-investment grade, a consequence of a recession will result in a long sustained period within a recession state (minimum of 6 years)
Availability of capital will decrease, and the cost of capital and or funding will increase*

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

A. Financial Services

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

*A. Political risks and or issues
Fiscal state
Corruption at governmental level and governmental authorities – these influence business confidence, and fuel political risks as well as fiscal state*

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

*A. Gaining control over SOEs.
Private sector collaboration with government – this is, however, impacted by governments willingness to change in order to improve current state of affairs.*

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

*A. Gaining control over SOEs
Increasing Political stability
Lower unemployment*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. Weakening of international governance



Dr Francois van Dyk
Senior Specialist Risk Consultant
Marsh

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

Impact Scale:

E. Critical



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

D. Likely





► Increasing
Strike Action

2.8

Increasing Strike Action

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. 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; this is particularly the case when additional employment has a negative effect on those already employed within a particular industry or sector.

Q. Give three primary causes of this risk.

*A. 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?

A. 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?

*A. Government and Public Services
Manufacturing
Mining, Engineering and Construction*

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

*A. 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 an industry level?

*A. Application of industry-specific minimum wages
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 a National level?

A. National coordinating structures need to assist and compliment those on the industry level. This includes the selective use of legislation to drive salary improvements, while de-politicising labour unions.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Increasing polarization of societies
Rising income disparity*



Nick Piper

Director
Signal Risk

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

Impact Scale:

C. Moderate



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

C. Moderate



Likelihood Scale:

E. Almost Certain



Increasing Strike Action

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. 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 financial year.

Q. Give three primary causes of this risk.

*A. High demands of wage increases attributed to cost of living
Decline in union densities giving rise to competition for members that also inflates labour demand
Industrial actions/strikes are regulated in terms of law*

Q. What are the consequences if this risk materialises?

*A. Low productivity
Loss of income leading to high household debts
Decline in economy which places pressure on the extended family support structure in a climate of high unemployment*

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

*A. An adversarial model of collective bargaining
Predominately single year agreements do not provide for growth and stability
Lack of training in negotiation skills, productivity bargaining or other innovations
Lack of ownership by stakeholders to work towards a common vision or outcome*

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

*A. Collective bargaining improvement processes customised for a particular sector or industry
Negotiation 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*

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

*A. Prioritise collective bargaining challenges at NEDLAC
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. Which of the following global trends do you think will have a major impact on the risk going forward?

| | |
|--|--|
| <i>A. Growing middle class in emerging economies</i> | <i>Shifts in power</i> |
| <i>Increasing polarization of societies</i> | <i>Urbanisation</i> |
| <i>Rising geographic mobility</i> | <i>Weakening of international governance</i> |
| <i>Rising income disparity</i> | |



Zanele Hlophe
Chief Audit Executive
CCMA



Haroun Docrat
National Senior Commissioner
CCMA

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

Impact Scale:
D. High



Likelihood Scale:
E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:
D. High



Likelihood Scale:
E. Almost Certain





▶ Profound
Political and
Social Instability

2.9

Profound Political and Social Instability

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. Political and social instability could prove to be a significant obstacle to achieving South Africa's NDP objectives.

Q. Give three primary causes of this risk.

*A. Political infighting and growing uncertainty within the ruling party.
A lack of accountability in relation to political leadership, giving rise to greater impunity and corruption.
Growing youth dissatisfaction due to socio-economic challenges.*

Q. What are the consequences if this risk materialises?

*A. A decline in investor confidence, leading to slower economic growth – GDP growth and the creation of sustainable employment opportunities would be particularly affected. Development prospects would also be detrimentally affected.
Government could risk losing domestic and international legitimacy if political and social instability cannot be contained.
Race and class relations in South Africa will become increasingly strained.
Increased strain on budgets at national and municipal levels if corruption is not adequately addressed. Such strain will in turn affect development and service delivery.
An increase in crime rates.*

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

*A. Government and Public Services
Education
Healthcare*

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

A. Political will and budget constraints (in relation to socio-economic instability).

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

A. Increased engagement and pressure on government to initiate reform.

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

*A. Increased government accountability and transparency
Increased dialogue between government and citizens to address concerns giving rise to social instability
Increased engagement and inclusivity of minorities, women and youth on political, social and economic concerns*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Increasing polarization of societies
Rising income disparity
Shifts in power
Urbanisation*



Raeesah Cachalia

Consultant
In On Africa

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Profound Political and Social Instability

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. Structural changes to the economy can be enabled by a Government that unfortunately is over-regulating key industries such as Mining and Small Businesses rather than enabling investment. At the same time transformation has been slow and therefore does require regulation to address social development.

This topic is critical to take our country forward.

Q. Give three primary causes of this risk.

*A. Lack of real transformation in business. previously disenfranchised majority
Increasing corruption in Government, enabled by business
Lack of enabling economic policy to support growth in investment*

Q. What are the consequences if this risk materialises?

*A. Further decline in economic growth
Decline in poverty alleviation
Increased expectations leading to increased social unrest*

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

*A. Government and Public Services
Energy, Water and Utilities
Communications and Technology
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Education
Healthcare*

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

*A. Lack of skills
Poor economic growth
Lack of service delivery*

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

*A. Real change in leadership that is serious about transformation
Executive remuneration linked to minimum wage to reduce the wage gap
Tackling corruption*

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

*A. Work together to tackle corruption
Continue with skills development
Reduce crime
Improved service delivery, specifically healthcare, education, basic services such as water, electricity, refuse removal etc.
Enabling policies to increase investment
Ethical leadership in both business and government*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Climate change
Increasing polarization of societies
Rising income disparity
Urbanisation
Increasing national sentiment*



Chandu Kashiram
Consultant

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Profound Political and Social Instability

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. It is first necessary to separate political instability from social instability. While each topic does present a risk to the achievement of the NDP, and they are inherently related, the manifestation of these risks can be vastly different.

In the context of democratic South Africa, the primary impact of political instability is likely to be policy paralysis or policy change. 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.

Secondly, let's assume that social instability takes the form of public demonstrations, although forms are manifold.

Sustained and disruptive campaigns targeting service delivery projects can result in operational delays, while industrial action in key economic areas can have profound effects on government revenue generation to finance large development projects.

Q. Give three primary causes of this risk.

A. Political instability:

- Poor government delivery, exacerbated by corruption
- Infighting in political parties
- Growing socio-economic grievances drive anti-government sentiment, which could increase the demand for government accountability, government action and potential government change

Social instability:

- Inequality
- Growing anti-government sentiment
- Worsening economic outlook

Q. What are the consequences if this risk materialises?

A. Political instability impacts government delivery through policy deficiency and poor implementation. Political uncertainty negatively impacts investor perceptions as well as the economic outlook for the country, which can curb available funding to back nationwide development drives.

The consequences of social instability are manifold. Operationally, public protests can disrupt operations through solidarity strike actions or logistical delays along key transport routes. More broadly, if sustained and widespread, social instability can encourage government to implement a security crackdown on dissent (although this is unlikely in South Africa). However, social instability can result in reduced confidence in the current administration, which could lead to cabinet shuffles or more severe leadership changes. Such developments increase political and policy uncertainty.

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

A. Professional Services

- Government and Public Services
- Financial Services
- Energy, Water and Utilities
- Communications and Technology
- Transport and Logistics
- Petrochemicals
- Manufacturing
- Mining, Engineering and Construction
- Education
- Healthcare



Gabrielle Reid

Lead Sub Saharan Africa Political and Country Analyst S-RM

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

Impact Scale:

D. High



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

C. Moderate



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

A. The primary barrier in solving these risks is the size of the tasks at hand. Reducing socioeconomic inequality, improving government service delivery and encouraging economic growth are not only large tasks but often the outcomes of which are not immediately felt or apparent.

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

A. Again, 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. What is the effective risk response to treating the risk on a National level?

A. 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. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Growing middle class in emerging economies
Rising income disparity*



Profound Political and Social Instability

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. Chronic social and political instability will significantly impact government's ability to meet its NDP objectives. The primary reason for this is that resources and strategies formulated to meet these goals by 2030 were created during a period in which South Africa experienced relative social and political stability and had a similar long-term trajectory. However, chronic social and political instability would disrupt governmental initiatives aimed at remedying socio-economic grievances over the long-term by absorbing resources and dramatically shifting the posts outlined in the NDP.

Q. Give three primary causes of this risk.

A. Unemployment
Maladministration
Inflation

Q. What are the consequences if this risk materialises?

A. Social instability has become a staple feature of South Africa's socio-political and economic environment with the trend increasing on a year-on-year basis. The phenomenon is being fuelled by income inequality, unemployment and poor service delivery which in part is rooted by maladministration by various structures of government. This has seen an increase in protests in South Africa which are increasing both in frequency and associated levels of violence, and marked by vandalism, criminality and disruptions to business and public services. The further the phenomenon is allowed to burgeon, the greater it will impact socio-economic stability and hinder the efficacy of mechanisms proposed to address it.

While South Africa has generally attained a level of political stability following its transition to a multiparty democracy, it appears that the country is facing a negative political outlook fomented by increasing factionalism within the ruling African National Congress, centred on the governance of President Jacob Zuma. This factionalism is currently playing out within government institutions, complicating their ability to carry out their mandated services to the public and thus increasing civil content. The political machinations are also impacting South Africa's presumed stability by external stakeholders which is also having adverse impacts on the South African economy which could further catalyse causal factors such as unemployment and income inequality over the short-to-medium term.

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

A. Government and Public Services
Energy, Water and Utilities
Mining, Engineering and Construction
Education

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

A. As with governance failure, barriers lie with institutions mandated to impose checks and balances on executive branches of government failing to undertake their policy prescriptions. External factors such as the recent drought and/or fluctuations in commodity prices and the wider global economy are all uncontrollable factors which impact inflation and concomitant social unrest.

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

A. The focus on an industry level remains on ensuring that regular assessments on the prevailing socio-political dynamic in South Africa is regularly ascertained as to ensure that industries can employ the necessary mechanisms to remain resilient to the impacts of social and political instability. Planning for worst case scenarios and reviewing longer term investments should be central to risk management considerations on both an organisation and industry level.

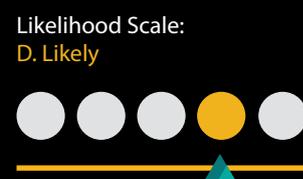
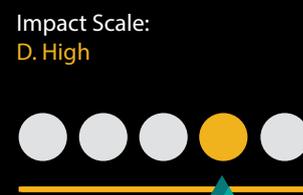


Ryan Cummings
Director
Signal Risk

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



Rate the Impact and Likelihood of the risk in the next 10 years.



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

A. On a national level, focus on transparent and accountable governance by empowered stakeholders is the best means of addressing both political and social stability.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. Climate change

Environmental degradation

Growing middle class in emerging economies

Increasing polarization of societies

Rise of chronic diseases

Rising income disparity

Shifts in power

Urbanisation

Weakening of international governance

Profound Political and Social Instability

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. It can lead to the collapse of the NDP or restricted/marginal benefits achieved against what the plan envisaged to do.

Q. Give three primary causes of this risk.

*A. Factions within the ruling party
Continued poor or negative economic growth
Social disparity where South Africans arrange and place themselves within ethnic, race, religious etc. compartments
Weak delivery institutions*

Q. What are the consequences if this risk materialises?

A. State failure or collapse

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

*A. Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

*A. Political ambitions/competition more important than national interest
Not showing visible progress and achievement of the socio-economic goals in the NDP
Uncontrollable and unforeseen global political and economic developments
Distrust between Government and South African business leaders*

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

A. Involvement of all interest groups within the industry/company spheres to have ownership and common mindset of what and how deliverables will be pursued and tangibly achieved as part of the broader success requirements of NDP- inclusive and integrated approach.

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

A. Continued social dialogue, involvement and performance monitoring and management amongst all role players in NDP, ensuring effective implementation and tangible benefit- we need a new social- economic accord/pact from government, business , labour and community to guarantee success of NDP.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Increasing polarization of societies
Rising income disparity
Shifts in power
Increasing national sentiment*



Trevor Channing

Executive Manager
Governance and Risk
The Chemical Industries
Education & Training Authority

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

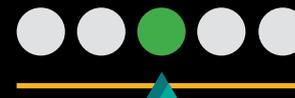
Impact Scale:

D. High



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

D. Likely





▶ Governance
Failure

2.10

Governance Failure

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. Economic development depends on trust and on a dependable law and order system. Any failure of these will reduce the ability of the economy to provide for poverty alleviation, economic growth and employment opportunities.

Q. Give three primary causes of this risk.

*A. The revolutionary cycle will move into the next phase, which is characterised by disjointed decision making, incoherent long term strategies, and increased factionalism in government groups
Clientism is likely to become a major factor
Infighting among elites a third cause*

Q. What are the consequences if this risk materialises?

*A. Increased economic and political uncertainty
Lower growth rates
Higher unemployment
Increasingly erratic decision making*

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

*A. Professional Services
Government and Public Services
Financial Services
Transport and Logistics
Manufacturing
Mining, Engineering and Construction
Education*

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

*A. Lack of political coherence
Dichotomy in political cultures
Political rigidity*

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

A. Political engagement in accelerating democratic renewal, awareness or political implications of policy decisions.

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

*A. Better leadership
Accelerated forward political thinking*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Climate change
Environmental degradation
Increasing polarization of societies
Rising income disparity
Shifts in power
Weakening of international governance*



Coen van Wyk

Consultant
In On Africa

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

Impact Scale:

D. High



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Governance Failure

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. In my opinion, this topic is a fundamental risk to the achievement.

Q. Give three primary causes of this risk.

A. Government fails to set the "tone from the top" (and in fact fails to set any tone at all) Compliance with King IV is seen as another layer of regulations rather than a value-add and many organisations (other than listed organisations compelled to do so by the JSE) fail to apply and explain King IV

Q. What are the consequences if this risk materialises?

A. A breach of Section 76 of the Companies Act (with its resultant draconian consequences), loss of liberty, loss of reputation and financial destruction.

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

A. The only barrier is the attitude of people themselves

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

A. Industry level is an excellent starting point.

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

A. The national level is critical but the chance of that happening with the current government is nil.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Climate change
Environmental degradation
Increasing polarization of societies
Rise of hyper connectivity
Rising income disparity
Shifts in power
Weakening of international governance
Increasing national sentiment*



Michael Judin

Senior Partner
Judin Combrinck

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Governance Failure

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. Governance failure risk does pose a threat to the achievement of the 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 a leadership issue. 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 CG and NDP.

Q. Give three primary causes of this risk.

A. Absence of ICRAFT – Integrity, Competence, Responsibility, Accountability, Fairness, Transparency. With regards to competence, not having the necessary competencies on the board i.e. inadequate director selection and appointment processes.

Lack of stakeholder inclusivity i.e. not taking broader stakeholder interests into consideration. Tick-box approach to applying governance, i.e. not focussing on the achievement of outcomes but rather mindlessly applying practices.

Q. What are the consequences if this risk materialises?

A. 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?

A. Professional Services

Government and Public Services

Financial Services

Energy, Water and Utilities

Communications and Technology

Transport and Logistics

Petrochemicals

Manufacturing

Mining, Engineering and Construction

Hospitality

Education

Healthcare

Retail

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

A. Viewing governance as systems, structures and processes only that need to be “complied” with, governance is more and more about behaviours and performance as well. CG is in fact essential for long-term performance and failing it being recognised as such poses a risk.

Director appointment processes in some sectors could be improved. We need more of a focus on director competence prior to appointment.

Lack of ethics - greed/corruption

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

A. Adequate and robust director appointment processes, including consideration of director competence. Ongoing CPD 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.



Parmi Natesan

Executive

Centre for Corporate Governance
IoDSA

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

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



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

*A. Adequate and robust director appointment processes, including consideration of director competence. Ongoing CPD 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. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Ageing population
Environmental degradation
Rising income disparity
Shifts in power
Weakening of international governance
Increasing national sentiment*

Governance Failure

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. Essentially, the achievement of the NDP objectives will be dependent on government operating as a functioning system in the lead up to its 2030 deadline. Governance failure, however, would significantly undermine any long-term strategy by government at reducing socio-economic deficiencies such as poverty and inequality which are delineated as its primary NDP objectives for 2030. On the contrary, governance failure in the years leading up to 2030 will likely exacerbate current levels of poverty and inequality in South Africa, possibly above levels which were initially assessed - and against which the tenets of the NDP was initially formulated to address.

Q. Give three primary causes of this risk.

A. Economic decline
State Capture
Unconstitutional change in government

Q. What are the consequences if this risk materialises?

A. The consequences of governance failure would have a profound impact on the social, economic and political stability of South Africa. In addition to complicating long term strategies at addressing poverty and inequality, governance failure would have immediate impacts which could exacerbate these deficiencies, thus catalysing a cycle of instability which would continue in the absence of corrective measures.

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

A. Government and Public Services
Energy, Water and Utilities
Education

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

A. A major barrier to the risk is that some of its causal factors are only amenable by the very institutions exacerbating the problem. This is particularly the case with the causal factor of state capture where perceived maladministration in the executive branch of government is not being addressed nor remedied by the available party or parliamentary mechanisms constructed to maintain checks and balances on this avenue of power. On the contrary, the executive branch of government is increasingly attempting to circumvent those checks and balances on power by constitutionally diluting the independence and impartiality of those checks and balances. Another barrier is that the causal factor of economic decline is subject to various external influences beyond the control of the South Africa state. These include global stability, environmental degradation, climate change and other external factors which have a direct impact on economies of developing countries such as South Africa and which would ultimately hinder the achievement of short-, medium- and long-term socio-economic goals.

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

A. From an industry perspective, the best manner in which to address the risk is to have routine assessments (both short-to-long term) on the political trajectory of South Africa with specific reference to the relative stability of government. Industries should remain flexible to early warning signals derived from such assessments as to remain resilient to its potential impacts.

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

A. On a national level, the effective risk response would be for those bodies entrusted to be the checks and balances on transgressors of their political power to act on their mandate and address the issue before its consequences could manifest into government failure. In addition, where causal factors are not necessarily within the remit of government redress, assessments of external factors should occur regularly by government planners with concomitant adjustments made to socio-economic policies which have been formulated to counter their impact.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. Climate change
Environmental degradation
Rising income disparity
Shifts in power
Weakening of international governance



Ryan Cummings

Director
Signal Risk

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

Impact Scale:

D. High



Likelihood Scale:

B. Unlikely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

C. Moderate



Governance Failure

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. A failure in governance could have a serious to critical impact on achieving the NDP objectives.

Q. Give three primary causes of this risk.

*A. Corruption and self or party-political interest
Ineffective and unskilled boards/governing bodies
Ineffective and unskilled leadership*

Q. What are the consequences if this risk materialises?

*A. Failure to realise the objectives of the NDP or other strategic initiatives
Service delivery breakdown
State/business/organisational failure*

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

*A. Government and Public Services
Energy, Water and Utilities
Communications and Technology
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Education
Healthcare*

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

*A. Political interference in the economy
Patronage/cadre deployment on the boards/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 an industry level?

*A. Transparent and competitive processes to appoint heads of critical institutions
Appointing professionally certified and experienced directors – CD(SA)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 a National level?

A. As above

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Increasing polarization of societies
Shifts in power
Weakening of international governance*



Walter Ehrlich

Director
Retlaw Fox

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Governance Failure

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. In broad terms, the National Development Plan (NDP) is currently the country's overarching strategy, whereby the South African government has set out an ambitious set of goals to reduce poverty, as well as transform and improve the country's ailing economy. Clearly, without new jobs being created, and such where the relationship between government, business and civil society remains volatile, these goals will be difficult to achieve; and they will remain a set of goals without any real tangible value or benefit.

Sadly, whilst the NDP has been in play for a few years now, the progress is extremely slow and the NDP is perhaps even backsliding. With evidence of mounting mistrust between business and government, and allegations of 'state capture' which have implicated a great deal of politicians in corruptive behaviour, investment confidence and business uncertainty in South Africa has been shaken to its core. Indeed this too has been exacerbated by relentless pressures placed upon business amid a weakening economy, rising credit risks, increasing regulations and threats of a 'failed state'.

With the uncertainty of where the 'tripartite alliance' now finds itself within the context of the country's leadership, it's quite unlikely that the NDP will be getting a boost anytime soon. This being the case, the goals will remain elusive, unemployment and poverty will continue to increase and the dream of attaining these goals by 2030 will be seriously protracted.

There's a very real possibility that for the NDP to become attainable, a complete 'overall' will be required; and whilst relationships between government and business will need to be restored, civil society will also need to regain trust in a system which has clearly let them down.

Q. Give three primary causes of this risk.

A. Poor governance practices with no, or little consequences
Inept leadership, low benchmarks and standards
Corruption

Q. What are the consequences if this risk materialises?

A. Coming off the back of similar strategic objectives that were set by the South African government since 1994, namely those such as the Industrial Plan of Action Policy (IPAP) and the New Growth Path (NGP) amongst others, the NDP is yet another plan that seemingly will not produce the results required to "eliminate poverty and reduce inequality by 2030". This repeated rhetoric made by politicians is quickly losing the patience of the millions of impoverished people in South Africa. Indeed the evidence has been seen in the recent 2016 municipal elections where the ANC ruling political party has taken a beating at the polls, losing a great deal of its supporters to the opposition parties. But losing a portion of a party's electorate is one thing, it's altogether a different matter when people do not have jobs and no means of making a decent income, neither being sustainable. In more recent times, desperate people have been encouraged to believe that 'grabbing land' (similar to Zimbabwe) without compensation is their right, and to them the rule of law seemingly is no deterrent to achieving their objectives. With this dire situation only getting worse by the day, strong ethical leadership is required to instil confidence in the South African leadership, the economy and civil society all of which can be argued is massively dysfunctional. With the widening gaps of huge inequality amongst millions of South African citizens, grows discontent and resent. The consequences of this toxic situation being ignored or superficially addressed -- which has existed for many years - is simply disastrous.

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

| | |
|--------------------------------|--------------------------------------|
| A. Professional Services | Petrochemicals |
| Government and Public Services | Manufacturing |
| Financial Services | Mining, Engineering and Construction |
| Energy, Water and Utilities | Hospitality |
| Communications and Technology | Education |
| Transport and Logistics | |



Terry Booyesen
Co-founder and Executive
Director
CGF

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

D. Likely



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

- A. Lack of trust within South African government and business leadership*
- Waning support from vested international stakeholders*
- Overly prescriptive regulations on business, particularly small medium businesses*
- No real business incentives to support NDP*
- Few strong public/private partnerships*
- Increasingly demands of BBBEE and similar legislative requirements*

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

- A. Interact more regularly with government and each other to determine the role they play within the NDP*
- Specifically factor NDP components within their business strategies*
- Be alerted on a regular basis to where the NDP is achieving the goals and where they are being missed*

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

- A. Replace inept government leadership*
- Hold individuals accountable, at government and business levels*
- Penalise corruptive practices*
- Re-write a plan of action which has realistic goals*
- Develop the plan jointly between government, business and leaders in civil society*
- Provide regular updates to civil society of the plan's progress and challenges*
- Publicise non-delivery of the plan's targets at a national level, citing the reasons and consequences*
- Legislative and regulatory demands must be relaxed*
- Business incentives must be introduced and properly rewarded*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

- A. Growing middle class in emerging economies*
- Increasing polarization of societies*
- Rising income disparity*
- Shifts in power*
- Urbanisation*
- Increasing national sentiment*

USD

30.458

38.148

47.957

38.352

31.858

29.222

30.988

30.148

2.11

Exchange
Rate Fluctuations

Exchange Rate Fluctuations

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. Exchange rate fluctuations are business as usual in South Africa and will remain a key feature of the local business environment.

