



Profiling – An Instrument to Reduce Human Failure Risk

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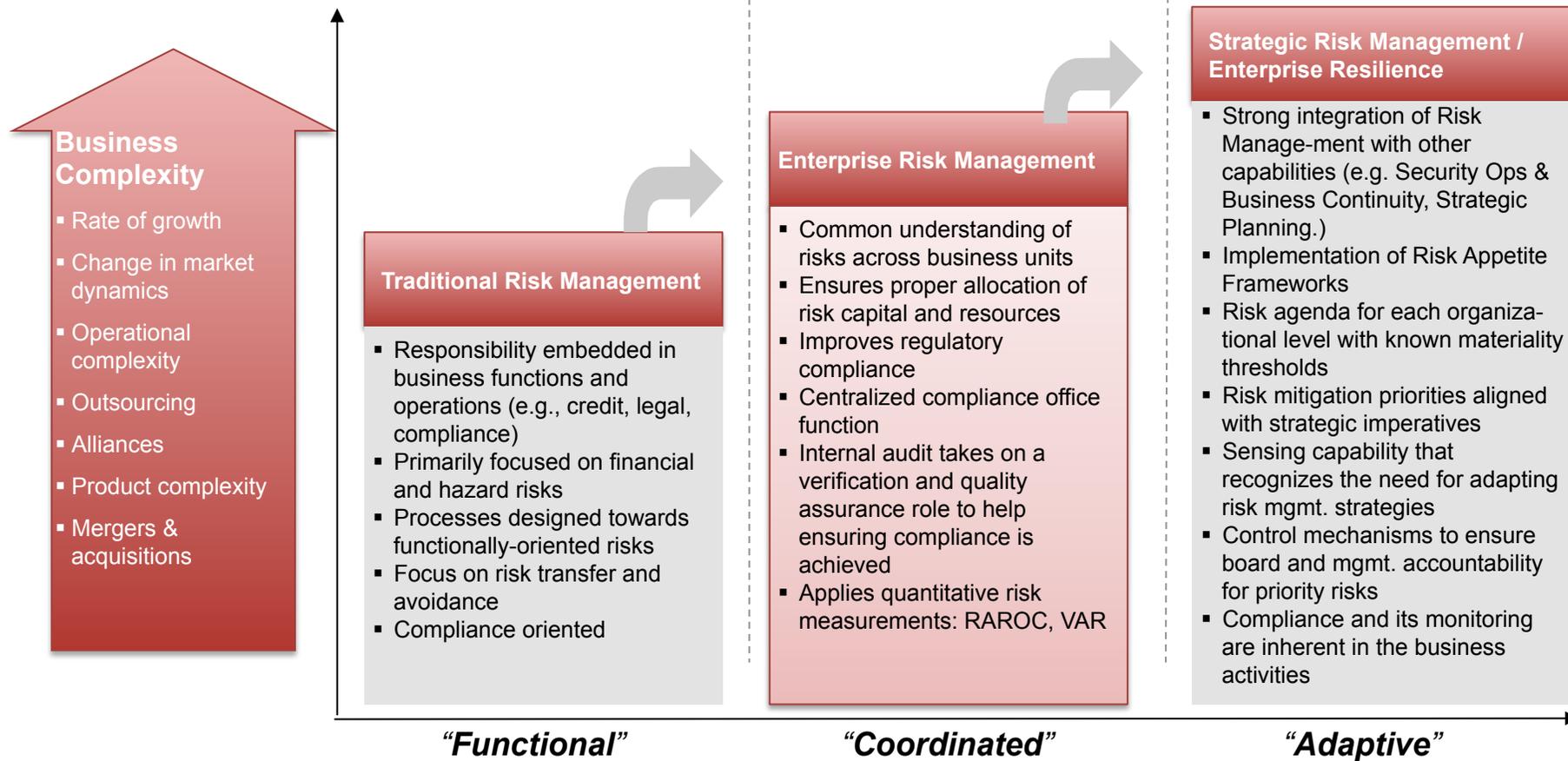
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In recent years, Risk Management was rapidly evolving from a traditional functional nature to a more strategic capability...

Risk Management Maturity Model





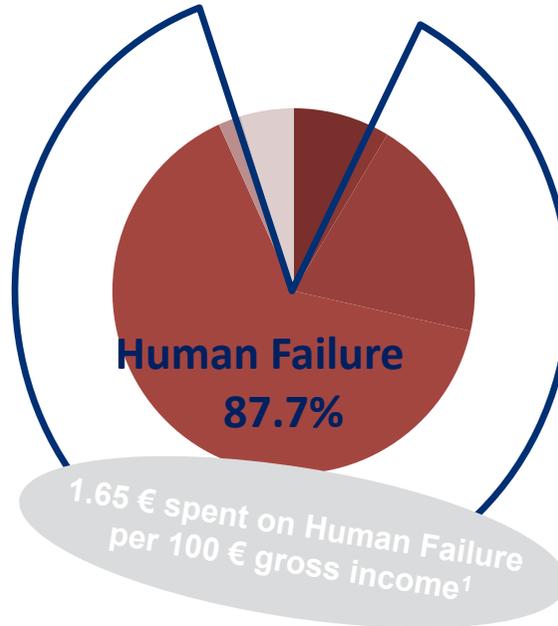
... but recent loss events show that Human Failure is not sufficiently considered - even in sophisticated Risk Mgmt. Models

Example Operational Risk Management – Human Failure at Banks

Trader blamed for Morgan Stanley's \$9bn loss back in business *The Telegraph*
 "The trader blamed for helping to rack up a \$9bn (£5.8bn) loss at Morgan Stanley as the US housing market turned sour is back in the mortgage business" - September 2010

Libor scandal: RBS fined £390m *BBC*
 "Royal Bank of Scotland (RBS) has been fined £390m (\$610m) by UK and US authorities for its part in the Libor rate-fixing scandal." - February 2013

Société Générale Reports €4.9 Billion Trading Loss *Bloomberg*
 "Société Générale SA said bets on stock index futures by a rogue trader caused a 4.9 billion-euro (\$7.2 billion) trading loss, the largest in banking history." - January 2008



- External Fraud
- Internal Fraud
- Execution, Delivery & Process Mgmt.
- Clients, Products & Business Practices
- Employment Practices & Workplace Safety
- Natural Disasters & Public Safety
- Technology & Infrastructure Failures

JP Morgan Chase fined \$20m for mishandling Lehman Brothers funds *theguardian*
 "Government investigation finds Wall Street giant acted improperly ahead of Lehman's collapse in 2008." - April 2012

UBS \$2 billion rogue trade suspect held in London *REUTERS*
 "Swiss bank UBS said it had lost around \$2 billion due to rogue dealing by a London-based trader at the Swiss bank" - September 2011

