

# Corporate Resilience

## The Eightfold Way

# The Eightfold Way

Right Concentration

Right View

Right Mindfulness

Right Intention



Right Effort

Right Speech

Right Livelihood

Right Action

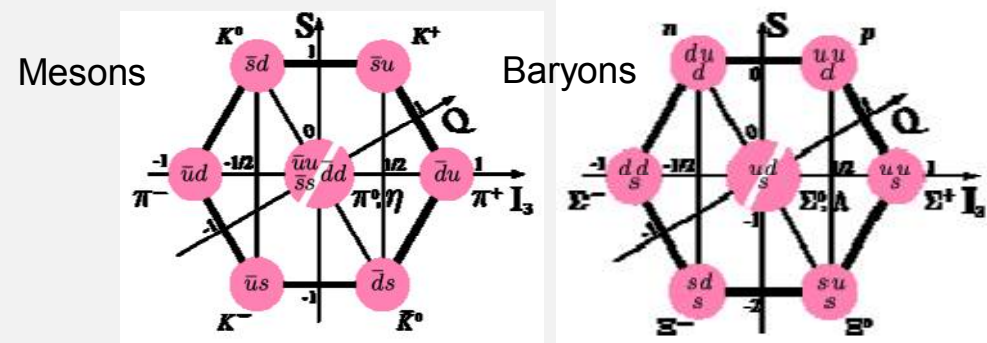
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# The Eightfold Way



- Noble Eightfold Path of the Buddha
  - All eight elements of the path begin with the word 'right'
  - Which means: overcome any temptation
- Quark model of elementary particle physics
  - theory organizing subatomic mesons and baryons into **octets** (symmetry group)
  - fundamental theory of nature describing all states (flavors) of elementary particles
  - states are 'resistant' (symmetrical) against flavor rotations in 8-fold vector space
  - Rotations end up in new particles with equal mass



# Resilience

- Hooke's law

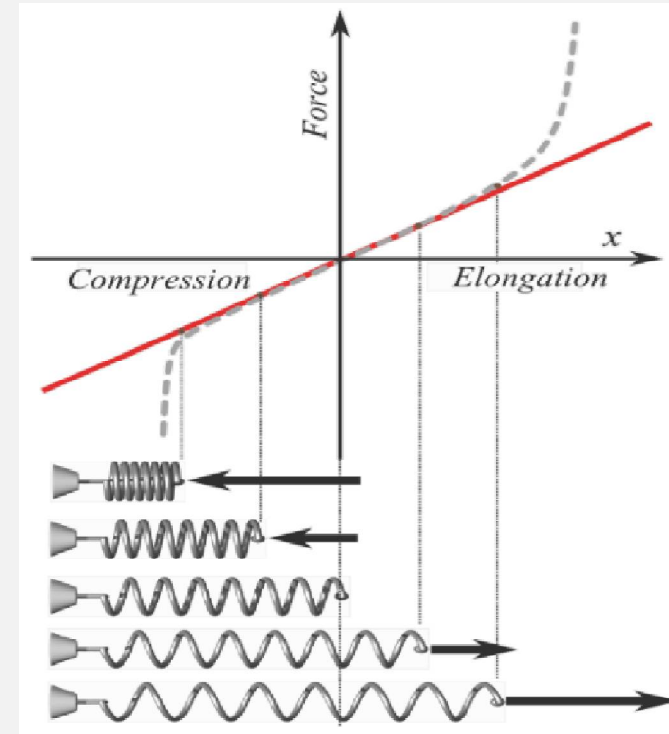
$$F = -kX$$

where

F: reaction force

X: displacement of the spring

k: spring characteristics



Source: Wikipedia

Resilience: F is **negative** (reaction force)  
k is the **immanent strength** to **resist** against  
the **displacement** force

