

A group of four diverse business professionals (three women and one man) are standing in a modern office with large windows, pulling on a thick rope together. They are all smiling and looking towards the center, suggesting teamwork and collaboration. The background is a bright, minimalist office space with white walls and a dark wooden floor.

# Infusing the Human Element into Enterprise Risk Management

**James Bone, GRCIndex**



Human Element? Why IT Matters?



Industry 4.0: Convergence of Digital & Physical is Accelerating



Heuristics & Biases: |  
The Root Cause of Human Error |

Weakest Link  
in  
Cybersecurity  
– Humans!

# Homeland Security News Wire

BIOMETRICS BORDER/IMMIG. BUSINESS CYBERSECURITY DETECTION DISASTERS  
PUBLIC SAFETY PUBLIC HEALTH REGIONAL SCI-TECH SURVEILLANCE TERROR

**HSNW conversation with Dr. Cedric Jeannot**

## **Greatest cyber vulnerabilities are people, says cybersecurity expert**

Published 19 October 2011

**Dr. Cedric Jeannot, the founder and president of I Think Security, recently sat down with Eugene K. Chow, the executive editor of Homeland Security NewsWire, to discuss the latest rash in cyberattacks on companies, why hackers have been so successful, and the fallout from the RSA SecurID attacks**

### **Recent stories**

**Warming to Affect Water Availability for Hydropower, Public Water Supply in Wales**

**U.K. Top General: Western Powers Must Retaliate for Iran's Drone Strike on Oil Tanker**

**Iran "10 Weeks Away" from Weapon-Grade Uranium**

Sophistication of  
Hacks Evolve!

Phishing, Social  
Engineering,  
Cognitive Hacks

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# In 2021, Human Factors consistently lead Top 10 Risk List

1. Impact of pandemic-related policies and regulation on business performance
2. Impact of economic conditions on growth
3. Pressure of pandemic-related market conditions on demand
4. Adoption of digital technologies may require new skills that are in short supply
5. Privacy, identity management and information security challenges
6. Cyber threats
7. Impact of regulatory change and scrutiny on operational resilience, products and services
8. Leadership succession challenges; ability to attract and retain top talent
9. Resistance to change operations and the business model
10. Ability to compete with “born digital” and other competitors



Humans tend to do what they value

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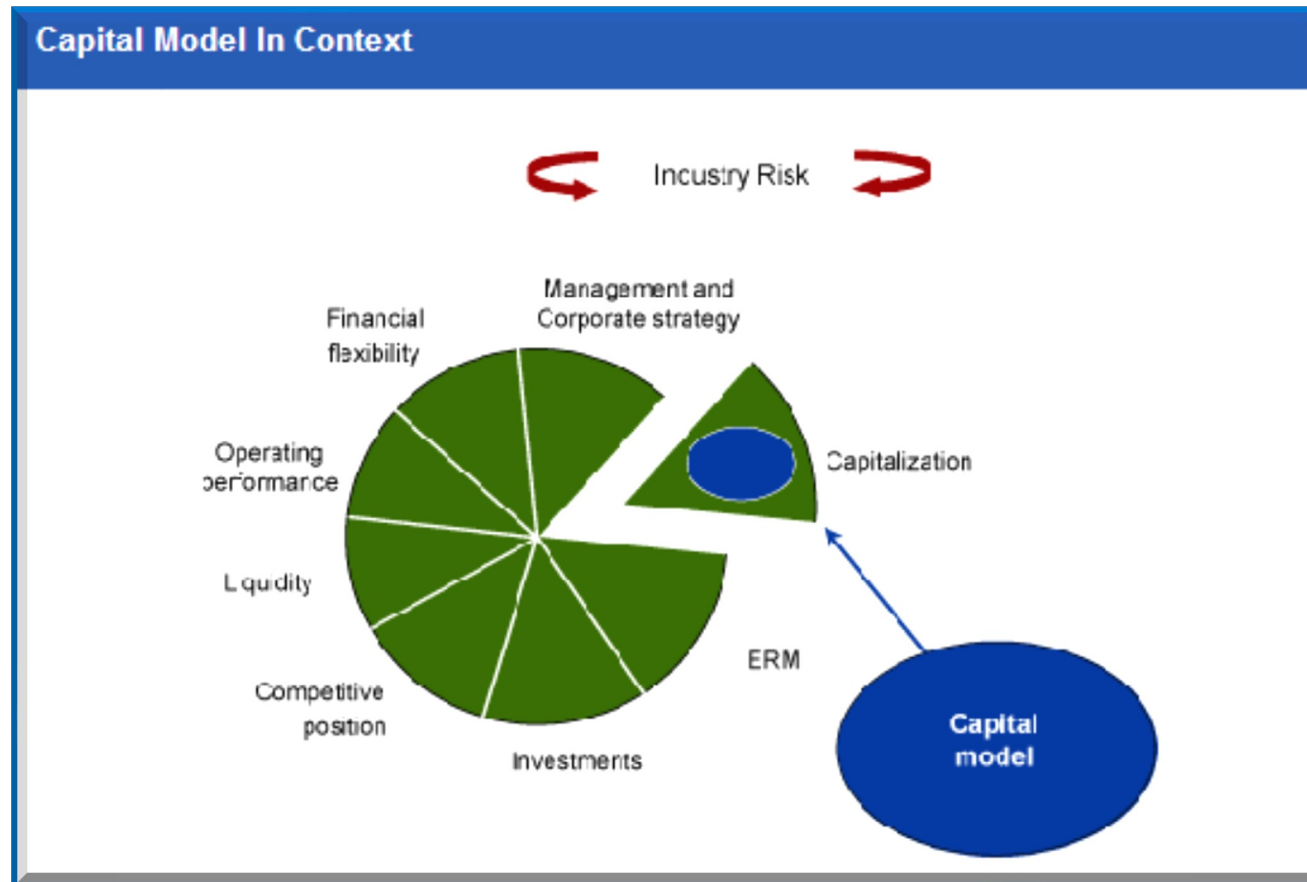
**WYSIATI:**  
**A Machine for Jumping to Conclusions**



