

# Using Scenarios, Analytics, and Cognitive Technology to Manage Emerging Risks

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- Build **risk awareness** across the enterprise
- Assist business leaders in **identifying and managing emerging risks**
- **Communicate** with the Audit Committee
- **Participate with external** organizations to gather information on emerging risks and good risk management practices

The business environment continues to change with increasing speed and volatility and is subject to severe shocks.

In contrast to what most do today, extrapolating from the known risks, we need to think broader about what we don't know, the **emerging risks**.

- We need to expand our risk assessments analysis and start driving conversations on business insights related to potential emerging risks.
- The goal is to help the company be better prepared to identify, mitigate, and take advantage of, emerging risks and opportunities.



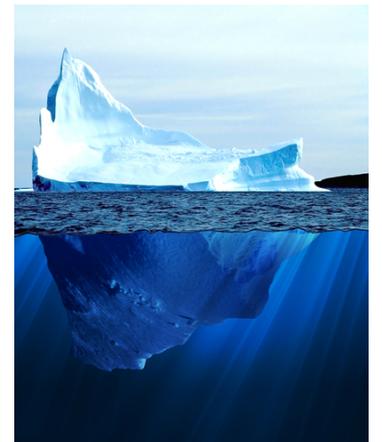
Effective risk management requires understanding more about **what we don't know**, than what we do know.

Source: Board Perspectives on Risk Management Issue 55: Protiviti 2014

“..newly developing or changing risks which are difficult to quantify and whose **potential business impact** is not yet sufficiently taken into account.”

Source: Swiss Re New Emerging Risk Insights 2014

- Emerging risks are not:
  - Known risks on the Enterprise Risk Map being managed by the business
  - Current issues being addressed by HQ, Business Units, or Countries
  
- **Emerging risk are:**
  - **Possible concerns on the horizon**
  - **Potential to have significant impact, but not yet accounted for**