Q. Give three primary causes of this risk.

*A. Rising interest rates in the US and other low risk jurisdictions
Sovereign risk rating downgrade by two or more rating agencies
Political turmoil and poor management of government finances
Growing fiscal and current account deficits
Disappointing economic growth*

Q. What are the consequences if this risk materialises?

A. Renewed rand weakness, undermines confidence, pushes inflation and interest rates higher, and hurts domestic demand and economic growth in the process.

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

*A. Financial Services
Manufacturing
Mining, Engineering and Construction
Hospitality
Retail*

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

*A. Heavy reliance on external funding
Inadequate domestic savings – government, households and business
General unfavourable investment environment – political uncertainty, policy uncertainty, poor labour relations, limited competition*

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

*A. The use of financial instruments to hedge against exchange rate fluctuations for example forward cover etc.
Limit borrowing in foreign currency – especially short-term
Diversify earnings base, to include foreign jurisdictions*

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

*A. Improve export capacity
Reduce fiscal deficits and improve service delivery
Improve investment environment – set clear line between government's role and that of the private sector, improve consistency of economic policies, resolve problems at state-owned enterprises and improve delivery of cost-effective economic infrastructure, create more flexible labour policies, which recognise market conditions and reward innovation and productivity, vigorously promote competition and punish collusion or anti-competitive behaviour.*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Ageing population
Climate change
Increasing polarization of societies
Rising income disparity
Increasing national sentiment*



Nicky Weimar
Senior Economist
Nedbank

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

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Exchange Rate Fluctuations

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. High risk level.

Q. Give three primary causes of this risk.

A. South Africa's over-reliance on commodity exports
Volatile international capital flows
Tightening of monetary policy stance in the USA

Q. What are the consequences if this risk materialises?

A. Fluctuating export earnings and import payments
Fluctuating JSE prices and yields
Fluctuating capital flows

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

A. Government and Public Services
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality

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

A. Inadequate domestic savings (thus, an "addiction" to foreign investment)
Political and policy uncertainty
Sluggish productivity growth
High exposure to international forces

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

A. N/A

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

A. N/A

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. Growing middle class in emerging economies
Rising geographic mobility
Shifts in power
Increasing national sentiment



Professor Andre Roux

Head: Future Studies Programme
University of Stellenbosch Business School

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



Exchange Rate Fluctuations

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. Normal exchange rate fluctuations will not materially influence achieving the NDPs objectives
Abnormal (increased levels of) exchange rate fluctuations over a sustained period might have some influence on achieving the objectives of the NDP
Given other (connected) material events, such as a credit rating downgrade to non-investment grade and a subsequent period within recession, less competitive exchange rate levels and/or volatile exchange rate levels will to some degree influence the achievement of the NDPs objectives

Q. Give three primary causes of this risk.

A. Political instability/issues and party/governmental infighting
Fiscal state
Low economic growth and or recession period/state

Q. What are the consequences if this risk materialises?

A. Economic recession
Potential additional Fiscal pressures originating from current account fluctuations/impact

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

A. Financial Services

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

A. Lack of control and or influence due to being an emerging economy

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

A. N/A

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

A. More stable fiscal state
Higher and or consistent economic growth
Increased political certainty

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. Shifts in power



Dr Francois van Dyk
Senior Specialist Risk Consultant
Marsh

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

D. Likely





▶ Severe
Income Disparity

2.12

Severe Income Disparity

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. The NDP should be primarily directed to alleviating income disparities, and by doing so would have to achieve other goals: better education, higher employment.

Q. Give three primary causes of this risk.

*A. Poor education/training
Historical institutional bias against "have nots"
Governance incompetency*

Q. What are the consequences if this risk materialises?

A. Continued protests and riots over lack of government services delivery and unmet poverty and unemployment goals; long term in breakdown of society.

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

*A. Government and Public Services
Education*

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

*A. Lack of imaginative governance
Government corruption
Intransigent minority that controls national wealth*

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

*A. More skills training
Higher wages and benefits
Support for meaningful social change*

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

A. Citizen demand for good governance, media focus on income disparity.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Environmental degradation
Growing middle class in emerging economies
Increasing polarization of societies
Rise of hyper connectivity
Rising income disparity
Shifts in power
Urbanisation*



James Hall
Consultant
In On Africa

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

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



Severe Income Disparity

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. This risk has a critical negative impact on economic growth and poverty alleviation. The large gap means that it will take much longer to create a viable middle class that is needed to spur economic growth.

Q. Give three primary causes of this risk.

A. Flawed top management (specifically CEO) remuneration models. CEOs are grossly overpaid and receive bonuses despite making significant losses. Remuneration is based on "scarce skills" which is flawed. Myopia. Remuneration is based on achievement of short term goals and short tenure of CEOs who merely cut jobs to increase profits.

Q. What are the consequences if this risk materialises?

*A. Increasing unemployment, job cuts take place at the bottom
Increasing social unrest
Increase in poverty
Poor economic growth
Increased social grants and ever increasing expectations*

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

*A. Financial Services
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Retail*

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

*A. Poor employer and employee relations
Flawed remuneration models
Lack of transformation
Nepotism
Myopia*

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

*A. Link minimum wages to a multiple of the CEO's total package
Ethical Leadership
Link bonuses to performance with increased consequence management
CEOs that make losses should be removed from office
Increased shareholder activism*

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

*A. Enforce penalties provided for in the B-BBEE and Affirmative Action legislation
Legislate minimum wages that is linked to CEO's packages
Skills development, specifically at a TVET College level*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Rising geographic mobility
Rising income disparity
Urbanisation
Increasing national sentiment*



Chandu Kashiram
Consultant

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Severe Income Disparity

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. Addressing inequality is a critical aspect in the implementation of the NDP. But this very factor, if not addressed timeously, may be an obstacle in reaching some of the core objectives of the NDP.

The NDP proposes the development of a national decent living standard. However, the NDP fails to adequately define what a decent living standard would constitute. This is unfortunate given that this mechanism is one that may actually directly impact on and reduce inequality. A national conversation around what a decent living standard, in economic terms, is and what is feasible needs to be had.

Q. Give three primary causes of this risk.

A. Challenges within the education sector – Education levels tend to be proportional to skills. A person's skills determine his/her economic participation. Unfortunately, access to (especially at university level) and the quality of education people access is dependent on income. So, the manner in which these two factors impact on one another creates a vicious cycle of poverty and inequality.

Proliferation of the working poor due to absence of decent living wage: CEOs/management/high level staff are paid exorbitantly high salaries while lower skilled workers earn a meagre portion of what their better paid counterparts earn.

Q. What are the consequences if this risk materialises?

A. Lack of access to the most basic human rights due to low/now income: (nutritious) food, healthcare, housing. Increased dependence on state provided social assistance. The state has a responsibility to provide assistance to those who are unable to meet their own economic needs. As such, social assistance to the poor will always be necessary. However, what is critical is a situation where the poor can benefit from state assistance as a short term measure, but in the long term exit out of state support into a position where they are able to meet their own needs.

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

- A. Professional Services*
- Government and Public Services*
- Financial Services*
- Energy, Water and Utilities*
- Communications and Technology*
- Transport and Logistics*
- Petrochemicals*
- Manufacturing*
- Mining, Engineering and Construction*
- Hospitality*
- Education*
- Healthcare*
- Retail*

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

A. Access to quality education – from ECD level to university level. Quality is dependent on various factors, but moreover adequate education facilities and teachers that meet basic norms and standards.

Low economic growth, limited job creation, exacerbated by ill-conceived political decisions adversely impacting on business and investor confidence

Systemic inequality embedded in the current economic system: the labour market determines the value of wages. However, the skills jobseekers with low education levels are able to supply does not meet the demands of the job market. As such, they either remain unemployed or are employed, but underpaid.



Querida Saal

Human Rights Advocate and Researcher
SAHRC

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

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



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

*A. **Agriculture:** Opening of agricultural markets to small-scale farmers, post-settlement support to land reform beneficiaries, such that they become productive*

and are able to actively participate in the agricultural sector and profit from the use of their land; greater access to capital to finance necessary inputs.

***Mining:** effectively implement social labour plans so that communities are able to benefit optimally from the country's rich mineral resources; improved implementation of beneficiation strategies.*

Financial services: ensure that appropriate checks and balances are done before lending money to individuals who realistically cannot afford to repay (with interest) the loans; unsecured lending to the poor pushes them into a cycle of debt, poverty and more inequality. The industry should apply a more human rights based approach in conducting its business.

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

A. Address challenges within the education sector and improve the quality of education

Improve the quality of, and ensure better access to, vocational training

Encourage entrepreneurship, simplify process to register small businesses, more funding available for start-up businesses and easier access to funds

Defining decent living standards, i.e. minimum wages and paying same to workers

Increased involvement of private sector in job creation, i.e. Providing learnerships, etc.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. Ageing population

Climate change

Environmental degradation

Growing middle class in emerging economies

Increasing polarization of societies

Rise of chronic diseases

Rising geographic mobility

Rising income disparity

Shifts in power

Urbanisation

Severe Income Disparity

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. *Very high risk.*

Q. Give three primary causes of this risk.

A. *Growth rate <5%
High unemployment
Infinitely large gap between workers' wages and the income of the unemployed*

Q. What are the consequences if this risk materialises?

A. *Growing dissatisfaction with orthodox economic policy
Growing disdain for political promises
High levels of social unrest
Depreciation of stock of social capital*

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

A. *Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

A. *Unemployment
Wage increases in excess of productivity growth
Dichotomy between skilled and unskilled earnings*

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

A. *N/A*

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

A. *N/A*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. *Increasing polarization of societies
Shifts in power*



Professor Andre Roux

Head: Future Studies Programme
University of Stellenbosch Business School

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

D. Likely



Severe Income Disparity

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. One of the core goals of the NDP is to grow average incomes (a measure that is distorted by high income disparity)
If income disparity continues at the same rate, those with less income may still not have reasonable access to housing, health, education, etc. (as examples)*

Q. Give three primary causes of this risk.

*A. Unemployment
Wage gap
Greed*

Q. What are the consequences if this risk materialises?

*A. Ongoing social problems in the country, further resulting in downgrading and potential departure of skilled professional individuals who want to live in a safe and sustainable environment
Ongoing civil and social unrest resulting in various additional costs to the economy, loss of productivity etc.*

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

*A. Energy, Water and Utilities
Transport and Logistics
Manufacturing
Mining, Engineering and Construction
Education
Healthcare*

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

*A. Affordability
Change in mindset regarding what the top levels need/demand
Greed*

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

*A. Ongoing awareness
Strategies implemented to reduce wage gap
Pro-active remuneration policies that deal with this issue within business*

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

*A. Ongoing awareness
Strategies implemented to reduce wage gap
Debate regarding minimum wage (or a living wage) and its consequences*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Growing middle class in emerging economies
Rising income disparity*



South African Reward Association

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

Impact Scale:
D. High



Likelihood Scale:
D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:
E. Critical



Likelihood Scale:
E. Almost certain



Severe Income Disparity

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. The non-management of the current severe income disparities threatens the majority of the six primary priorities in the NDP from the achievement of prosperity/equity, strengthening of our democracy/accountability, labour absorption, citizenry, social cohesion and a capable and developmental state. The challenge is that on NDP projections even if we start reducing disparities that by 2030 it will still leave South Africa above the average of comparative countries.

Q. Give three primary causes of this risk.

*A. Unemployment
Marginal economic growth
Structural discourse on remunerative frameworks/economic output/value against skills and competencies of the South African labour market*

Q. What are the consequences if this risk materialises?

*A. Political and economic instability
Violence and protest actions
Deterrent for international "nervous" investors
Disillusion amongst South Africans on the promised benefits of democracy*

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

*A. South Africa not an investment friendly country
Lack of International competitiveness and export driven markets
Corruption*

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

*A. Moderate wage increases specifically on senior and executive levels
Commitment to a better wealth distribution model from companies that also benefit lower and middle level employees*

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

*A. Policy and legislative leadership to entice sustainable foreign investments
Concerted focus and drive with industry leaders to plant sustainable SMEs
More focused and effective implementation of current policies aimed at addressing inequality i.e. BBB-EE and Employment Equity aimed at benefitting the broad base of black South Africans*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Growing middle class in emerging economies
Rise of hyper connectivity
Rising geographic mobility
Shifts in power
Urbanisation
Increasing national sentiment*



Trevor Channing

Executive Manager
Governance and Risk
The Chemical Industries
Education & Training Authority

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost certain





Skills
Shortage

2.13

Skills Shortage

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. Absolutely critical. If we do not have the people with the right skills in the right jobs, then our economy (and consequentially our society) will decline.

Q. Give three primary causes of this risk.

*A. Declining investment in education and training
 Politisation of skills
 Growing inequality gap between the haves and the have-nots*

Q. What are the consequences if this risk materialises?

*A. Unsustainable levels of inequality
 Political and social unrest
 Crisis in government
 Growth of the black-market economy
 Need to import increasingly more foreign skills*

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

*A. Professional Services
 Government and Public Services
 Financial Services
 Communications and Technology
 Transport and Logistics
 Mining, Engineering and Construction
 Education
 Healthcare*

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

A. Political will and making unpopular decisions

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

A. Sharing of information about the real picture; involvement in investing in building critical mass for the identified scarce skills through scholarships, bursaries, funding of research chairs at universities, etc.

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

A. Work across the binary divides that exist at sectoral or industry levels. Inter-relatedness should be a driving principle in responding to this risk at the national level.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Growing middle class in emerging economies
 Rise of hyper connectivity
 Rising geographic mobility
 Rising income disparity
 Shifts in power
 Urbanisation*

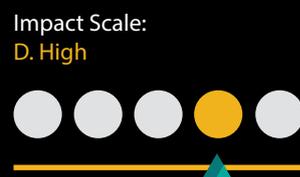


Jody Cedras
 Higher Education and Public Policy
 Professional
 PolicySA

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



Rate the Impact and Likelihood of the risk in the next 10 years.



Skills Shortage

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. A prosperous, more equal society with plenty employment opportunities as envisioned in the NDP hinges on a skilled workforce that can respond to present and future industry needs.

Owing to the distorted apartheid-era economic legacy which fails to create job and business opportunities for the majority of people, and the youth in particular, targeted interventions are necessary to eradicate poverty, reduce inequality and improve the prospects for South Africans.

Unemployment, especially among youth, is a global phenomenon in the light of international economic stagnation. In the South African context this problem is exacerbated by wide-ranging factors, including a lack of work experience; the incompatibility of available jobs with the skills sets of job seekers; inadequate entry-level employment opportunities for new labour market entrants; a disjuncture between the education system and the labour market; lack of social capital (especially for black youth); and poor work-readiness.

Given the causal relationship between low educational training and unemployment, it has become imperative for the entire education system to produce quality 'graduates' at different points. For example, a solid knowledge base must be created for grade 9 learners since they are expected to make a subject choice that will determine their future. The country can ill afford to wait for learners to access the post-school education and training system for their skills and knowledge to be improved. That will be too late and detrimental to the gainful participation of young people in the economy.

Q. Give three primary causes of this risk.

A. A dysfunctional apartheid-era education and training system where skills were profoundly racialised and gendered in favour of white males generally and particularly at the expense of black females.

The declining contributions of the mining and agricultural sectors to the Gross Domestic Product (GDP) as compared to that of the services sector, which includes business and financial services. South Africa needs flexible education and training that can respond to the demand-driven needs of the South African economy.

Globalisation is another cause as international organisations also recruit especially high-level skills from South Africa.

Q. What are the consequences if this risk materialises?

A. Increased risk behaviour, violence and crime

Socio-economic alienation due to long-term unemployment

Increased social instability

Reduced incapacity of the country to develop a knowledge society

A less competitive South Africa that is unable to secure the direct foreign investment needed to propel the country economically

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

A. Professional Services

Government and Public Services

Financial Services

Energy, Water and Utilities

Communications and Technology

Transport and Logistics

Petrochemicals

Manufacturing

Mining, Engineering and Construction

Hospitality

Education

Healthcare

Retail



Peter Bosch

Directorate: Registration & Recognition
SAQA

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

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

D. Likely



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

- A. Lack of provision for early childhood development (ECD) and poor throughput rate at school exiting point – that is, Grade 12.*
- Inadequate enrolments at Technical and Vocational Education and Training (TVET) colleges*
- Lack of disciplinary knowledge displayed by teachers, facilitators, and/or instructors*
- A general under-investment in technology especially at public TVET colleges for the purpose of skills development*
- Unreliable labour market information systems and out-dated occupational forecasting models*
- Increased new HIV/AIDS infections especially among the economically active citizens*

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

- A. Adopt a progressive immigration approach to increase the supply and transfer of high-level skills*

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

- A. Government, business organisations and civil society must review the labour market policy as enunciated in some labour acts and codes of good practice for relevance. Further, government, through the relevant departments, must improve education and training by reviewing school curricula and the role of the Sector Education and Training Authorities (SETAs).*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

- A. Ageing population*
- Increasing polarization of societies*
- Rise of chronic diseases*
- Rising geographic mobility*
- Rising income disparity*
- Urbanisation*

Skills Shortage

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

Q. Give three primary causes of this risk.

A. The NDP requires skilled people for effective implementation

Q. What are the consequences if this risk materialises?

*A. 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?

*A. Government and Public Services
Mining, Engineering and Construction
Education
Healthcare*

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

*A. Poor education system
Ridiculous regulatory framework
Lack of political will*

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

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

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

*A. Reduce tax to create jobs
Resolve fees must fall campaign
Eliminate institutionalised theft and apply the funds to more worthy causes*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Ageing population
Increasing polarization of societies
Rising income disparity
Shifts in power*



Dr Mark Bussin

Chairperson
21st Century

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Skills Shortage

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. This is not a risk anymore – it is a reality. Particularly if we see the auditor general's report indicating that 92% of municipalities are in trouble.

Q. Give three primary causes of this risk.

*A. Basic Education not aligned
Tertiary education transferring of facts – not stimulate thinking
Perceptions and entitlement of citizens*

Q. What are the consequences if this risk materialises?

*A. Populist uprising
Increase in crime
Social instability
Economic instability
Political instability
Increase in use of technology with increase in unemployment*

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

*A. Political will
Psychology of society*

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

A. Change management

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

A. Re-alignment of national priorities

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Ageing population
Climate change
Environmental degradation
Growing middle class in emerging economies
Increasing polarization of societies
Rise of chronic diseases
Rise of hyper connectivity
Rising geographic mobility
Rising income disparity
Shifts in power
Urbanisation
Weakening of international governance
Increasing national sentiment*



Dr Whitey Van Der Linde

Senior Lecturer
University of Johannesburg

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain





▶ Commodity
Price Fluctuations

2.14

Commodity Price Fluctuations

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. We expect the impact of the commodity price downturn to lift somewhat in 2017. The worst of the slide in commodity prices is probably behind us. Five years ago massive excess capacity existed in almost all commodities. Today these surpluses are either almost depleted or much smaller. The new incoming US president has promised to accelerate the US recovery through tax cuts, infrastructure spending and less regulation. If he delivers on these promises, it should support demand for commodities. Conditions in China, the world's biggest consumer of commodities, are also more stable than they were 6 months ago. The supply and demand dynamics for most commodities have therefore improved. And this should help commodity prices drift higher in 2017. It will be a very gradual improvement but from 2018 onwards, the cycle should become supportive of commodity-producing and exporting countries.

Q. Give three primary causes of this risk.

A. The commodity price cycle in our view will become destructive if world growth disappoints in 2017. Of course, there are many factors that could potentially disrupt global growth prospects: Brexit; if the impact of Trump Presidency anti-trade policies outweigh the impact of the promised fiscal stimulus by triggering a trade war with China and other emerging markets; if tensions between the West and Russia escalate into cross-border conflict that spooks the markets and hurt business confidence; if China's delicate rebalancing misfires or relapses.

Q. What are the consequences if this risk materialises?

A. If commodity prices were to fall again, it would place further pressure on South African mining and manufacturing, resulting in even more radical rationalisation, trimming of capex plans and increased retrenchments. This in turn would tend to spillover into consumer spending, hurting domestic demand and the broader services industries. Ultimately, it would trim GDP growth prospects. South Africa would probably be looking at GDP growth of around 0.3% in 2017 instead of the 1% Nedbank currently expects.

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

*A. Energy, Water and Utilities
Manufacturing
Mining, Engineering and Construction*

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

A. I am not the best person to answer this question. Ultimately, there is not much any company can do about unfavourable global conditions. The best way to survive is to streamline operations, cut expenses and fat where possible, keep critical skills, and improve efficiencies.

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

A. Rationalisation without losing critical capacity or skills. The focus should be on developing a more efficient operation.

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

A. Government intervention should be kept to a minimum. The best government can do is reduce policy uncertainty, reduce red tape and compliance costs where possible and feasible without sacrificing long-term sustainability.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Ageing population
Climate change
Increasing polarization of societies
Rising income disparity
Increasing national sentiment*



Nicky Weimar
Senior Economist
Nedbank

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

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Commodity Price Fluctuations

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. This risk is a key consideration in relation to the NDP as it has a significant impact on being able to achieve faster economic growth, higher investment and greater labour absorption.

Q. Give three primary causes of this risk.

A. The state of the global economy, Chinese growth rate and global uncertainties strongly influence commodity prices.

Q. What are the consequences if this risk materialises?

A. Extreme commodity price fluctuations hinder project investment and increase uncertainty around being able to achieve faster economic growth, higher investment and greater labour absorption.

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

*A. Government and Public Services
Financial Services
Energy, Water and Utilities
Transport and Logistics
Mining, Engineering and Construction*

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

A. The external nature of the risks that include the state of the global economy, Chinese growth rate and global uncertainties, are beyond the South African government's ability to determine. There are however measures that can be taken to limit the impact of commodity price fluctuations.

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

A. Regulatory certainty as well as governmental cooperation with the mining industry to ensure competitive advantage is gained wherever possible.

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

A. Ensure regulatory certainty as well as governmental cooperation with the mining industry to ensure competitive advantage is gained wherever possible.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Growing middle class in emerging economies
Increasing polarization of societies*



Mark Robins

MRC Mining Practice Lead
Marsh

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

Impact Scale:

C. Moderate



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Commodity Price Fluctuations

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. High risk in the light of South Africa's continued (over-) reliance on the exports of commodities. The fluctuations also have a major bearing on the volatility of the Rand exchange rate.

