



# Risk Governance

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## From Vulture Culture to Risk Culture

Razvan Tudor  
risk management expert

“Unfortunately, today’s insurance industry has so many problems that your insurance company may not be able to deliver its part of the bargain: the peace of mind and trust that you are paying dearly for. **The insurance system, as it exists, offers no reliable protection.**”

*VULTURE CULTURE  
Dirty Deals, Unpaid Claims,  
and the Coming Collapse of the Insurance Industry  
ERIC D. GERST*

# 2005 momentum

## Something no one is talking about

- By mid-2005, **fifteen insurance executives had pleaded guilty** to a variety of insurance fraud charges, including scheme to defraud in the first degree (a class E felony carrying a maximum sentence of 1 to 4 years in prison) and scheme to defraud in the second degree (a Class A misdemeanour with a maximum sentence of 1 year in jail)
- Spitzer (AG) bemoaned the fact that although the **insurance industry had thus far paid more than \$1 billion in restitution in settlement of its misdeeds**, “not a word has come out of the White House about maybe there being a structural problem in the insurance industry.

How does this affect  
any of us?



"It covers you for everything except fire, accident, illness, loss, personal injury, or death."  
Cartoon by Neil Bennett. Reprinted with permission of Cartoonstock.com.

# Risk

<b>Risk perspectives</b>	<b>Actuar</b>	<b>Financial economist</b>
<b>Definition</b>	Uncertainty	diversification vs concentration
<b>ROI</b>	a single rate of interest for discounting	volatility (interest & market) + correlations
<b>Profit</b>	premiums + investment income – claim costs – expenses	profit is related to investment required
<b>Asset valuation</b>	book values	market values

# MISCONCEPTIONS OF RISK

- **Risk is the probability of an undesirable event** (see Campbell, 2005).
- **Risk is the probability of an adverse outcome** (Graham and Weiner, 1995).
- **Risk is a measure of the probability and severity of adverse effects** (Lowrance, 1976).
- **Risk is the combination of probability of an event and its consequences** (ISO, 2002).
- Risk is probability and consequence, more specifically risk is equal to the triplet  $(s_i, p_i, c_i)$ , where  $s_i$  is the  $i$ th scenario,  $p_i$  is the probability of that scenario and  $c_i$  is the consequence of the  $i$ th scenario,  $i = 1, 2, \dots, N$  (Kaplan and Garrick, 1981; Kaplan, 1991).

Risk  
=  
exposure to uncertainty

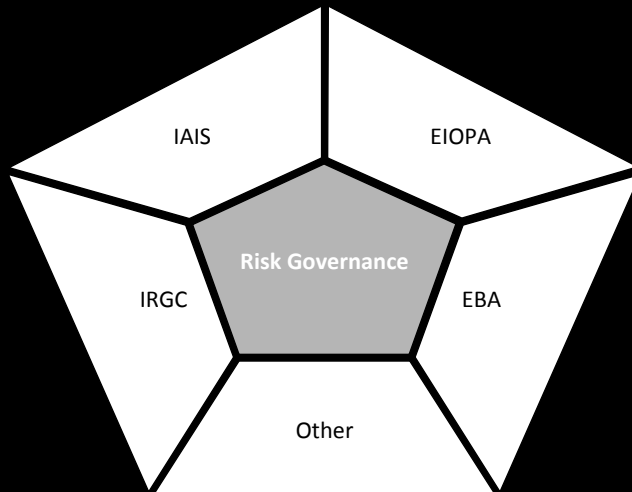
Risk

=

The exposure to changes  
conjugated to changing  
sensitivity to which we are  
exposed.