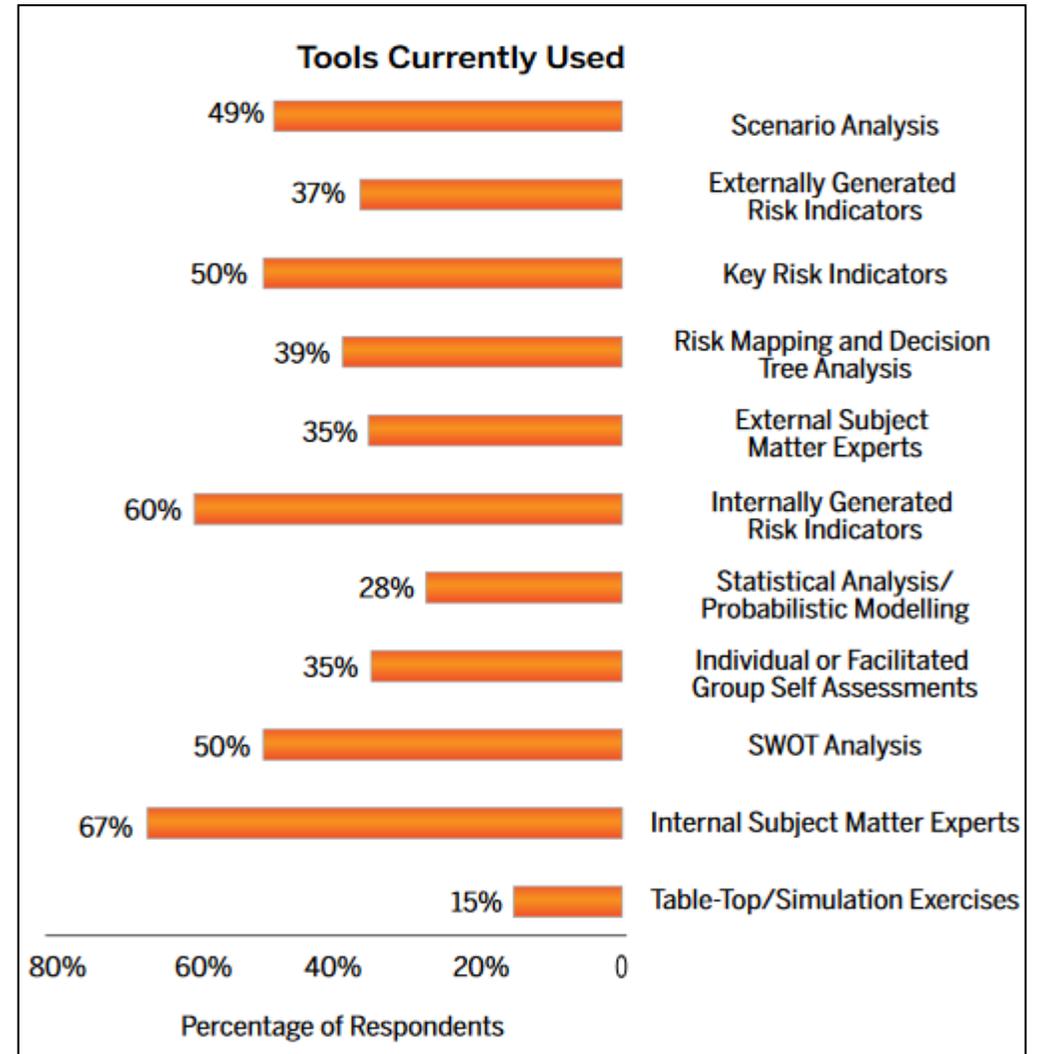


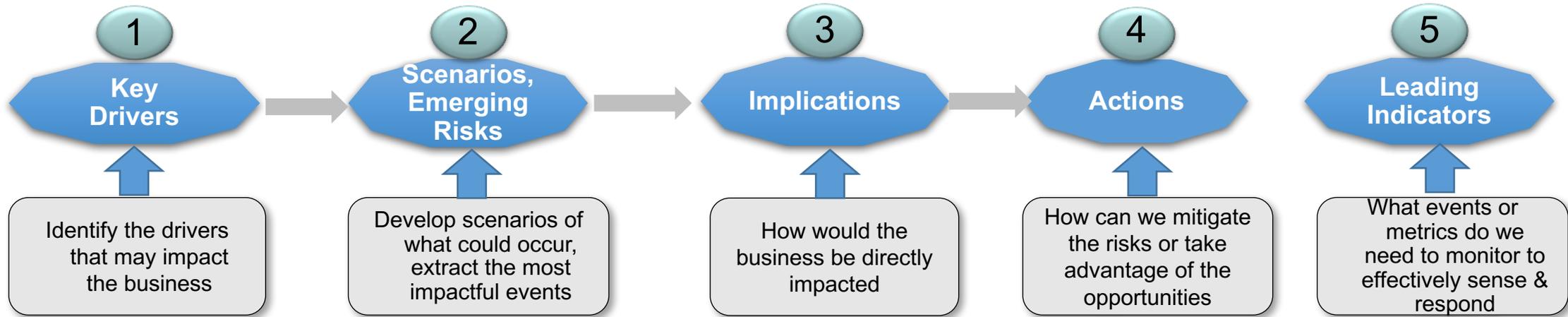
# There are different techniques to identify emerging risks

Companies use multiple techniques to identify emerging risks

- SMEs interviews / surveys
- Key risk indicators (internal/external)
- Scenario planning
- Statistical modeling
- Decision Tree analysis
- ... ..