Senate investigation finds JP Morgan hid mistakes as trade losses grew *theguardian*
 "Bank executives to testify Friday after report claims company misled public during \$6.2bn London Whale trading debacle." - March 2013

¹ 2012 ORX Report on Operational Risk Loss Data: average total gross loss of 1.88 € per €100 gross income
 Source: Operational Riskdata eXchange Association (ORX), Newspaper



Senior mgmt. need to be mindful about their own risks



SPIEGEL ONLINE

Bribery Suspicions: US Investigators Go After Former Siemens CEO

The Siemens bribery scandal is far from over for former CEO Heinrich von Pierer. US authorities are now investigating Pierer and other top managers on suspicion of being involved with corruption. The Americans are particularly interested in mysterious payments made to Argentina. [...] corruption scandal at the company that first came to light in 2006. [...] After all, Siemens already closed its file on Pierer a year ago. That cost him €5 million (\$6.6 million) -- his contribution to the billions in fines that the company had been ordered to pay in relation to the corruption scandal. [...]
December 2010



INTERNATIONAL BUSINESS TIMES

Bernie Ecclestone: £29m F1 'Bung' Was No Bribe - I was Blackmailed

Bernie Ecclestone says he will fight to clear his name after authorities in Germany filed bribery charges alleging he was involved in a £29m bribery scandal over the sale of Formula One. [...] The charges pertain to allegations Ecclestone paid bribes to Gerhard Gribkowsky, formerly the chief risk officer at the German bank BayernLB.
May 2013



SPIEGEL ONLINE

Broken Hartz: Former VW Personnel Boss Peter Hartz on Trial For Corruption

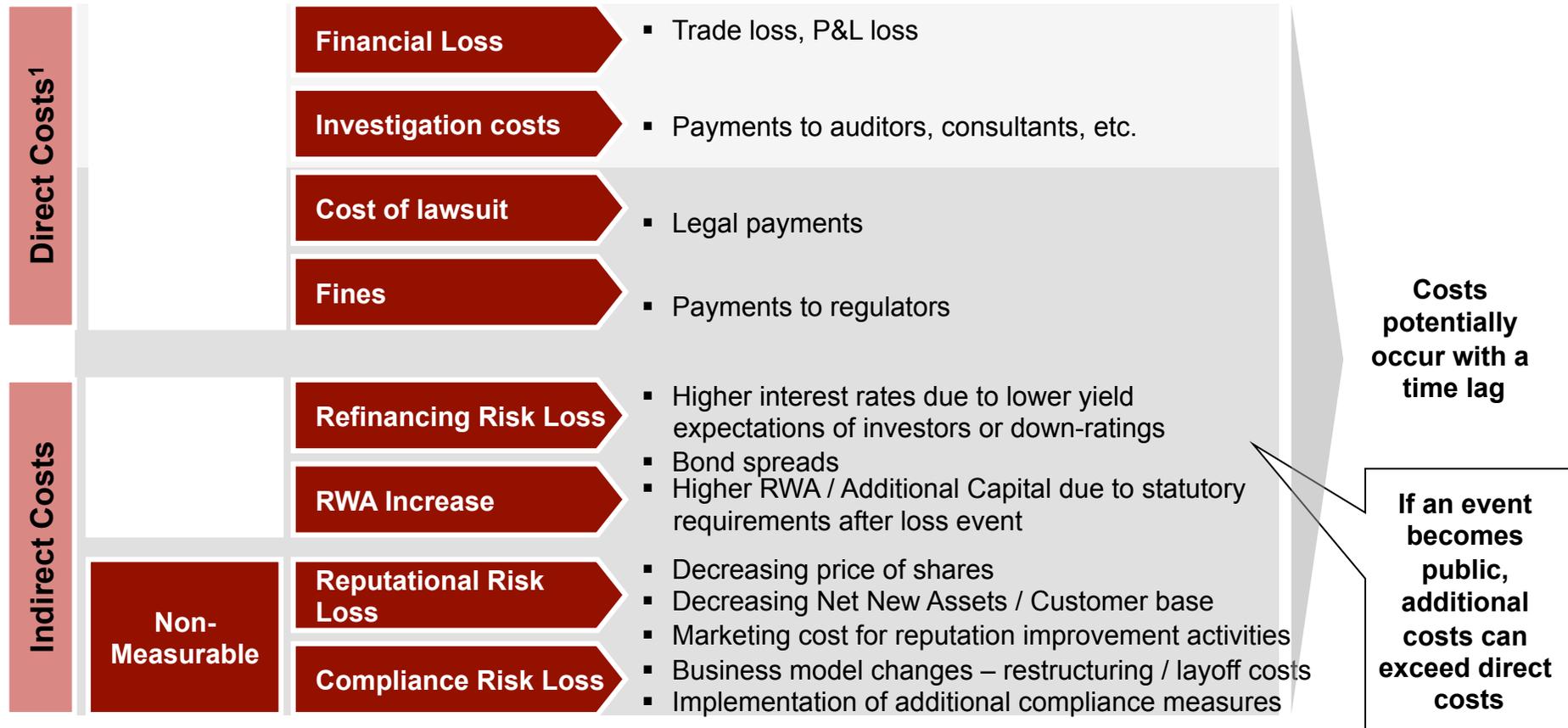
Former Volkswagen personnel boss Peter Hartz has gone on trial in Germany, charged with illegally awarding a union boss and his lover more than €2 million. It could be the end to a glittering career, during which Hartz acted as an adviser to Gerhard Schröder and even gave his name to labor market reforms. *January 2007*

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The cost of a loss event due to Human Failure is only partially measurable and increases in case the event becomes published

Costs to Consider



¹ Direct Costs are reported in 2012 ORX Report on Operational Risk Loss Data: "Operational Risk Event [...] has a quantifiable negative impact on the P&L of the firm."