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# Resilience

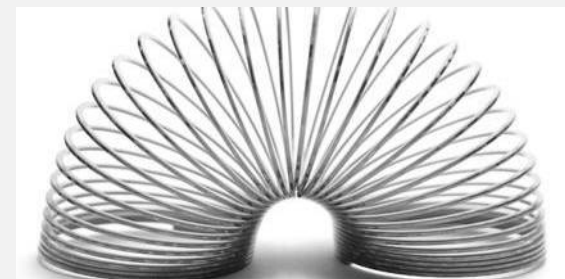
- Buddha

- whatever challenge, temptation, risk...  
don't leave the Noble Eightfold Path
- keep doing 'right'



- Nature

- any rotation, deformation, change, perturbation ...  
tries to keep / restore itself into previous state
- keep 'resistant'



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# Resilience is ...

... the ability ...



... to **bounce** back

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# Resilience

- **Engineering**

property of a material to absorb energy when it is deformed elastically and then, upon unloading, to have this energy recovered

- **Psychology**

positive capacity of people to cope with stress and adversity

- **Ecology**

capacity of an ecosystem to respond to a perturbation or disturbance by resisting damage and recovering quickly

- **Networking**

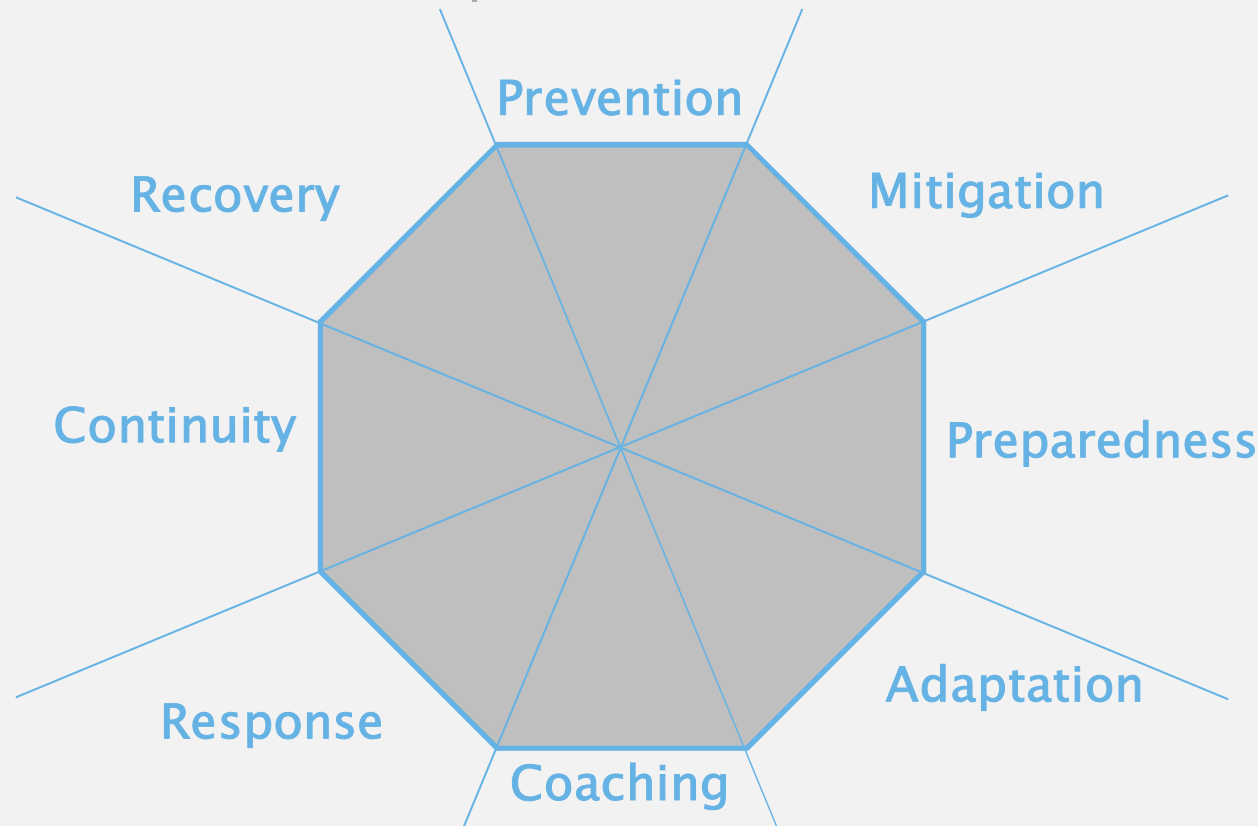
ability to provide and maintain an acceptable level of service in the face of faults and challenges to normal operation