Risk governance

# Relevant bodies:



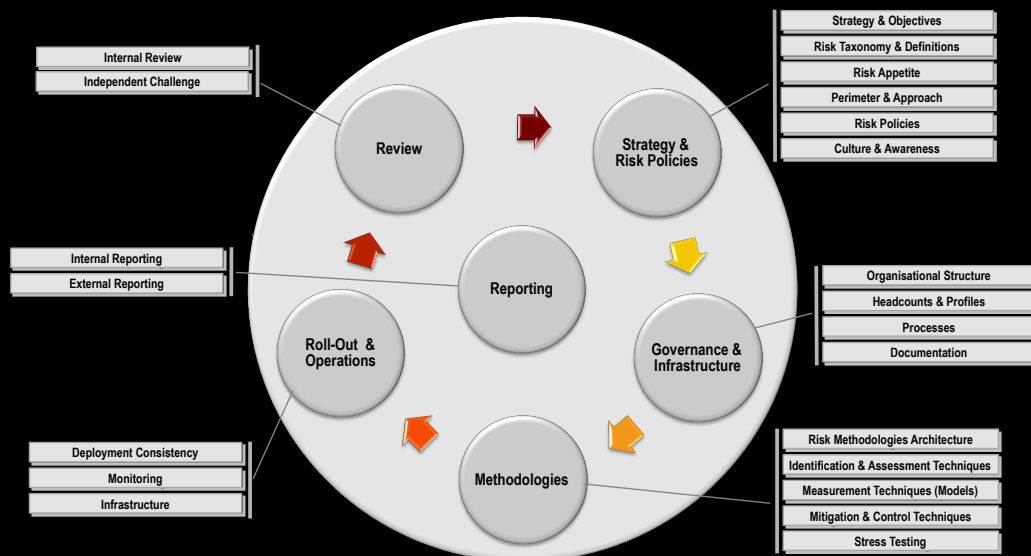
- EIOPA - European Insurance and Occupational Pensions Authority
- IAIS - International Association of Insurance Supervisors
- EBA - European Banking Authority
- IRGC - International Risk governance council
- Other - ISO, etc