Q. Give three primary causes of this risk.

*A. Global economic sluggishness
Restructuring of the Chinese economy (from industry to services; and from investment to consumption)
Excess capacity*

Q. What are the consequences if this risk materialises?

*A. Slower economic growth
Volatile terms of trade
Job insecurity
Volatile exchange rate*

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

*A. Transport and Logistics
Petrochemicals
Mining, Engineering and Construction*

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

*A. Smallish, open economy
Inability to add value ourselves in a competitive, efficient fashion (because of high costs of labour; regulatory environment; lack of will)*

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

A. N/A

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

A. N/A

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Climate change
Environmental degradation
Growing middle class in emerging economies
Shifts in power
Urbanisation*



Professor Andre Roux

Head: Future Studies Programme
University of Stellenbosch Business School

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



Commodity Price Fluctuations

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. A lower revenue stream from the mining sector will result in less available budget for government to inject in key areas for development across the board. Key areas that will be affected include education, healthcare and social protection.

Q. Give three primary causes of this risk.

*A. Continuing slump in global economy
Reshaping of Chinese economy away from heavy manufacturing and toward services
Weaker demand from other emerging economies*

Q. What are the consequences if this risk materialises?

*A. Slower internal ability to stimulate both infrastructure and societal development.
Less ability for government to provide PDSA with ability to secure education, while social grants will also decrease.*

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

*A. Manufacturing
Mining, Engineering and Construction
Education
Healthcare*

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

A. Global chains of supply and demand. Current lower commodity prices due to oversupply and lack of demand are outside of the government's control.

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

A. Unless freezes or cutbacks on production are instituted to raise global prices, the mining sector will have to ride out the current trough in demand until the cycle turns and demand grows.

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

A. Rather than looking to export raw minerals, it would be worthwhile to invest in value-add mechanisms that will increase the profits from mining activities as opposed to waiting until prices rise.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Growing middle class in emerging economies
Rise of hyper connectivity
Shifts in power
Urbanisation*



Ogi Williams

Senior Research Analyst
In On Africa

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

Impact Scale:

C. Moderate



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

B. Minor



Likelihood Scale:

D. Likely



Commodity Price Fluctuations

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. Relevant to important. Direct implication on growth, jobs and employment.

Q. Give three primary causes of this risk.

A. Global supply and demand
Global growth – especially China

Q. What are the consequences if this risk materialises?

A. Impact jobs and growth

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

A. Government and Public Services
Transport and Logistics
Manufacturing
Mining, Engineering and Construction

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

A. Global prices
Local mining regulations and overdue reforms

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

A. Technology
Lure investment

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

A. Reform to be more competitive

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. Growing middle class in emerging economies
Increasing polarization of societies
Shifts in power
Urbanisation



Lyal White

Director
Centre for Dynamic Markets
GIBS

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Commodity Price Fluctuations

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. It is a critical risk to the mining industry and the South African economy as a whole. This is a risk outside our control and affects the sustainability of the industry in terms of employment and further growth. This also presents an opportunity for the industry to demonstrate a level of innovation to 'work smarter' and increase productivity.

Q. Give three primary causes of this risk.

*A. Global political uncertainty
Global economic uncertainty
Supply/demand uncertainty*

Q. What are the consequences if this risk materialises?

*A. Availability of capital
Possible lack of investment through the cycle*

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

*A. Poor foundational education system
Lack of flexibility
Effective and constructive risk management in the unpacking of the true impact of the risk*

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

A. Industry should work together on a common solution.

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

A. Collaboration for the true sustainability of the industry.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Climate change
Increasing polarization of societies
Shifts in power
Weakening of international governance*



Reshma Ramkumar

Chief Risk Officer
Impala Platinum

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

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

C. Moderate



Commodity Price Fluctuations

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. South Africa is a country blessed with natural resources (both base metals and high valued minerals) and forms a solid platform to create wealth and has potential to enable and support the country's GDP growth trajectory should commodity prices be stable and high enough to reward capital invested in the commodity sector.
It is also critical for government, organised labour and business leaders to follow an holistic approach in meeting the NDP plan and at the same time meeting the requirements related to "Social License to Operate".

Q. Give three primary causes of this risk.

A. China restructuring its economy from an Investment Economy in Infrastructure to a Consumption Economy reducing the demand for commodities e.g. steel, cements, iron ore, copper coal etc.
Single digit GDP growth in China reducing the demand for commodities.
Overinvestment and excess supply of commodities reducing prices to a level that is making it difficult to appropriately reward capital invested (risk reward trade off) in the commodity sector.

Q. What are the consequences if this risk materialises?

A. South Africa will not be able to optimise the extraction of in-country resources and resultantly reduce both direct and indirect taxes, royalties and putting pressure on the fiscus.
Increase in unemployment as well as a reduction in social investment in the commodity sectors.
Civil unrest and nationalisation of natural resources.
On-going market volatility is making it very difficult for mining and metals (commodity) companies to make sustainable cost reductions that do not erode short and long term value, optimising working capital and at the same time improving capital effectiveness.

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

A. Mining, Engineering and Construction

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

A. In addition to market volatility the following barriers exist, namely:
Policy uncertainty from the government and relevant departments involved in the commodity sector e.g. Sectorial Charters, BBBEE, and regulatory frameworks
Current dysfunctional relations and infighting between ANC leaders and the negative impact it is having on the state functions to enable the effective delivery on regulatory and policy frameworks.

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

A. Corporate South Africa must take a firm stance in making it clear to the government that sound policy direction and frameworks are required to regulate the commodity sector, to enable the attraction of international capital to support continuous investments in the commodity sector, social investment and generating sufficient tax regimes to support the fiscus.

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

A. Government, labour and corporate South Africa (private capital) should create a stable environment to attract foreign capital and demonstrate that we can work together to develop and grow the commodity sector to the benefit of everyone in the country as well as the providers of capital.
It is also important that the judicial system, NGOs and local communities work together at a national level to ensure that proper governance is in place to regulate the commodity sector.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

- | | |
|---------------------------|---------------------------------------|
| A. Climate change | Urbanisation |
| Environmental degradation | Weakening of international governance |
| Rising income disparity | Increasing national sentiment |



Tap Van Der Berg
Senior Manager
Enterprise Risk Management
Sasol

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate





Education
and Skills
Development

2.15

Education and Skills Development

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. The establishment of a good quality education and skills development scheme and its considerable potential contribution to the overall wellbeing of the South African citizenry and economy is crucial to achieving the NDP objectives.

Some reliable indicators suggest the existence of a demand-supply quandary in the country. The use of foreign artisans by Eskom for the construction of the Medupi, Ingula and Kusile power stations is one such indicator that confirms the skills shortage in South Africa. The import of labour to build the stadiums in preparation for the 2010 Soccer World Cup event is another case in point that highlights the serious skills deficit in the country.

Failing to realise a quality education and training system attuned to the skills needs of South Africa will exacerbate the current unemployment rate and, as a direct result, reduce the tax base. A shrinking tax base poses a huge risk to the ability of government to providing a better life for people. One of the public services rendered by government that may suffer severely due to a reduced tax base is the social welfare system. This will leave the most vulnerable even more exposed to the increased cost of living and exclude them from basic services such as water and sanitation, medical facilities, and quality education.

It is thus clear that skills development, along with training and education are vital elements for the wellbeing of the people and for the South African economy.

Q. Give three primary causes of this risk.

A. Closure of Technikons; Technical Colleges/ Vocational Training Centres; Teacher Training Colleges and Nursing Colleges.
 Failure by the Sector Training and Education Authority (SETA) system to adequately deliver on its mandate specifically in relation to skills development.
 Misalignment between industry needs and the training and skills development syllabi.

Q. What are the consequences if this risk materialises?

A. Increased levels of unemployment and poverty
 Less economically competitive South Africa
 Increase number of people living in poverty
 Increased economic exclusion
 Increased crime
 Increased social pathologies such as teenage pregnancy, drug abuse, and the like
 All the above factors, and others, could impact negatively on investor confidence

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

A. Government and Public Services
 Financial Services
 Energy, Water and Utilities
 Education
 Healthcare

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

A. Poor institutional functionality which includes, inter alia, issues relating to governance, planning and financial management
 Uncoordinated education and training planning
 Undue interference of and influence exerted by some trade unions in education and training matters



Peter Bosch

Directorate: Registration & Recognition
 SAQA

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

Impact Scale:

C. Moderate



Likelihood Scale:

B. Unlikely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



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

A. All role players involved in the formal education system or skills development programmes must coordinate their efforts to be more effective in either re-skilling workers or preparing new entrants. It is assumed that people with relevant skills are more likely to adapt to the changing needs of the economy and thereby be able to remain gainfully employed. It is therefore imperative to educate and skill people to be able to meet present and future industry needs in order to make a contribution to the economy.

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

A. Government through its implementing agencies, among others, the Department of Higher Education and Training; the South African Qualifications Authority (SAQA); the three Quality Councils namely Umalusi, the Council on Higher Education and the Quality Council for Trades and Occupations; and the Sector Education and Training Authorities must ensure coherence and the alignment between the education and training as well as skills development curricula and industry requirements. Professional bodies (statutory and non-statutory) recognised by SAQA have an important role to play in this regard.

Government also needs to ensure the systemic articulation between academic and vocational qualifications. Oftentimes, existing occupationally directed qualifications result in learning pathways with dead-ends. These qualifications should provide a pathway into higher education, mostly Universities of Technology. Additionally, colleges mainly produce vocational education as an alternative academic route to higher education.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

- A. Increasing polarization of societies*
- Environmental degradation*
- Rise of chronic diseases*
- Rising income disparity*

Education and Skills Development

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. Developments in the higher education sector in relation to the fees must fall and decolonisation movement has increased this risk significantly.

Q. Give three primary causes of this risk.

*A. No visible leadership
Instability within the ruling party
Plans are too ambitious and thus paralysed when it comes to implementation*

Q. What are the consequences if this risk materialises?

A. Growth in the private E&SD sector (marketisation of what is essentially a basic human right).

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

*A. Professional Services
Financial Services
Education*

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

A. Leadership, mainly political, but also from business and civil society.

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

A. Advocacy - constantly putting it on the agenda of the industry decision-makers.

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

A. Again, advocacy – keep the general public informed and identify champions originating from the community.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Increasing polarization of societies
Rise of hyper connectivity
Rising income disparity
Shifts in power*



Jody Cedras
Higher Education and Public Policy
Professional
PolicySA

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

Impact Scale:

A. Insignificant



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Education and Skills Development

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. This is probably one of the most significant risks facing South Africa and is a precursor to many other risks such as a higher unemployment rate materialising. The nation simply cannot develop as long as the masses remain at a low education level. Any country's ability to succeed depends on its human resources.

Q. Give three primary causes of this risk.

*A. 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?

*A. Increased unemployment rate
South Africa not able to compete in the global village – i.e. workforce underutilised and underperforming resulting in less than optimum output and wastage
South African workforce behind the technology curve*

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

*A. 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*

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

*A. Organisations need to invest more in bridging the education gap by training employees and not just expecting to recruit skilled individuals
Professional bodies playing a greater role in determining future needs for respective professionals*

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

*A. Education system should be overhauled with the aim to produce a future-fit workforce
More investment in transforming the education system
Increasing access for the poor*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Increasing polarization of societies
Rise of hyper connectivity
Rising geographic mobility
Rising income disparity*



Claudelle Von Ecke
Chief Executive Officer
IIA SA

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

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Education and Skills Development

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. Not up to standard. Will have consequences for NDP.

Q. Give three primary causes of this risk.

*A. National psychology
Who trains the educators? Educators not adequately competent.
Psychology of entitlement – if incompetent individuals can get top jobs – why do I have to be educated?*

Q. What are the consequences if this risk materialises?

*A. NDP not being achieved – will stay a pipe-dream
Decline in infrastructure
Increasing gap between haves and have-nots*

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

A. Appoint competent people – not based on race, gender or religion.

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

*A. Unpopular decision – increase standards
Problem complex – not a simple response*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Increasing polarization of societies
Rising income disparity
Increasing national sentiment*



Dr Whitey Van Der Linde

Senior Lecturer
University of Johannesburg

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Education and Skills Development

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. This is the single most critical risk to the achievement of the NDP objectives. Without proper commitment and investment in this area, South Africa loses any competitive edge it may have.

Q. Give three primary causes of this risk.

*A. Political uncertainty
Lack of proper educational infrastructure
Government and industry working against each other*

Q. What are the consequences if this risk materialises?

*A. An unemployable workforce
We will be unable to sustain technological growth
Increase in unemployment*

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

*A. Lack of proper educational infrastructure
Qualified educators
Ineffective planning*

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

*A. Investment in technical trades
Collaborative training centres
'Marketing' of the benefits of education*

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

*A. Collaboration
Investment*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Increasing polarization of societies
Rise of chronic diseases
Rising income disparity
Shifts in power
Urbanisation
Weakening of international governance*



Reshma Ramkumar

Chief Risk Officer
Impala Platinum

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

D. Likely





- ▶ Major Escalation in Organised Crime and Illicit Trade

2.16

Major Escalation in Organised Crime and Illicit Trade

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. This risk has a real impact on delivery of NDP objectives in terms of creating a longer term sustainable society. Abuse of organisations/ social groups at the cost of creating stable but sustainable future contributors to economic stability is a key area of concern.

Q. Give three primary causes of this risk.

*A. Skewed power bases in South Africa's young democracy creating opportunities for organised crime to flourish
Mismatch between highly sophisticated regional and global legislative/judiciary systems vs ability to cohesively implement across stakeholder groupings
Global economic disparities creating vulnerable groups that can be exploited*

Q. What are the consequences if this risk materialises?

*A. Increased dependencies on government grants/state revenue pressure
Inability to achieve NDP outcomes due to conflicting resources
Unforeseen societal pressures*

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

*A. Government and Public Services
Healthcare*

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

*A. Immensity of the scale of organised crime and illicit trace compared to limited resources
Inherent reluctance to expose/acknowledge this behaviour
Conflicting critical needs across South Africa and Africa*

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

A. Concerted effort by business groupings (Business Unity SA, BBC, etc.)

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

A. Concerted effort by like-minded groupings (HSF, LeadSA, Freedom Under Law, Active Citizenry, Freedom of speech)

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Increasing polarization of societies
Rise of hyper connectivity
Rising geographic mobility
Rising income disparity
Urbanisation
Weakening of international governance*



Christelle Marais

Practice Leader: Strategic Risk Consulting Marsh

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Major Escalation in Organised Crime and Illicit Trade

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. Organised crime and illicit trade presents an indirect threat to the achievement of the NDP. These activities result in a multitude of negative consequences, ranging from the impact on personal security to altering the perceptions of international investors; all of which affect the capacity to achieve development goals.

There is a wide range of organised crime syndicates that differ in level of sophistication and criminal activity in South Africa. Child and human trafficking syndicates target the most vulnerable sectors of our society, for example, while the illicit trade in wildlife products is increasingly detrimental to our natural environment. Furthermore, as South African society continues to connect online, we are becoming increasingly vulnerable to cyber threats. All areas of society can be affected by organised crime and illicit trade, limiting the impact of the NDP.

Moreover, organised crime does not just compromise the social fabric of a country but the cost of such crimes often diverts much needed resources away from development objectives. Resources may be diverted away for a sudden need to combat increased drug use in communities, or a need to reduce violent crime or curb the repercussions in key economic sectors, such as tourism through environmental degradation. In doing so, the financial resources available for the NDP are reduced.

Q. Give three primary causes of this risk.

*A. Poor response infrastructure, including limitations in the criminal justice system and government corruption, has allowed organised crime and illicit trade to proliferate South Africa's more advanced economic infrastructure and urban communities, along with its geographic position along key trafficking routes makes it an attractive destination for organised crime networks
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*

Q. What are the consequences if this risk materialises?

A. The consequences of organised crime can be seen at an individual and national level. For example, economic crimes by organised syndicates can prove financially costly to the individual as well as businesses. However, as organised crime proliferates, so too does the likelihood for increased violence, intimidation and corruption.

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 resources from other development agendas.

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

*A. Government and Public Services
Financial Services
Communications and Technology*

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

A. The primary barrier in finding a solution to organised crime and illicit trade is the low visibility of this risk. Inherently, organised crime and illicit trade are covert and, as such, we cannot immediately identify their impact. As a result, 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.

Furthermore, 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.



Gabrielle Reid

Lead Sub Saharan Africa political and country Analyst S-RM

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

Impact Scale:

C. Moderate



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

C. Moderate



Likelihood Scale:

E. Almost Certain



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

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

A. 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. Which of the following global trends do you think will have a major impact on the risk going forward?

A. Rise of hyper connectivity



Major Escalation in Organised Crime and Illicit Trade

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. Organised crime and illicit trade will have a significant and detrimental long-term effect on South Africa's environmental sustainability and resilience.

Q. Give three primary causes of this risk.

*A. Inadequate law enforcement around organised crime and illicit trade
Corruption
Inadequate border control*

Q. What are the consequences if this risk materialises?

*A. Environmental degradation
Increasing criminal activity
Negative impact on small businesses within South Africa*

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

*A. Professional Services
Government and Public Services
Energy, Water and Utilities
Retail*

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

*A. Insufficient resources
Weak law enforcement structures and capabilities
Corruption*

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

A. Funding and collaboration between industries and government, towards a joint approach in dealing with the challenges around illicit trade.

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

*A. Increased attention to skills development and capacity within law enforcement
Increased bilateral and multilateral cooperation to enable collective and synchronised responses to threats around environmental crime and illicit trade*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Climate change
Environmental degradation
Rising income disparity
Urbanisation
Weakening of international governance*



Raeesah Cachalia

Consultant
In On Africa

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Major Escalation in Organised Crime and Illicit Trade

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. The non-ferrous theft trade is booming! Theft of copper conductor is highly valued by organised syndicates and the demand for copper is escalating especially in Johannesburg. The impact of non-ferrous theft in a municipal environment is the impact 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.

*A. Demand by the Chinese market for local copper is increasing
Escalating socio-economic climate and availability of jobs is forcing people to become "bread and butter" criminals
Escalation of illegal electricity connections in informal areas*

Q. What are the consequences if this risk materialises?

A. 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?

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

A. Stricter regulation in the non-ferrous trade and the identification of stolen cables by supply authorities must be in place.

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

A. 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.

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

A. 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. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Rising income disparity
Weakening of international governance*



Chris Gower
Revenue Protection Manager
Buffalo City Municipality

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

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain





Failure/
Shortfall of
Critical Infrastructure

2.17

Failure/Shortfall of Critical Infrastructure

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. *Failure and shortfall of critical infrastructure*

Q. Give three primary causes of this risk.

A. *Incompetent contractors appointed
Lack of proper supervision or commitment by project managers within infrastructure departments
Fraud*

Q. What are the consequences if this risk materialises?

A. *Loss of government reputation
Litigations
Public protest – vandalism
Accidents*

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

A. *Government and Public Services
Transport and Logistics*

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

A. *Lack of leadership skills
Greed*

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

A. *Through competency investigation of company
Appoint selection committees (evaluation/adjudication) from various spheres of the competency intended for construction*

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

A. *Enhance the process followed when registering companies in the National SCM Data Base
Introduce punitive mechanism to contractors falsifying their competency*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. *Ageing population
Increasing polarization of societies
Rising geographic mobility*



Dikeledi Mnyandu
Director
Risk Management
Department of Transport
KwaZulu Natal

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

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



Failure/Shortfall of Critical Infrastructure

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. Poses a real risk in terms of delivery.

Q. Give three primary causes of this risk.

*A. Poor investment and planning
Poor maintenance and upgrading*

Q. What are the consequences if this risk materialises?

A. Slow growth, development and deteriorating jobs.

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

*A. Professional Services
Government and Public Services
Energy, Water and Utilities
Transport and Logistics
Manufacturing
Mining, Engineering and Construction*

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

*A. Poor planning and budgets
Politics
Lack of investment
Firm level inefficiencies*

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

A. Improve support, costing and efficient delivery.

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

A. National investment and support.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Increasing polarization of societies
Rise of hyper connectivity
Rising geographic mobility
Rising income disparity
Shifts in power
Urbanisation*



Lyal White

Director
Centre for Dynamic Markets
GIBS

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

Impact Scale:

C. Moderate



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Failure/Shortfall of Critical Infrastructure

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. The NDP portrays developmental growth in economic infrastructure which includes electricity, increase in GDP, improving education, training and innovation, safer communities etc. of which electricity infrastructure is crucial. 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.

*A. Lack of investment towards backlog maintenance and upgrade requirements
Lack of prioritisation of critical capital infrastructure expenditure
Lack of capacity to maintain and upgrade infrastructure*

Q. What are the consequences if this risk materialises?

A. Prolonged outages and cities without electricity will be experienced. The reliability of the electrical system will be vulnerable.

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

*A. Lack of funding
Lack of maintenance
Setting aside portion of the tariff income for regular maintenance and upgrades*

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

*A. Identify the critical infrastructure and develop an integrated plan with tangible projects with estimated costing's to create a master plan
Possibilities of system failures have to be identified and plans developed to deal with such critical failures*

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

*A. An integrated plan and programme of critical infrastructure requiring funding and upgrades has to be developed
A system failure backup plan must be implemented to avoid scenarios such as the blackouts in Toronto and Italy (2003), India (2012), Turkey and Pakistan (2015), Sri Lanka and California (2016)*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Rising geographic mobility
Rising income disparity
Shifts in power
Urbanisation*



Sy Gourrah
Junior Vice President
SAIEE

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Failure/Shortfall of Critical Infrastructure

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. Recovery from the 2008 and 2014 rolling blackouts has been evident, but damage to the economy has been done with less investment streaming in to key sectors amid fears of power shortages.

Q. Give three primary causes of this risk.

*A. Aging power plants and project overruns in bringing new plants online
Aging transmission lines and distribution failures
Cable theft and illegal electrifications*

Q. What are the consequences if this risk materialises?

A. Lower foreign investment in critical infrastructure development due to insufficient power supply

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

*A. Lack of greater implementation of microgrids, especially in rural areas, which would decrease pressure on the central power grid
Lack of transparency and the strong push to implement the largely cost-ineffective nuclear option and malaise around the topic of new power infrastructure development without Eskom*

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

A. Allowing industry participants to develop their own microgrids and move away from the dependency on the central grid and its ever-rising tariffs.

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

A. Break-up Eskom into more productive and efficient private units, or allow for private stakeholding in the national power utility to increase efficiency, lower corruption and stimulate transparency.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Growing middle class in emerging economies
Rise of hyper connectivity
Urbanisation*



Ogi Williams

Senior Research Analyst
In On Africa

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



Failure / Shortfall of Critical Infrastructure

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. This risk is crucial in the South African developmental context

Q. Give three primary causes of this risk.

*A. Inability to fund key infrastructure programmes due to down grading of financial borrowing status by rating agencies
Leadership instability in the key State Owned Entities and political interference in the appointment of CEO's
Fraud and corruption in the tendering system including state capture of key infrastructure resources
Lack of good governance
Poorly managed, serviced or upgraded infrastructure
Lack of planning for the key infrastructure is not aligned with the economic growth and population
NDP not aligned with SOC and key national government department plans
Government entities failure to collect revenue e.g. Municipalities, Eskom etc.
Lack of experienced Project Managers*

Q. What are the consequences if this risk materialises?

*A. 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 South Africa
Service delivery protests*

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

*A. Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Mining, Engineering and Construction*

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

*A. Fraud and corruption
Political interference*

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

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

*A. Increase government transparency on the tender 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, and adjusted as the economy changes*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Ageing population
Climate change
Growing middle class in emerging economies
Shifts in power
Urbanisation*

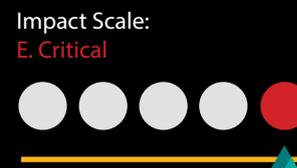


Thulani Mkhungo
Chief Risk Officer and Chief Audit Executive
SIU

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



Rate the Impact and Likelihood of the risk in the next 10 years.