For the following three prominent events, indirect costs exceeded the direct losses significantly

Examples of Loss Event due to Human Failure¹

J.P.Morgan

Mgmt. Issue

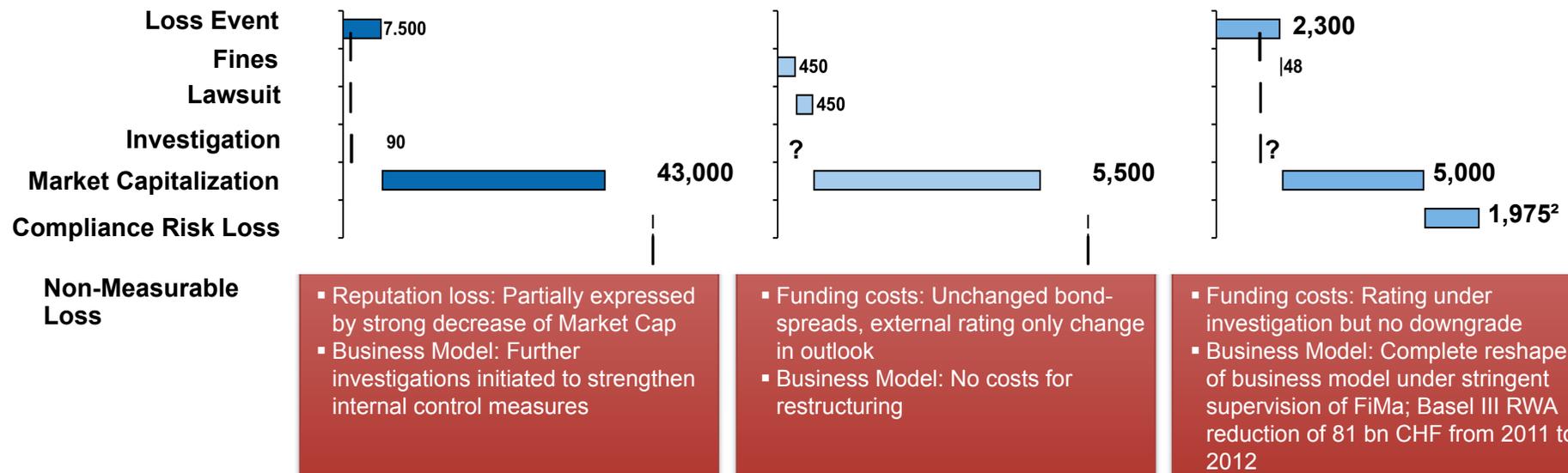
 BARCLAYS Criminal Offense

 UBS Rogue Trader

- Heavy losses in the CIO dep., due to:
- Poor Trading Strategy, not fully understand by CIO management
 - Faulty risk controls and poor reporting quality
 - Risk underestimation and poor management decisions

- Manipulation of LIBOR interbank rate, crucial benchmark for interest rates, panel: average of up to 18 major banks
- Barclays et al accused to have submitted „in concert“ falsified numbers back to 2005

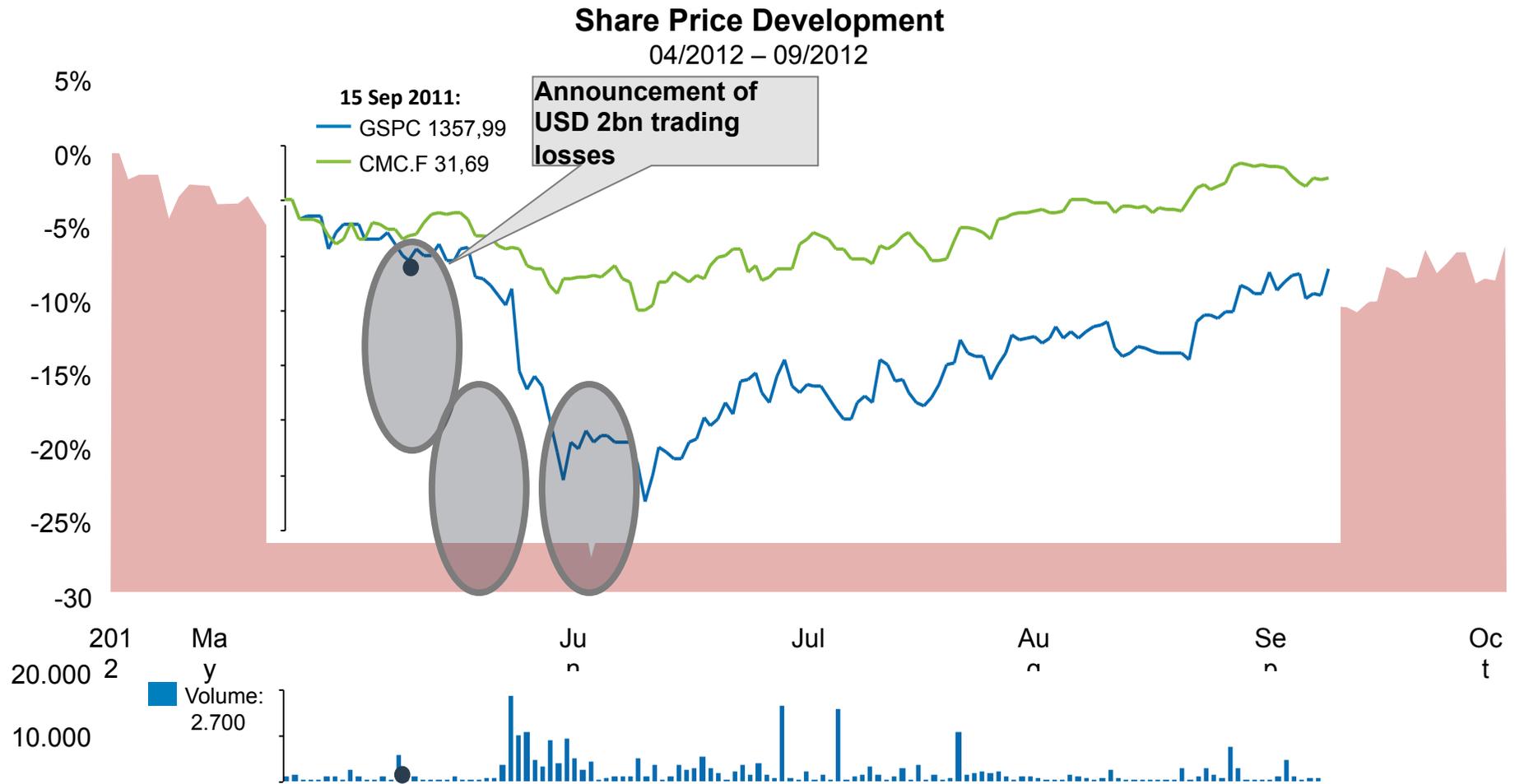
- Delta 1 ETF trader and former trade support & created fictitious hedges based on OTC ETFs
- Extended forward settlement dates and booked trades against internal counterparties to hide positions



¹ Share Price Development in Appendix; ² Total net interest and trading income of 6.847 bn CHF in 2010 (before event) and 4.872 bn CHF in 2012 (UBS Annual Report 2012)



JP Morgan's Share Price dropped by almost 20% after announcement of 2bn USD trading losses