*“48% of respondents believe they should incorporate more multidimensional approaches into their risk management practices.”*





## Benefits

- A creative and structured process to guide for longer term “consciously” thinking
- Combining both the past and future makes strategic thinking stronger
- Develop multiple possible scenarios help to overcome bias and uncertainties
- Engage with Business Unit and Country to gain broader insights

## Adaption & Practice

### **Educated CFO’s and Controllers in New York:**

- Simulation exercise of the scenario planning methodology

### **Exercised the approach with real risks**

- United Kingdom exit from the European Union (Brexit)
- Country level scenarios

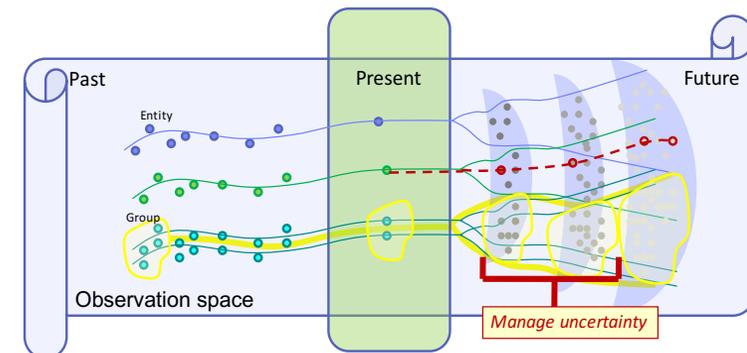


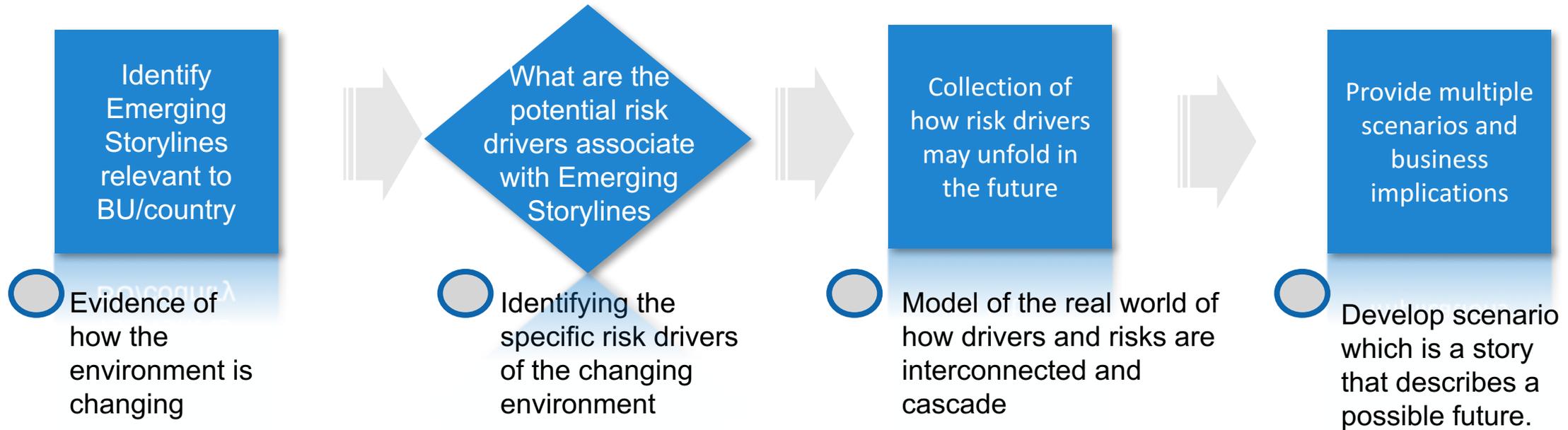
## Objective

- Provide business leaders with an automated solution to assist in identifying and assessing emerging risks
- Accelerate the scenario planning process from information collection and scenario development to deeper risk analysis
- Enable scenario planning in a global environment where skills and resources may be scarce

## Scenario Planning Advisor (SPA) Features & Benefits

- SPA leverages **Cognitive** and **Analytics** technology, co-developed with IBM Research
- Aggregates relevant **storylines** to identify **emerging risks**
- Projects possible scenarios with business implications based on selected **risk drivers**
- Customizable by unit and **supports local language**





## Objectives

- Analyze big data in order to identify anticipated emerging risks earlier, or even before they occur
- Enable strategic risk discussions
- Improve risk acumen of our leaders
- Establish credible links between the “big picture” global issues and the practical business implications
- Easily share the risk knowledge with broad team
- Overcome bias in risk identification
- Accelerate the scenario development process
- Gain broader insights
- Capture “what we don’t know” in a more productive way

*Our SPA front end already let the users understand what to expect and how to use it!*

## Welcome to IBM Scenario Planning Advisor

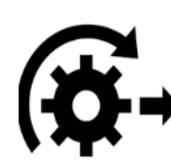
How does it work?



