

### Game

• Which aspects or characteristics of risk management instil a judgement in you?



#### OperationI Risk Components

#### Areas of Implementation

Risk Governance Assessment

Review Risk Mgmt Structure Review Risk Mgmt Related Policies Review Risk Infrastructure

Policy & Procedure Framework

Design Operational Risk Mgmt Policy Design BCP Framewotk Design Insurance Framework

Risk Identification

Define Process Risk Library

Define Loss Capture Template

Risk Assessment & Measurement

Conduct Risk Profile Assessment Conduct Loss Data Analysis Design Risk Measurement Models

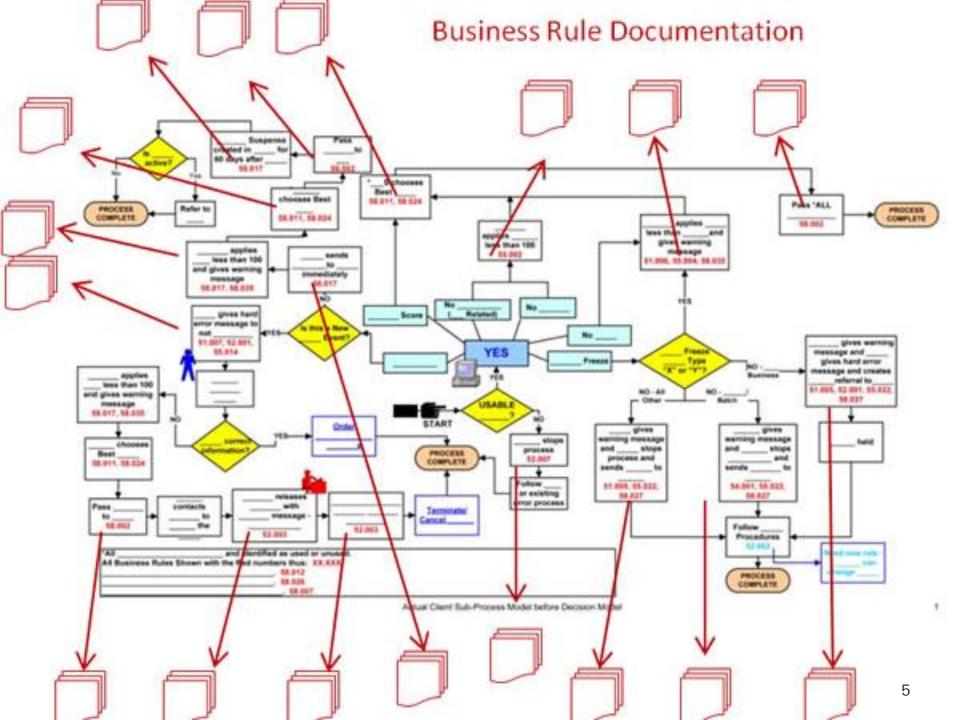
Risk Control & Mitigation

Conduct Control Assessment Define Corrective Action Plan

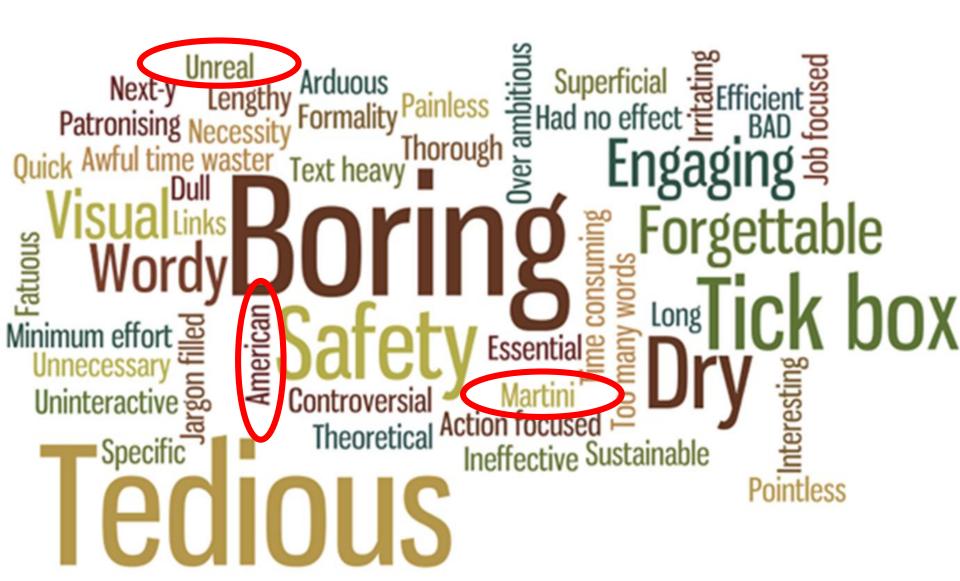
Risk Monitoring & Reporting

Design Reporting Templates Design Reporting Workflow









# But risk management is so much more...















### A bit about me...



### History of Risk Management as a professional discipline Developed as a response to new risk classes and instruments

1960s 1990s **1970**s 1980s **Today** Creation of the New elements **Expansion to** New risk elements: **Enterprise Risk** of risk: also cover **Operational and** Management Focus on **Financial** financial risk model risk (ERM) insurable risks market risks management ■ Mitigation of ■ Failure to ■ End of ■ Use of the severity of Bretton manage derivatives losses from Woods ('72) derivatives (eg forwards, hazards -> Forex risk appropriately futures, options, swaps) to hedge (eg Orange Oil price County, Barings) financial risks: fluctuations - FX risk in "oil crisis" ■ Model failures - Equity risk -> Commodity (eg LTCM, - Interest rate recent fin. crisis) price risk risk ■ Policy shift of - Commodity ■ Improper US Fed ('79) accounting for price risk -> Interest derivatives rate risk (eg Enron)