## Governance model - Model objectives -

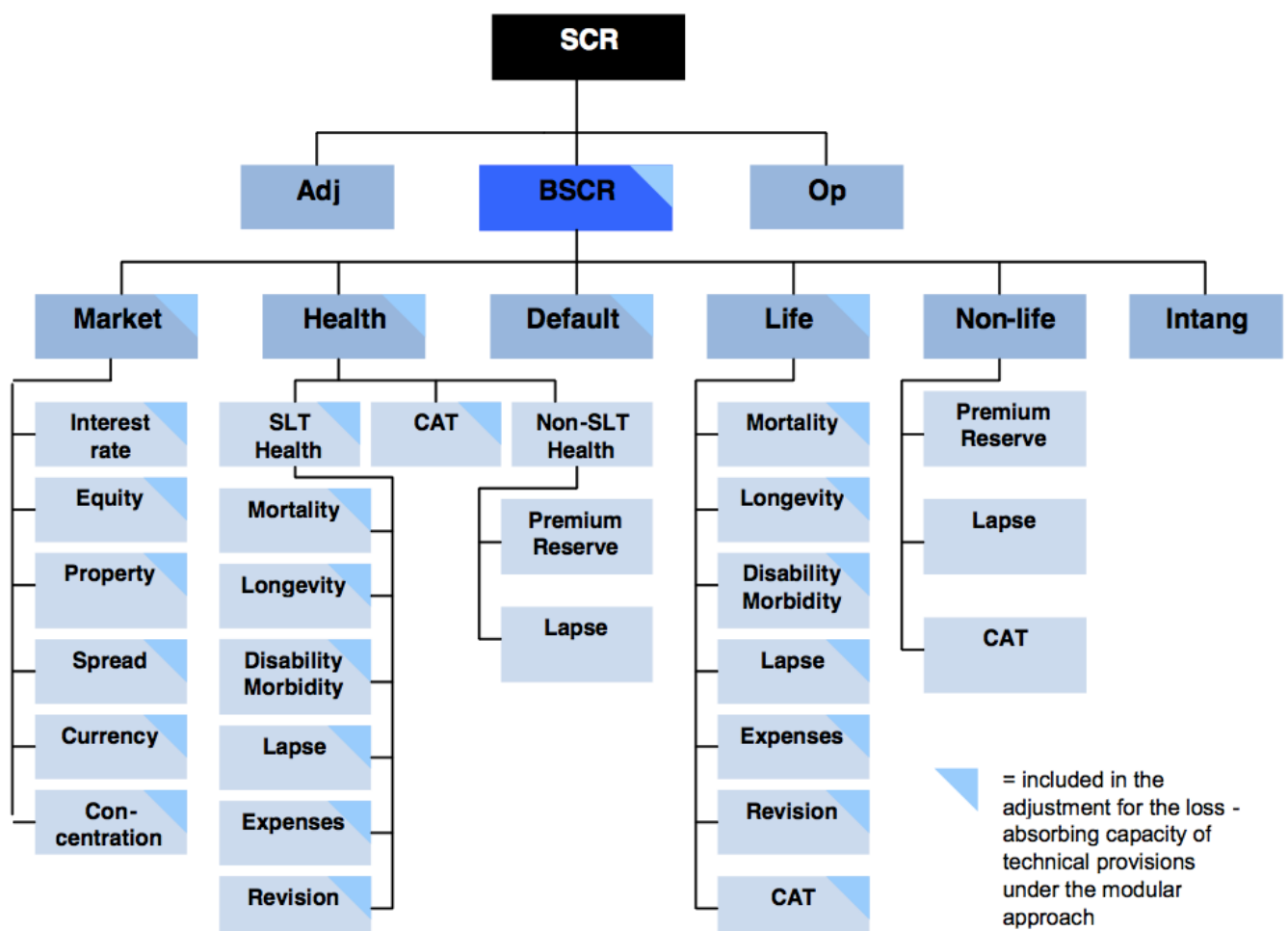
- **Optimize objectivity, consistency, control and transparency in the model management by providing**
  - **End-to-end processes for model development, implementation, review and validation**, including a formal process for originating a new or updated model
  - **An efficient model governance framework stipulating the roles and responsibilities of the various parties along with the whole model lifecycle**, in line with the segregation of functions principles
  - **A set of guidelines** supporting the different stakeholders when originating, developing, implementing, reviewing or validating the models
  - **A sound and reliable validation organisation** and framework
  - **A description of the roles and responsibilities of all parties involved in models management**
- **Answer to the key regulatory requirements** with regards to corporate structure and organisation, management body and internal controls
- **Be used as an umbrella document for the management and governance of all models**