**Read** external emerging storylines.



**Select** relevant key risk drivers.



**Develop** scenarios and business implications.



**Use** the output and start your risk conversation.

To get started,

Select Country ▾

- Canada (English)
- Czech Republic (Czech)
- France (French)
- India (English)
- Malaysia (Malaysian)
- Mexico (Spanish)
- Nigeria (English)
- South Africa (English)

*Country List is available for everyone  
GEO teams can learn from other countries as well.*

- IBM Streams
- IBM Planning Projector\*
- Watson Translator



# Country Profile is Key – user/country centric tool needs local knowledge



### Sources

News Websites and/or RSS Feeds **42**

Please provide the most trusted and insightful news sources for this profile (e.g., for the URLs). The more websites you provide, the better the scanning quality.

Examples:

- News source: "The Guardian Nigeria", "BBC Русская Служба"
- Website: <http://guardian.ng/>, <http://www.bbc.com/russian>
- RSS feed URL: <http://guardian.ng/feed/>, <http://feeds.bbci.co.uk/russian/rss.xml>

Please enter only one website name or website URL per line.

Name	URL
1 new website, to be verified	<a href="http://www.boursorama.com">http://www.boursorama.com</a>
2 Le Figaro	<a href="http://www.lefigaro.fr/rss/figa">http://www.lefigaro.fr/rss/figa</a>
3 L'EXPRESS.fr	<a href="http://lexpansion.lexpress.fr">http://lexpansion.lexpress.fr</a>
4 La Croix.com	

### Organizations

Notable Organizations **23**

Please list some of the organizations and businesses whose are major industry players, militant opposition or terrorist organizations on the same line. If you know organization's Twitter accounts

Examples:

- Central Bank of Nigeria
- Boko Haram
- Les Républicains
- Union pour un mouvement populaire, UMP, [www.u-m-p](http://www.u-m-p)

Organization
1 Les Republicains, @lesRépublicains
Parti Socialiste, @partiso

### People

Prominent Individuals **54**

Please list the names of some of the individuals whose opinions or actions are influential (e.g., political leaders, etc.). Provide both **English** and **other language** spellings for individuals that may appear in the news or in social media (on the same line).

Examples:

- Muhammadu Buhari
- Goodluck Jonathan

Name
1 valls Manuel, Manuel valls, @manuelvalls

### Basic Drivers **16**

Topic: Commodities  
 Sample keywords: oil, gas, fuel, petrol  
 New keywords (press Enter or click "Save" to save):

Topic: Corruption  
 Sample keywords: corrupt, kickback, bribe, improper use of funds,  
 New keywords (press Enter or click "Save" to save):

Topic: Crime  
 Sample keywords: theft, fraud, abduction, killing, law enforcement,  
 New keywords (press Enter or click "Save" to save):

Topic: Currency  
 Sample keywords: devaluation, exchange rate, fiscal policy, foreign investment,  
 New keywords (press Enter or click "Save" to save):

*Degree of impact Survey gives the tool Intel to build scenarios*

### Risk Drivers Degree of Impact Survey

Please provide **relative** High/Medium/Low rating for each question. We also provide "Don't know" as one option, please only select it for questions you have no experience with. Please note that the questions in this survey are organized by risk driver. You can navigate between drivers using the **Next Driver** and **Previous Driver** buttons at the top of the survey. You can always update your answer.

Driver: Clients acceptance of strategic imperatives

Question 1 of 6

How likely are any of the following to lead to clients acceptance of strategic imperatives?  
 Note: The following questions are around your local clients' acceptance of IBM's CAMSS.