### Three pillars of Risk Management Strong framework for disciplined risk taking

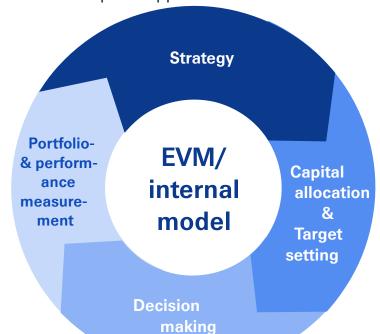
#### Quantitative Risk Risk risk management transparency governance Sound valuation and risk Clearly defined Company risk culture responsibilities for risk measurement Financial and risk taking and risk mgmt disclosure, incl. risk Quantitative risk limit information monitoring system Sound, documented: risk mgmt policies Reliable capital adequacy framework operating, reporting, limit monitoring, and control procedures Regulatory compliance Independent internal and external audits of processes and figures



### Steering cycle and involvement of Risk Management Risk Management is embedded across the cycle

Group risk policy and tolerance





- Risk model outputs used as input in optimisation of planning
- Testing of risk tolerance and appetite
- Derivation of risk limit framework

- Risk Management Standards
- Part of all decision taking bodies concerned with risk taking
- Large transaction approval



Limit monitoring

Accumulation control

in risk landscape and impact

Reporting on changes

on capital adequacy

Capital cost allocation

## NO, just NO





#### Scenarios that make risk management a foe

- Excessive
- Ivory tower
- Skillsets of risk management professionals
- Tone from the top
- "No" / Smarty pants
- Regulator?
- Objects in the rear view mirror are behind you

### Looking forwards



### Looking back is not sufficient to prepare for tomorrow's risks.





Historical data

Foresight information

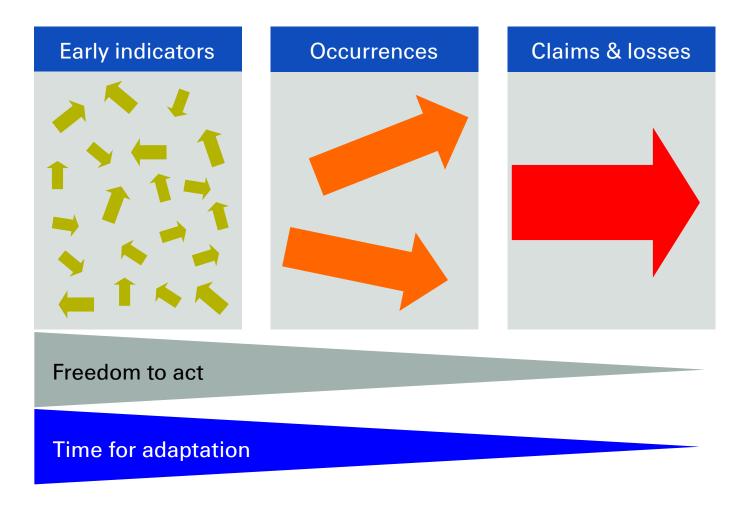
Yesterday's experience

Today

Tomorrow's exposure



### Picking up early indicators ensures freedom to act and time for adaptation





#### Goals of Swiss Re's emerging risk management process

Risk dialogue

Balance sheet protection

Product & services development

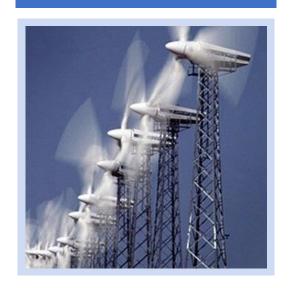
Raising awareness



Limiting downside risk



Enabling new business



### Examples of emerging risk topics featured in the latest SONAR publications



The great monetary experiment



Super nat cats



Genetic engineering



Traffic jams in the skies



Dangers of LED light



Challenges of the Internet of Things



The antibiotic boomerang



Rising pandemic risk

#### The great monetary experiment



- Many structural deficiencies of the global economy remain unaddressed.
- Traditional policy measures are no longer feasible or have reached their limits leading to competitive currency devaluation.
- Unconventional strategies, such as "helicopter money" are entering the policy debate.

#### Traffic jam in the skies



- Appropriate regulations for safe air traffic is lagging behind technological developments.
- Increasing use of drones may add an aircraft fleet exposure to companies that had no airborne operations before.
- An increasing number of microsatellites may increase collision risk.

#### The dangers of LED light



- LEDs emit blue wavelengths, which seem to be most disruptive at night and make sleep more difficult.
- Recent studies indicated that the emitted blue wavelengths may also injure the retina.
- There is a potential for large serial losses since LEDs are likely to become the major domestic light source.



### Legal notice

©2015 Swiss Re. All rights reserved. You are not permitted to create any modifications or derivative works of this presentation or to use it for commercial or other public purposes without the prior written permission of Swiss Re.

The information and opinions contained in the presentation are provided as at the date of the presentation and are subject to change without notice. Although the information used was taken from reliable sources, Swiss Re does not accept any responsibility for the accuracy or comprehensiveness of the details given. All liability for the accuracy and completeness thereof or for any damage or loss resulting from the use of the information contained in this presentation is expressly excluded. Under no circumstances shall Swiss Re or its Group companies be liable for any financial or consequential loss relating to this presentation.