

AIRMIC ERM Forum 2017

Information systems and analytics:
The risk manager's essential toolkit...

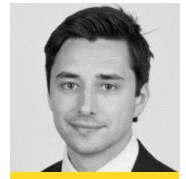
How can data management and
analytics be used to make smarter risk
and risk financing decisions, and
understand emerging risks?



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SESSION OVERVIEW

TUESDAY 7th NOVEMBER 14:30 – 15:45 Workshop B3 Room: City 1

Key points to cover:

- ✓ What is big data?
- ✓ How does traditional Risk Management differ from ERM?
- ✓ What drives a Risk Identification Framework?
- ✓ Where should a Risk Manager be focussing their energy?
- ✓ What should be on their checklist?

What is 'Big Data' & why is it becoming so important?

Big data is too large, complex and dynamic for any conventional data tools to capture, store and manage. Challenging to use the volume, variety and velocity of data being generated

Big Data Trends

Impacts every business & function

Creates value

Increases competition, growth & productivity

Some sectors more impacted

Shortage of talent

Big data analysis to transform insurance industry

Businesses are encouraging customers to provide them with more information



The big-data revolution in US health care: Accelerating value and innovation

by David Kaye & Co

How big data is going to help feed nine billion people by 2050

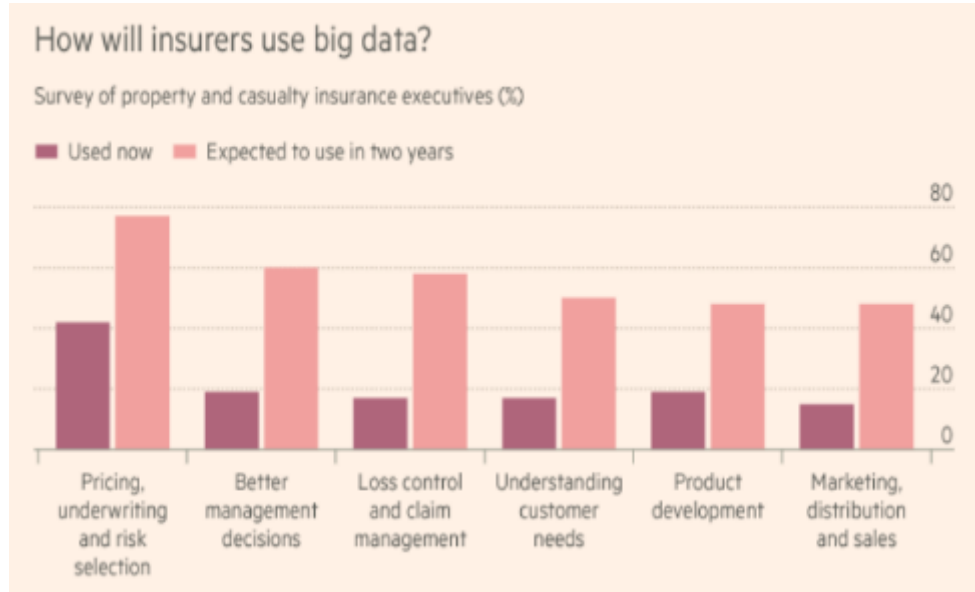
By Lyndsey Gilpin



Big data could

How is it impacting the risk industry?

Enterprise risk management uses many types of quantifiable and qualitative data to help identify, assess, and manage risk across the business. The value and expected use of data varies across organisations



Stochastic-based economic capital models adopted more broadly outside of Financial Services