- **Organizations**

the positive ability of a system or company to adapt itself to the consequences of a catastrophic failure caused by power outage, a fire, a bomb or similar event

# Business | Corporate Resilience

- The ability of an organization's business operations to rapidly adapt and respond to internal or external dynamic changes – opportunities, demands, disruptions or threats – and continue operations with limited impact to the business.



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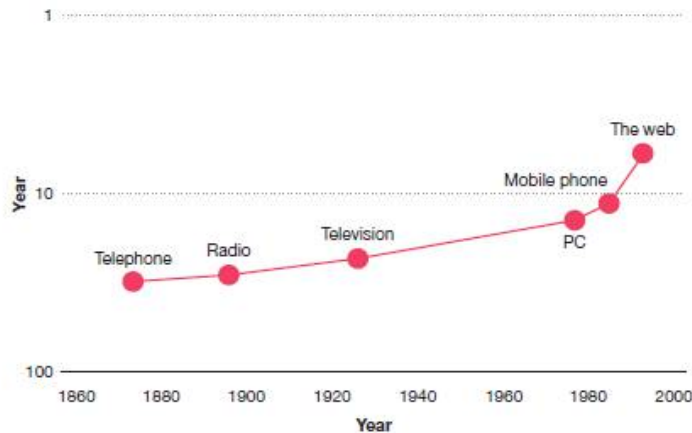


# Dynamic Changes | Disruption

- **Global / Local Society & Market** (unexpected changes: politics, economics, financial market, ...)
- **Competition** (new invention, dumping prices, ...)
- **Cost of raw material , labor, outage** (speculation, unions, strike, ...)
- **Business Interruption** (data center outage, power outage, fire, ...)
- **Corruption** (sales, purchase, ...)
- **Information Leakage** (IT, whistle-blowing, ...)
- **Cyber Attack** (IT manipulation, IT-outage, ...)
- **Fraud** (customer, suppliers, management, employees, ...)
- **Financials** (manipulation, tax evasion, ...)
- **Capital** (frozen credit, open receivables, ...)
- **Investors** (unfriendly takeovers, disruption, ...)
- **Operations** (sabotage, mobbing, ...)
- **Human Behavior** (personal benefit, decisions influenced by internal / external pressure, lack of reality, Ego, misuse of power, ...)
- ...

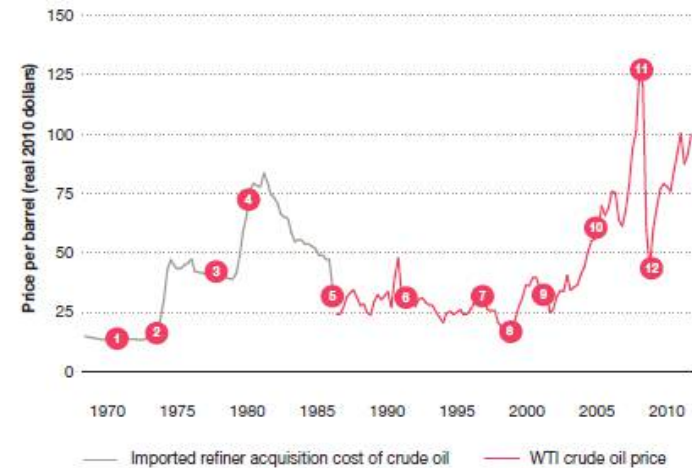
# Rate of Change <> Rate of Response

**Figure 1 Mass use of inventions**  
Years until use by 25% U.S. population



Source: Mass Use of Inventions, *The Singularity is Near: When Humans Transcend Biology*, Raymond Kurzweil (Penguin Group, 2009) (<http://www.singularity.com/charts/page60.html>)