Human Factors = Operational Risks

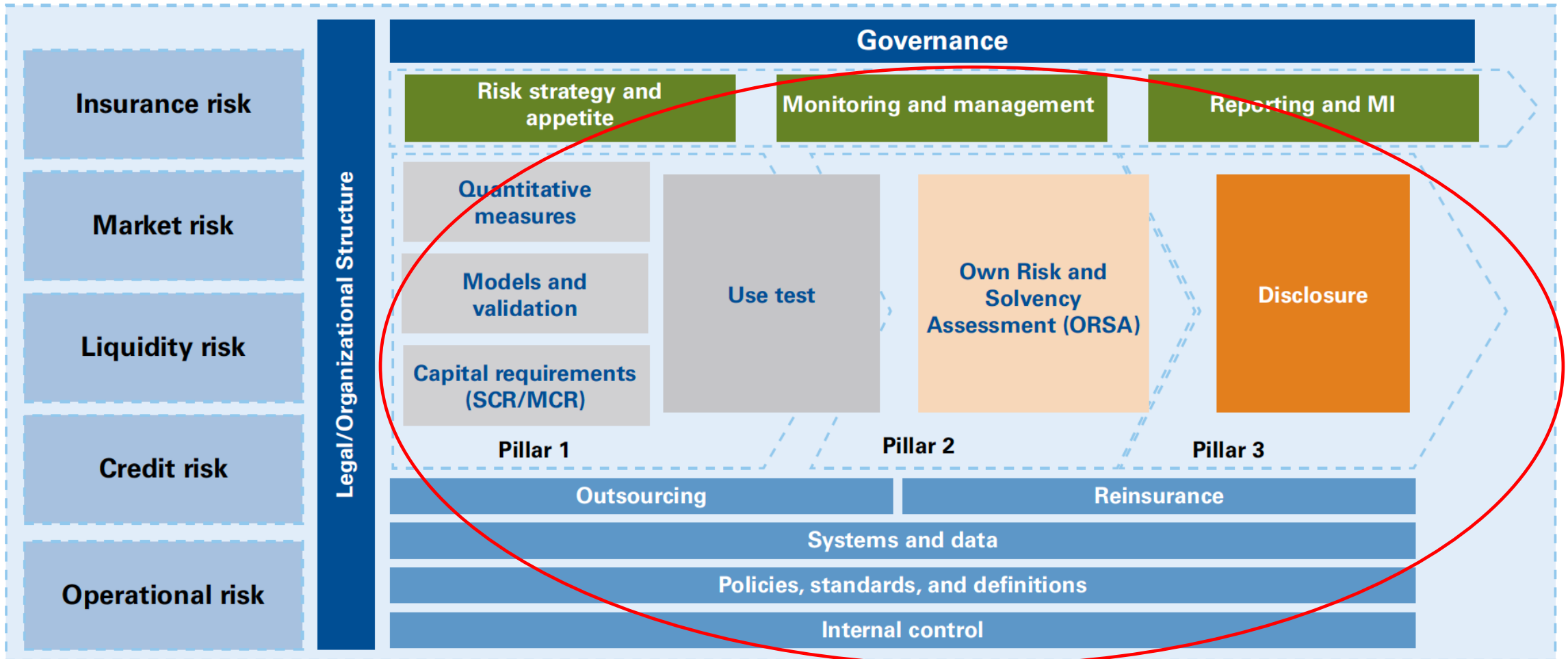
# Organizational Behavior = Risk-based Capital