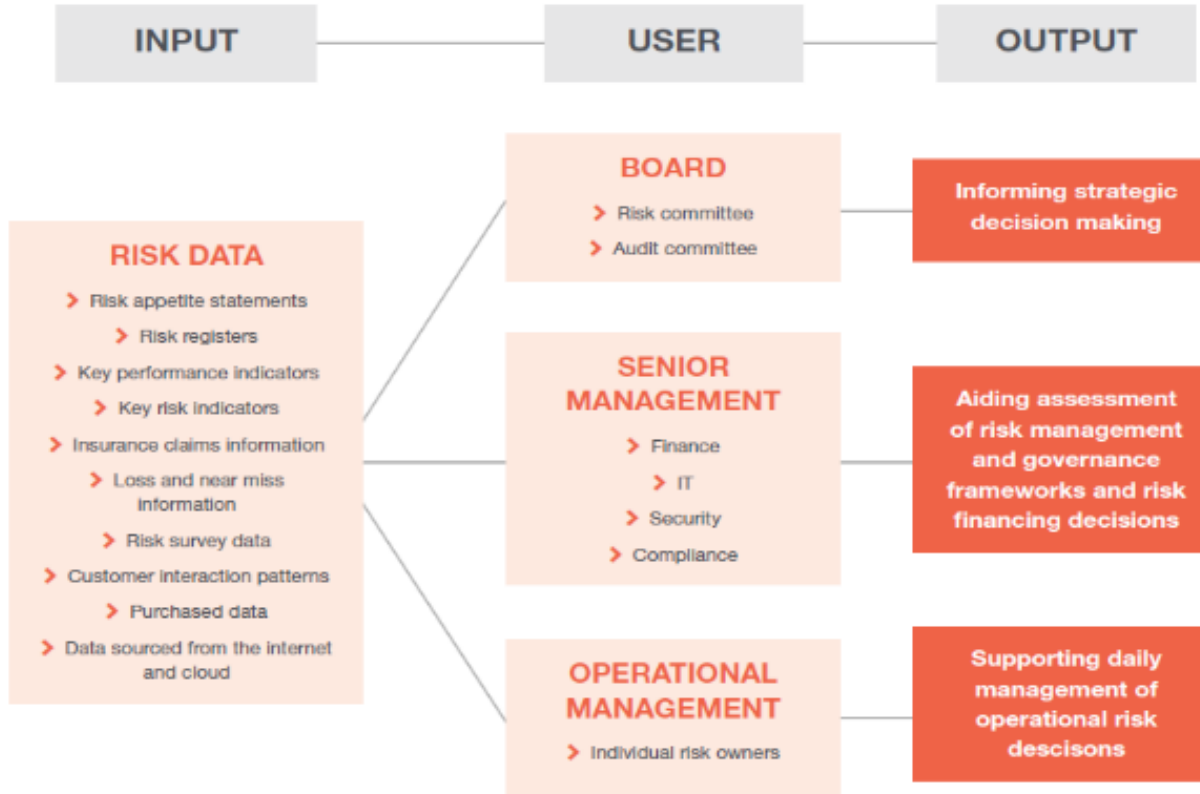
Model risk management (MRM) is receiving extensive ERM focus at present

Risk diversification measurement will become the single most important element in economic capital calculations

Source: Financial Times

So how can data add value?

Data means different things to different functions and businesses. At a strategic level organisations need summarised and meaningful information to aid decision making and highlight risk profiles



ERM & Technology

Audience Reflection:

Who is using spreadsheets to monitor and track their risks?

What is the value of ERM?

Potential Upside With little Downside Risk



	Advanced ERM Companies	All Other Companies
Better Informed Decisions	86%	58%
Greater Management Consensus	83%	36%
Increased Management Accountability	79%	34%
Smoother governance practices	76%	39%
Ability to meet strategic goals	76%	36%
Better communication to board	69%	52%

“The Potential Cost and Value of ERM” The Conference Board

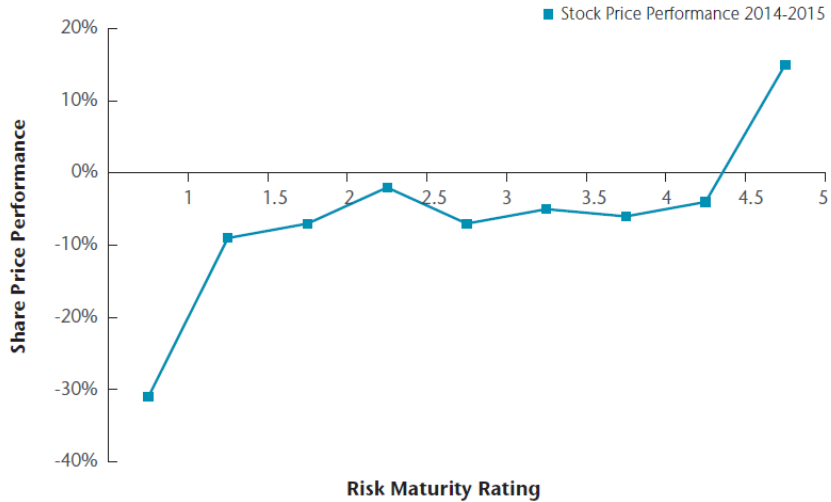
Source: Matteo Tonello, Emerging Governance Practices in Enterprise Risk Management, The Conference Board R-1398-07-WG, February 2007.