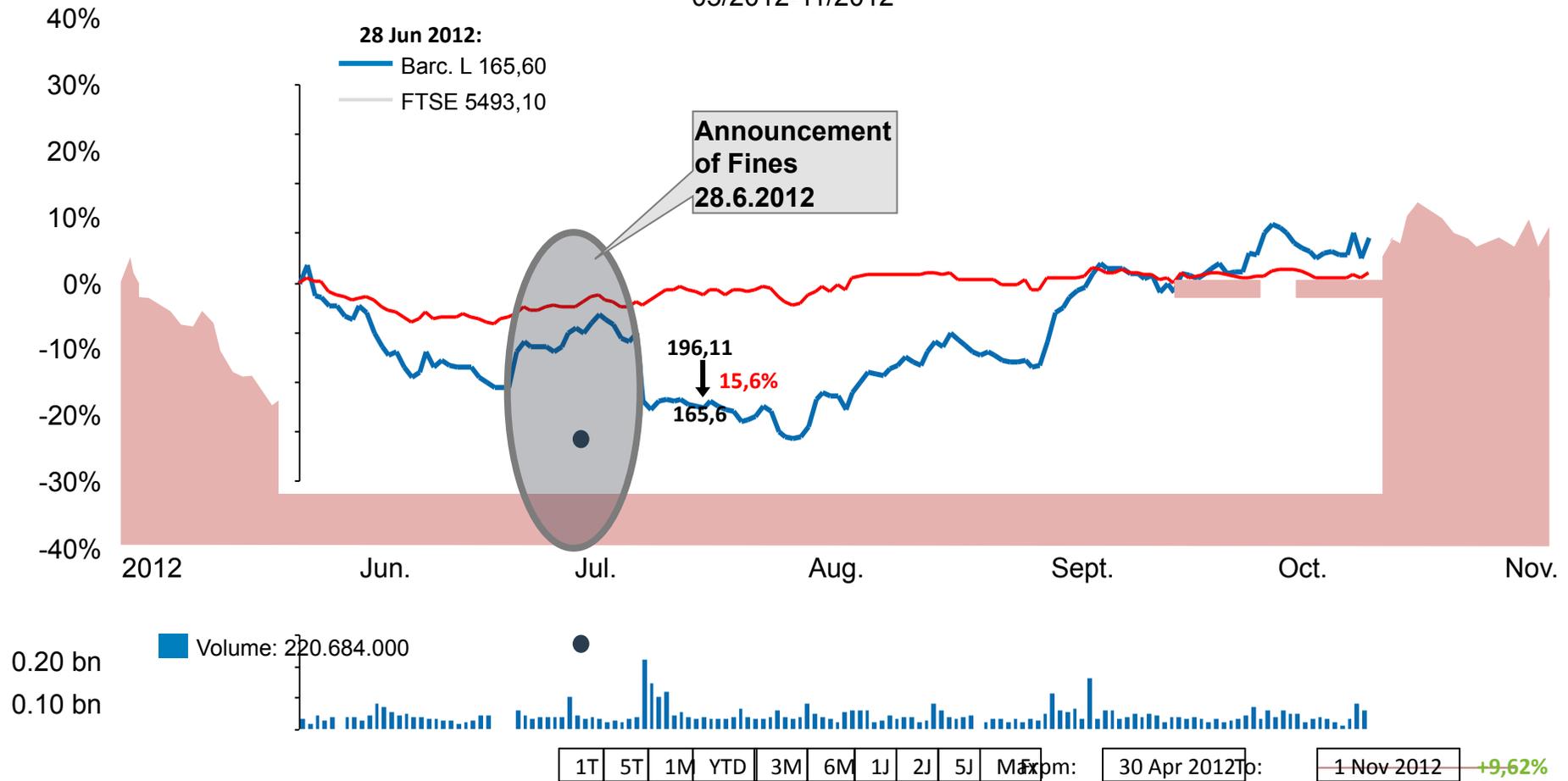




Barclays' Share Price dropped by 15.6 % after announcement of fines

Share Price Development

05/2012-11/2012



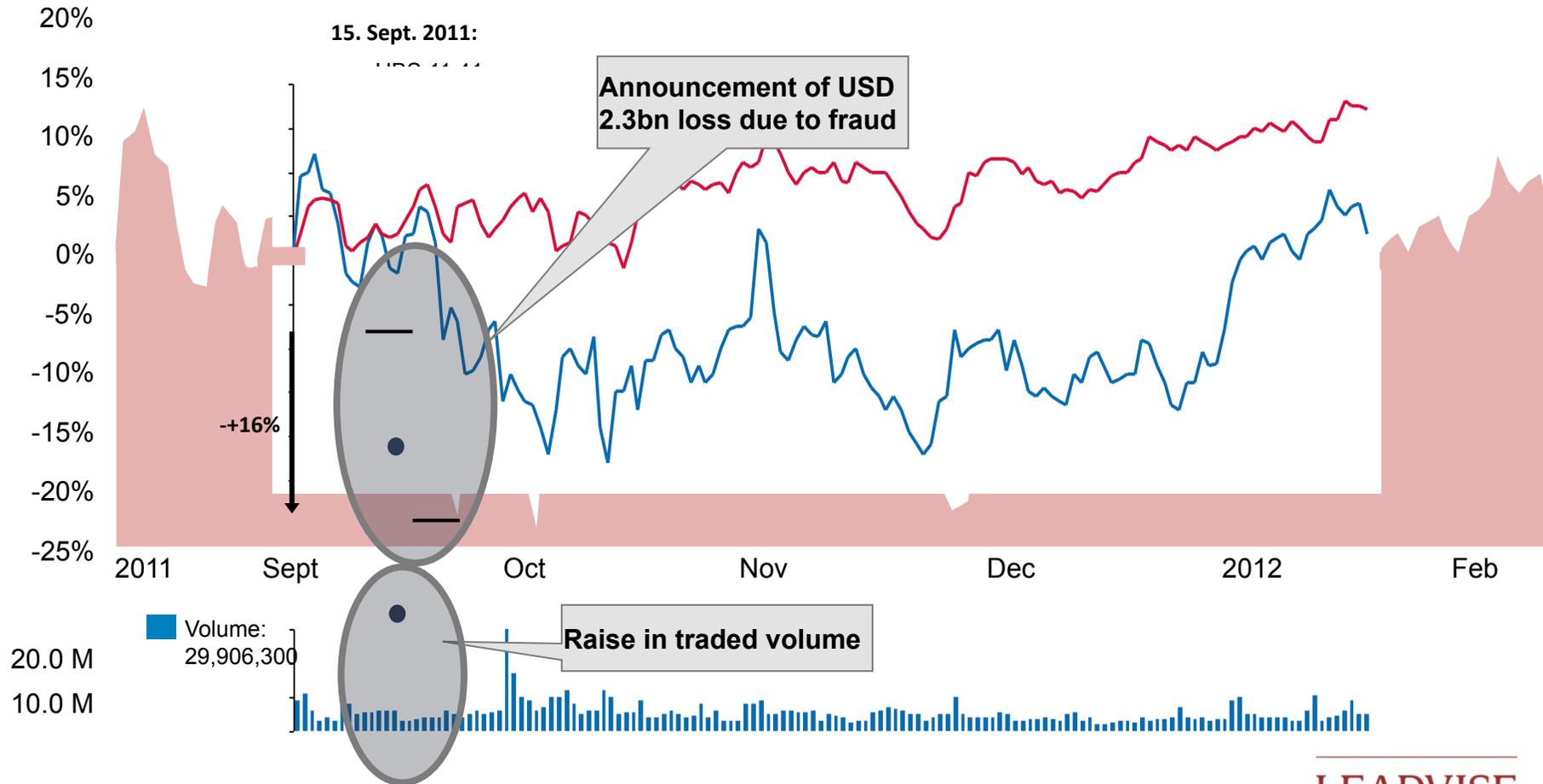
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UBS's Share Price dropped by 16% after announcement of 2.3bn USD due to a rogue trader