► Brexit
Repercussions
("British Exit" from the EU)

2.18

Brexit Repercussions

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. There will be little to no effect. Indirectly through trade etc., but little else on the NDP.

Q. Give three primary causes of this risk.

*A. Less connected to South Africa's key trade partner
Managing it with the European Union
Perception of conservatism creeping into the global system*

Q. What are the consequences if this risk materialises?

A. Lower or more complicated trade and investment flows.

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

*A. Professional Services
Financial Services
Transport and Logistics
Petrochemicals
Hospitality
Retail*

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

A. Externalities – politics and society in the United Kingdom. How they deliver the policy changes.

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

A. Communicate, engage, renegotiate

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

A. Keep a close eye on trade and key trade partners, currencies etc

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Ageing population
Growing middle class in emerging economies
Increasing polarization of societies
Rise of hyper connectivity
Rising geographic mobility
Rising income disparity
Shifts in power*



Lyal White
Director
Centre for Dynamic Markets
GIBS

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

Impact Scale:
A. Insignificant



Likelihood Scale:
A. Insignificant



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:
C. Moderate



Likelihood Scale:
C. Moderate



Brexit Repercussions

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. It is very difficult to determine any likelihood or probability rating for this risk due to the British and EU not yet being clear on how the impacts/consequences of this will materialise. South African organisations are concerned about a potential impact, but wary of spending time, funds and effort on possible mitigation strategies which may they may not be able to rationalise when a real view of the risk.

Q. Give three primary causes of this risk.

*A. Severe income disparities and inequality (globally and regionally)
Trust deficit between society and what is perceived as "institutions"; e.g. European Union, Democrats in United States, African National Congress in South Africa.
Social media and globalisation (immediate availability of information)*

Q. What are the consequences if this risk materialises?

*A. Inability to import/export to European Union/British markets (or to negotiate new beneficial trade agreements)
Increased unemployment in South Africa by firms impacted by one above
South African organisations forced to find alternative markets for products*

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

*A. Communications and Technology
Petrochemicals*

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

A. Lack of information on what next steps by role-players will be (United Kingdom Government, European Union)

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

*A. Promoting South African industries' brand/reputation for superior products (wine, fresh fruit, etc.)
Developing alternative markets (e.g. sugar to North America instead of Europe)
Lobby Department of Trade and Industry as well as International Relations to promote local industries globally*

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

*A. Department of Trade and Industry actively supporting those industries most impacted by potential Brexit consequences
Promoting Brand South Africa in alternative markets*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Ageing population
Growing middle class in emerging economies
Increasing polarization of societies
Rise of hyper connectivity
Rising income disparity
Shifts in power*



Christelle Marais

Practice Leader: Strategic Risk Consulting Marsh

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

Impact Scale:

C. Moderate



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

B. Minor



Likelihood Scale:

E. Almost Certain



Brexit Repercussions

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. Brexit is a code for a number of politico-economic attitudes. It will bring about a closing of economic barriers, a political nationalism, and reduced global interaction. The result will be less economic choice, less economic vigour, less sharing of economic risk across borders, and more rigid political systems. It signals an increased risk of war or political intolerance.

Q. Give three primary causes of this risk.

*A. Increased nationalism
Closing of economic borders
Less international verification of rights and opportunities*

Q. What are the consequences if this risk materialises?

*A. Lower economic growth
Less flexibility
Less spread of economic risks*

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

*A. Financial Services
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Hospitality*

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

A. International trend of political and economic thinking is not susceptible to management on the micro-level.

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

A. Building socio-political consensus on the need for globalisation, the importance of a global post-UN Charter philosophy, and a rejection of divisive, xenophobic and nationalistic politics.

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

A. Better leadership

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Environmental degradation
Growing middle class in emerging economies
Increasing polarization of societies
Rising income disparity
Weakening of international governance
Increasing national sentiment*



Coen van Wyk
Consultant
In On Africa

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Brexit Repercussions

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. At this stage the (real / actual) impact on South Africa remains to be seen given the timeframe behind the exit process, but particularly the changes to international trade and policy, which are not clear at present and which depend on the exit negotiations. The state and/or direction of particularly the UK will be influenced by the exit negotiations and exit result.

A definite (risk) exposure to South Africa does however exist.

Q. Give three primary causes of this risk.

A. N/A

Q. What are the consequences if this risk materialises?

A. Potential decrease in exports and or competitiveness (in both pricing and quantity) of exports – impacting balance of payments, and at current given the fiscal pressures this is not welcome to the South African economy in various ways.

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

A. Manufacturing

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

A. No real control over this risk, albeit that management of relations with both the UK and EU are critical.

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

A. N/A

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

A. Relationship management with relevant authorities in both UK and EU.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. Shifts in power



Dr Francois van Dyk
Senior Specialist Risk Consultant
Marsh

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

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain





Regulatory/
Legislative
Changes

2.19

Regulatory/Legislative Changes

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. To implement projects related to the NDP certain changes may need to be made to the current legislation and regulations. However, the institutions may not be able to implement those changes and regulators may not be able to monitor implementation.

Q. Give three primary causes of this risk.

*A. Requirements for implementation do not align with available capacity/resources to implement and to monitor their impacts
Misdirected focus
Lack of clear guidelines
No willingness to comply
Limited or lack of understanding of the NDP*

Q. What are the consequences if this risk materialises?

*A. Business as usual, nothing changes
Inequity gap increases
Lack of spending on projects
Fines and licensing issues
Legal and Litigation exposure
Disgruntled communities
Reduced level of trust and integrity of the institutions ability to deliver*

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

*A. Risk management process misaligned with policy decision making
Lack of compliance culture
Lack of capacity to understand, implement and monitor the NDP and its legislative requirements and drivers for legislative changes
Lack of ownership*

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

*A. Review approach towards integrated risk management functions
Each case must be treated on its merit and appropriate support provided per case
Political will and support
Collaborative efforts at inception stages
Inclusion of affected industries in assessing legislation change risk
Training and capacity building*



Nkosinathi Mhlongo

Managing Director
KeyDimensions Risk and Advisory Services

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

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



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

*A. Participation of Risk Management body in policy consultative process
Strengthen CBOs/NGOs/civil society to monitor implementation
Collective efforts with all stakeholders
Training and capacity building
Consequence and incentives management*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Ageing population
Climate change
Environmental degradation
Increasing polarization of societies
Rise of chronic diseases
Shifts in power
Increasing national sentiment*

Regulatory/Legislative Changes

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. A possibility of misalignment thus stagnation during the implementation phase.

Q. Give three primary causes of this risk.

*A. Lack of cooperation from key roles i.e. government and business
Undue influence from those that have economic power
Too long process to approve changes/ reforms*

Q. What are the consequences if this risk materialises?

*A. Shrinkage of public-private partnership thus adverse effects on job creation
Failure to address country's tripartite challenges i.e. poverty, unemployment and inequalities
Reforms/ changes are too slow yet we are faced by a fast-changing world economic environment*

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

*A. All industries will be directly or indirectly affected, but the most hit will be:
Healthcare
Government and Public Services
Manufacturing
Mining, Engineering and Construction*

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

*A. Inadequate understanding of the goal congruency of the country by the role players
Individual priorities over national interest*

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

*A. First, the appreciation that the world is changing faster than we can think
Abolish the notion of 'us' and 'them' and partner for the betterment of the country's development
Implementation of national policies through clusters
Cooperation at the consultative summits (Foster cooperation through conducting summits or cluster consultations)*

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

*A. Provide adequate training and refresher courses to the implementers
Ensure proper monitoring on implementation with a recourse
Ensure legislative/ regulatory enforcement using the already existing systems
Most importantly break the silo mentality within and outside of the public sector*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Climate change
Increasing polarization of societies
Rising income disparity
Shifts in power*



Bheki Gutshwa

Vice President
IRMSA

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

Impact Scale:

D. High



Likelihood Scale:

D. High



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

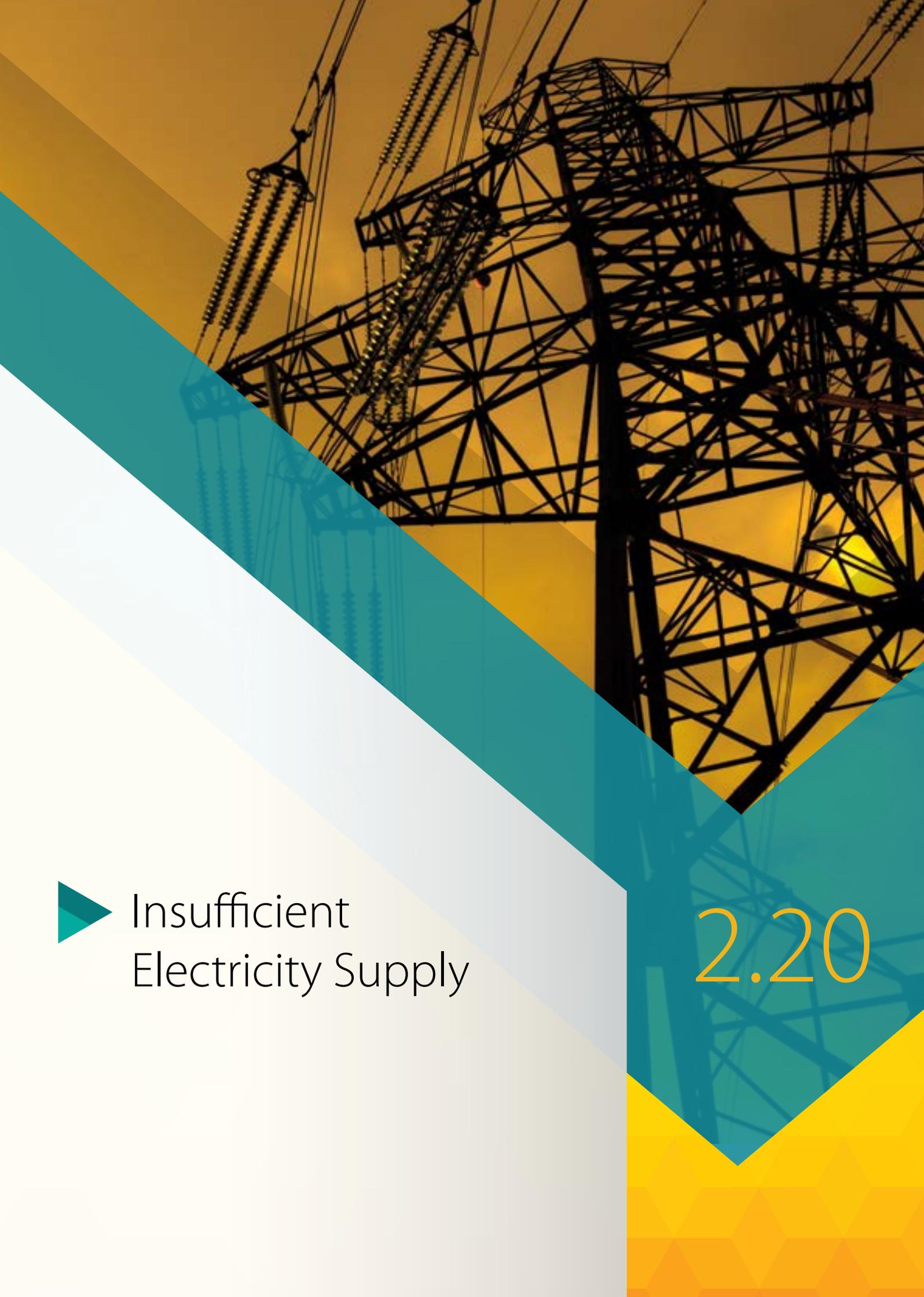
E. Almost Certain



Likelihood Scale:

E. Almost Certain





▶ Insufficient
Electricity Supply

2.20

Insufficient Electricity Supply

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. *The increasing, escalating national trend of both electricity and water losses is of a serious concern. The direct impact of this trend is less cash income generated for licenced suppliers, which is presently resulting in the licenced supply entity not being in a position to perform planned network maintenance and the delivery of a basic service in informal areas.*

Q. Give three primary causes of this risk.

A. *A non-competitive electricity supplier's market, which is open to public company participation
A new and emerging small scale embedded generation (SSEG) market industry
Both non-technical losses (illegal connections, theft) and technical losses (inefficient equipment)*

Q. What are the consequences if this risk materialises?

A. *The provision of a basic, metered electricity service in informal areas has to be prioritised. If this is not achieved, electricity losses will spiral out of control and this will develop into a non-payment pattern across other, more affluent customer categories.*

If this trend continues, this will result in a shortfall of basic services and the quality of this service to the general public.

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

A. *Government and Public Services
Energy, Water and Utilities
Communications and Technology
Manufacturing
Retail*

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

A. *The non-availability of dedicated Revenue Protection teams in the smaller municipalities, to prevent non-technical losses and the associated recovery of non-billed revenue
The lack of an adequate operational budget for Revenue Protection teams*

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

A. *The industry has to target non-technical losses, find solutions and recover lost or stolen electricity income.*

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

A. *The National Energy Regulator must make it a licence condition that where supply authorities have an above average electricity loss percentage, a 1-2% of electricity income is mandatorily used for the funding of Revenue Protection teams and for operational use in the recovery of non-billed electricity. This condition must be in place until such time as losses are brought down to an acceptable level.*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. *Climate change
Increasing polarization of societies
Rising income disparity
Shifts in power
Increasing national sentiment*



Chris Gower
Revenue Protection Manager
Buffalo City Municipality

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Insufficient Electricity Supply

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. Insufficient electricity supply creates risk to the ability of South Africa to sustain, stimulate and grow its economy; which will impact particularly on employment, attracting investment, expanding infrastructure, and investing in environmental sustainability by transitioning to a low carbon economy.

Q. Give three primary causes of this risk.

*A. Increasing misalignment of industry structure to the introduction of new power production capacity
 Inadequate management and technical skills
 Eskom's financial and operational sustainability:*

- o New build delays and cost over-runs*
- o Paying for costly for gas and renewable IPPs*
- o Fuel price driven high electricity generation costs*
- o Increasing municipal debt*
- o Reduced sales volumes*
- o Insufficient maintenance and refurbishment*

*Slow implementation of new base load and load following generating capacity to replace Eskom's old power stations
 Deteriorating performance of an inefficient electricity distribution industry*

Q. What are the consequences if this risk materialises?

*A. Reduction in the Eskom credit ratings, due to loss of confidence by the major credit ratings agencies
 Loss of confidence of investors impeding the development of industries key to economic growth
 Reduced and unreliable production of commodities and goods, key to economic growth and the reversal of Eskom's declining sales
 Disruption of essential services, telecommunications, and traffic congestion*

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

*A. Energy, Water and Utilities
 Communications and Technology
 Transport and Logistics
 Manufacturing
 Mining, Engineering and Construction*

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

*A. Uncertain government policy and regulatory direction
 NERSA continuing to apply a short-term approach to pricing
 Pricing path policy uncertainty
 Local government resource application and delivery capability*

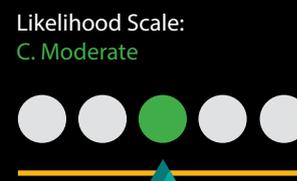
Q. What is the effective risk response to treating the risk on an industry level?

*A. Sustained and improved operating and cost performance of Eskom's old power generation plant
 Ring-fencing and then unbundling Eskom's generation, system operator, transmission and distribution operations
 Ring-fencing local government electricity operations and eliminating the cross subsidisation of other services
 Improved management and technical skills that enable improved performance from the application of limited funding and other resources to the operation, maintenance and refurbishment of electricity infrastructure
 Industry level agreement with government on restructuring the electricity supply industry*



Les Carlo
 Risk Intelligence Committee
 Member
 IRMSA

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



Rate the Impact and Likelihood of the risk in the next 10 years.



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

- A. Accelerated implementation of ISMO with sufficient buyers and sellers for effective market operation*
- National government underwriting of, and repayment of municipal arrear debt*
- A long-term government electricity supply infrastructure funding and investment strategy linked to the Integrated Resource Plan and policy for certainty over a long-term pricing path*
- Urgent investment in major base load and load following generation capacity*
- Restructure the electricity supply industry*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

- A. Climate change*
- Environmental degradation*
- Shifts in power*
- Urbanisation*

Insufficient Electricity Supply

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. The NDP portrays developmental growth in economic infrastructure which includes electricity, increase in GDP, improving education, training and innovation, safer communities etc. of which electricity supply is crucial. Electricity supply is a catalyst to the above objectives and lack of sufficient electricity supply would lead to the non-achievement of the objectives as detailed in the NDP.

Q. Give three primary causes of this risk.

*A. Delay in the restructuring of the electricity supply industry
No competition at generation/transmission and distribution levels
No power pools and independent system operators
No approved Integrated Resource Plan (IRP) that clearly indicates the energy mix requirements of the country with accompanying regulatory legislation*

Q. What are the consequences if this risk materialises?

*A. We have experienced insufficient electricity supply in 2008 and again in 2014/2015 which resulted in immense economic losses
Lack of investor confidence, especially foreign investment, which is crucial for projects such as renewable projects*

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

*A. Integration of stakeholders to have a unified approach to the electricity supply industry
Political buy-in
An approved IRP
A road map to the end state of the Electricity supply industry*

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

A. The industry is led by experts in the different fields and proposals on resolving the above risk can be formulated.

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

A. A national task team with all the relevant stakeholders and role players has to be delegated the authority to formulate strategies that benefit the industry and country in the long run. A lot of the ground work has already been formulated and presented to various national structures.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Shifts in power
Urbanisation
Increasing national sentiment*



Sy Gourrah
Junior Vice President
SAIEE

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

Impact Scale:

D. High



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



Insufficient Electricity Supply

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. One of the key enabling milestones or requirements of the NDP is to “produce sufficient energy to support industry at competitive prices, ensuring access for poor households, while reducing carbon emissions per unit of power by about one-third.”

However, in respect of ensuring success in achieving almost all of the other key enabling milestones of the NDP e.g. promoting manufacturing, better health facilities, job creation, improving water and sanitation infrastructure, improving ICT infrastructure and associated communication, enhancing education etc the availability and access to secure and cost effective electricity will be key to ensuring success with respect to the aforementioned NDP key milestones.

Historically, there was always a direct correlation between the GDP of South Africa and the availability of secure and cost effective electricity supply. Given that South Africa’s GDP is currently very low, any further risk to the availability of secure and cost effective power supply will definitely further exacerbate this situation.

Q. Give three primary causes of this risk.

A. Poor or inadequate integrated resource planning by national government with regards to generation, transmission and distribution

Very low reserve margins and when overall demand for electricity exceeds the supply of available power supply

Inadequate investment in the maintenance and refurbishment of existing electricity infrastructure and inadequate investment in new infrastructure

Q. What are the consequences if this risk materialises?

A. We will be back to the 2008 and 2014/15 load shedding scenario

Worst case scenario is we could have rolling blackouts

Foreign investment in business operations will be severely curtailed or grind to a halt if secure and adequate electricity supply is no longer available

The viability of businesses that depend on a secure, adequate and cost effective electricity supply will also suffer

In essence the economy of the country will suffer including job losses, a rise in inflation, and USD/ZAR forex will also be negatively affected

Multinational businesses may also pull out their operations in South Africa and possibly relocate elsewhere in the world

Economic development and economic growth will also suffer

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

A. Manufacturing

Mining, Engineering and Construction

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

A. Probably access to cost effective primary energy, capital and the availability of skilled and competent manpower resources.

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

A. The industry should ensure that the existing infrastructure is sound enough to transport and evacuate the available power across the entire electricity value chain i.e. from Gx, Tx, Dx to the end user customer

Adequate budgets must be made available and that the existing infrastructure is properly and timeously maintained and refurbished

Competent and skilled manpower resources must be maintained at the correct levels, retained and trained and developed

Long-term and short term planning should also be taken care of

Sufficient quantities of primary energy especially coal and water should be available

No more delays with regards to the new build programme especially in respect of completing as planned and timeously Medupi and Kusile power stations

Good relations should be maintained with organised labour to avoid unnecessary and continued industrial strike action and consequent work stoppages



Vally Padayachee

Strategic Advisor
AMEU

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

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

C. Moderate



Likelihood Scale:

C. Moderate



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

- A. National government must facilitate access to cost effective capital from especially global capital markets
It is critical that national government must facilitate investor confidence and fiscal prudence in the country to avoid, for example, rating agency downgrades
Government should allocate reasonable and sufficient guarantees to fund the building of power or electricity infrastructure
National government must ensure that the latest IRP is finalised soonest as a priority
Government should also continue to promote a wider energy mix similar to the very successful REIPP Programme and other alternative energy options
Government should also promote Demand Side Management (DSM), Demand Response (DR), programmes
Government should also look at “moving away” in a prudent and “mature” manner from so called energy intensive industries without unreasonably disincentivising the establishment of such industries
The impact of embedded generation especially small scale embedded generation (SSEG) on the revenues of Eskom and the metros and municipalities must be carefully monitored and managed – these institutions are seeing some revenue erosion (though not too debilitating at this stage)

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

- A. Climate change
Environmental degradation
Increasing polarization of societies
Rise of chronic diseases
Rising geographic mobility
Rising income disparity
Urbanisation
Weakening of international governance



▶ Lack of
Innovation

2.21

Lack of Innovation

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. The structure and demographics of South African society with its inequalities among race and region means that innovative solutions are needed, not just global solutions that may have been effective in their countries but inapplicable in South Africa. A lack of innovation will inhibit the NDP objectives particularly around economic growth, poverty alleviation and education in particular.

Q. Give three primary causes of this risk.

*A. A lack of adequate funding in both the public and private sector
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?

*A. Higher cost of meeting NDP objectives
Ineffective delivery of required solutions*

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

A. Education

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

*A. Lack of adequate mechanisms to access funding efficiently, where it is available
Ineffective government bureaucratic institutions and staffing
Private sector reluctance to invest in innovation*

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

A. Education is the sector that is of the highest priority and one that suffers from a lack of innovation – political will is required at the highest levels to encourage different models of education where required.

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

A. Overhaul the institutions that oversee the innovation support programmes and create partnerships with the private sector.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. Increasing polarization of societies



Terence Singh
Director
Ruhi Consulting

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Lack of Innovation

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. As one of the fundamental drivers for long term economic growth, innovation and technological advancement is central to the entire NDP. A sustained lack of investment and success in regards to innovation activities will, over the long term, severely handicap South Africa's ability to compete economically, and reduce its ability to deliver services and welfare cost effectively. It is also an enabling factor for all other elements of the NDP – it leads to greater labour absorption, it results in more environmentally sustainable technologies, it increases life spans... and so on. A failure to innovate will ultimately undermine the entire effort; and this topic should therefore be deeply considered not just as a standalone pillar, but as a cross-cutting competency in all others as well.