What is the value of ERM?

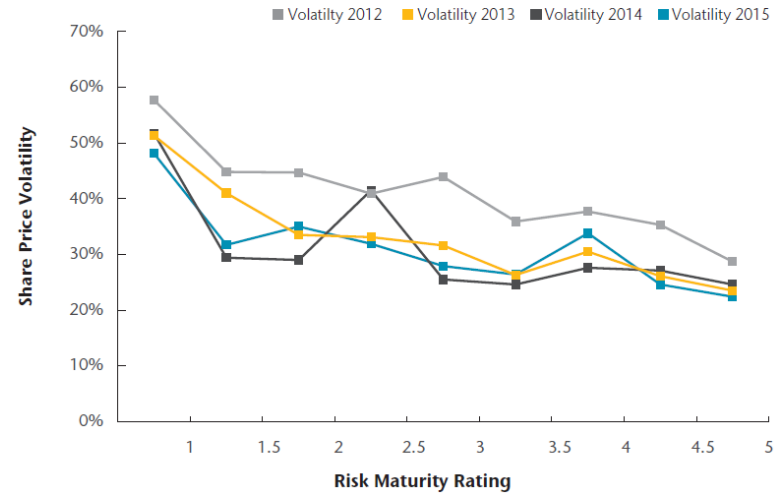
Real value



Graph One: Share Price Performance 2015



Graph Two: Share Price Volatility 2015



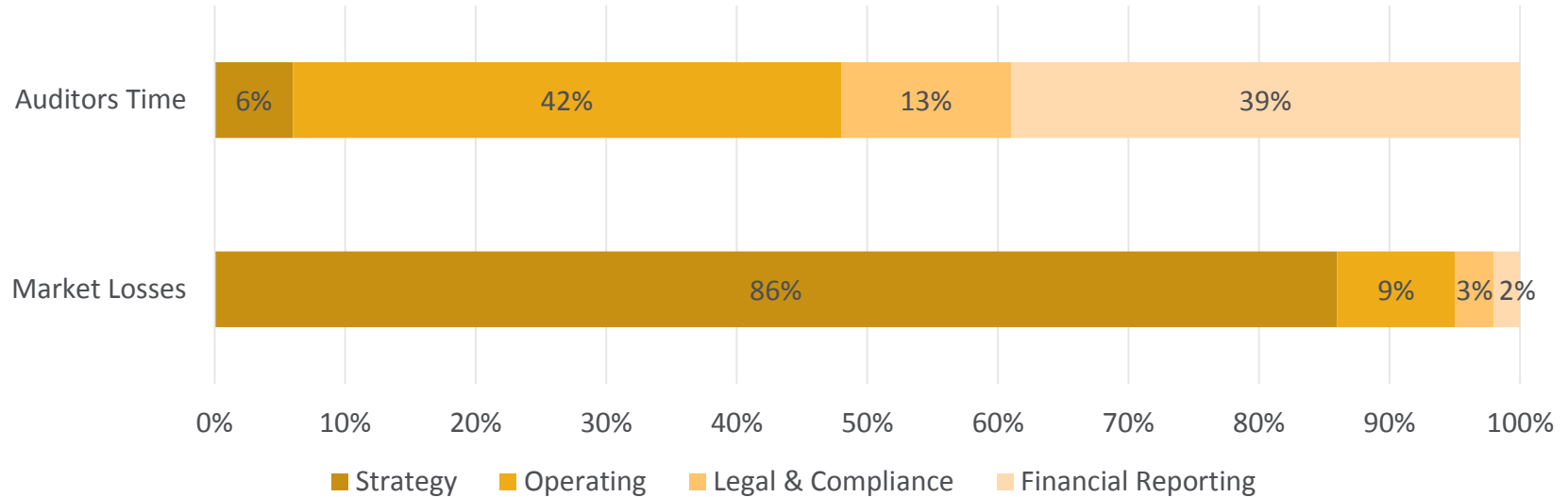
Where are you focusing your time?