**Figure 2 Crude oil prices and key geopolitical and economic events**



- |                                       |  |
|---------------------------------------|--|
| 1: U.S. spare capacity exhausted      | 7: Asian financial crisis                  |
| 2: Arab oil embargo                   | 8: OPEC cuts production targets 1.7 mmbdp  |
| 3: Iranian revolution                 | 9: 9-11 attacks                            |
| 4: Iran-Iraq war                      | 10: Low spare capacity                     |
| 5: Saudis abandon swing producer role | 11: Global financial collapse              |
| 6: Iraq invades Kuwait                | 12: OPEC cuts production targets 4.2 mmbdp |

Oil prices have responded to geopolitical and other events over the past 40 years. Events that disrupt supply or increase uncertainty about future oil supplies tend to drive up prices.

Source: U.S. Energy Information Administration, Thomson Reuters.  
Updated: quarterly | Last updated: 3/31/2012

Source: Resilience | Winning with risk  
(PWC report, July 2012)

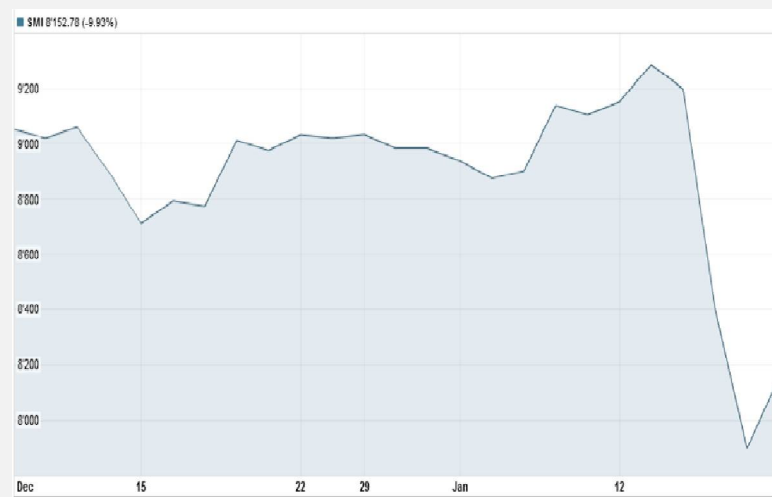
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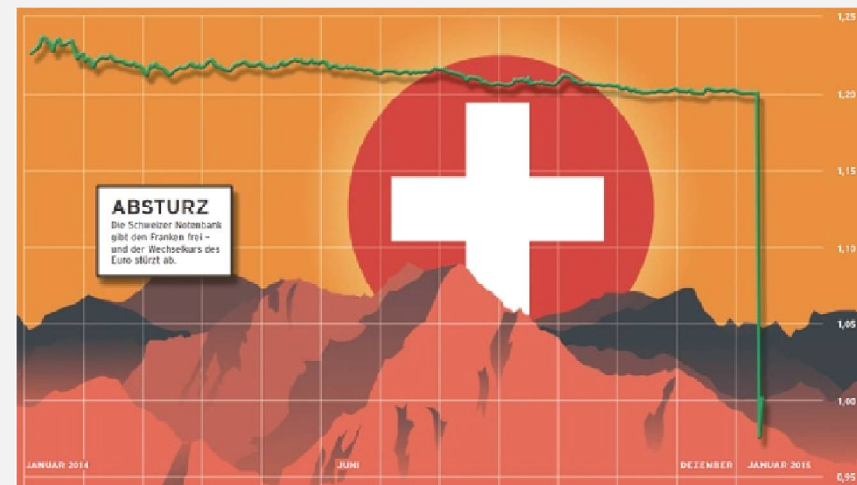
# Swiss Franc Shocker