# Model???

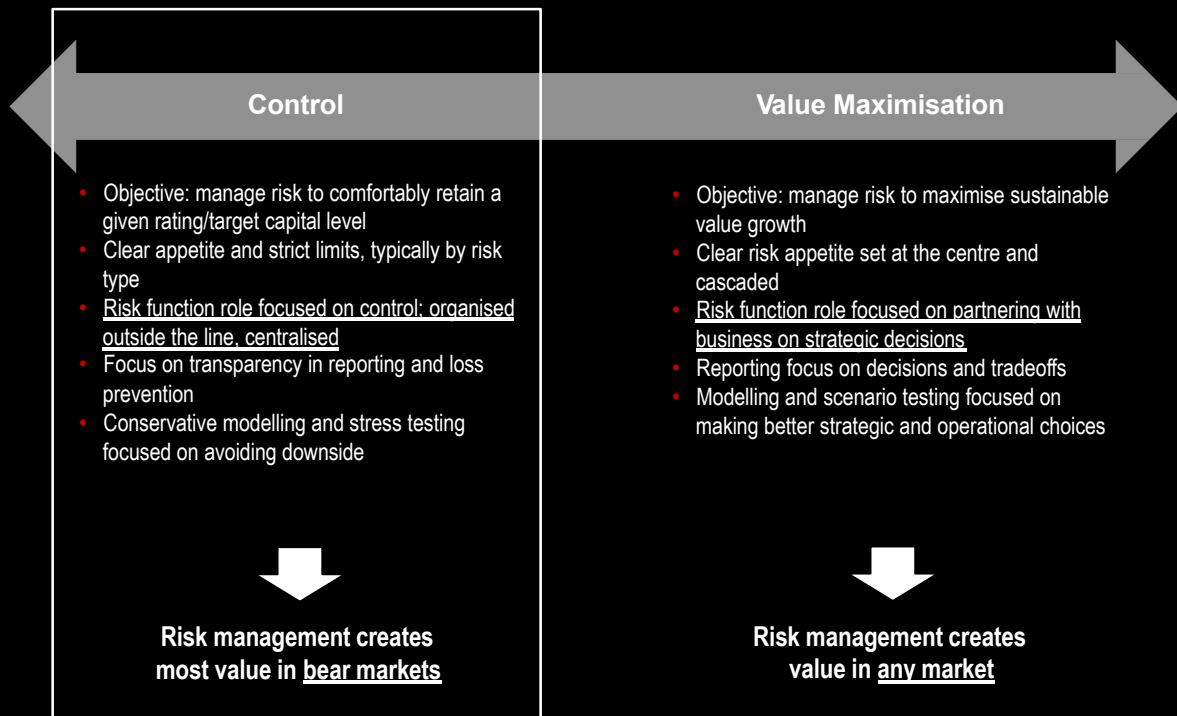
## How to assess the model?