Q. Give three primary causes of this risk.

A. Poor education systems, infrastructure and performance; innovation is a numbers game, and we do not have a very large number of people (relative to the population) involved in innovation activities. A risk-averse corporate and public sector culture; many organisations (and people inside those organisations) are not willing to take calculated innovation risks – or are prevented from doing so by regulation such as the PFMA – and hence resources are allocated towards business-as-usual practices. South African firms do not generally compete internationally, nor are given support to do so; firms that do this (e.g. Sasol, Sappi, Naspers) have extensive innovation, R&D and technology acquisition efforts as they recognise the need to out-compete local players.

Q. What are the consequences if this risk materialises?

A. Long term decline in international competitiveness of South African firms. This will lead to opportunities for them to be bought out or outcompeted by foreign firms, leading to the loss of local revenues, possibly also jobs. The services and products demanded by South Africa will still be met, we will just be essentially exporting those profits overseas; thus fewer jobs, less wealth creation in the country.

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

A. Government and Public Services
 Financial Services
 Energy, Water and Utilities
 Communications and Technology
 Manufacturing
 Mining, Engineering and Construction
 Healthcare
 Retail

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

A. A genuine understanding of the role of innovation in economic development and firm level competitiveness across both public and private sector
 Role models for innovation and entrepreneurship amongst the bulk of the South African population
 Political leadership to prioritise education and innovation efforts

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

A. Building stronger cross-value chain innovation partnerships.

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

A. Creating appropriate incentives and support mechanisms to enable private firms to undertake risky ventures.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. Climate change
 Environmental degradation
 Growing middle class in emerging economies
 Rise of hyper connectivity
 Rising income disparity
 Urbanisation



Davis Cook
 Chief Executive Officer
 RIIS

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



Rate the Impact and Likelihood of the risk in the next 10 years.



Lack of Innovation

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. Innovation is the engine for economic growth and development. At our current GDP growth rate we need a different kind of innovation, we are in dire need of innovation that can create new industries and new skills, without this our NDP is exposed.

Q. Give three primary causes of this risk.

A. Why are we no longer innovating? It is very simple, our top scientists have left the country due to crime, corruption and the high murder rate; research houses have received less funding over the years but more importantly, nothing is forcing South Africa to innovate. During apartheid South Africa had to innovate to sustain its isolation and there were more patents filed then than there are now.

Q. What are the consequences if this risk materialises?

A. The risk has materialised and our balance of payments has gone worse due to our false sense of economic buying power through imports while suppressing our local IP and potential employment opportunities.

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

- A. Professional Services*
- Government and Public Services*
- Financial Services*
- Energy, Water and Utilities*
- Communications and Technology*
- Transport and Logistics*
- Petrochemicals*
- Manufacturing*
- Mining, Engineering and Construction*
- Hospitality*
- Education*
- Healthcare*
- Retail*

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

A. There are competing economic interests in us allocating our resources to what will really support our National Development Plan. Twenty years later we now have the Department of Small Business which is supposed to be a platform for innovators and entrepreneurs. Is this new department well resourced to fuel innovators to reduce unemployment by 50%? Time will tell.

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

A. Industries can work with individual university Chairs in support of industry initiatives but essentially each organisation guards its own innovation pipeline very closely. Because industries understand the language of bottom line, they often don't tamper with their innovation budget. Imagine if Huawei reduced its innovation by 50%, it will not be able to compete with CISCO. Funding of one's innovation pipeline is key.

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

A. There is great opportunity for innovation competency to be funded within SETAs where there is good blend of young minds hungry for economic opportunities. SETAs can also link well with all the sectors of the economy. Innovation machinery that has fuelled organisations like SASOL can be beneficial to our young talent.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

- A. Climate change*
- Environmental degradation*
- Rise of chronic diseases*
- Rising income disparity*
- Urbanisation*



Mdu Zakwe
Executive Chairman
Cyber Core

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain





Escalation
in Large-Scale
Cyber Attacks

2.22

Escalation in Large-Scale Cyber Attacks

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. When such a risk materialises, it will have a significant impact on the NDP - hundreds of entities and other stakeholders, for example citizens of South Africa will be affected. Many stakeholders will not recover, and should an attack be on the water supply, there will be a significant impact on citizens' welfare and health, and may result in many deaths.

Q. Give three primary causes of this risk.

A. Internal:

- Disgruntled staff

External:

- Cyberwar – hacking sponsored by terrorist organisations
- Cyber criminals

Q. What are the consequences if this risk materialises?

A. The extent and depth of the consequence will depend on which digital system was attacked. For example, if it was the banking digital systems, it would be catastrophic because of the multi-dimensional nature of the banking infrastructure. Whatever digital system is the target, the consequence would be either material, significant and/or catastrophic and may even be extinction.

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

A. Professional Services

- Government and Public Services
- Financial Services
- Energy, Water and Utilities
- Communications and Technology
- Transport and Logistics
- Petrochemicals
- Manufacturing
- Mining, Engineering and Construction
- Hospitality
- Education
- Healthcare
- Retail

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

A. Lack of understanding of the depth of the risk

- Funding
- Speed at which technology is changing

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

A. Identify the nature and type of the risk, will it come from an internal or external source?

- Secure digital platform that are fundamental to the success of the business
- Investment in new solutions
- Realistic policy and procedures, for example BYOD

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

A. Government taking the lead and setting up a cyber-security hub and setting the tone of good preventative measures

- Investment in digital security
- Ensure that this is seen as everyone's risk, part of their "DNA"
- Education
- Continuous awareness campaign

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

- A. Increasing polarization of societies*
- Rise of hyper connectivity*
- Rising income disparity*
- Shifts in power*
- Urbanisation*
- Weakening of international governance*



Anne Reed
National Risk Manager
BDO

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Escalation in Large-Scale Cyber Attacks

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. Technology is poised to play a vital role in (1) democratising access to resources (2) reducing barriers to entry for entrepreneurs wanting to participate in the economy and (3) facilitating easy access to learning resources even for lower-income groups. Large-scale cyber attacks will necessitate a disproportionate increase in funding required to thwart attacks or clean-up after an attack, because these issues have not been factored in during the development lifecycles for most infrastructure projects. This will pose a direct threat to the achievement of the goals such as reduction of the in-equality gap and the favourable positioning of South Africa in the global arena. Furthermore, being in "reactive" mode will mean a higher price will be paid to achieve the same security posture as nations who have factored these issues in, from the beginning, thereby eating away from limited public funds which will also impact on other objectives.

Q. Give three primary causes of this risk.

*A. Lack of skills to needed to incorporate secure designs into infrastructure and related projects with a cyber component
Lack of reliable metrics to assist in determining the adequacy of controls relative to risks being mitigated
Non-inclusion of cybersecurity competencies in higher education curriculum*

Q. What are the consequences if this risk materialises?

*A. Loss of productivity due to unscheduled downtime
Erosion of intellectual property from data breaches
Infrastructure meltdown when industrial control systems are targeted
Increased cost of doing business due to the incident handling costs and volumes*

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

*A. Government and Public Services
Financial Services
Energy, Water and Utilities
Healthcare*

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

A. Firstly, we need to raise awareness through industry specific events and high-level regulations need to be setup per industry to encourage/enforce positive behaviour.

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

A. Overhaul the institutions that oversee the innovation support programmes and create partnerships with the private sector.

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

A. A structure at the national level has to be defined and resourced appropriately for this. Such an organisation (possibly Chapter 9 institution) would be a stop shop for public / private sector organisations. A structure at the national level has to be defined and resourced appropriately for this. Such an organisation (possibly Chapter 9 institution) would be a one stop shop for public/private sector organisations. A structure at the national level has to be defined and resourced appropriately for this. Such an organisation (possibly Chapter 9 institution) would be a stop shop for public / private sector organisations.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Growing middle class in emerging economies
Rise of hyper connectivity
Urbanisation*



Edwin Mpofu
IT Security Operations Manager
Wolfpack Information Risk

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

Impact Scale:

D. High



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

D. Likely



Escalation in Large-Scale Cyber Attacks

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. Part of the NDP's endeavours is to reduce the "digital divide" in South Africa. To this end, the institutional arrangements to manage the information, communications and technology (ICT) environment needs to be better structured. This will require an efficient information infrastructure to achieve the said goal - to have greater inclusion and general economic growth.

The greater inclusion of the populous implies that more people will gain access to information that will enable them to become active participants in a more digitised economy. Cyber risks that are not well managed will, however, significantly impede the progress of this goal. This is due to the fact that when people use technology, there is an inherent requirement that the technology be trusted. Widespread materialisation of cyber risk can significantly reduce the uptake of a technology if there are negative perceptions about the technology. The increase in cyber-criminal activities can potentially hamper the achievement of this goal by 2030, as envisioned by the NDP.

Q. Give three primary causes of this risk.

A. Large organisations generally have better security processes in place due to the fact that they have bigger volumes of valuable information than smaller organisations. However, they generally do not do a good job of monitoring and managing the security processes of their business partners, suppliers and their supply chain.

There is a lack of skilled individuals who are responsible for managing the security of information. The defence against cyber-attacks requires well trained and experienced individuals to proactively and reactively manage the risk.

General trends have indicated that the requirement for the protection of information still does not get the attention that it requires in most organisations due to lack of support/buy-in from organisations' leadership.

Q. What are the consequences if this risk materialises?

A. Cybercrime is no longer just about theft and fraud. Due to the increased level of connectedness of the world, it has now spread to involve vast criminal networks (cyber porn rings), government sponsored hacking and cyber terrorism amongst others. These can result in extortion of monies, denials of service, corruption and destruction of data, ransomware, loss of corporate IP, identity theft. In instances where these relate to corporates, it might even result in regulatory fines where applicable (e.g. PoPI), financial loss due to compensation of affected customers, loss of competitive advantage due to loss of IP, and also reputation damage.

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

A. Communications and Technology

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

A. The following are the barriers preventing cyber-attack risk from being effectively managed:

- Lack of ownership of responsibilities for the activities related to managing cyber-attack risks. This is usually affected by lack of buy-in from organisations' leadership regarding the realities around cyber-attacks and how to manage those realities.*
- Cyber-attack risks not being understood by the people who need to be responsible for managing it.*
- Lack of ERM coordination with responsible individuals in the organisation around the management of cyber-attack risk efforts.*
- Lack of understanding of the impact that cyber-attacks could have on organisations. This results in the lack of investment in the mitigating controls that manage the cyber-attack risk.*

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

A. Organisations on an industry level must coordinate their risk management efforts to effectively respond to the treatment of the risk. This coordination must involve sharing of information about the incidents that impact the industry specifically. Industry standards must also be in place to cyber programmes and capabilities to align to.



Matome Bopape
Senior Specialist: Information Security
Vodacom

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

Impact Scale:

D. High



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain



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

A. At a national level, the government must have a national cyber-attack management framework and policy in place to articulate the responsibilities of the stakeholders in the management of cyber risks. There must also be a national level coordination of efforts to deal with cyber-attack threats across industries affected by the risk, primarily those that are more susceptible to the threat of the risk. The government must periodically engage with these particular industry stakeholders that are affected the most around their responsibilities in managing the risk.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

- A. Growing middle class in emerging economies*
- Increasing polarization of societies*
- Rise of hyper connectivity*
- Rising geographic mobility*
- Rising income disparity*
- Shifts in power*
- Urbanisation*
- Weakening of international governance*

Escalation in Large-Scale Cyber Attacks

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. For us to achieve our targets as per the NDP we need all our resources. The problem with large scale cyber attacks is that they tend to take our focus away from our NDP targets, and force us to focus on defending against a wave of attacks.

Q. Give three primary causes of this risk.

A. Large scale cyber attacks can be attributed to well co-ordinated cyber gangs who find it easier to conduct such attacks on poorly controlled environments with low security maturity. Some of the large scale cyber attacks can be attributed to certain hackers or groups of hackers having a political interest linked with our sovereignty as a Republic. In some instances hackers are motivated by economic reasons

Q. What are the consequences if this risk materialises?

A. Pending the outcome of a hack report requested by President Obama on their recent elections, consequences could be scripted election results. Statistics South Africa data can be manipulated so that planners can implement incorrect policies. Intelligence can be collected from any public official (especially Ministers, Deputy Ministers, Director Generals) using webmail services (i.e. gmail or yahoo mail).

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

- A. Professional Services*
- Government and Public Services*
- Financial Services*
- Energy, Water and Utilities*
- Communications and Technology*
- Transport and Logistics*
- Petrochemicals*
- Manufacturing*
- Mining, Engineering and Construction*
- Hospitality*
- Education*
- Healthcare*
- Retail*

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

A. Various reports from different research houses point to an inside threat as the weakest link that can propagate the risk of large scale cyber attacks. Our inability to train sufficient cyber armies to guard our cyber space remains an ongoing challenge despite some noted progress from certain sectors.

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

A. Industries have organised themselves into CSIRTs that continue to help each other as industry participants share much richer information and more insight into the mechanics of the cyber attacks, but then again, cyber attacks don't discriminate, hence the need for South Africa to become a unit in combating cyber attacks. Pockets of excellence against cyber attacks are not good enough for overall defence of our cyberspace.

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

A. Information sharing scares every hacker. Hackers marvel at our inability to have a defined information sharing framework and platform. This is certainly not an effective risk response. South Africa should define this information sharing framework that can support the current reporting of incidents.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

- A. Increasing polarization of societies*
- Rise of hyper connectivity*
- Rising geographic mobility*
- Rising income disparity*
- Shifts in power*
- Weakening of international governance*
- Increasing national sentiment*



Mdu Zakwe
Executive Chairman
Cyber Core

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

Impact Scale:

E. Critical



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain





▶ Government
Policy Changes

2.23

Government Policy Changes

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. Competing unforeseen and urgent priorities
Failure to make intended service delivery impact*

Q. Give three primary causes of this risk.

*A. Changes in the global economic environment thus compelling reviews of policies
Lack of appropriate continuous monitoring and evaluation
No sense of urgency as a result of inadequate enforcement*

Q. What are the consequences if this risk materialises?

*A. Government will be forced to attend and fund the unforeseen and urgent competing priorities e.g. health care, education, etc.
NDP target objectives of year 2030 will have to be postponed
Unsatisfied or disgruntled society
Political instability*

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

*A. Government and Public Services
Energy, Water and Utilities
Mining, Engineering and Construction
Education
Healthcare*

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

*A. Highly competing government priorities
Inadequate spatial planning
Perpetuating promises, made by politicians, that are not budgeted for
Fragmented public sector legislation*

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

*A. Continuous monitoring and evaluation of the policies
Appropriate actions should be taken against failures*

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

*A. Better planning with consultation that encompasses broader socio-economic challenges faced by the country and the world
More cooperation between government and business*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Climate change
Environmental degradation
Increasing polarization of societies
Rise of chronic diseases
Rise of hyper connectivity
Rising geographic mobility
Rising income disparity
Urbanisation*



Bheki Gutshwa
Executive Committee Member
IRMSA

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

Impact Scale:

E. Critical



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Government Policy Changes

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. Very relevant – although perhaps the risk should read as “Ambiguity of Government Policy”

Q. Give three primary causes of this risk.

*A. **Lack of a Clear Societal Transformation Vision** – Driven by political and ideological ambiguity
Leadership and Governance - Poor governance and weak ethical leadership
Lack of social cohesion – Exacerbated by continued social prejudice and biases, especially racism
Skills and capacity to execute*

Q. What are the consequences if this risk materialises?

A. These risks have been prevalent since the birth of our young democracy and have crystallised recently.

1) Currently, there is no national vision as to our “transformation model”:

i) Is it a “redistributive” economic model – the way the economic pie is divided will be changed, regardless of if it shrinks or grows. This is a model that has been employed across many parts of the post-colonial world, with limited success. However, it has historically been “effective” in achieving redistribution for an elite.

ii) It is an “economic growth” driven transformation, drive by greater levels of economic engagement in the global economy and increasing the size of the society’s share of the global economic pie. This model has been employed in Singapore, South Korea, Chile and China, with massive impact. However, this is a medium to long term journey (20 to 40 years) and in many instances was driven under authoritarian Governments in the initial phase.

iii) Is it a “hybrid”, with Malaysia being a leading example.

There is a need for us to assess what type of society we want to create in South Africa, create a national vision about what that society might look and feel like for its citizens and then try and create policies that support the “shared vision” of its citizens.

2) There is little doubt that society has been somewhat let down by the quality of its leaders, both in the public and private sectors.

There has been too little ethical and selfless leadership across the board (generally speaking). Acknowledging pockets of excellence, overall there is a need for more ethical and servant leadership, accompanied by strong Governance structures and accountability.

3) A by-product of the above two risks is an increasing polarization within society and an escalating lack of social cohesion.

There appears to be consensus that we are evidencing increasing levels of racial anger and resentment within our society. Positively, this is not exclusively a South African issue and is increasingly a global phenomenon, driven by a populist political agenda under the banner of nationalism, nativism and protectionism. Although these are global issues, the escalating levels of social unrest and anti-establishment sentiment are concerning. The underlying driver is undoubtedly that the global economic landscape has been challenging since the Global Financial Crisis (GFC) in 2007/8 and resentment for Government’s inability to deliver easy answers (to very complicated problems) is growing.

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

*A. Government and Public Services
 Energy, Water and Utilities
 Education
 Healthcare*

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

A. We need to create alignment on the social transformation vision for our country and then ensure the political agenda is coherently constructed around the drivers of achieving the vision.

The NDP is a key part of creating that vision, and therefore requires that the current political leadership should not be conflicted, in any way, in terms of the political means of achieving that agenda. This is further compromised if the NDP agenda is also not a national agenda and if any in Government do not see it as core to the transformation vision of the country.



Sheralee Morland

President
IRMSA

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

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain



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

A. Although there are various symptomatic responses that particular industries can have with regards to mitigating “Government policy variation” risks, they are indeed only at the symptomatic level. If not addressed at a causal level, we will remain constrained to a sub-2% growth economy (as has been the case since 2011) and the real growth will likely be beyond our borders.

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

A. These issues are inherently at a National level.

There appears to be a strong need to have a robust dialogue, at a national level about our society and the type of society we want and need to create. Notwithstanding the recent political trend of populism and nationalism, driving an introspective political agenda, this is unlikely to be sustainable. The benefits of globalisation are undeniable and creating a globally integrated society that is both competitive and connected within the global economic village will have advantages. Society, Government and Business need to agree to an agenda that is inclusive and that seeks to address the many social challenges we have in this society in a sustainable manner. This is likely to require personal sacrifice from all those in leadership positions, demonstrating a commitment to servant leadership through personal sacrifice. Maybe it is time for more of us to engage on “what can we do for our country, rather than what our country can do for us”. During 2016 business rallied around in support of a prevention of a downgrade.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

- A. Increasing polarization of societies*
- Rising income disparity*
- Weakening of international governance*
- Increasing national sentiment*

Government Policy Changes

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. Unbalanced consideration of factors influencing government policy.

Q. Give three primary causes of this risk.

*A. Voting system
Cost-benefit analysis (manipulation or inadequacy)
Over-reliance on statistical data
Economic conditions
Personal and political ambitions
Greed and moral decay
Politics*

Q. What are the consequences if this risk materialises?

*A. Insufficient weight given to available evidence
Excessive weight given to insufficient evidence
Misinformed judgements
Instability in the country and industries
Down grading by rating agencies
Personal and professional damage*

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

*A. Professional Services
Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Manufacturing
Mining, Engineering and Construction
Hospitality
Education
Healthcare
Retail*

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

*A. Fear
Lack of political will
Lengthy policy making and approval processes
Lack of information*

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

*A. An integrated risk management programme
Streamlining the policy making process
Inclusion of industries at policy making inception stages
Training and capacity building*

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

*A. A balanced use of qualitative and quantitative risk analysis methods informing policy decisions
Training and capacity building
Morals and ethics*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

| | |
|---|--|
| <i>A. Ageing population</i> | <i>Rising geographic mobility</i> |
| <i>Climate change</i> | <i>Rising income disparity</i> |
| <i>Environmental degradation</i> | <i>Shifts in power</i> |
| <i>Growing middle class in emerging economies</i> | <i>Urbanisation</i> |
| <i>Increasing polarization of societies</i> | <i>Weakening of international governance</i> |
| <i>Rise of chronic diseases</i> | <i>Increasing national sentiment</i> |
| <i>Rise of hyper connectivity</i> | |



Nkosinathi Mhlongo
Managing Director
KeyDimensions Risk and Advisory
Services

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

Impact Scale:

E. Critical



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

E. Almost Certain





▶ Critical
Information
Infrastructure
Breakdown

2.24

Critical Information Infrastructure Breakdown

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. This risk plays a vital role on the national economy. There is reliance on the information infrastructure and network, as most of the decisions made by C-Suite and other stakeholders depends on information available. The 2030 strategy, if implemented properly, will position South Africa as future-fit.

There is a need for the Public and Private sector to collaborate to ensure that the NDP objectives are met.

Q. Give three primary causes of this risk.

*A. Lack of clear strategic direction in dealing with the risk
Lack of accountability and ownership*

Q. What are the consequences if this risk materialises?

*A. Reputational damage
Economic well-being of South Africans, and also but not limited to the effective functioning of government or the economy*

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

*A. Government and Public Services
Financial Services
Energy, Water and Utilities
Communications and Technology*

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

*A. Poor management
The use of old methods to resolve current and future states
Lack of adaptability*

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

*A. It is crucial for different industries to clearly analyse and understand the magnitude of the risk
Clarification of roles and responsibilities*

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

A. Collaboration between public, private and academia sectors

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Climate change
Environmental degradation
Growing middle class in emerging economies
Increasing national sentiment*



Malebu Makgalemela
Executive: Enterprise Risk Management Cell C

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

Impact Scale:

E. Critical



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

D. Likely



Critical Information Infrastructure Breakdown

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. The breakdown of critical information infrastructure and networks will negatively impact on the South African Government's ability to achieve the National Development Plan. It will prohibit job creation, access to communication, industrial production, public services i.e. housing, health care, education, safety and security, as well as access to water and sanitation. The breakdown and absence of inclusion via technology i.e. social media will demoralise society. The societal order will not overcome inequality and will not have the opportunity to share and prosper in the upliftment and quality of life which access to technology and information enables.

Q. Give three primary causes of this risk.

*A. Cyber attacks
Natural disasters
Human error
Malicious destruction of infrastructure*

Q. What are the consequences if this risk materialises?

*A. Interruption of transportation, electricity and water supply, communication and data transmission
Collapsing of commercial structures and financial systems
Unauthorized access and/or modification of personal information
Loss of life due to the collapse of emergency response and medical services
Compromised national security
Breakdown of safety and security services*

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

A. Communications and Technology

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

*A. The interdependency between technologies and providers i.e. not all providers pay the necessary attention to resilience as part of their business as usual processes
Ignorance and underestimating the abilities, knowledge, and experience of cyber criminals
How to guides are freely available for criminals to upskill themselves
Capital investment required to implement resilient infrastructure and to employ the necessary skills to maintain and operate those
Environmental changes i.e. increased extreme weather patterns
Religious and political instability*

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

*A. Resilience must be part of business as usual processes
Special attention must be given to system security
Institutions that govern the respective industries must have critical information infrastructure protection (CIIP) as a specific requirement
Collaboration between all parties within the respective industries to ensure CIIP
Business continuity management systems and best practices must be adhered to as part of corporate governance*

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

*A. Establish national institutions with a mandate and adequate budget to continuously monitor critical information infrastructure (CII) to ensure that national services are always protected
Establish relationships with international partners, specifically on cyber security
Educate society*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

A. Rise of hyper connectivity



Hannes Grey
Senior Specialist: Business
Continuity Management
Vodacom

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

Impact Scale:

E. Critical



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

D. Likely



Critical Information Infrastructure Breakdown

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. The National Development Plan is pro-employment and general upliftment of economic reality of our people. The risk that any of the critical information infrastructure were to break down i.e. telecommunication network, could mean total shut down of internet connected or enabled businesses ultimately impacting on our earning potential. Certainly the risk is impacting the realisation of our NDP.