- SNB President Thomas Jordan said the policy was no longer ‘**sustainable**’, as it required constant intervention, buying EUROS by the billions to maintain the exchange rate with freshly printed Swiss francs (Jan 15, 2015)

Swiss Market Index:  
Jan 15, 2015



EUR / CHF Exchange rate  
Jan 15, 2015



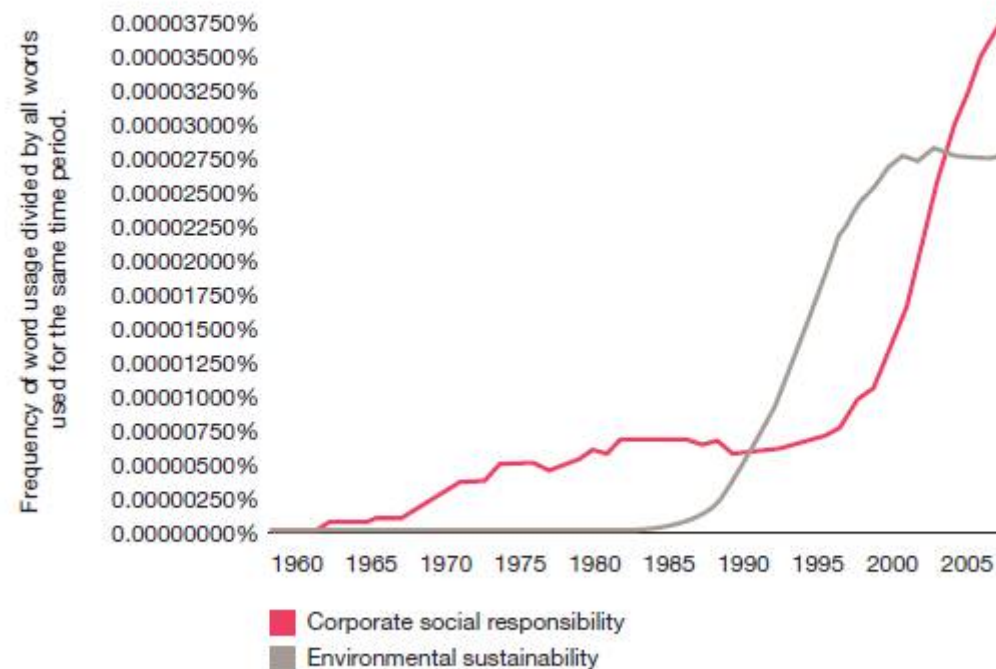
Source: FAZ.NET, 18.01.2015)

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# Corporate Social Responsibility (CSR) & Sustainability

**Figure 6 Increasing interest in CSR and sustainability**



Source: Innovating for Sustainability presentation, Bob Eccles and George Serafeim, May 2012

Source: Resilience | Winning with risk  
(PWC report, July 2012)

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# Outage by Strike

Lufthansa cancels 1,350 flights as pilots strike again ...  
The strikes this year have knocked \$160m off the  
airline's operating profits. (BBC News, 1.12.2014)



Source: AFP

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# Criminal Activity

- ABB has uncovered a sophisticated criminal scheme related to a significant embezzlement and misappropriation of funds in its South Korean subsidiary.
- This embezzlement and misappropriation of funds will have an impact on the previously reported unaudited 2016 results. Current estimate is a pre-tax charge of approx. \$100 million.

(Source: ABB Press Release, 22.02.2017)



Source: Photo ABB

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# Cyber Attacks

## Massive ransomware cyber-attack hits nearly 100 countries around the world

More than 45,000 attacks recorded in countries including the UK, Russia, India and China may have originated with theft of 'cyber weapons' from the NSA

- Global cyber-attack - live updates
- 'Accidental hero' finds kill switch to stop spread



Source: The Guardian, 12.5.2017

## Cyberattack Hits Ukraine Then Spreads Internationally

By NICOLE PERLROTH, MARK SCOTT and SHEERA FRENKEL JUNE 27, 2017



Several companies have been affected by the Petya cyberattack, including, from left, Rosneft, the Russian energy giant; Merck, a pharmaceutical company; and Maersk, a shipping company.