Share Price Development

08/2011 – 03/2012





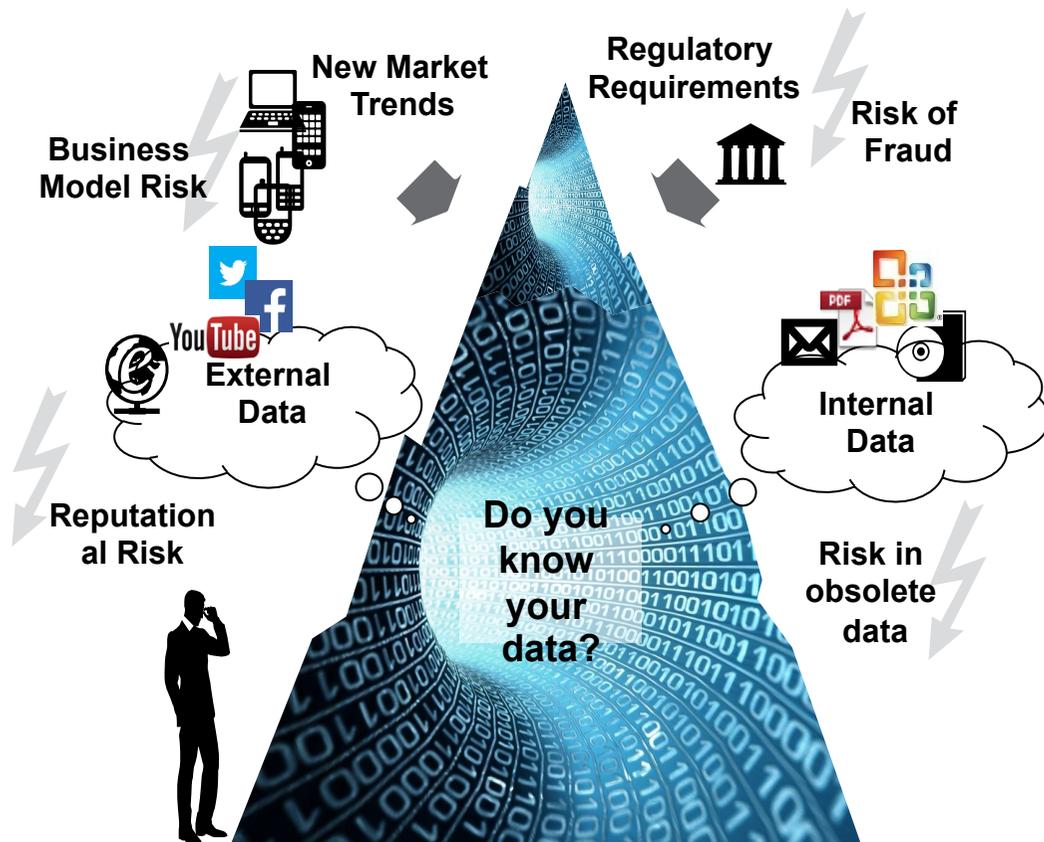
Lesson Learned?

“If someone acts with criminal intent, you can’t do anything. (...) That will always exist in our job. If you ask me whether I feel guilty, then I say no.”

Oswald Gruebel, CEO UBS 2009-11



Massive data growth rates are potentially overwhelming risk management capabilities of many institutions



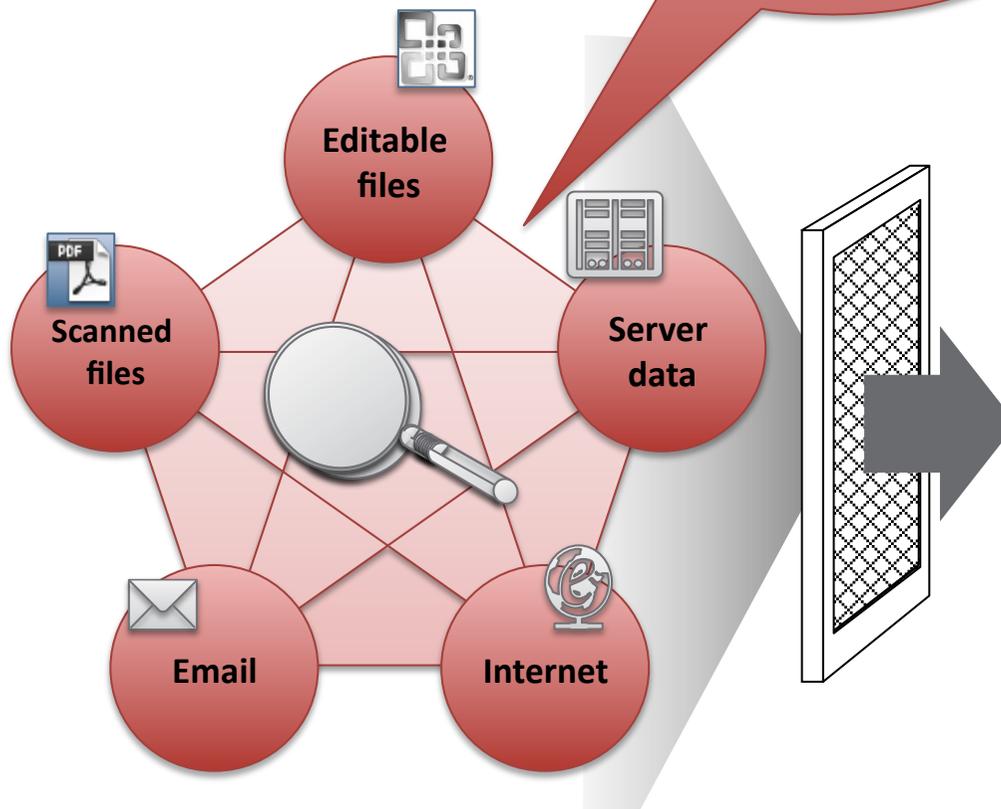
Key Questions

- How to measure legal risk?
- What controls are in place to prevent fraud?
- Do we adapt too slow to market trends? Or too quickly? Can business processes adapt fast enough to market changes?
- What are the customers' needs? Does he/she like our brand?
- Any hidden risk of becoming a potential acquisition candidate?