Business risks that significantly impact execution of strategy are not Governance and Compliance

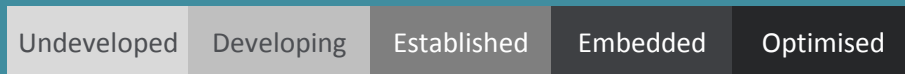
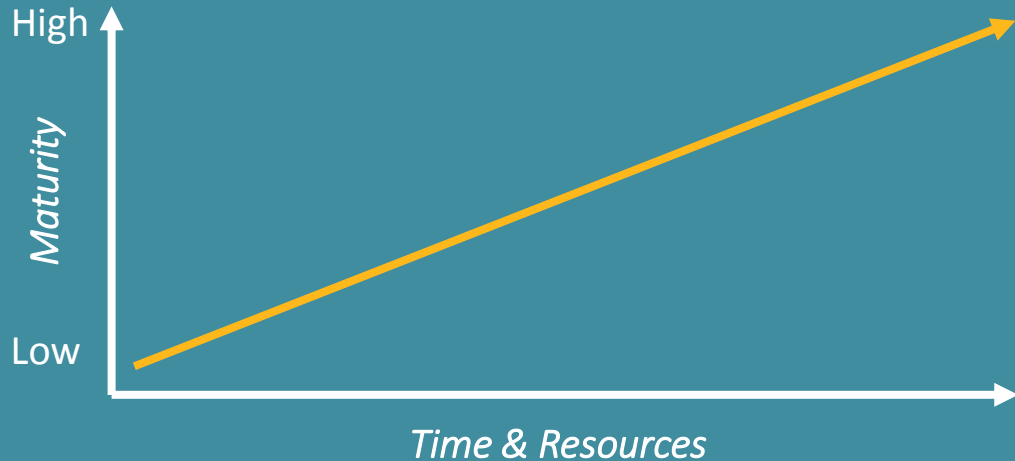
Portion of Significant Losses in Market Value