Left, Sergei Karpukhin/Reuters; center, Matt Rourke/Associated Press; right, Enrique Castro Sanchez/Agence France-Presse — Getty Images

Computer systems from Ukraine to the United States were struck on Tuesday in an international cyberattack that was similar to a recent assault that crippled tens of thousands of machines worldwide.

Source: New York Times, June 27, 2017

# Energy Transition

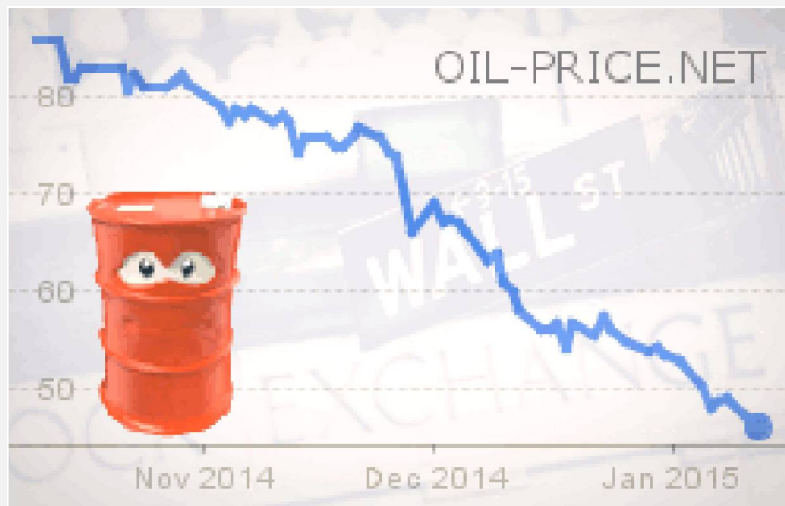


- Fukushima nuclear accident on March 11<sup>th</sup> 2011 led to political decision of **energy transition**
- Energy provider based on nuclear power were faced with **dramatic changes** of their business, assets and market requirements



# Risk by Raw Material Costs

- **Rapid** changes, **fast** reaction ???
- Will Collapse in Oil Price Cause a Stock Market Crash?  
(Tom Therramus, Steve Austin for OIL-PRICE.NET,  
2015/01/14)



Source: OIL-PRICE.NET, 2015/01/14,  
NASDAQ.COM, 2015/01/20

# Corporate Resilience

- **Rethinking underlying Management Principles**

- cross-functional decision making to get better results based on different perspectives
- willingness to access information from multiple sources for richer content
- avoid guidance by those with a vested interest in the status quo

- **Generating a portfolio of strategic options**

- portfolio of experimental strategies (design thinking) from all parts of the company rather than just product portfolio
- portion of its capital expenditures to test new strategies

- **Careful resource allocation**

- market based mechanisms to manage resources so that funding of known opportunities is balanced by an appetite for new ventures

- **Effective corporate governance**

- improve leadership with supervision of board of directors that make sure the management has a plan for the future and promote resilience rather than just safeguards against wrongdoing