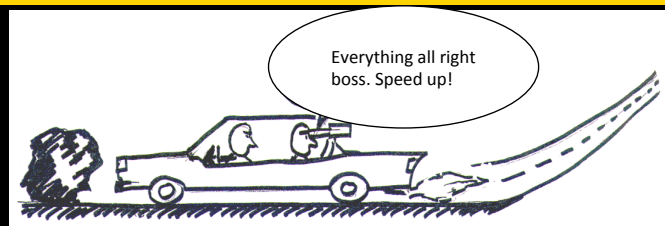
# Strategy & Risk policies



# Risk Appetite



# Risk culture

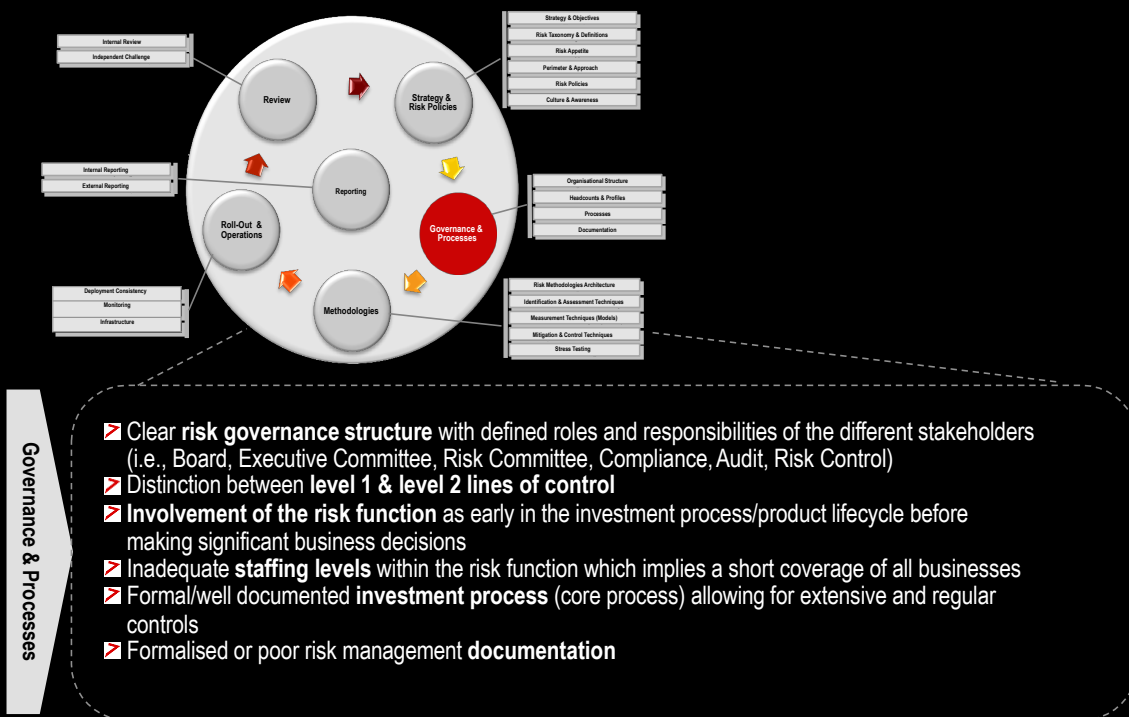


# Governance & Processes

## Key assumptions

- The **existence of separate Risk, Audit and Control Function Committees at board level.**
- A **fully independent internal audit function** including the inspection of local branches;
- A **centralised risk management** function (not excluding a certain level of decentralisation or “antennas” in large groups);
- A **centralised compliance function** (not excluding a certain level of decentralisation or „antennas“ in large groups);
- **Clear divisions** of tasks and responsibility **between the different risk functions;**
- **An internal control framework** supported by designated process and control owners in each business unit. These owners should have a sound understanding of risk and compliance matters;
- **A clearly defined risk taxonomy and a well-defined risk appetite;**
- **The existence of standardised risk control procedures** such as Risk Control Self Assessments, templates and reporting structures;
- **The implementation of proper escalation procedures** with designated owners.

# Typical issues



## Common operational committee

- This governance model should be steered by the ultimate body in charge of risk and control within the institution. **(executive committee)**
- **Members of the committee would be:**
  1. Head of internal audit;
  2. Head of risk management;
  3. Head of compliance;
  4. Head of internal control;
  5. Each business unit/process RCSA owner.
- **This committee should hold monthly meetings with the following objectives:**
  1. Address each major risk occurrence and track its remediation;
  2. Discuss pertinent risks and trends based on a set of agreed common key risk indicators (KRI"s);
  3. Evaluate anticipated or actual changes in the risk profile that have a significant impact and define actions if needed.

# Governance model

## - Model objectives -

- **Optimize objectivity, consistency, control and transparency in the model management by providing**
  - **End-to-end processes for model development, implementation, review and validation**, including a formal process for originating a new or updated model
  - **An efficient model governance framework stipulating the roles and responsibilities of the various parties along with the whole model lifecycle**, in line with the segregation of functions principles
  - **A set of guidelines** supporting the different stakeholders when originating, developing, implementing, reviewing or validating the models
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# Methodologies








# Risk identification

Tools and techniques	Risk Identification
Brainstorming	SA
Structured or semi-structured interviews	SA
Delphi	SA
Check-lists	SA
Primary hazard analysis	SA
Hazard and operability studies (HAZOP)	SA
Hazard Analysis and Critical Control Points	SA
Environmental risk assessment	SA
Structure « What if? » (SWIFT)	SA
Scenario analysis	SA
Failure mode effect analysis	SA
Cause-and-effect analysis	SA
Human reliability analysis	SA
Reliability centred maintenance	SA
Consequence/probability matrix	SA
Business impact analysis	A
Fault tree analysis	A
Event tree analysis	A
Cause and consequence analysis	A
Layer protection analysis (LOPA)	A
Sneak circuit analysis	A
Markov analysis	A
FN curves	A
Risk indices	A
Cost/benefit analysis	A
Multi-criteria decision analysis (MCDA)	A