Q. Give three primary causes of this risk.

A. Key risks that can cause a breakdown of Critical Information Infrastructure and Networks (CIIN) can vary from design of SCADA systems to lack of human capital to defend South Africa's CIIN and total dependence on non-South African service providers that may compromise our sovereignty. SCADA systems are like operating systems upon which these CIIN are run but they are not designed with all the systems safeguards to detect, prevent and detect cyber attacks. South Africa still considers Maths Literacy as more important than Cyber Studies as a subject, we have a long way to go to evolve with the world and address the skills shortage in the cyber space. Stretched dependence on foreign service providers to support and maintain our CIIN, in light of other risks stated above, remains an unmitigated danger.

Q. What are the consequences if this risk materialises?

A. Should our SCADA be hacked, Gautrain can be set up to collide, airplane communication systems can be cut, Medupi power plant can self-destruct, Lesotho joint water project can release water and compromise the ability to produce hydro power. The problem with external dependency for SCADA maintenance is the link it has with political decisions in the sense that should South Africa make a foreign policy decision that is frowned upon, the likelihood of our SCADAs being attacked increases even more.

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

- A. Government and Public Services*
- Financial Services*
- Energy, Water and Utilities*
- Communications and Technology*
- Transport and Logistics*
- Manufacturing*
- Mining, Engineering and Construction*
- Hospitality*
- Healthcare*

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

A. Our education system is vital in the creation of much needed skills that can be used when we import such technologies. Silo planning is the key challenge. For competitive reasons the private sector is forgiven for limited silo planning, but as far as it affects the whole industry. Public sector silo planning is a sin.

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

A. Sector specific can be recommended for amount of effort they continue to put to protect as customers and stakeholders and they should be supported by other industries and government at large because we as a country are as cyber resilient as our weakest link. With our national IT backbone setup around SITA the Advanced Persistent Threats only needs a single entry on the security unconscious government agency and Iran's experience will be at our shores.

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

A. Government has set up a Cyber Response Committee (led by The State Security Agency) that involves leaders and captains of industry running these CIINs. This is where the level of co-ordination can be heightened.

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

- A. Increasing polarization of societies*
- Rise of hyper connectivity*
- Rising geographic mobility*
- Rising income disparity*
- Shifts in power*
- Weakening of international governance*
- Increasing national sentiment*



Mdu Zakwe
Executive Chairman
Cyber Core

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

Impact Scale:

E. Critical



Likelihood Scale:

C. Moderate



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

E. Critical



Likelihood Scale:

D. Likely



Critical Information Infrastructure Breakdown

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. A critical information infrastructure and network breakdown would have a significant and calamitous impact on the NDP objectives. Such systems may include the banking systems, power systems, air traffic control.

Q. Give three primary causes of this risk.

*A. Lack of planning, co-ordination and external maintenance on key infrastructures, for example water and sanitation
Skills deficiency
Sabotage*

Q. What are the consequences if this risk materialises?

*A. Significant economic decline
A cholera and diarrhoea outbreak
Financial market collapse*

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

*A. Financial Services
Energy, Water and Utilities
Communications and Technology
Transport and Logistics
Petrochemicals
Hospitality
Healthcare*

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

*A. Lack of judicious strategic thinking at Government level in as much as no appetite to change the leadership and cabinet members in Government
Lack of a common purpose for all South African, similar to the New Deal after the Depression in the 1930s
Taxes are being sapped by corruption and maladministration*

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

*A. Ensuring that Treasury can perform their duties and allocate funds to infrastructure projects that will benefit the nation, as a whole
Ensuring that those in the informal sector contribute their due financial portion to the fiscus, i.e. they start paying rates and taxes
Awareness campaigns as to how to manage oneself in the event of a pandemic or an outbreak, for example cholera*

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

*A. Allow for the construction of significant infrastructure builds, for example a new sewerage treatment plant
Education, stop trade unions disrupting the education system by allowing cronyism
Have an appetite to stop rewarding failure*

Q. Which of the following global trends do you think will have a major impact on the risk going forward?

*A. Climate change
Rise of hyper connectivity
Rising geographic mobility
Rising income disparity
Shifts in power
Urbanisation*



Anne Reed
National Risk Manager
BDO

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

Impact Scale:

D. High



Likelihood Scale:

D. Likely



Rate the Impact and Likelihood of the risk in the next 10 years.

Impact Scale:

D. High



Likelihood Scale:

E. Almost Certain





South African Risk Assessment Methodology

The groundwork for the report was carried out by the IRMSA Risk Intelligence Committee commencing early in 2016. A series of workshops and surveys were carried out with South Africa's top risk management professionals, corporate leaders and members from other institutes, utilising a variety of platforms during various stages of the risk assessment. A high-level description of the risk assessment methodology is provided overleaf.

A) Creation of a South African Risk Universe

The first step of this year's project was to create a detailed risk universe. 51 risks were identified from several reports (2015 and 2016 IRMSA Risk Reports, WEF Global Risks 2016 Report, World Bank Sub-Saharan Africa Outlook 2015, Aon Global Risk Management Survey 2015 and PwC Risk in Review 2015). The list of risks and the associated risk categories is provided in the table below.

| | | | |
|---|---|---|---|
| Asset bubble | Banking reputational risk | Biodiversity loss and ecosystem collapse | Brexit repercussions ("British Exit" from the EU) |
| Critical information infrastructure breakdown | Capital availability / credit risk | Commodity price fluctuations | Deflation |
| Droughts in Sub-Saharan Africa | Ebola virus outbreak | Economic Slowdown | Education and skills development |
| Energy price shock | Escalation in large-scale cyber attacks | Escalation of economic and resource nationalisation | Exchange rate fluctuations |
| Extreme weather events | Failure / shortfall of critical infrastructure | Failure of a major financial mechanism or institution | Failure of climate-change mitigation and adaptation |
| Fiscal crisis / credit rating downgrades | Food crises | Governance failure | Government policy changes |
| Increasing Corruption | Increasing Strike Action | Insufficient Electricity Supply | Interstate conflict with regional consequences |
| Lack of Innovation | Lack of leadership | Large-scale involuntary migration | Major escalation in organised crime and illicit trade |
| Man-made environmental catastrophes | Massive incident of data fraud / theft | Mismanaged urbanisation | Misuse of technologies |
| Natural catastrophes | Profound political and social instability | Prolonged recession in high-income countries | Prolonged recession in the BRICS countries |
| Regulatory / legislative changes | Reputational damage or adverse media / social media attention | Rising pollution in the developing world | Severe income disparity |
| Skills shortage | Spread of infectious diseases | State collapse or crisis | Terrorist attacks |
| The weakening of representative democracy | Unemployment or underemployment | Unmanaged inflation | Water crises |
| Weapons of mass destruction | | | |

| Categories of 2017 Risk Universe: | | | |
|-----------------------------------|---------------|--------------|--|
| Economic | Environmental | Geopolitical | |
| Societal | Technological | Removed risk | |
| New risk | | | |

Table 4: Risk Universe for the 2017 South African Risk Report

B) Initial Survey: Formulating Risk Descriptions

Full risk descriptions were created prior to the initial survey so that they could be better understood by the respondents and by the reader. The following risk meta-language was used for the descriptions:

Something might happen (the future uncertainty) - Leading to (the most likely consequence)

The primary cause is not provided in the risk description and forms part of the causal loop process. The assumption is that a cause is always current or already happening. The table below contains all 51 detailed risk descriptions coupled with examples. Many of the descriptions are derived from the WEF.

| Risk Name | Examples | Risk Description |
|---|--|--|
| Asset bubble | Commodities, housing and shares. | Unsustainably overpriced assets in a major economy or region, leading to devastating national recessions and could have ripple effects on the global economy.(WEF, 2016) |
| Banking reputational risk | Scandals, noncompliance with acts and regulations, public misinterpretation of data, information breaches, poor customer service, financing of dubious individuals or groups and money laundering. | Negative publicity regarding an institution's business and employee practices, whether true or not, leading to a decline in the customer base, costly litigation or revenue reductions. |
| Biodiversity loss and ecosystem collapse | Losses of populations, species and habitats. | Irreversible environmental impact, leading to in severely depleted resources for humankind as well as industries.(WEF, 2016) |
| Brexit repercussions ("British Exit" from the EU) | | Challenging post-Brexit economic landscape characterised by uncertain trade relations, short-term capital outflows, current account shortfalls and exchange rate volatility. |
| Critical information infrastructure breakdown | Internet, satellites, telecommunications, power distribution, water supply and national defence. | Cyber dependency increases vulnerability to outage of critical information infrastructure and networks leading to widespread disruption. (WEF, 2016) |
| Commodity price fluctuations | Food, metals, agricultural raw materials and beverages. | Significant or prolonged movements in commodity prices, leading to volatile economic conditions. |
| Deflation | General decline in the prices of goods and services. | Prolonged ultra-low inflation or deflation in a major economy or region, leading to economic stagnation and periods of high unemployment. (WEF, 2016) |
| Droughts in Sub-Saharan Africa | Reduced or fluctuating rainfall, El Nino. | Frequent and severe droughts in the region, leading to humanitarian, agricultural and economic devastation. |
| Economic slowdown or recession | During an economic slowdown the economy is still growing; a recession occurs when the economy is contracting, when there is negative growth for two or more consecutive quarters. | Prolonged slowdown or recession in a country, leading to a drop in the stock and housing markets and increased unemployment and inflation. |
| Education and skills development | Literacy levels, number of university graduates, and skill level of labour force. | Inadequate provision of or access to education and skills development initiatives, leading to a country's skills requirements not being met. |
| Energy price shock | Oil, coal and natural gas. | Energy price increases or decreases significantly leading to further economic pressures on highly energy dependent industries and consumers. (WEF, 2016) |
| Escalation in large-scale cyber attacks | Targets computer information systems, infrastructures, computer networks, and/or personal computer devices. | Large-scale cyberattacks or malware, leading to large economic damages, geopolitical tensions or widespread loss of trust in the Internet. (WEF, 2016). |
| Escalation of economic and resource nationalisation | All resources. | Governments assert control over natural resources, privately owned corporations, and industries located on their territory with or without compensation, conflicting with the interests of multinational corporations. |
| Exchange rate fluctuations | Supply and demand. | Exchange rate fluctuations based on supply and demand in the foreign exchange market, affecting economic growth, capital flows, inflation and interest rates. |
| Extreme weather events | Floods, storms, tornadoes, hurricanes and heat waves. | Weather disasters leading to major property, infrastructure and environmental damage as well as human and economic loss. (WEF, 2016). |
| Failure / shortfall of critical infrastructure | Energy, transportation, telecommunications, government systems and banking and finance. | Failure to adequately invest in, upgrade and secure infrastructure networks, leading to pressure or a breakdown with system-wide implications. (WEF, 2016). |
| Failure of a major financial mechanism or institution | Bank closures, credit rating downgrades for banks, capital availability and credit risk etc. | Collapse of a financial institution and/or malfunctioning of a financial system leading to significant local or global economic impacts. |
| Failure of climate-change mitigation and adaptation | Societies could experience climatic shifts in temperature, storm frequency, flooding and other factors. Adaptation measures include large-scale infrastructure changes as well behavioural shifts. | Governments and businesses fail to enforce or enact effective measures to mitigate climate change, protect populations and help businesses impacted by climate change to adapt. (WEF, 2016). |
| Fiscal crisis / credit rating downgrades | Sovereign debt / credit rating downgrades, large government debt etc. | Excessive debt burdens, leading to sovereign debt crises and/or liquidity crises, defaults and higher interest rates. |
| Food crises | Rates of hunger and malnutrition rise sharply at local, national, or global levels; sudden spike in food prices. | Access to appropriate quantities and quality of food and nutrition becomes inadequate, unaffordable or unreliable on a major scale, leading to hunger riots and political turmoil. (WEF, 2016). |
| Governance failure | Corruption, illicit trade, organised crime, impunity, political deadlock etc. | Inability to govern a nation of geopolitical importance caused by weak rule of law, corruption, illicit trade, organised crime, impunity or political deadlock. (WEF, 2016). |
| Government policy changes | Economic policy, legal changes etc. | Government significantly or regularly changes rules and frameworks, forcing local and international organisations to change the way that they operate. |
| Increasing corruption | Transparency International Corruption Perceptions Index (CPI) | Increasing public and private sector corruption, leading to reduced investor confidence, mistrust, protests and credit rating downgrades. |
| Increasing strike action | Strikes affect all industries, public and private sector exposure. | Increasingly prolonged and intense strike action, leading to violence, destruction, economic repercussions, reputational damage and man-days lost. |

Table 5: Risk Descriptions for the Risk Universe

| Risk Name | Examples | Risk Description |
|---|---|--|
| Insufficient electricity supply | Voluntary load reduction, blackouts, coal supply, capacity constraints etc. | Insufficient power station capacity to supply the full customer, leading to load shedding in order to prevent the collapse of the national power system. |
| Interstate conflict with regional consequences | Trade/currency wars, military intervention etc. | A bilateral or multilateral dispute between states leading to economic, military, cyber, societal or other conflict. (WEF, 2016). |
| Lack of Innovation | Translating an idea or invention into a good or service that creates value. | Inability to create a society that funds, celebrates and encourages innovation, leading to reduced economic growth and competitiveness. |
| Lack of leadership | Inability to make critical decisions, limited technical ability etc. | Increasingly poor leadership, leading to failure to implement policy, greater unemployment, social instability and reduced economic growth. |
| Large-scale involuntary migration | The European migrant crisis. | Large-scale involuntary migration induced by conflict, disasters, environmental or economic reasons. (WEF, 2016). |
| Major escalation in organised crime and illicit trade | Illicit financial flow, tax evasion, human trafficking, counterfeiting and organised crime. | Large-scale activities outside the legal framework, undermining social interactions, regional or international collaboration and global growth. (WEF, 2016). |
| Man-made environmental catastrophes | Oil spill, radioactive contamination, toxins, coal ash spill, chemical spill etc. | Failure to prevent major man-made catastrophes, resulting in harm to lives, human health, infrastructure, property, economic activity and the environment. (WEF, 2016). |
| Massive incident of data fraud / theft | Stealing computer-based information, cyber terrorism etc. | Wrongful exploitation of private or official data that takes place on an unprecedented scale, leading to reputational backlash, security concerns and lawsuits. (WEF, 2016). |
| Mismanaged urbanisation | Escalating unemployment, chronic housing shortages and inadequate service infrastructure. | Poorly planned cities, urban sprawl and associated infrastructure leading to social, environmental and health challenges. (WEF, 2016). |
| Misuse of technologies | Artificial intelligence, geo-engineering and synthetic biology. | Intended or unintended adverse consequences of technological advances, leading to human, environmental and economic damage. |
| Natural catastrophes | Earthquakes, volcanic activity, landslides, tsunamis and geomagnetic storms. | Geophysical disasters leading to major property, infrastructure and environmental damage as well as human loss. (WEF, 2016). |
| Profound political and social instability | Street riots, social unrest etc. | Major social movements or protests disrupting political or social stability, negatively impacting populations and economic activity. (WEF, 2016). |
| Prolonged slowdown or recession in high-income countries | Persistent slowdown in the high-income countries; reduction in foreign direct investment (FDI) flows to the region. | Prolonged slowdown or recession in high-income countries leading to a disruption to global capital flows, especially affecting Sub-Saharan Africa. (World Bank Sub-Saharan Africa Outlook, 2015) |
| Prolonged slowdown or recession in the BRICS countries | Lower growth rates in the BRICS; reduced Sub-Saharan Africa export growth. | Prolonged slowdown or recession in the BRICS countries (Brazil, Russian Federation, India, China, and South Africa), leading to a reduction in trade flows with Sub-Saharan Africa. (World Bank Sub-Saharan Africa Outlook, 2015). |
| Regulatory / legislative changes | Affects all industries, as well as the public and private sectors. | 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. |
| Reputational damage or adverse media / social media attention | Questionable decisions made by national government and other influential parties. | Damage to the country's reputation coupled with adverse publicity in the media and on social media, leading to damaged public perception and reduced investor confidence. |
| Rising pollution in the developing world | High-polluting industries. | Unsustainable pollution levels in the developing world, leading to health concerns, rising carbon emissions and temperatures. |
| Severe income disparity | Income distribution and mobility, Gini coefficient. | Rising inequalities between and within nations, leading to migration, protests, disillusionment and revolutions. |
| Skills shortage | Skill level of labour force and unemployment levels. | Inadequate quality and affordable skills, leading to reduced competitiveness, increased unemployment, social unrest and the need to import skills. |
| Spread of infectious diseases | Ebola virus, Zika virus etc. | Uncontrolled spread of infectious diseases caused by bacteria, viruses, parasites or fungi and the resistance to antibiotics, antivirals and other treatments, leading to widespread fatalities and economic disruption. (WEF, 2016). |
| State collapse or crisis | Loss of state legitimacy, control of its territory, enduring violence, rapidly declining GDP etc. | State collapse of geopolitical importance caused by internal violence, regional or global instability, military coup, civil conflict, failed states, etc. (WEF, 2016). |
| Terrorist attacks | State-sponsored terrorism, dissent terrorism, religious terrorism and criminal terrorism. | Individuals or non-state groups with political or religious goals successfully inflict large-scale human or material damage, leading to widespread fatalities, economic disruption and enhanced security, military and intelligence activities. (WEF, 2016). |
| The weakening of representative democracy | Political party membership and electoral turnout. | An erosion of trust in democratic political institutions and processes, leading to a decline in mass political participation and the sense of disconnection between citizens and their representatives. |
| Unemployment or underemployment | Cyclical, frictional, seasonal and structural unemployment. | A sustained high level of unemployment or underutilization of the productive capacity of the employed population, leading to the inability for the economy to attain high levels of employment. (WEF, 2016). |
| Unmanaged inflation | Consumer Price Index (CPI) gauges the increasing cost of goods and services to consumers. | Unmanageable increase in the general price level of goods and services in key economies, leading to a reduction in the value of assets or income. (WEF, 2016). |
| Water crises | Water shortages, water stress, water shedding etc. | A significant decline in the available quality and quantity of fresh water leading to harmful effects on human health and/or economic activity. (WEF, 2016). |
| Weapons of mass destruction | Atomic bomb, hydrogen bomb, mustard gas, anthrax etc. | Nuclear, chemical, biological and radiological technologies and materials are deployed leading to international crises and potential for significant destruction. (WEF, 2016). |

Table 5: Risk Descriptions for the Risk Universe

C) Initial Survey: Formulating Top 20 National and Industry Risk Profiles

The risk management fraternity respondents were requested to select the top 10 risks from the list of 51 risks, which they believed could adversely affect the achievement of the South African government's NDP priorities for 2030. They were then asked to select the top 10 risks that could adversely affect the achievement of their organisation's objectives within their respective industries. The Risk Intelligence Committee was able to compile a list of top 20 risks for South Africa on both the national and industry levels from the responses received. The following tables illustrate the top 20 country and industry level risk profiles.

| | | | |
|---|--|---------------------------------|---|
| | | | |
| | | Commodity price fluctuations | |
| Droughts in Sub-Saharan Africa | | Economic slowdown | Education and skills development |
| | | | Exchange rate fluctuations |
| | Failure / shortfall of critical infrastructure | | |
| Fiscal crisis /credit rating downgrades | | Governance failure | |
| Increasing corruption | Increasing Strike Action | Insufficient electricity supply | |
| Lack of Innovation | Lack of leadership | | Major escalation in organised crime and illicit trade |
| | | | |
| | Profound political and social instability | | |
| Regulatory/legislative changes | | | Severe income disparity |
| Skills shortage | | | |
| | Unemployment or underemployment | | Water crises |
| | | | |

Table 6: Top 20 South African Risk Profile – National Level

| | | | |
|---|--|---------------------------------|---|
| | | | |
| Critical information infrastructure breakdown | | Commodity price fluctuations | |
| | | Economic Slowdown | Education and skills development |
| | Escalation in large-scale cyber attacks | | Exchange rate fluctuations |
| | Failure / shortfall of critical infrastructure | | Failure of climate-change mitigation and adaptation |
| Fiscal crisis/credit rating downgrades | | Governance failure | Government policy changes |
| Increasing Corruption | Increasing Strike Action | Insufficient Electricity Supply | |
| Lack of Innovation | Lack of leadership | | |
| | Massive incident of data fraud/theft | | |
| | Profound political and social instability | | |
| Regulatory/legislative changes | | | |
| Skills shortage | | | |
| | | | Water crises |
| | | | |

Table 7: Top 20 South African Risk Profile – Industry Level

| Categories of 2017 Risk Universe: | | | |
|-----------------------------------|---------------|--------------|--|
| Economic | Environmental | Geopolitical | |
| Societal | Technological | Removed risk | |
| New risk | | | |

D) South African Risk Rating Session: Delegate Participation at IRMSA Risk Labs

Delegates that attended the Johannesburg, Cape Town and Durban Risk Labs in July and August 2016 provided likelihood and consequence/impact ratings for the top 20 national and industry level risks, using a standard 1 to 5 rating scale provided below.