# First Dimension

## Areas of Corporate Resilience



# Second Dimension

## Methods of Corporate Resilience



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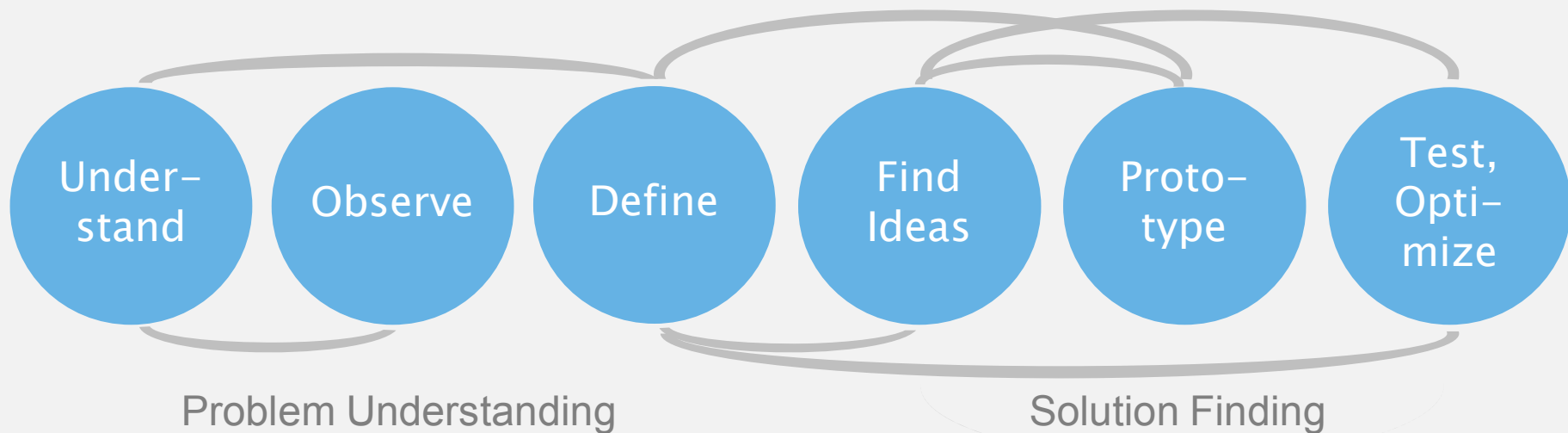
# Third Dimension

## Measures of Corporate Resilience



# Design Thinking

- ‘**matching** people’s **needs** with what is technologically **feasible** and **viable** as a business strategy’ (Tim Brown, CEO and president of IDEO)
- a formal method for practical, **creative resolution of problems** and **creation of solutions**, with the intent of an **improved future result**
- by considering both present (**known**) and future (**unknown**) conditions and parameters of the problem, **alternative solutions** may be explored simultaneously
- discovers **hidden** parameters and open **alternative** paths which may lead to the goal
- is **iterative**, thus intermediate ‘solutions’ are also **potential starting points** of alternative paths, including **redefining** of the initial problem



# Where Design Thinking Helps

- to evaluate various **customer expectations**
- to evaluate **market-driven options** of product portfolio
- to model **pro-active sales strategy** (customer experience)
- to evaluate **risks and immanent chances**
- to model **flexible and efficient organizations**
- instead of comprehensive market analysis
- instead of classical product management based on analytical approach
- instead of incentive driven reactive sales models
- instead of assurance based risk management
- instead of rigid org-chart definition

# Enterprise Risk Management

*No risk, no fun !*



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# Enterprise RM <> Risk Management

## Enterprise Risk Mgmt.

- covers **all core risks** but also **emerging / strategic opportunities**
- **w/o** taking **risks**  
organizations will gain **no value**
- consolidated **enterprise-wide** risk management frameworks
- value-based **integration of risk into broader strategic opportunities**