Root cause analysis	NA
Decision tree	NA
Bow tie analysis	NA
Monte Carlo simulation	NA
Bayesian statistics and Bayes Nets	NA

# Risk measurement

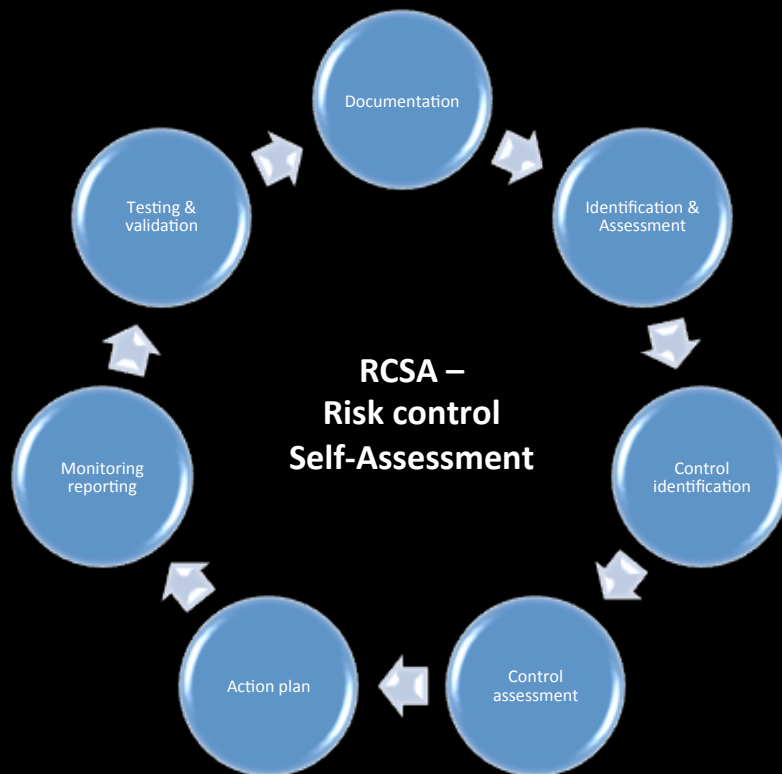
Tools and techniques	Risk evaluation
Hazard Analysis and Critical Control Points (HACCP)	SA
Environmental risk assessment	SA
Structure « What if? » (SWIFT)	SA
Failure mode effect analysis	SA
Reliability centred maintenance	SA
Root cause analysis	SA
Monte Carlo simulation	SA
Bayesian statistics and Bayes Nets	SA
FN curves	SA
Risk indices	SA
Hazard and operability studies (HAZOP)	A
Scenario analysis	A
Human reliability analysis	A
Consequence/probability matrix	A
Decision tree	A
Bow tie analysis	A
Business impact analysis	A
Fault tree analysis	A
Cause and consequence analysis	A
Cost/benefit analysis	A
Multi-criteria decision analysis (MCDA)	A