v

Proportion of Time Spent by Auditors on Each Risk

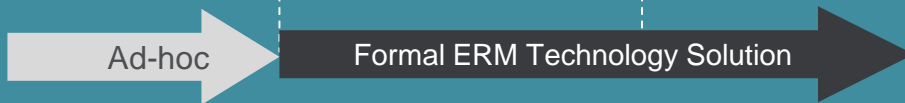


ERM & Technology



Risk
Management
in silos

No silos
One Risk View

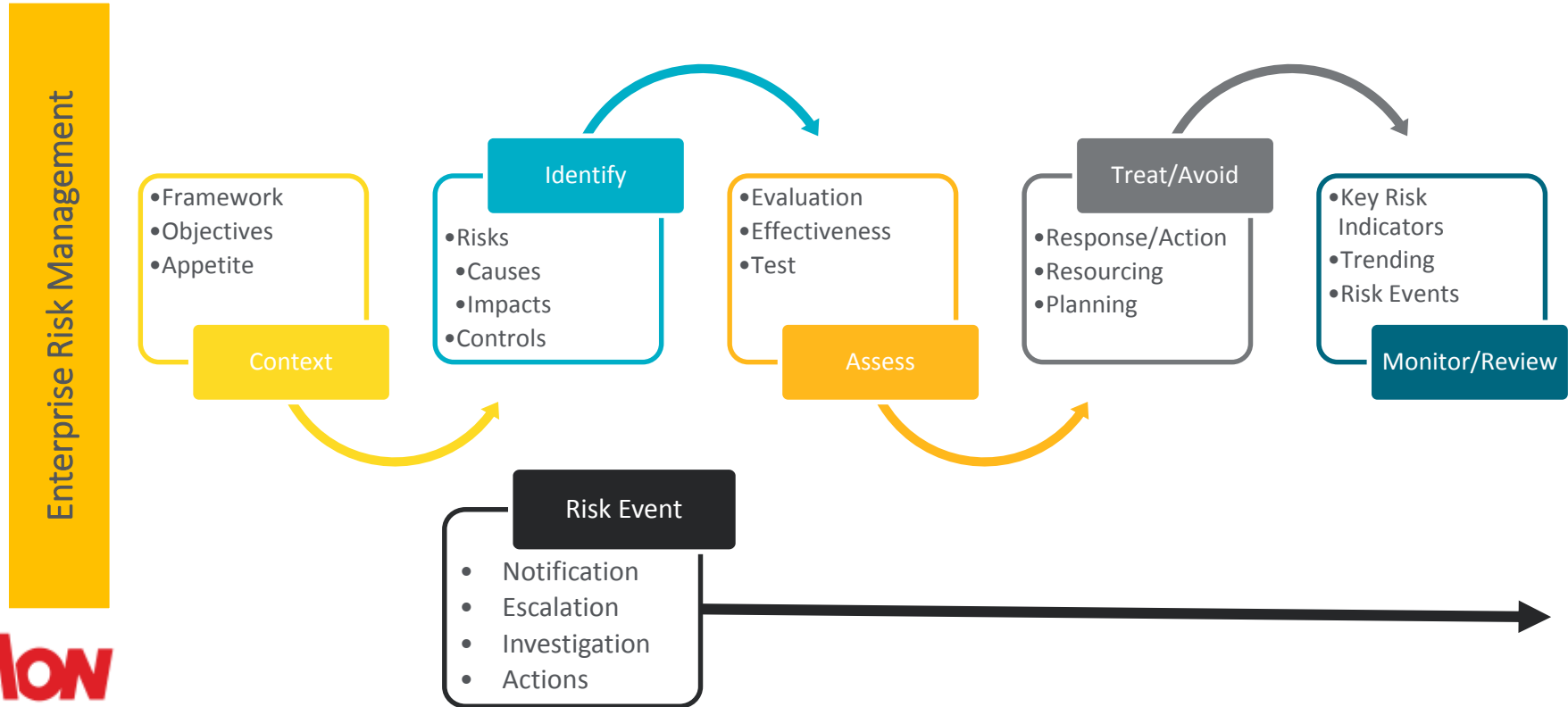


So when should
technology be
considered?



Where can technology apply?

Consider the ISO31000 ERM Process



ERM Capabilities

Going beyond pure compliance/checklist

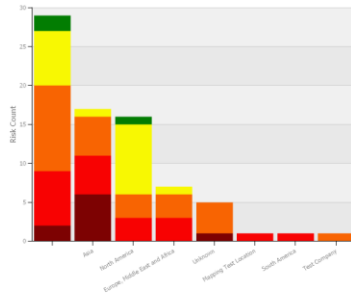


ERM & Technology

Focus Area – Visualise your risk landscape

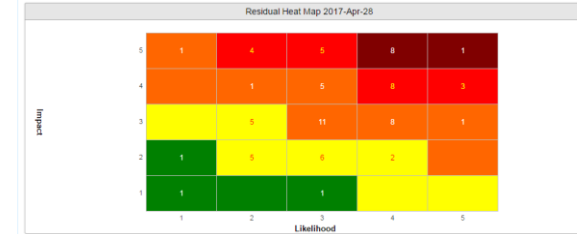
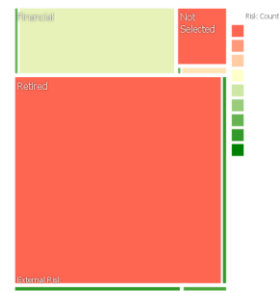