Qualitative and Quantitative Factors –  
Measures of Risk Behavior



**\*Easily recognizable after the fact but seldom measured beforehand**

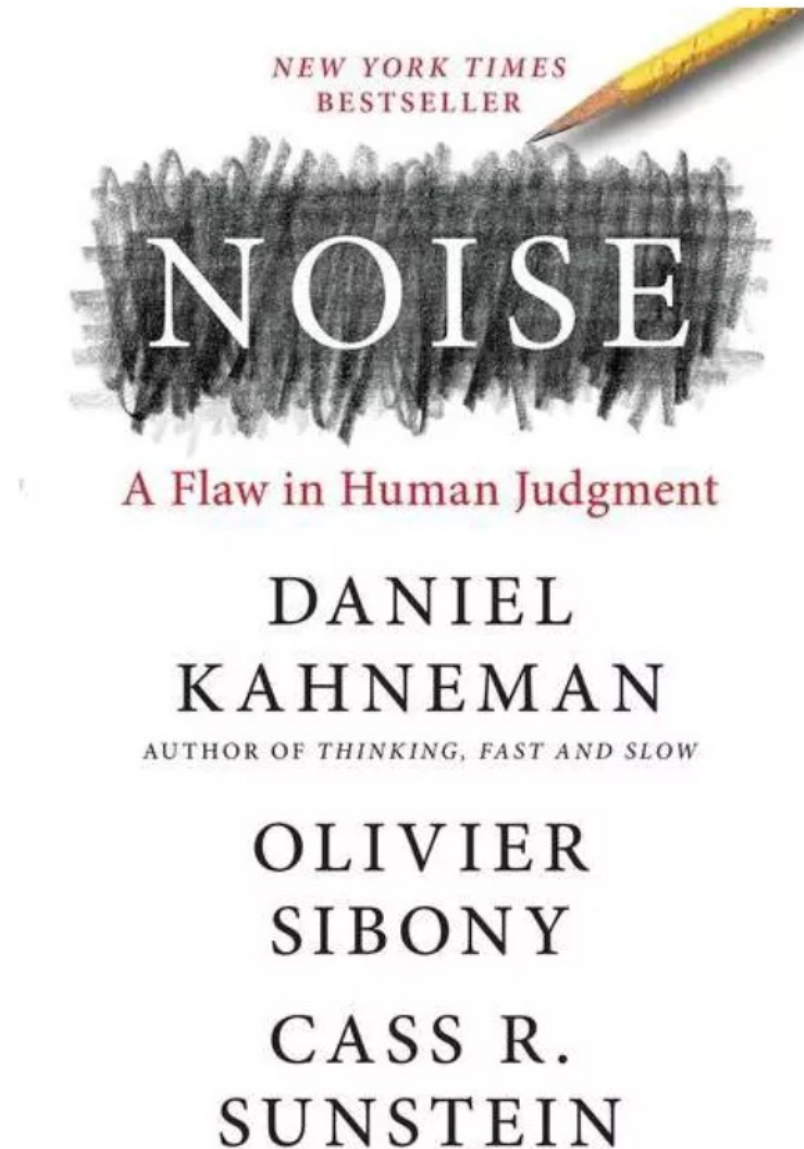
Figure 1: Solvency II Framework



A breakdown of the Solvency II Three Pillars framework into its constituent components; so as to identify Solvency II Target Operating Model. Each aspect of the Solvency II frame work interacts and links to other areas. No components should be looked at in isolation.