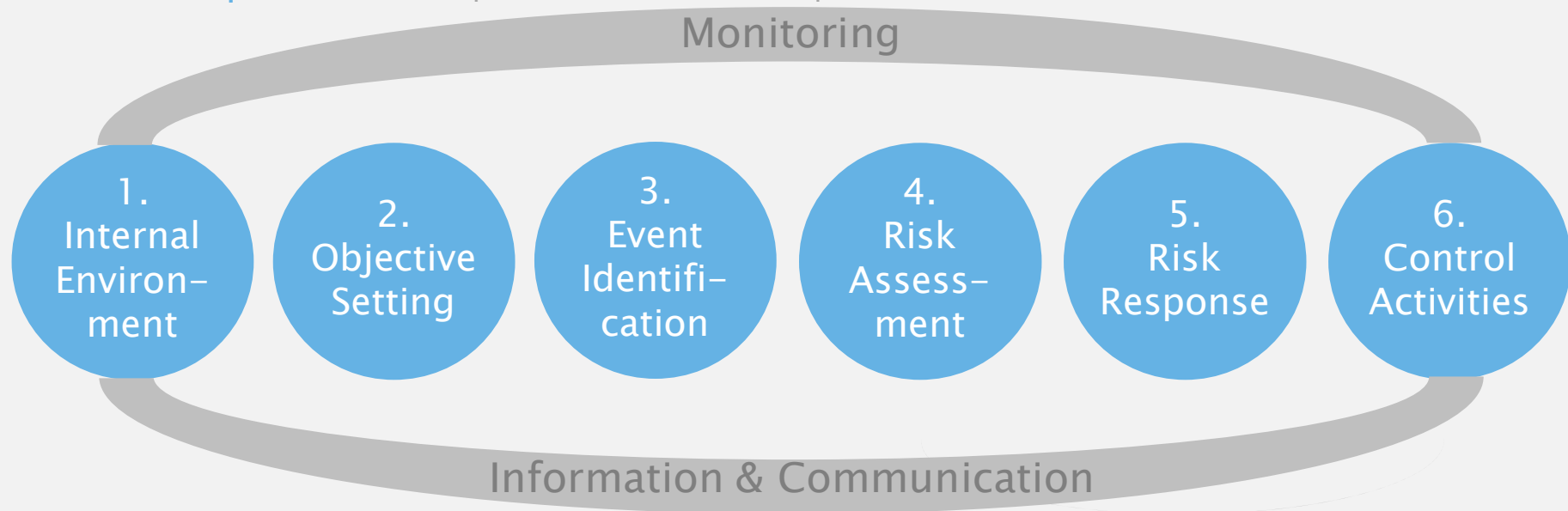
## Risk Management

- overall corporate insurance:
  - avoid something
  - minimize consequences
- all threads are risks, no chances
- Control frameworks
- Compliance frameworks
- Governance frameworks

*If storm arises, the one build a dam, the other set sails*

# Enterprise Risk Management

1. Management philosophy, **risk appetite**, the composition and role of the board, corporate values and culture.
2. Process in place to set **objectives** supporting and aligning with the entity's mission that are **consistent with its risks appetite**.
3. Internal and external events affecting achievement of an entity's objectives, **distinguishing between risks and opportunities**. Opportunities to be channelled back to management's strategy or objective-setting process
4. Risks are **analysed**, considering likelihood and impact, as a basis for determining how they should be **managed**.
5. Management selects **risk responses** developing sets of actions to align risks with the entity's **risk tolerance** and **risk appetite**.
6. **Policies** and **procedures** developed to ensure the risk responses are carried out.



# Where Enterprise RM Helps

- to seize an opportunity out of an evaluated risk
  - e.g. **profit loss risk** due to currency change rate while seizing **opportunity to factor in external currency** and / or in **organization abroad**
  - e.g. **business outage risk** due to IT disaster while seizing **opportunity to outsource to 2 independent IT provider** with service level & price competition
  - e.g. **supply chain risk** (price, delivery, etc.) while seizing **opportunity by second supplier principle**
  - e.g. **production outage risk** while seizing **opportunity to outsource to contracted manufacturer**
- instead of only assurance against risk by
  - e.g. hedging currency fluctuation
  - e.g. computer / server crash
  - e.g. contractual penalty in single supplier contract
  - e.g. fire, storm, etc.

Simple examples just to understand the principle / difference

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# Corporate Resilience <> Forensic

## Corporate Resilience

- **Pro**-active
- **Permanent** Monitoring of risk related business activities
- **Internal**, C-level, supervisory board

## Forensic

- **Re**-active
- **One-time** internal revision
- **External** task force

*better put a strong fence around the top of the cliff...*

*... than an ambulance down in the valley*

# Corporate Resilience



1. Right View
2. Right Intention
3. Right Speech
4. Right Action
5. Right Livelihood
6. Right Effort
7. Right Mindfulness
8. Right Concentration