Active Risk Count by Organization and Risk Map Color



Level 2

Risk Count and Financial Impact by Risk Categories

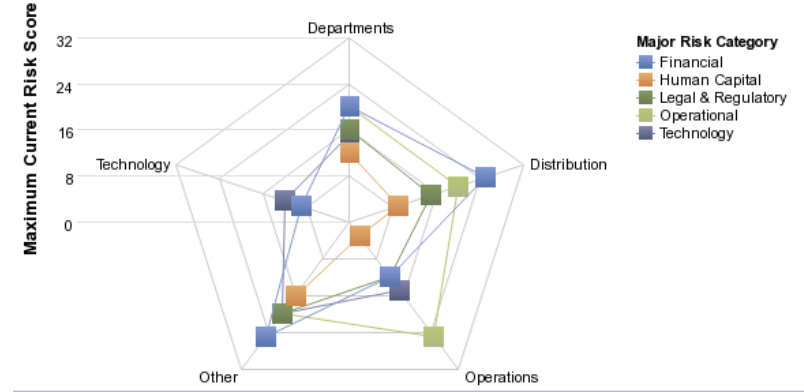
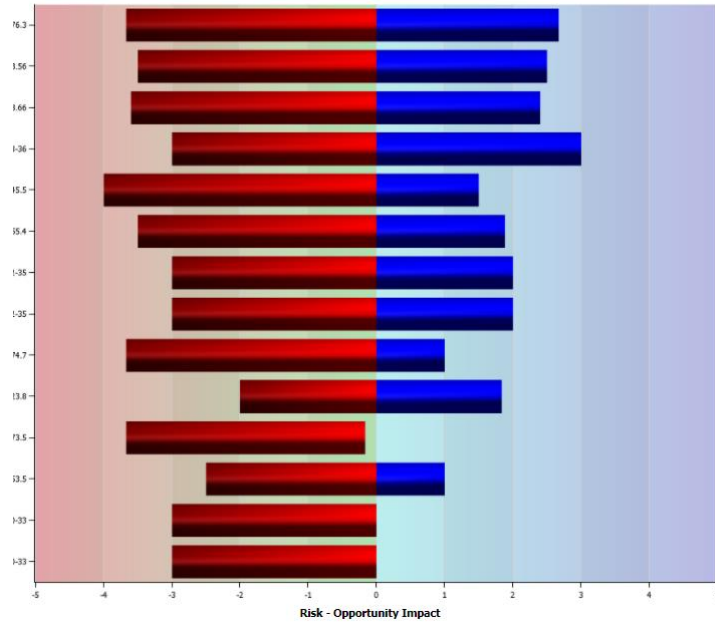


Risk Register

Reference	Organization	Risk Name	Main Risk Category	Risk Owner	Inherent Risk	Residual Risk	Risk Score Progression Chart
RISK-00156	Europe, Middle East and Africa	Lack of capital availability for acquisitions - copy 2 of Risk 6 - now rescoring	Financial	Angus Rhodes	20 ●	16 ●	
RISK-00152	Asia	Lack of capital availability for acquisitions	Financial	Angus Rhodes	20 ●	16 ●	
RISK-00145	Worldwide Corp	Lack of capital availability for acquisitions - copy of risk6	Financial	Angus Rhodes	25 ●	20 ●	
RISK-00139	Worldwide Corp	New Competition Risk	Strategic	Angus Rhodes	20 ●	12 ●	