Big Data technologies can enhance and re-enforce risk management capabilities

However, this potentially works on symptoms only!



Benefits

- With new capabilities to analyze and connect entire databases, dependencies and connections, as well as documents and emails with **potential of non-compliance can be detected**
- From analyzing unstructured data, **pro-actively dependencies between data** files can be found
- **Documents** and emails that **can be freely deleted because they are no longer required** for compliance or ongoing business purposes (data pruning)

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Many studies disclose the correlation between specific personal characteristics and risk attitude or non-compliant behavior

Example - Personal similarities between Société Générale's and UBS's Rouge Trader

Société Générale (SG) Jérôme Kerviel 2008	UBS Kweku Adoboli 2011
Decent degree at secondary university	Decent degree at secondary university
Straight to SG after university	Straight to UBS after university
Former trade support/control; knowledge of back office processes and controls	Former trade support/control; knowledge of back office processes and controls
No possibility of personal gain except bonus	No possibility of personal gain except bonus
SG describes him as single person acting on his own	UBS describes him as single person acting on his own
Supposed to be client facilitation	Supposed to be client facilitation
Aged 31 when arrested	Aged 31 when arrested

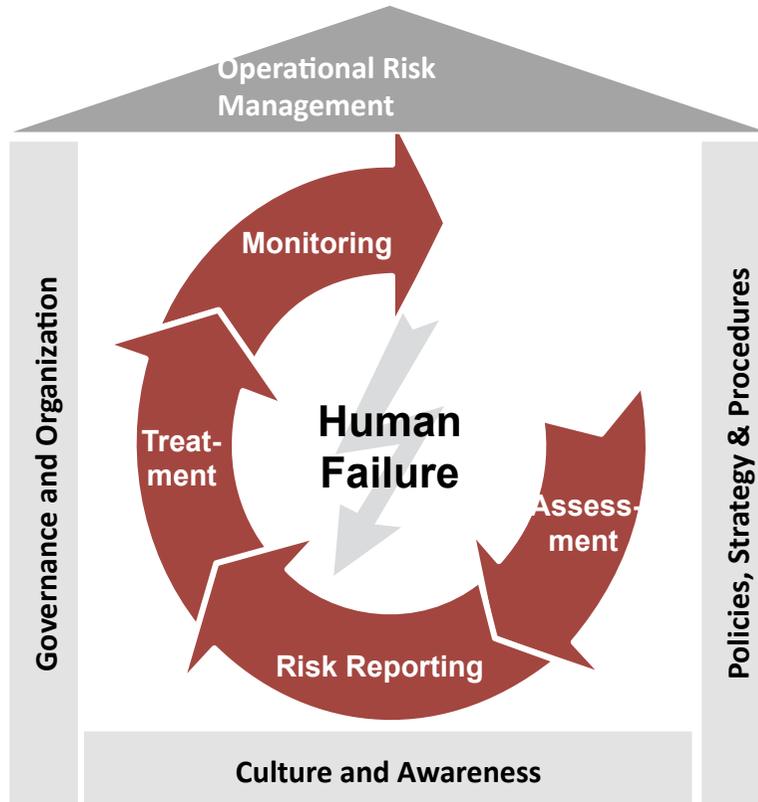
Key Risk Indicators / Early Warning Triggers

- Lifestyle (Gambling and Debt)
- Personal Account Dealing
- Tracking of Mandatory Time Away /
- Adherence to Holiday Policy
- Tracking of unusual office hours
- Chat protocols / Emails / Bloomberg Messenger / Social Media
- Password misuse
- Unauthorized use / access of profiles
- Code of Conduct Breaches

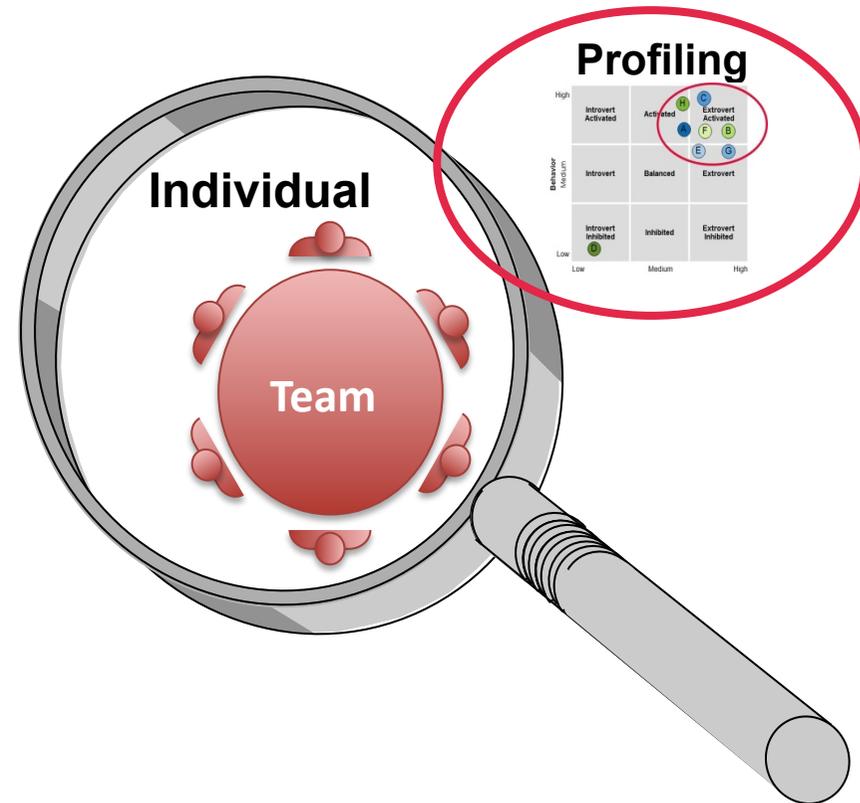


However, today's risk management frameworks still lack the integration of acting persons in their observation

Operational Risk Management Framework



Observation of teams and of individuals needed



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Profiling bridges that gap and enables the potential identification of Human Failure Risks of individuals and team constellations

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Profiling – Risks of the operating person

FMEA Persons / Teams				Probability of detection	Monetary evaluation
Name	Risk	Probability of occurrence	Risk impact		
Nils Mxxx	No decision taken	Xx%	Direct		200 Mio. €
Nils Mxxx	Announcement of problems was too late	Xx%	Direct		1 Bill. €
Nils Mxxx	Withheld information		...		200 Mio. €
Susanne Uxxx	Missing collaboration		Indirect		50 Mio. €
Heinz Mxxx	Ignore important information		...		
Heinz Mxxx	Hasty decision taking		...		
Heinz Mxxx	Misjudgement of information		...		
	Accepting own advantage				