Risk	Level & Trend	Impact	Risks Description
Market Risk		High	<ul style="list-style-type: none"> <li>Low interest rate environment continues in the short and long term</li> <li>Equity exposure in some countries increased</li> </ul>
Macro		High	<ul style="list-style-type: none"> <li>Despite some improvement, economic recovery is still fragile</li> <li>High government debt poses the potential risk of further sovereign and financial institution downgrades</li> <li>EU market still negatively affected by high level of unemployment (affects especially life insurers)</li> </ul>
Liquidity & Funding		High	<ul style="list-style-type: none"> <li>Lapse rates in some countries are increasing</li> <li>Less liquid investments on the rise – potentially to offset low interest rates</li> </ul>
Credit Risk		Medium	<ul style="list-style-type: none"> <li>High sovereign exposure and increasing political tensions</li> <li>Riskiness of sovereigns and corporates may not be reflected in the credit spreads</li> </ul>
Profitability & Solvency		Medium	<ul style="list-style-type: none"> <li>Sound Solvency I levels, well above the regulatory minimum requirement, both for life and non-life companies</li> <li>Some reduction in reserves but also additional reserving requirements in other countries currently monitored</li> <li>Potentially less liquid investments keep up the investment return despite the low interest rate environment ; ROE and ROA also still relatively robust</li> </ul>
Interlinkages/ Imbalances		High	<ul style="list-style-type: none"> <li>Contagion risks from banks and sovereigns remain. Uncertainty in bank balance sheets and sovereign downgrades cannot be ruled out. This would have a negative impact on access to capital markets and might materialise also via contagion effects within the financial sector</li> </ul>
Insurance		Medium	<ul style="list-style-type: none"> <li>Premium growth remains moderate in non life but erosion of tax advantages also heralds harder times ahead for life insurers</li> <li>Effect from natural catastrophe events in 2013 not fully known yet but will have no major impact on the score as 2013 gave the reinsurance industry a respite</li> </ul>

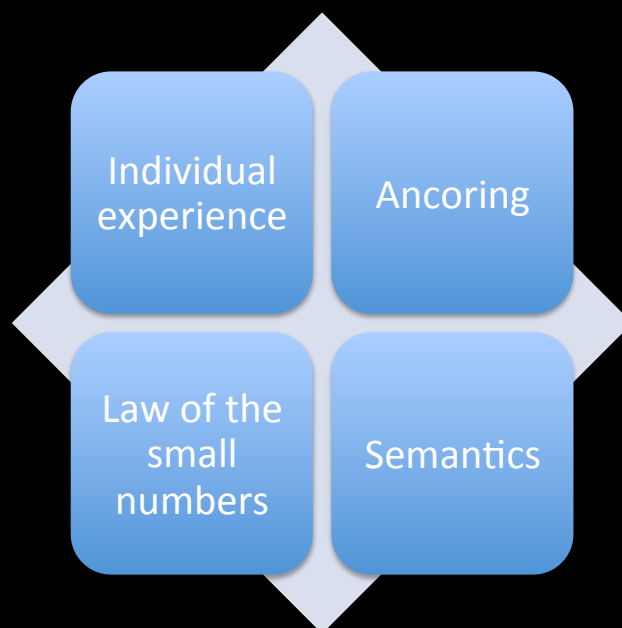
# **Roll out & operations**

## **Review**

# Self assessment



But,



# Why independent review?

Let's see:

- Confidence horizon: 90%

smallest value

biggest value

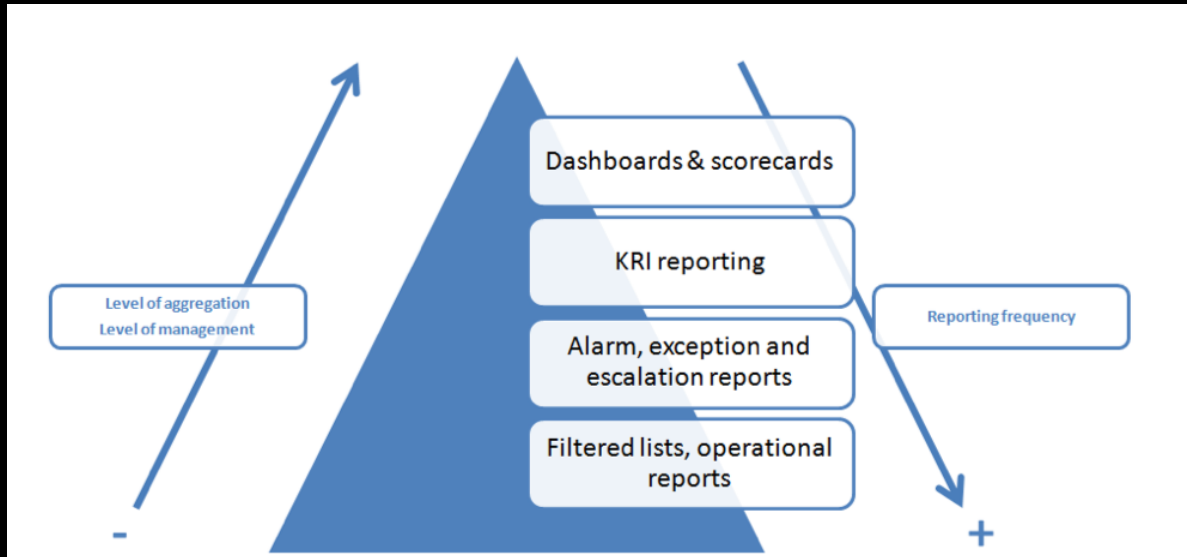
- Age of Martin Luther King when he died
- Length of Nile river (miles)
- Number of OPEC countries members
- What year was born Wolfgang Amadeus Mozart
- Gestation period in days for Asian elephant
- Flight distance from London to Tokyo in mil
- Deepest ocean point known in fouts