Likelihood Scale:

- A. Rare/Remote
- B. Unlikely
- C. Moderate
- D. Likely
- E. Almost certain

Impact Scale:

- A. Insignificant
- B. Minor
- C. Moderate
- D. High
- E. Critical

Terrorist attacks and Brexit repercussions were added as wildcard risks following the initial survey due to their relevance at the time. Refer to the ranking of both top 20 risk profiles below with the aggregated risk ratings.

| Overall Ranking | July 2016 Top 20 Risk Rankings: National Level | RI | RL | RR | Risk Sub Category |
|-----------------|---|------|------|-------|-------------------|
| 1 | Droughts in Sub-Saharan Africa | 4,93 | 4,1 | 20,21 | NDP |
| 2 | Increasing corruption | 4,15 | 4,3 | 17,85 | NDP |
| 3 | Lack of leadership | 4,28 | 4,08 | 17,46 | NDP |
| 4 | Increasing strike action | 3,83 | 4,41 | 16,89 | NDP |
| 5 | Water crises | 4,15 | 4,06 | 16,84 | NDP |
| 6 | Economic slowdown or recession | 3,87 | 4,21 | 16,29 | NDP |
| 7 | Structurally high unemployment / underemployment | 3,94 | 4,01 | 15,8 | NDP |
| 8 | Fiscal crisis / credit rating downgrades | 3,97 | 3,82 | 15,17 | NDP |
| 9 | Education and skills development | 3,92 | 3,85 | 15,09 | NDP |
| 10 | Skills shortage | 3,82 | 3,94 | 15,05 | NDP |
| 11 | Governance failure | 3,99 | 3,71 | 14,8 | NDP |
| 12 | Severe income disparity | 3,64 | 4,06 | 14,78 | NDP |
| 13 | Exchange rate fluctuations | 3,71 | 3,88 | 14,39 | NDP |
| 14 | Regulatory / legislative changes | 3,64 | 3,7 | 13,47 | NDP |
| 15 | Failure/shortfall of critical infrastructure | 3,92 | 3,43 | 13,45 | NDP |
| 16 | Profound political and social instability | 3,66 | 3,54 | 12,96 | NDP |
| 17 | Brexit ("British Exit" from the EU) | 3,44 | 3,69 | 12,69 | NDP |
| 18 | Commodity price fluctuations | 3,61 | 3,45 | 12,45 | NDP |
| 19 | Major escalation in organised crime and illicit trade | 3,53 | 3,49 | 12,32 | NDP |
| 20 | Insufficient electricity supply | 3,6 | 3,36 | 12,1 | NDP |

| Overall Ranking | Top 20 Risk Rankings: Industry Level | RI | RL | RR | Risk Sub Category |
|-----------------|---|------|------|-------|-------------------|
| 1 | Increasing strike action | 3,72 | 4,06 | 15,1 | Industry |
| 2 | Exchange rate fluctuations | 3,82 | 3,85 | 14,71 | Industry |
| 3 | Lack of innovation | 3,85 | 3,69 | 14,21 | Industry |
| 4 | Regulatory / legislative changes | 3,76 | 3,67 | 13,8 | Industry |
| 5 | Increasing corruption | 3,75 | 3,67 | 13,76 | Industry |
| 6 | Profound political and social instability | 3,71 | 3,67 | 13,62 | Industry |
| 7 | Fiscal crisis / credit rating downgrades | 3,67 | 3,71 | 13,62 | Industry |
| 8 | Escalation in large-scale cyber attacks | 3,9 | 3,43 | 13,38 | Industry |
| 9 | Governance failure | 3,77 | 3,45 | 13,01 | Industry |
| 10 | Education and skills development | 3,62 | 3,48 | 12,6 | Industry |
| 11 | Water crises | 3,64 | 3,45 | 12,56 | Industry |
| 12 | Commodity price fluctuations | 3,72 | 3,32 | 12,35 | Industry |
| 13 | Brexit ("British Exit" from the EU) | 3,64 | 3,38 | 12,3 | Industry |
| 14 | Government policy changes | 3,68 | 3,32 | 12,22 | Industry |
| 15 | Economic slowdown or recession | 3,41 | 3,54 | 12,07 | Industry |
| 16 | Skills shortage | 3,63 | 3,32 | 12,05 | Industry |
| 17 | Insufficient electricity supply | 3,54 | 3,4 | 12,04 | Industry |
| 18 | Failure/shortfall of critical infrastructure | 3,55 | 3,29 | 11,68 | Industry |
| 19 | Critical information infrastructure breakdown | 3,31 | 3,51 | 11,62 | Industry |
| 20 | Lack of leadership | 3,92 | 2,76 | 10,82 | Industry |

Table 8: Top 20 National and Industry Level Rankings and Risk Ratings – July 2016

E) South African Risk Rating Session: First Quarterly Survey

Moving beyond an annual snapshot view of South Africa's risk profile in relation to its changing environment and global trends, IRMSA will provide ongoing monitoring of the manner in which these risks are unfolding, and assessing whether their likelihood and impact is increasing or decreasing. The most up to date South African risk profile is provided below following the survey conducted at the end of 2016.

| Overall Ranking | January 2017 Top 20 Risk Rankings: National Level | RI | RL | RR | Risk Sub Category |
|-----------------|---|------|------|-------|-------------------|
| 1 | Increasing corruption | 4,31 | 4,44 | 19,14 | NDP |
| 2 | Water crises | 4,33 | 4,26 | 18,45 | NDP |
| 3 | Structurally high unemployment / underemployment | 4,09 | 4,37 | 17,87 | NDP |
| 4 | Droughts in Sub-Saharan Africa | 4,22 | 4,2 | 17,72 | NDP |
| 5 | Lack of leadership | 4,22 | 4,15 | 17,51 | NDP |
| 6 | Fiscal crisis / credit rating downgrades | 4,15 | 3,96 | 16,43 | NDP |
| 7 | Economic slowdown or recession | 4,1 | 3,98 | 16,32 | NDP |
| 8 | Increasing strike action | 3,94 | 4,06 | 16,00 | NDP |
| 9 | Profound political and social instability | 4,05 | 3,94 | 15,96 | NDP |
| 10 | Governance failure | 4,09 | 3,79 | 15,50 | NDP |
| 11 | Exchange rate fluctuations | 3,76 | 4,12 | 15,49 | NDP |
| 12 | Severe income disparity | 3,60 | 4,18 | 15,05 | NDP |
| 13 | Skills shortage | 3,86 | 3,82 | 14,75 | NDP |
| 14 | Commodity price fluctuations | 3,68 | 3,94 | 14,49 | NDP |
| 15 | Education and skills development | 3,85 | 3,76 | 14,48 | NDP |
| 16 | Major escalation in organised crime and illicit trade | 3,73 | 3,65 | 13,61 | NDP |
| 17 | Failure/shortfall of critical infrastructure | 3,76 | 3,52 | 13,24 | NDP |
| 18 | Brexit ("British Exit" from the EU) | 3,19 | 4,09 | 13,05 | NDP |
| 19 | Regulatory / legislative changes | 3,64 | 3,51 | 12,78 | NDP |
| 20 | Insufficient electricity supply | 3,71 | 3,26 | 12,09 | NDP |

Table 9: Top 20 National Level Rankings and Risk Ratings – January 2017



F) IRMSA Risk Report Participants

Profile of Survey Respondents

Just over 80% of the survey respondents (figure 19) interact with their respective organisation's risk management programmes at least once a week; the majority of that group do so on a daily basis. Not only are the respondents well qualified considering that they actively manage these risks in their own organisations, but they are also diverse in that they represent every major industry within the public and private sectors.

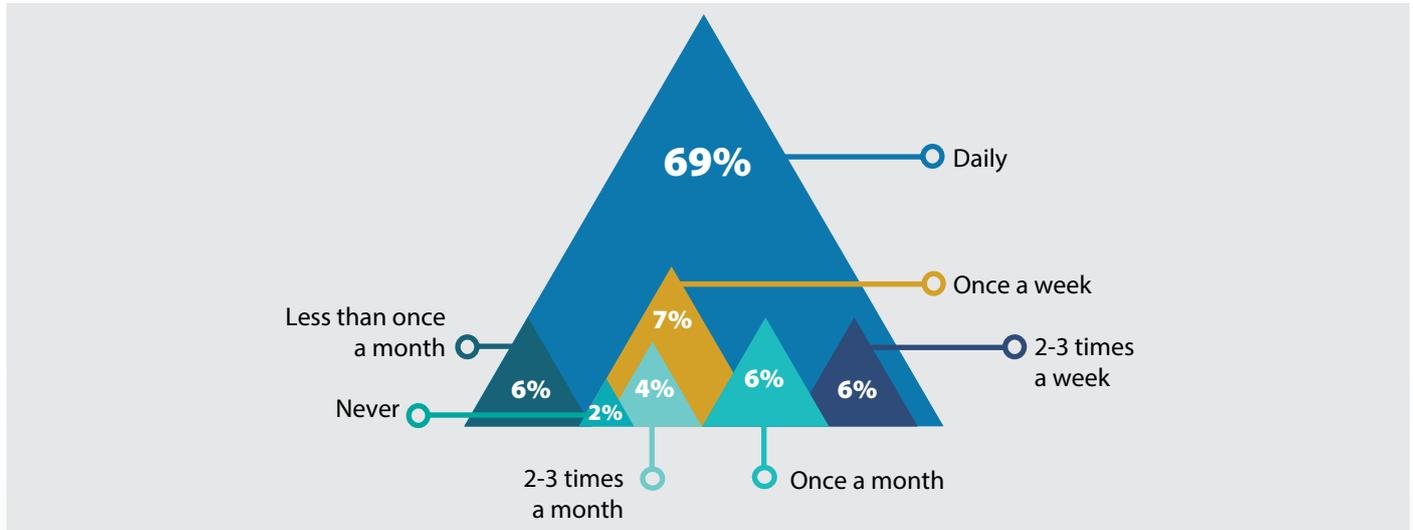


Figure 19: Level of Interaction that Respondents have with their Organisation's Risk Management Programmes

Profile of all Participants

A total of 1557 participants, including all survey respondents, the Risk Lab and IRMSA Conference attendees, contributed toward the identification and prioritisation of the risks that are relevant in the South African context. The images below indicate how the participants are broken down into gender, sector (public and private) and industry.

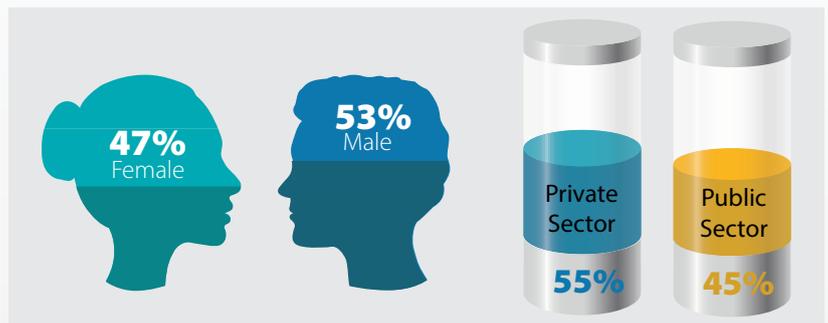


Figure 20: Participant Distribution by Gender and Sector

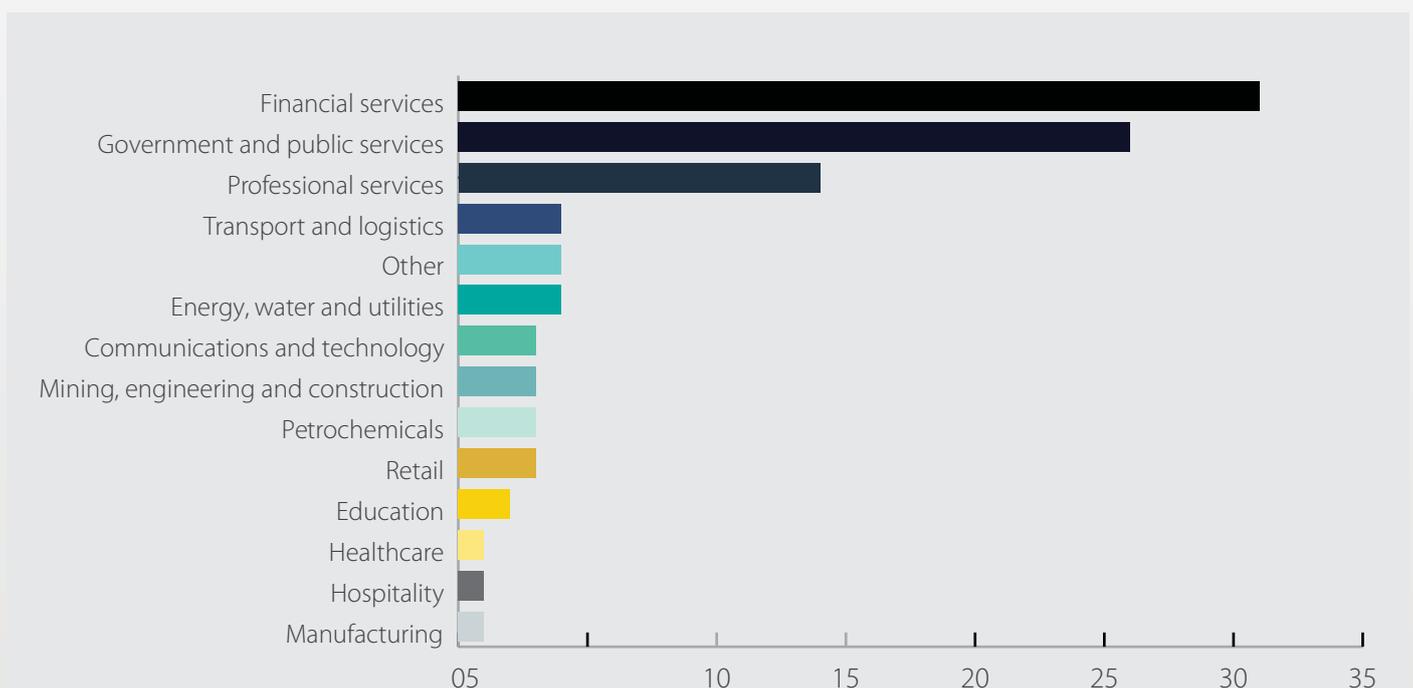


Figure 21: Participant Distribution by Industry



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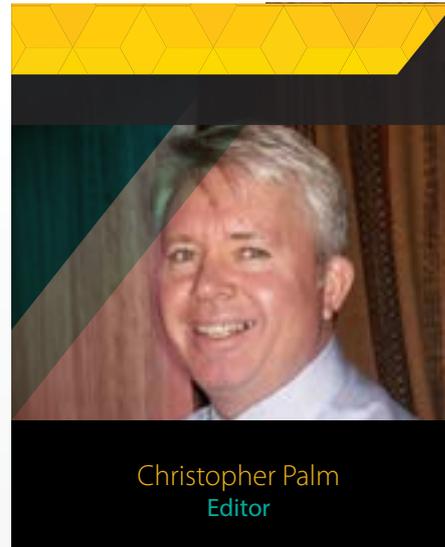
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Acknowledgements and Project Team

A project like the IRMSA Risk Report cannot be accomplished by one individual, but rather it is a collaborative effort by a team of enthusiastic and committed contributors. IRMSA would particularly like to thank its membership, the IRMSA Risk Intelligence Committee, the IRMSA Executive Committee and the Subject Matter Experts who lent their expertise.

Risk Intelligence Committee

We would like to thank those members on the Risk Intelligence Committee who gave considerable time to the project.



Working group



Committee Members

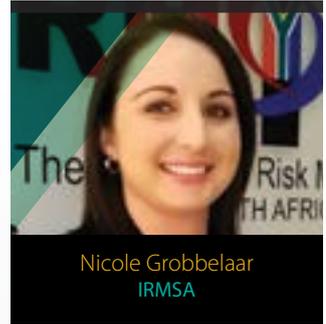




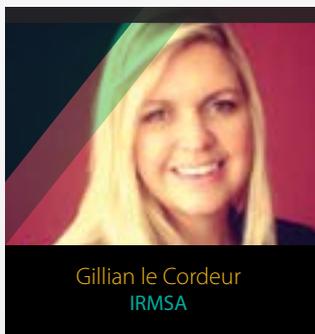
Bronwyn Blyth
Editing



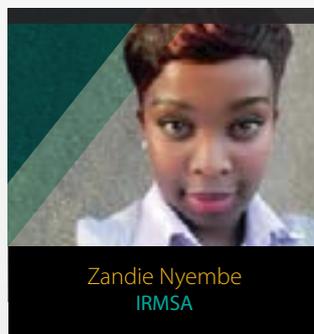
Kobus de Wet
IRMSA



Nicole Grobbelaar
IRMSA



Gillian le Cordeur
IRMSA



Zandie Nyembe
IRMSA

Contributors





► Contributors



Terry Booysen

CGF - Co-founder and Executive Director: CGF Research Institute



Terry Booysen co-founded CGF Research Institute ('CGF') where he is an Executive Director and majority shareholder. Terry regularly speaks to business and government leadership on GRC (Governance, Risk & Compliance) covering the Corporate, SME and Government sectors, and he has published numerous GRC related articles. Terry previously held senior managerial and executive positions in the banking industry. He also served in an executive position at IBM SA covering thought leadership in the financial services sector, before becoming a consultant, specialising in smartcard banking, e-business and the corporate governance arenas.



Matome Bopape

Vodacom - Senior Specialist: Information Security



Matome is the Information Risk Officer at Vodacom Group with over 13 years' experience in Information Risk, Security and Governance management. Matome studied has an MBA and a Postgraduate Diploma in Business Administration (PDBA) from GIBS and an Honours in Computer Science from the University of Pretoria. Matome is experienced in the following: ISO/IEC 27002, CobiT and ITIL. Matome started his career at Faritec in the following roles: Security Administrator and Internet Developer. Internet Security Engineer Information Security Consultant over a period of He also worked at KPMG in an advisory role. Matome was exposed to a varied number of clients including ABSA Capital, Investec, Eskom Pension Fund, AFGRI, Miners Pension Fund, ABSA Wealth, and Neotel amongst others. Matome then worked at Telkom in the role of an Information Risk and Governance Specialist. In his current Information Risk Officer role at Vodacom he has experience that included the management of Cyber Security Risk Management, Privacy Risk Management, general Information Risk Management, Information Governance and Awareness across the Vodacom Group of companies.



Peter Bosch

SAQA - Directorate: Registration & Recognition



Peter Bosch has served education as a teacher and Head of Department: Mathematics in both government and former model C schools for 14 years. He left education to pursue a career as a Sales Manager in the insurance industry in Namibia. Thereafter he established two successful businesses of his own. He later accepted a position at the Financial Services Board where he gained invaluable experience about the financial regulation sector. Peter is currently employed by the South African Qualifications Authority where he is responsible for the evaluation and registration of qualifications and part qualifications on the National Qualifications Framework (NQF). In addition, his functions also include the recognition of professional bodies and registration of their professional designations on the NQF. Among other qualifications, Peter has recently completed a Master of Public Administration and is currently studying towards a Bachelor of Laws degree.



Mark Bussin

21st Century - Chairperson

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 remuneration arena. He serves on and advises numerous boards and Remuneration Committees and has consulted in many countries. Mark holds a Doctorate in Commerce and has published or presented 40 academic articles and over 300 popular papers and has appeared on television and radio, and in the press for expert views on remuneration. 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 commissioner in the Presidency, he advised on the Remuneration and conditions of employment for the President, Deputy, Ministers, Judges, Magistrates, Parliament and Traditional Leaders.



Raeesah Cachalia

In On Africa - Consultant

Raeesah Cassim Cachalia is a South Africa based researcher who has worked within government as well as civil society. Her areas of interest include conflict, violent extremism and human rights, with an emphasis on the Middle East and North Africa. She is currently a researcher for the ISS within the Transnational threats and International Crime division, and has previously held posts as Deputy Director for Research and Policy at the Civil Secretariat for Police, and been part of the Conflict and Terrorism unit at IOA. She has been widely published through Defence Web, Polity.org and IOA on a variety of topics including human rights, the Arab spring, NATO involvement in Lybia and the Egyptian elections. Raeesah holds a BA Law and an LLB in Human rights from the University of Pretoria.



Les Carlo

IRMSA - Risk Intelligence Committee Member

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.





Jody Cedras

PolicySA - Higher Education and Public Policy Professional



Dr Cedras is a founding member of the African Consortium of Public Administration, and is a member of the Southern African Association for Institutional Research. He also serves on the Advisory Panel of the African Journal of Public Affairs. Dr Cedras is a Research Associate in the School of Public Management and Administration at the University of Pretoria. Dr Cedras is also a senior research associate of PolicySA, a policy think tank in the professional bodies and higher education sectors. Professionally, he has held senior and executive positions in the following entities: Department of Higher Education and Training; Higher Education South Africa (HESA) (now Universities South Africa); the University of Cape Town (UCT) and; the South African Qualifications Authority (SAQA). Dr Cedras is presently tasked with establishing the Institutional Planning Department at Sefako Makgatho Health Sciences University in order to give effect to the university's institutional planning, institutional research, regulatory reporting, and quality assurance functions.



Trevor Channing

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



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).



Davis Cook

RIIS - Chief Executive Officer



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 SA and the UK. His academic background includes physics and applied math; politics, philosophy and economics; and development studies.

Ryan Cummings
Signal Risk - Director

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).



Kris Dobie
Ethics Institute - Manager, Organisational Ethics

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.



Haroun Docrat
CCMA - National Senior Commissioner

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.





Walter Ehrlich

Retlaw Fox - Director



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.



Fred Goede

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



Fred Goede worked for 25 years in the petroleum, chemicals, energy and mining sectors, mainly on operations and projects in Southern Africa as well as the Middle East, North America and Europe for divisions of Sasol (Pty) Ltd. As General Manager for Health and Environment, he had to integrate energy, environment, climate change, health and sustainability challenges into business. He presented papers at many of the world's energy, climate, gas and oil conferences, in addition to the United Nations conferences on sustainability, chemicals and climate change. A registered natural scientist for more than 20 years, Fred contributed as a lead author to the work of the Intergovernmental Panel on Climate Change (IPCC) from 2002 until 2006. He received a certificate for his contribution to the Nobel Peace Prize of 2007 which the IPCC shared with Al Gore. When his position as General Manager for Environment and Health became obsolete in 2014 following company restructuring, he decided to leave Sasol and pursue other opportunities in environmental leadership. Early 2015 he registered his own company and manages projects for the public and private sector risks associated with organisations, especially related to environment and sustainable development. Since September 2015 he is senior lecturer at North-West University, teaching the part-time Masters in Applied Risk Management at UARM in Johannesburg to risk professionals. He spearheaded the development of a new five-day climate change course at North-West University which is presented since October 2015 at the Centre for Environmental Management.



Sy Gourrah
SAIEE - Junior Vice President



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 Manger 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.



Chris Gower
Buffalo City Municipality - Revenue Protection Manager



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).



Hannes Grey
Vodacom - Senior Specialist: Business Continuity Management



Hannes Grey has 15 years' experience in the ICT industry. He has been appointed in various specialists and managerial positions throughout his career. Hannes joined Vodacom Group in 2009 as a specialist in Business Continuity and was subsequently promoted to a senior specialist. Hannes is responsible for the Technology Portfolio with Vodacom Group. The portfolio includes Technology Recovery, Technology Emergency Management as well as the implementation of the Vodafone Group Global Policy Standard for Network Resilience (Mobile and Fixed) within the Vodacom Group of companies.



Bheki Gutshwa
IRMSA - Vice President

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.



James Hall
In On Africa - Consultant

James Hall, Founding Editor of the Africa Conflict Monitor (ACM) and critically acclaimed author, columnist and filmmaker, pioneered insider coverage and analysis of Africa, in Africa, with six books and thousands of articles and news stories for publications worldwide. Described by TIME magazine as a "Chicago-born Swazi" and by Reuters as "a seasoned African observer," Hall has garnered numerous journalism, filmmaking and photography awards. As a consultant, James Hall has been called upon to conduct original research and compile reports for the London-based Control Risks Group, the World Food Programme, UNICEF, Standard Bank Swaziland and several other NGOs, government agencies and private businesses. His by-line appears in stories for news services including Reuters and IRIN/Plus News among others, newspapers such as Business Day, and Mail & Guardian, and magazines including African Review, New African, Financial Mail and others). His longer academic writing appears in the bi-annual editions of the reference work Africa Contemporary Record.



Zanele Hlophe
CCMA - Chief Audit Executive

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.