So far implemented controls

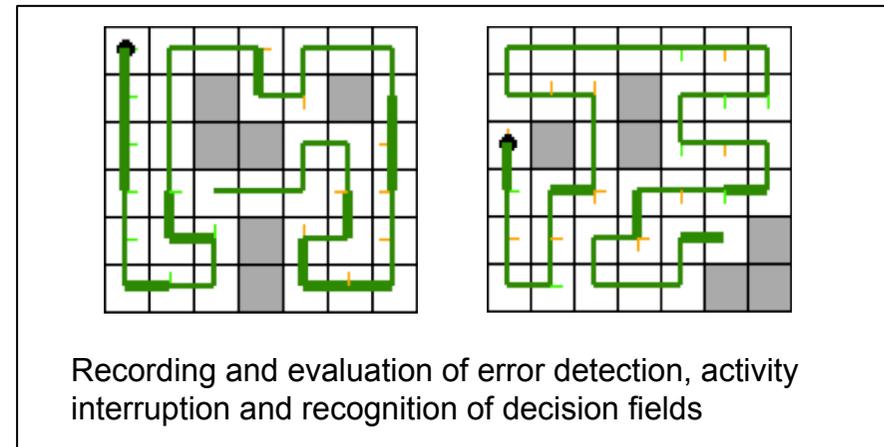
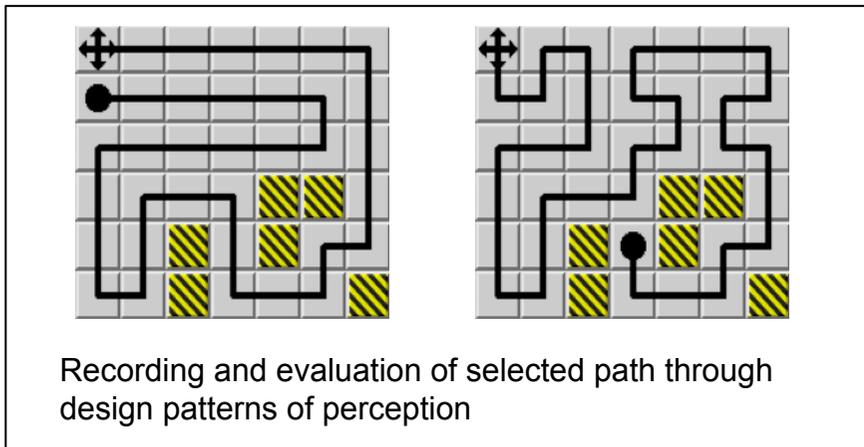
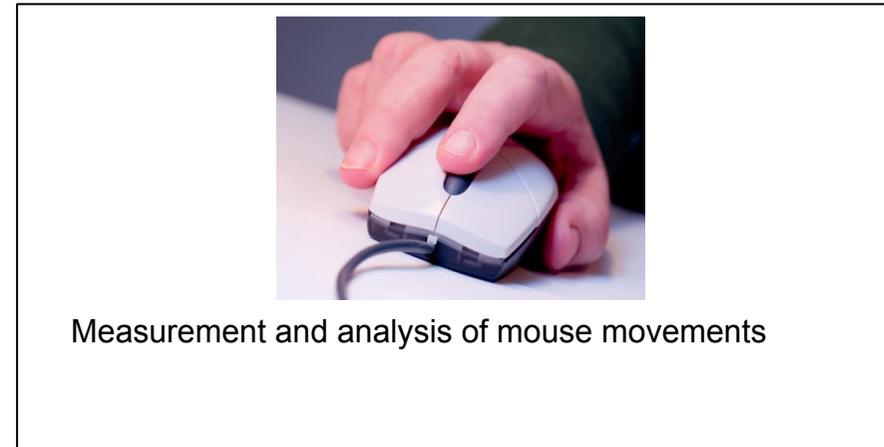
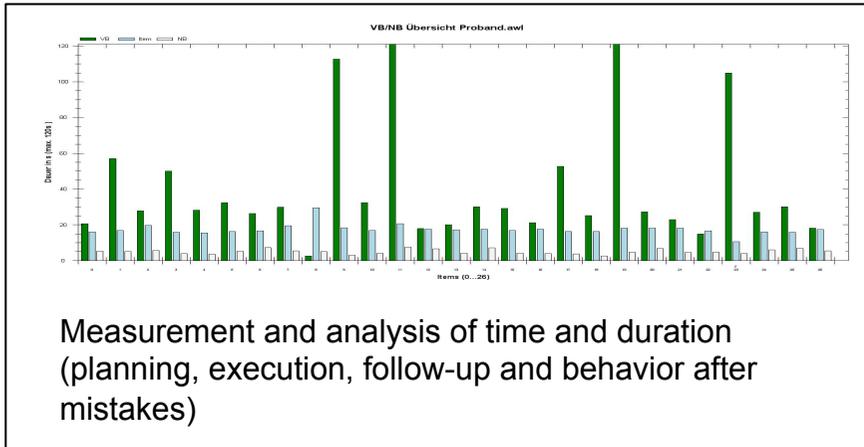
Focus of Profiling

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In contrast to other valuations, profiling allows straightforward monitoring of the action within 30 minutes...

Measurement methods of Profiling

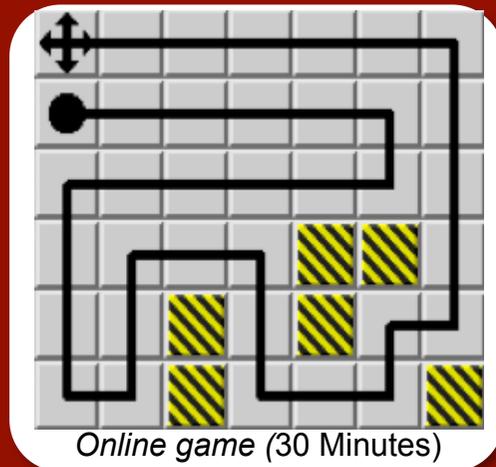




... and the results are based on objective assessment of defined performance indicators instead of subjective perceptions

Performance indicators of Profiling

Culture Work Profiling (field-tested & validated in ~8.000 cases)



Online game (30 Minutes)

- Immediate monitoring of activity
- Evaluation and Feedback
- Evaluation of the frontal brain lobe capability (integration of emotion and cognition)

Operating Level

- Detection of otherwise invisible behavioral patterns / characteristics
- Prediction of the probable actions of a person / a team
- Specific derivation of measures / development of individuals and teams
- Target profile / adjusted team