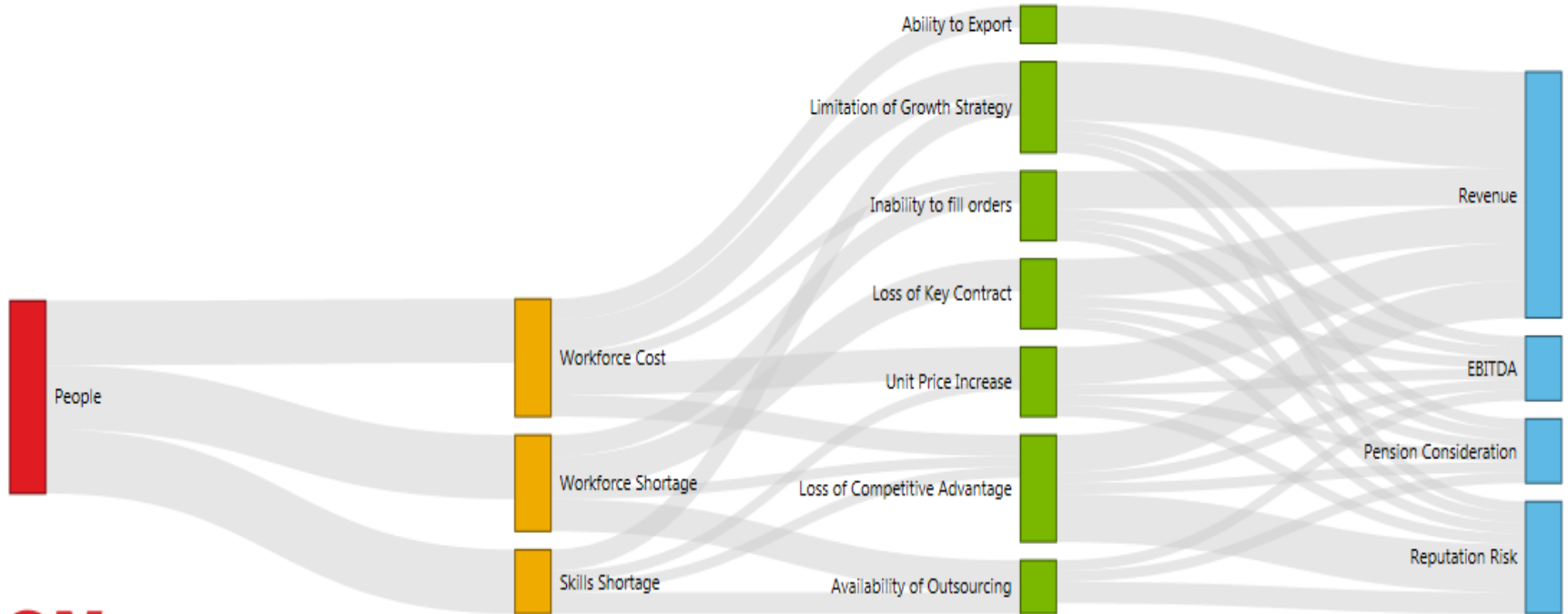
ERM & Technology

Focus Area – Visualise your risk landscape



Board Level – Risk Visualisation

Showing the interconnectedness of risks and their ultimate financial impact on the business provides senior leadership with powerful insights into the impacts of decisions on organisations

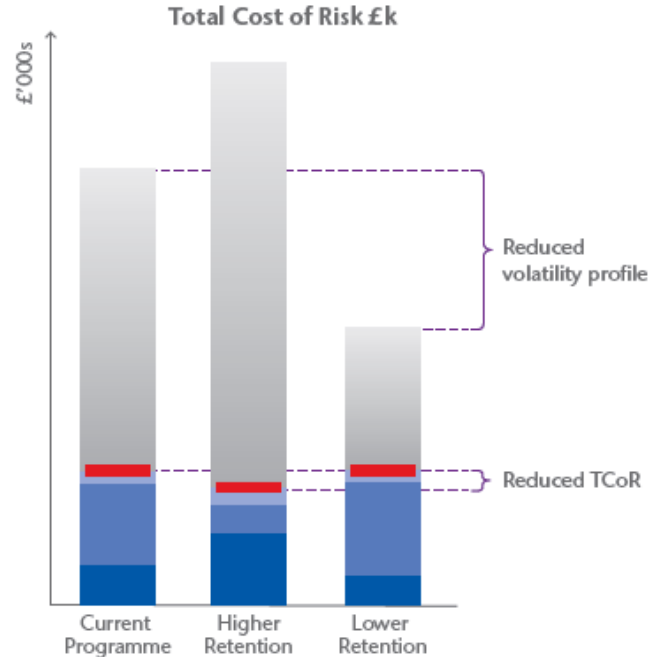


Operational Management – Identification & Modelling

How do we use analytics to help our organisations optimise its insurance programme by measuring the volatility of the risk profile to ensure that the insurance arrangements in place are economically efficient.



Data driven decision making



Enterprise Support

- lower barrier for rolling out in the organization

Rise of visualisations

- enables easier decision making

Analytic advances

- help identify the unknowns

Easier data integration

- provide context and relevance to business decisions

Technology convergence

- Providing integrated risk management offerings from HSE, GRC and Insurance, Risk & Claims.

What are our data challenges?

Despite the excitement surrounding data there are a number of challenges we face implementing a data driven approach to risk management. Asking the wrong questions or using the data in isolation can lead to poor decisions



Harnessing the web



Defining the question



Inappropriate infrastructure



Achieving consistency



Avoiding errors



Maximising the value



Difficulty accessing data



Poor quality data



Insufficient support

What are the next steps?

Mapped against key considerations when using technology?

Tightly define the problem in a Business Context

Determine the Performance Indicators

Identify the Data Sources & Integration Methods

Analyse & Model

Gain Insights & Take Actions

Assess current risk maturity

Engage board in expansion of ERM

Clear objectives & requirements

Evaluate & select appropriate solution

Any Questions?