# Well?

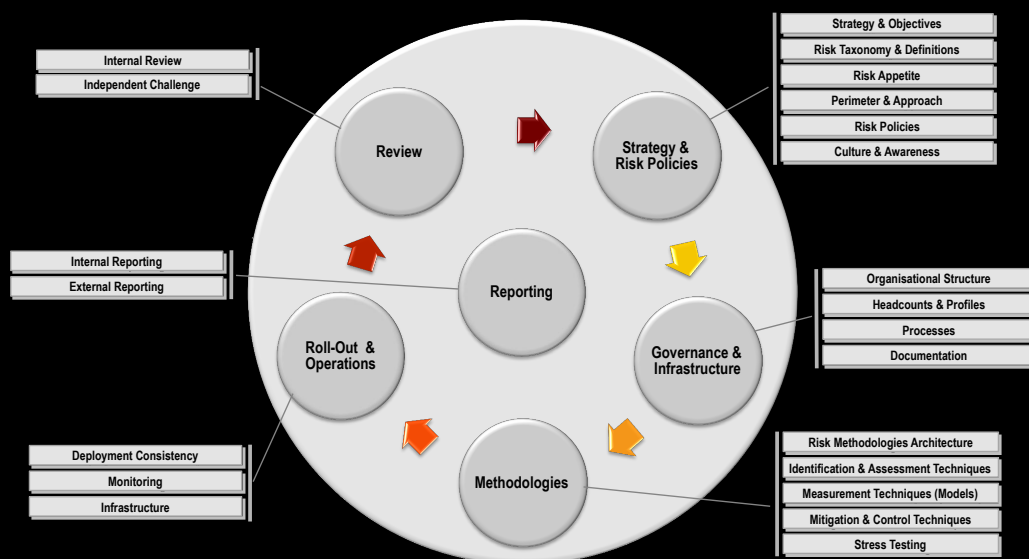
- |   |            |
|---|------------|
| • Age of Martin Luther King when he died      | 39         |
| • Length of Nile river (miles)                | 4187 miles |
| • Number of OPEC countries members            | 13         |
| • What year was born Wolfgang Amadeus Mozart  | 1756       |
| • Gestation period in days for Asian elephant | 645        |
| • Flight distance from London to Tokyo in mil | 5959 miles |
| • Deepest ocean point known in fots           | 36198 fots |

# Reporting

# The higher in the hierarchy the more synthetic info you get!



## Just to remeber:



# Key governance principle to remember:

- **Corporate structure and organisation**
- **Management body**
- **Risk Management and Compliance**
- **Alignment and convergence of practices for all risk and control functions**
- **Internal control**
- **Systems and continuity**
- **Transparency**

**“If everything is a matter of luck,  
risk management is a meaningless  
exercise.”**

*Peter Bernstein*

Thank you!  
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