Other valuations

Questionnaires Self-Perception ≠ Actions in real situations

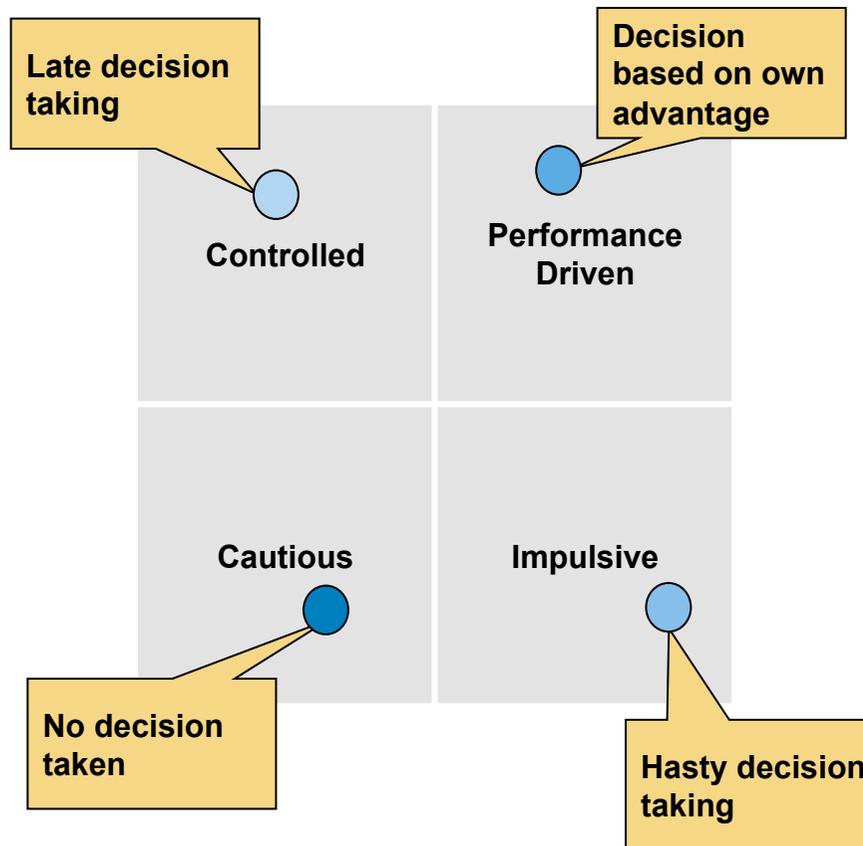


Potential risks and relating probability of occurrence can be derived from diagnosed characteristics of individuals and teams

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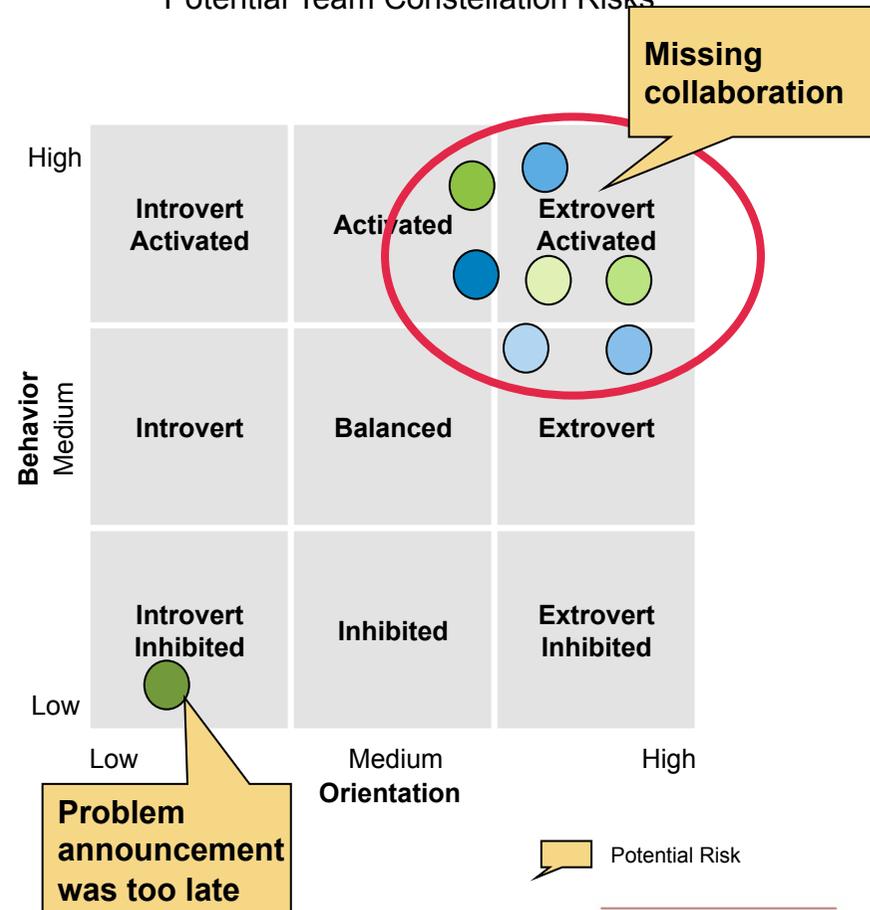
Dimensions of Regulation

Potential Risks of Individuals



Dimension of Orientation

Potential Team Constellation Risks





20% reduction of Human Failure Risk with Profiling is feasible – equivalent to 33 cents direct cost savings on 100 € gross income

Gross Loss Example

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Financial Institute with a yearly Gross Income of 1 bn EUR

FMEA Persons / Teams						
Name	Risk	Risk event type	Probability of occurrence	Reduction of probability via Profiling	Probability of detection	Monetary evaluation [kEUR]
Nils Mxxx	Withheld information	Employee Practices & Workplace Safety	1.75%			28.9
Susanne Uxxx	Missing collaboration	Execution, Delivery & Process Management	19.87%			327.9
Heinz Mxxx	Ignore important information	Clients, Products & Business Practices	64.72%			1067.9
Nils Mxxx	Accepting own advantage	Internal Fraud	1.32%			21.8
...

Yearly average gross loss
Of 16.5 mnEUR¹
20% savings = 3.3 mn EUR

Focus of Profiling

¹ 2012 ORX Report on Operational Risk Loss Data; for more details see Appendix

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About Leadwise

Leadwise is an independent Advisory Firm in the Rhein-Main Area

Efficiency

- Organizational and process
- Cost optimisation
- Business development



Strategy implementation

- Review and Operationalization
- Implementation
- Focussed Interventions

Project management

- Programme & Project management
- Requirements management
- Turnaround & QA

Risikomanagement & Regulierung

- Methods, processes, organization, regulatory approval
- Regulated sectors, such as finance, telecoms, health

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