Michael Judin

Judin Combrinck - Senior Partner

Michael Judin is currently a senior partner in the Johannesburg based law firm, Judin Combrinck Inc. Michael is a director of, and legal adviser to, the American Chamber of Commerce (AmCham) in South Africa. On 22 November 2006, Michael was inducted as an honorary life member of AmCham in recognition of exemplary leadership and dedicated service. Michael is deputy chairman of one company, and a non-executive director of another, quoted on the Johannesburg Stock Exchange. Michael is admitted as an attorney in Botswana, Lesotho and Swaziland, and is a member of the International Bar Association. He is also an associate member of the American Bar Association, where he acts as Co-Chairman of the Corporate Governance International Developments Sub-Committee. Michael is a member of the e-commerce advisory committee of the Financial Services Board of South Africa. Michael is an Honorary Member of the Institute of Directors in Southern Africa and acts as their outside legal advisor. He is a member of the Committee that wrote the Code for Responsible Investing In South Africa (CRISA), the Committee that wrote King III and he is on the Task Team writing King IV.



Chandu Kashiram

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.



Malebu Makgalemela

Cell C - Executive: Enterprise Risk Management

Malebu Makgalemela is an experienced professional in South Africa. She currently serves as the Executive for Enterprise Risk Management at the Cell C, a telecommunication service provider in South Africa. She is responsible for the Strategic Direction of the 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. Prior to Cell C, Ms. Makgalemela was Chief Risk Officer with a Government Agency for 2 years. This followed a stellar 7-year career with MTN SA, another leading telecommunication service provider in South Africa. Initially employed as a Senior IT Auditor responsible for conducting and supervising IT Audits, she would go on to become the Manager of Risk Analysis. Her position involved managing the Enterprise Risk Management initiatives for the company as well as implementing risk management best practices. Ms. Makgalemela concluded her career at MTN as a Senior Manager in charge of Enterprise Risk Management in the Business Risk Management Unit. A position she diligently discharged for 4 years and 3 months.



Adv. Kevin Sifiso Malunga

Deputy Public Protector of the Republic of South Africa

Adv. Malunga has been Deputy Public Protector of the Republic of South Africa since December 2012. He holds a BA Law from the University of Swaziland. He also acquired an LLB degree from the University of Natal in South Africa and an LLM in International Law from Georgetown University Law Centre in Washington DC. He is currently a candidate for Doctor of Juridical Science at the University of Wisconsin-Madison Law School in the US. His dissertation focuses on economic justice in South Africa, in particular the right to housing, assessing the ability of courts to effect social change. Adv. Malunga, is a member of several legal professional societies. His most recent contributions include serving as State Law Adviser to the Marikana Judicial Commission of Inquiry. Adv. Malunga also served as a State Law Adviser: Policy Co-ordination and Monitoring at the Department of Justice and Constitutional Development. He has also served in the former and current Chief Justice's office, where he was also an interim Chief of Staff. Adv. Malunga was also a part-time researcher/consultant to UNAIDS on international and domestic laws affecting HIV vaccine trialists in Ethiopia. In December 2010 he was appointed by the Minister of Higher Education and Training Dr Blade Nzimande to serve as a Board member of the South African Qualifications Authority (SAQA) for a period of five years.



Christelle Marais

Marsh - Practice Leader: Strategic Risk Consulting

Since 1991 until 2008, Christelle was active in various roles within the South African Post Office Group including insurance, cell captive establishment, forensic investigations and economic crime, compliance, integrated risk management and establishing and maintaining an Asset and Liability (ALCO) and Treasury Risk Management Function for the Group. She left the Group in 2008 as Senior Manager ALCO and Treasury Middle Office responsible for direction to the EXCO, ALCO and Board on effective risk management for the ALCO and Treasury. In 2008, Christelle joined Sasol in various capacities at subsidiary, joint ventures and later Group level in governance, risk management, compliance, ethics, business continuity and company secretarial services. Christelle was co-opted to conduct ERM for various major organisational restructuring projects within Sasol on a global scale and to inform the Board, Group Risk and SHE Committee, Group Audit Committee and EXCO on various risk related matters on project as well as business as usual activities. She developed Sasol's risk management strategy, recognised by Ernst & Young as world class in external industry report. Christelle developed a risk management maturity model based on international external benchmarking validated as best practice. In 2015, Christelle joined Marsh Risk Consulting as the practice leader for Strategic Risk Consulting and has since established this as a key service offering to Marsh's client base.





Clémence McNulty

ERM Southern Africa - Principal Consultant



Clémence McNulty is a Principal Consultant within ERM's Sustainability and Climate Change practice based in Cape Town. Clémence supports clients to develop, quantify and deploy integrated corporate sustainability strategies along their value chains and throughout their asset lifecycle. Clémence leverages financial modelling and value analysis skills to help clients understand the business case for sustainability, evaluate non-technical risks tied to decisions such as capital project development or asset divestment, and to articulate and evaluate the socio-economic impacts stemming from their activities. Clémence has extensive experience of the energy, mining and utilities value chains and planning for regulatory, stakeholder and technical driven changes to business models. She has a strong understanding of the role of systems and the challenges associated with change management in relation to large scale business transformation from her prior experience supporting IT implementation projects within Accenture. From her past experience as a strategy consultant, Clémence has deep skills in opportunity assessment, valuation, economic/ financial modelling, scenario analysis and strategic planning as well as operating model design, and is adept at developing C-suite and Board level communications to motivate organisational change to deliver sustainability. Clémence holds an Msc in Environmental Change Management from Oxford University and a BSc (Hons) in Business Administration from the University of Bath. She previously worked as a Strategy Consultant for Accenture, in their London and Cape Town offices, focused on the Energy and Resources sectors.



Nkosinathi Mhlongo

Keydimensions Risk & Advisory Services - Managing Director



Nathi Mhlongo is Managing Director at Keydimensions Risk & Advisory Services (Pty) Ltd. KRS specializes in integrated ERM, Legal and Compliance; Advisory and Training. Nathi previously served as Chief Risk Officer as well as Executive Manager: Internal Audit and Process Manager (Expenditure) at eThekweni Municipality and uMsunduzi Municipalities respectively, a Deputy Director (Municipal Finance) at CoGTA and an Educator. She has experience as Chairperson of Risk Management, Audit and Performance Management Committees at a Provincial Government Department, District and Local Municipalities. She is a member of the Institute of Risk Management South Africa and Institute of Directors South Africa. Nathi has MBA, BComm and Diploma in Secondary Education.



Thulani Mkhungo

SIU - Chief Risk Officer and Chief Audit Executive



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.



Dikiledi Mnyandu

Department of Transport - KwaZulu Natal - Director: Risk Management

Dikiledi Bertha Mnyandu is a Director for Risk Management at KwaZulu-Natal Provincial Department of Transport. Dikiledi 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.

Dikiledi 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. Dikiledi is currently looking forward to participating in the Provincial Risk Management Committee planned to commence in March 2017.



Sheralee Morland

IRMSA - President

Sheralee Morland, President of the Institute of Risk Management of South Africa, has over 25 years of accumulated experience in governance related roles of internal auditing and risk management in banks, asset management, insurance, and mining organisations.



Edwin Mpofu

Wolfpack Information Risk - IT Security Operations Manager

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 organisation.

Currently, he is employed by Wolfpack Information Risk and is responsible for the organisation'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.





Parmi Natesan

IODSA - Executive: Centre for Corporate Governance

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.



Thabile Nyaba

RAF - General Manager: Risk

Thabile Nyaba is a General Manager at Road Accident Fund (RAF), responsible for Risk Management, Business Continuity Management and Combined Assurance. She has extensive and practical experience in risk management and Internal Audit in both private and public sector. She is the winner of "Risk Manager of the Year 2015 Runner Up" and her RAF RM Team are winners of "Industry Initiative Award for Government and Public Services", by IRMSA. She is one of the first 9 "Certified Risk Management Practitioners" in the Country.



Vally Padayachee

AMEU - Strategic Advisor

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.



Nick Piper
Signal Risk - Director

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.



Reshma Ramkumar
Impala Platinum - Chief Risk Officer

Reshma Ramkumar, (BSc Chemical Engineering, MSc.) is a Chemical engineer who has vast experience in various aspects of the Mining industry, especially within the production and project management environment. Reshma has been a production manager at a world class base metals refinery and has managed numerous and diverse capital projects such as the design and implementation of an effluent treatments plant. Reshma brings this wealth of experience to the enterprise risk management function, with an intricate understanding of the mining industry and the associated business model.

As part of these experiences, Reshma has gained expertise in the development and pragmatic implementation of an enterprise risk management framework and model that focusses on adding value from a business perspective.



Anne Reed
BDO - National Risk Manager

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 timeframes.





Gabrielle Reid

S-RM - Lead Sub Saharan Africa Political and Country Analyst

Gabrielle is S-RM's lead Sub Saharan Africa political and country risk analyst. Since joining S-RM, she has worked on numerous bespoke projects focused on commercial, political and security developments in a range of jurisdictions, including Mali, Nigeria, Ghana, Mozambique, South Africa and several more. Gabrielle holds a Bachelor of Social Sciences in Politics and Psychology, a Bachelor of Social Sciences (Hons) in Justice and Transformation, and a Master's Degree in International Relations, focusing on terrorism in East Africa, from the University of Cape Town.



Mark Robins

Marsh - MRC Mining Practice Lead

Mark Robins, CEng, MSc (Eng), is currently MRC Mining Practice Lead with three decades of experience in civil and geotechnical engineering, mining and risk advisory. Formerly SVP Safety, Environment and Risk for AngloGold Ashanti, he had accountability for risk governance and advice to the Board of Directors and Executive. He also gained extensive experience in geotechnics and tailings facility stewardship, developing national standards and international guidance for the International Council on Mining and Metals (ICMM). Mark is currently Honorary Treasury of IRMSA.



Professor Andre Roux

University of Stellenbosch Business School - Head: Future Studies Programme

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 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.



Querida Saal
SAHRC - Human Rights Advocate and Researcher

Querida Saal is a human rights advocate and researcher at the South African Human Rights Commission (SAHRC), where she specialises in socio-economic rights. She completed her BA degree at Stellenbosch University, majoring in Political Science and Economics. Querida also completed an Honours degree and a Masters degree, both in Political Science. Querida has extensive experience in research, public policy analysis, and community development.



Terrance Singh
Ruhi Consulting - Director

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.



Allan Tumbo
SAHRC - Researcher

Allan Tumbo is a researcher employed at the South African Human Rights Commission. His focus area is the right to equality. In addition, Allan conducts research on the African Political Economy. Allan is a Master Degree graduate from the University of Gothenburg in Sweden, and a Bachelor Degree from the University of Witwatersrand.





Tap van der Berg

Sasol - Senior Manager: Enterprise Risk Management

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).



Dr Whitey van der Linde

University of Johannesburg - Senior Lecturer

Whitey (Tjaart Nicolaas) 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 range from Strategic Management, Financial Management, Operational Management and Risk Management. Work experience includes 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.



Francois van Dyk

Marsh - Senior Specialist Risk Consultant

Francois is an experienced risk professional with an academic background in quantitative finance, risk management, economics and accounting. He holds a PhD in Financial Risk along with several professional qualifications and certifications, including PRM and CHP designation. He has a background in banking and specialised risk consulting focusing on financial services, and has extensive knowledge and experience in various financial risk disciplines and related areas including prudential regulation, stress testing, financial stability, and capital management and adequacy. He has worked for and consulted at respected institutions and businesses globally. He boasts a respected academic career that includes internationally published empirical and applied quantitative research, and he often speaks at conferences and summits. At Marsh Risk Consulting he acts as consulting engagement lead for various large accounts, while also being engaged with designing, managing and delivering globally prominent strategic initiatives. Moreover, he leads, facilitates and delivers strategic and tailored consulting engagements of a solution-orientated problem solving nature, and is furthermore involved with actuarial, ancillary actuarial and other risk quantification and methodological functions.





Coen van Wyk
In On Africa - Consultant

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.



Claudelle von Eck
IIA SA - Chief Executive Officer

Claudelle is currently the CEO of the Institute of Internal Auditors. She was previously the COO of the Institute. 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 the Chairwoman of the SBL Alumni Association's Executive Committee. She has served on the Unisa Council as well as its Audit Committee. She currently serves on the Advisory Board of the Business and Economic Sciences faculty of the University of Pretoria. 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. 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 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. 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.



Nicky Weimar
Nedbank - Senior Economist

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.





Lyal White

Gordon Institute of Business Science - Director: Centre for Dynamic Markets

Prof. Lyal White is the founding director of the Centre for Dynamic Markets (CDM) at the Gordon Institute of Business Science (GIBS), University of Pretoria, where he is an Associate Professor in International Business focusing on political economy and strategy in Africa, Asia and Latin America. As Director for the CDM he drives research, learning and networks in Dynamic Markets at GIBS. He also heads up the CDM Africa office in Nairobi geared to grow the GIBS footprint in Africa. Prof. White is widely published in news media, academic journals and books, most recently as co-editor of "The Changing Dynamics of International Business in Africa" (Palgrave Macmillan, 2015), "Africa-to-Africa Internationalisation" (Palgrave MacMillan, 2016) and chapter contributor of "Africans Investing in Africa" (Palgrave Macmillan, 2015). He has worked in a range of sectors covering themes from investment rationale, strategy, competitiveness and general management in Dynamic Markets to reform, growth and development, and comparative politics in Africa and Latin America. He is also coordinating research and dialogue geared toward improving Africa's political and commercial relations with Latin America and understanding the role of new players in Africa and the world.



Ogi Williams

In On Africa - Senior Research Analyst

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.



Mdu Zakwe

Cyber Core - Executive Chairman

Mdu Zakwe, a Chartered Accountant by profession and has an MBA (IT) and Certificate in Applied Cyber Security (Massachusetts Institute of Technology). He took up a career in IT and was fascinated about IT governance and IT benefit realisation but with the emerging risks on the cyber space he is now focusing on cyber risk management and cyber security to help organisations put mitigating strategies and protect their information assets to ensure that they remain available and protected with integrity. His professional skills include business analysis, systems integration, enterprise intelligence, enterprise risk management, information assurance audits, data analytics and cyber security. He has worked for multinationals in various senior roles, has served on various boards and also became chairperson of various board committees both in the private and public sector.



► The South African Institute for Entrepreneurship (SAIE)



The South African Institute for Entrepreneurship is a registered NGO active in the entrepreneurship development environment in South Africa for about 20 years. The South African Institute for Entrepreneurship has a vision of a dynamic culture of entrepreneurship in South Africa that promotes a positive mindset in youth and adults and assists in the eradication of poverty through the creation of effective entrepreneurs and enterprises. In this view, the organisation's core purpose is to become the African continent leader of the mindset revolution. The institute develops innovative (experiential-based) training materials that utilize original, creative methodologies; and trains educators, trainers, co-operatives and community-based organisations to convey business skills, uncover entrepreneurship qualities and ensure sustainable economic development and wealth creation. In over 20 years of its existence, the South African Institute for Entrepreneurship has made great impact in the following social profit sectors of the South African economy – Education (School Entrepreneurship), Jobs (Enterprise Creation and Sustainability) as well as land (Agriculture).

► Umgeni Water



Umgeni Water is a state-owned entity established in 1974 to provide water services - water supply and sanitation services - to other water services institutions in its service area. The organisation operates in accordance with the Water Services Act (Act 108 of 1997) and the Public Finance Management Act (Act 1 of 1999), amongst others, and is categorised as a National Government Business Enterprise. Umgeni Water reports directly to the Department of Water and Sanitation (DWS), through the Chairman of the Board and the Chief Executive and its Executive Authority is the Minister of Water and Sanitation. The primary activities of Umgeni Water, as pronounced in section 29 of the Water Services Act, is to provide water services (water supply and sanitation services) to other water services institutions in its service area.

► South African Reward Association



SARA's role is to promote, develop and empower the reward profession in South Africa, and to ensure that Reward specialists and managers, human resources professionals and executives dealing with and responsible for Reward management, have the skills, confidence and passion for the reward discipline to make a significant difference in the way organisations position themselves to achieve their strategic objectives. SARA plays a key role in the professional development of Reward professionals in South Africa through its internationally recognised training and internship programmes. Since its inception in 1997, SARA has grown from strength to strength. SARA's head office is based in Johannesburg with branches in KwaZulu Natal and Cape Town to serve our members nationally. The SARA membership listing includes corporate firms, government service and State Owned companies. Most organisations listed on the Johannesburg Stock Exchange are corporate members of the association and our individual membership listing exceeds 3500.



▶ Association of Municipal Electricity Utilities (AMEU)

The AMEU is an association of municipal electricity distributors as well as national, parastatal, commercial, academic and other organisations that have a direct interest in the electricity supply industry in Southern Africa. The AMEU Branches and Affiliates Committees are currently all active and members are encouraged to attend meetings.



▶ AIG

AIG is a world leading property-casualty and general insurance organisation serving more than 70 million clients around the world. With one of the industry's most extensive ranges of products and services, deep claims expertise and excellent financial strength, AIG enables its commercial and personal insurance clients alike to manage risk with confidence. For over 50 years AIG has been dedicated to servicing the South African insurance market. Their products are characterised by innovation, outstanding "value added" services and underpinned with their underwriting specialists, unparalleled global network and the expertise of our local claims team.



▶ BarnOwl

BarnOwl is a fully integrated governance, enterprise risk management, compliance and audit software solution used by over 200 organisations in Africa, Europe and the UK. BarnOwl supports best practice risk management, compliance and audit frameworks (e.g. COSO, ISO31000, Compliance Institute's handbook, International Professional Practice Framework), whilst offering a highly flexible and configurable parameter-driven system allowing you to configure BarnOwl to meet your specific requirements.

BarnOwl is the preferred enterprise risk management (ERM) software solution in the South African public sector, endorsed by the Office of the Accounting General (OAG).

BarnOwl is developed, implemented and supported by IDI Technology Solutions (Pty) Limited (IDI). IDI is a well-established software development company based in Johannesburg, South Africa.



Chubb

Chubb is the world's largest publicly traded property and casualty insurer. With operations in 54 countries, Chubb provides commercial and personal property and casualty insurance, personal accident and supplemental health insurance, reinsurance and life insurance to a diverse group of clients.

The company is distinguished by its extensive product and service offerings, broad distribution capabilities, exceptional financial strength, underwriting excellence, superior claims handling expertise and local operations globally.

The insurance companies of Chubb serve:

- Multinational corporations, mid-size and small businesses with property and casualty insurance and services
- Affluent and high net worth individuals with substantial assets to protect
- Individuals purchasing life, personal accident, supplemental health, homeowners, automobile and other specialty insurance coverage
- Companies and affinity groups providing or offering accident and health insurance programs and life insurance to their employees or members
- Insurers managing exposures with reinsurance coverage.

With \$154 billion in assets and \$37.4 billion of gross premiums written in 2015* on a pro forma basis, Chubb's core operating insurance companies maintain financial strength ratings of AA from Standard & Poor's and A++ from A.M. Best.

Chubb Limited, the parent company of Chubb, is listed on the New York Stock Exchange (NYSE: CB) and is a component of the S&P 500 index. Chubb maintains executive offices in Zurich, New York, London and other locations, and employs approximately 31,000 people worldwide. Chubb Insurance South Africa limited has been trading in the South Africa marketplace since July 2006 and hold a local credit rating of AA (ZA) from GCR.



Ethics Institute

The Ethics Institute is a non-profit, public benefit organisation, incorporated in September 1999. Our vision of "Building an ethically responsible society" is achieved by forming partnerships with the public and private sectors, and the professions. We serve as a resource through our thought leadership, research, training, support, assessment and certification activities.

Our convictions

Everything we do is informed by our core convictions:

- We make a meaningful difference
- We build trusting relationships
- We enjoy working together

In short: The Ethics Institute, we find meaning and joy in what we do.



► The Institute of Internal Auditors South Africa (IIA SA)

The Institute of Internal Auditors (IIA Inc.) is the leading professional body representing the interests of internal auditors worldwide. It is the internationally recognised authority, principal educator and acknowledged leader in certification, research and technological guidance for the profession. The Institute is creator and custodian of the International Standards for the Professional Practice of Internal Auditors, and the Code of Ethics to which all members must adhere. A global institute with headquarters in Florida, USA, the IIA Inc. has a network of affiliates serving members in more than 160 countries in the fields of internal auditing, risk management, governance, internal control, IT audit, education, security and management.

The Institute of Internal Auditors South Africa (IIA SA), as part of this international network upholds and supports the profession by providing a wide range of services dedicated to the education and advancement of internal auditors and dynamically promoting and developing the profession in South Africa. The IIA SA's objectives are to build the profession, its credibility and a thriving business environment in South Africa. The IIA SA is the largest affiliate in the world after North America.



► The Institute of Directors in Southern Africa (IoDSA)

The Institute of Directors in Southern Africa (IoDSA) supports business leaders and directors in reaching their full potential by ensuring they fully understand the latest governance practices and are empowered to discharge their duties effectively.

The IoDSA offers exclusive programmes to develop existing and aspiring directors through thought leadership and providing a platform for peer interaction. We are committed to fostering better directors, better boards and better business in SA.



► Marsh

Marsh is a global leader in insurance broking and risk management, and its success is driven by teaming up with clients to define, design, and deliver innovative industry-specific solutions. With an extensive footprint of more 130 countries worldwide, Marsh is able to service cross-industry clients of various sizes, in different geographical locations and varying risk exposures. Closer to home, Marsh Africa combines on-the-ground knowledge and experience with unparalleled access to global resources, supported by over 1 200 colleagues across the African continent.



▶ South African Reward Association (SARA)



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▶ thryve



thryve is a provider of cloud based insurance administration, risk management information and customer relationship management systems. thryve is part of the Eikos Group and has been developing tailored insurance administration systems for insurance intermediaries for over 15 years.

- We market and support Riskconnect, a risk management information system solution that is provided in the cloud and developed on the Salesforce.com platform.
 - We are a Salesforce.com partner and partner with Salesforce to deliver the world's leading cloud-based sales, service and marketing platform to clients.
 - Our web-based insurance administration systems are hosted in the cloud and are developed on the Microsoft.net and SQL Server platforms.
- We employ developers, data analysts, business analysts, client support technicians, project managers and IT engineers, all key to delivering a robust and reliable solution to our clients. Our clients are large southern-African corporates, insurers and insurance brokers.

▶ UARM Centre for Applied Risk Management, Faculty of Economic Sciences and IT, North-West University, Vaal Triangle Campus



Ideally, business and risk managers play complementary roles in the process of setting and achieving an organisation's objectives. In practice however, a lack of knowledge and understanding of the interconnectedness of these roles can create misunderstanding and conflict between these role players. The resulting need for qualitative post-graduate risk management education and applied risk research led to the creation of the Centre for Applied Risk Management (UARM) in the Faculty of Economic Sciences and Information Technology of the Vaal Triangle Campus of the North-West University in 2012.

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Contact IRMSA

Tel: 011 555 1800 | Fax: 086 647 6191 | membership@irmsa.org.za
1st Floor, Block A, Grayston Ridge Office Park, 144 Katherine Street, Sandton, 2196
PostNet Suite 616, Private Bag X43, Sunninghill, 2157