	Likelihood
Businesses struggling to keep up with clients demands	High
Businesses struggling to conform to regulations	Medium
Increased education in technology field	Medium
Improved efficiency, usability, and lower costs	High
Increased data volume	High

KEY TOPICS

- IBM Streams
- IBM Planning Projector\*
- Watson Translator



# Scenario planning Storylines are based on country news and tweets



Selected Drivers for Scenario Planning: No risk drivers selected Click Open to open a storyline and select one or more relevant risk drivers from the list of Key Drivers on the right.

Filter on: News & Twitter

Over last: 7 days

Search

15+ of 616

Sort by: Topics

[Go Back to View all Storylines](#)

News and Tweets are aggregated by Topic

Tool suggest user risk drivers to run scenarios

01/20 1:24AM	News	<b>South Africa, Government, Busisiwe Mkhwebane, Currency exchange rate,</b>  Government expenditures	<b>5 things you need to know in South Africa today</b> A cabinet reshuffle may be coming soon, and some want Gordon to go: a new report in A in questionable payments in court today.
01/24 8:38AM	Twitter	<b>South Africa, Government, Eskom, Economy, GDP, Tariffs</b>	<p>South Africa: Minister how can south africa bail Eskom's strategy. You destroying the economy by cutting power!! And you not dealing with <a href="#">twitter.com/ann7tv/status/...</a> 8:38 AM - 24 Jan 2017</p>

### Select Key Drivers for: South Africa, Government

- Decrease in corruption
- Decrease in government spending (infrastructure, education, public benefits)
- Decrease in taxes
- Decreased foreign direct investment
- Decreased talent in workforce
- Demand for more IT infrastructure
- Fair justice system
- Favorable official(political figurehead) or party elected

# Scenario & Emerging Risks – country side by side example



IBM Scenario Planning Advisor Profile

You selected: **Increased cyber attacks** **Increase in data privacy regulations**

### Leading indicators

- Lower domestic demand
- Lack of business investment and opportunities
- Uneven distribution of wealth
- Excessive use of government forces for domestic control
- Drastic increase in taxes

### Scenario and Emerging Risks

Clients willing to adopt new platforms at better rates

**Probable**

- Increased risk
- Increased debt
- Clients accept
- Clients willing to
- IT market deceleration
- Weakening economic

**Possible**

- Increase ability for smaller domestic providers to become
- Increase cost of providers
- Clients are not complying with privacy regulations
- Decrease in infrastructure spending
- Growing corruption
- Decreased political stability
- Decrease in investment
- Decrease in government spending
- Increase in debt levels
- Unfair allocation
- Rising unemployment

### Business Implications

**Probable**

- Increased IBM gain market

**Possible**

- Opportunity for IBM which is locally count
- IBM can expand supply with n

Click here to go “behind scenes”  
Each scenario is supported with a flow on how it was projected by the cognitive engine (next page)

Risk Drivers selected:  
Increased cyber attacks & increase in data privacy regulations

Outcomes are based on country profiles and suggest scenarios on how the future will unfold

IBM Scenario Planning Advisor Profile

You selected: **Increased cyber attacks** **Increase in data privacy regulations**

### Leading indicators

- Decrease in government spending (infrastructure, education, public benefits)
- Increasing debt levels
- Drastic increase in taxes
- Lack of respect for authority
- Radical political party or official elected

### Scenario and Emerging Risks

IT market deceleration or downsize

**Probable**

- IT market
- Increased debt
- Increased risk
- Clients accept
- Clients willing to
- Weakening economic

**Possible**

- Increase ability to become com
- Clients and pot comply with priv
- Increase cost of providers
- Unfair allocation
- Growing social corruption
- Decreased political stability
- Decreased investment
- Increase in price
- Decreased foreign
- Decrease in government spending (infrastructure, education, public benefits)

### Business Implications

**Probable**

- In IBM gain market

**Possible**

- IBM opportunities for IT
- country Cloud data centers