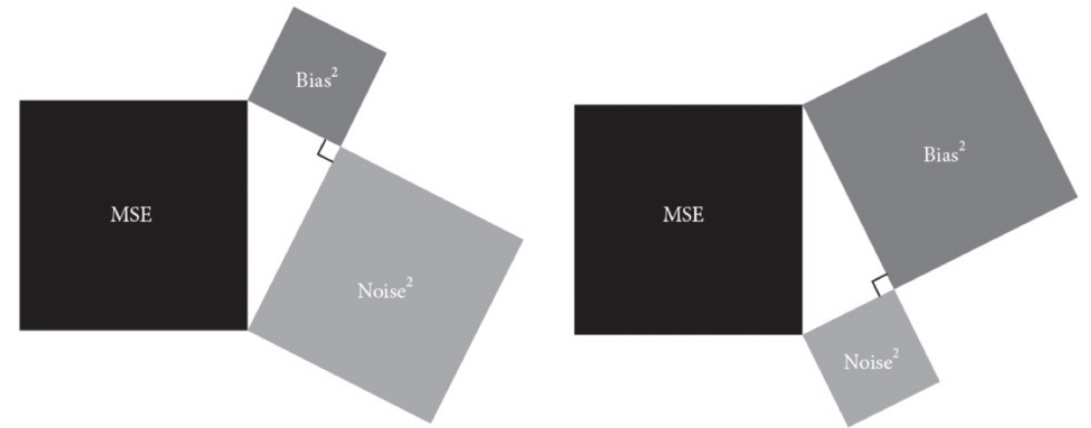
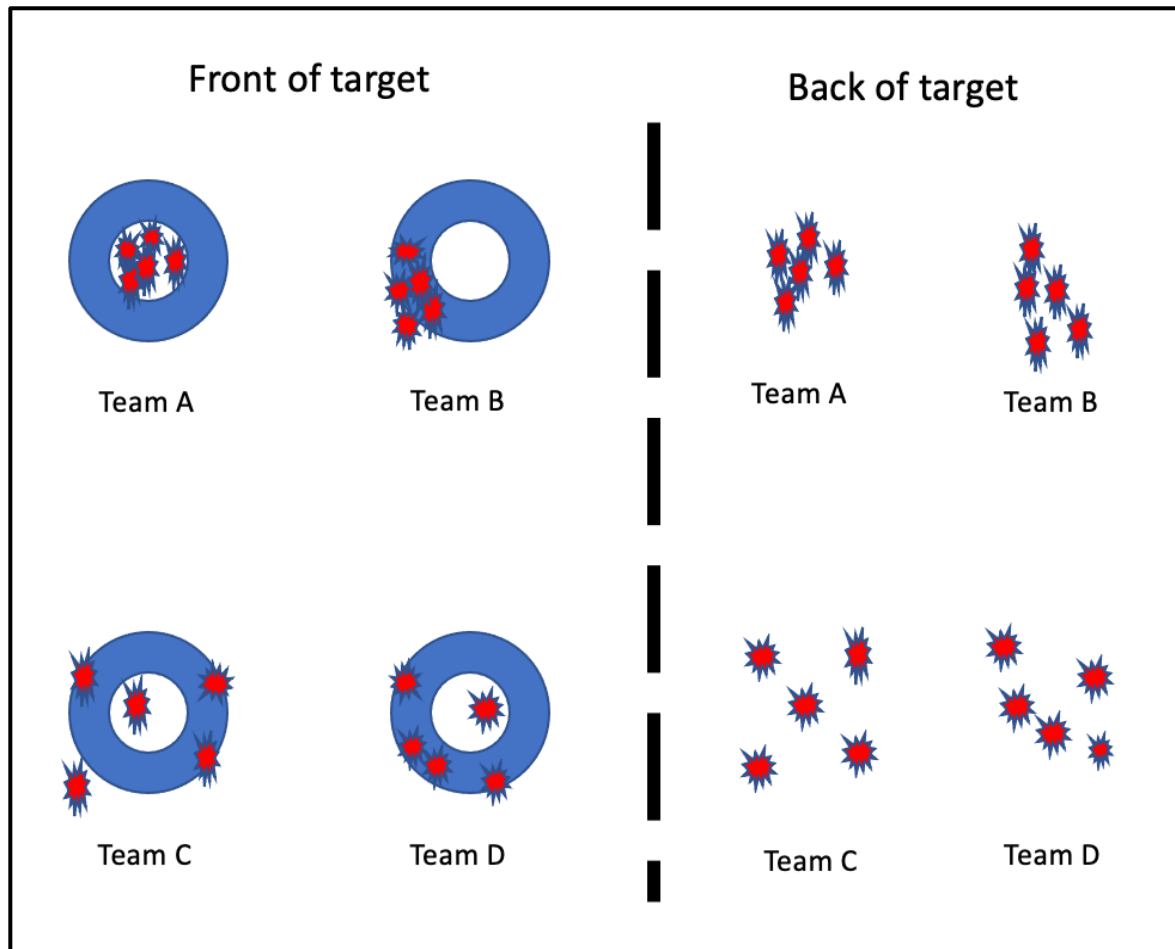
Understanding  
Noise leads to  
new Insights:

“Calculating  
Noise”



# Error = Bias + Variance + Noise

## Average error vs Variability of error



Overall Error (Mean Squared Error) = Bias squared + Noise squared. "[The figure above]"



## Case Study of “Noise” in Insurance



Operational Risks by Design – Simplicity is end game

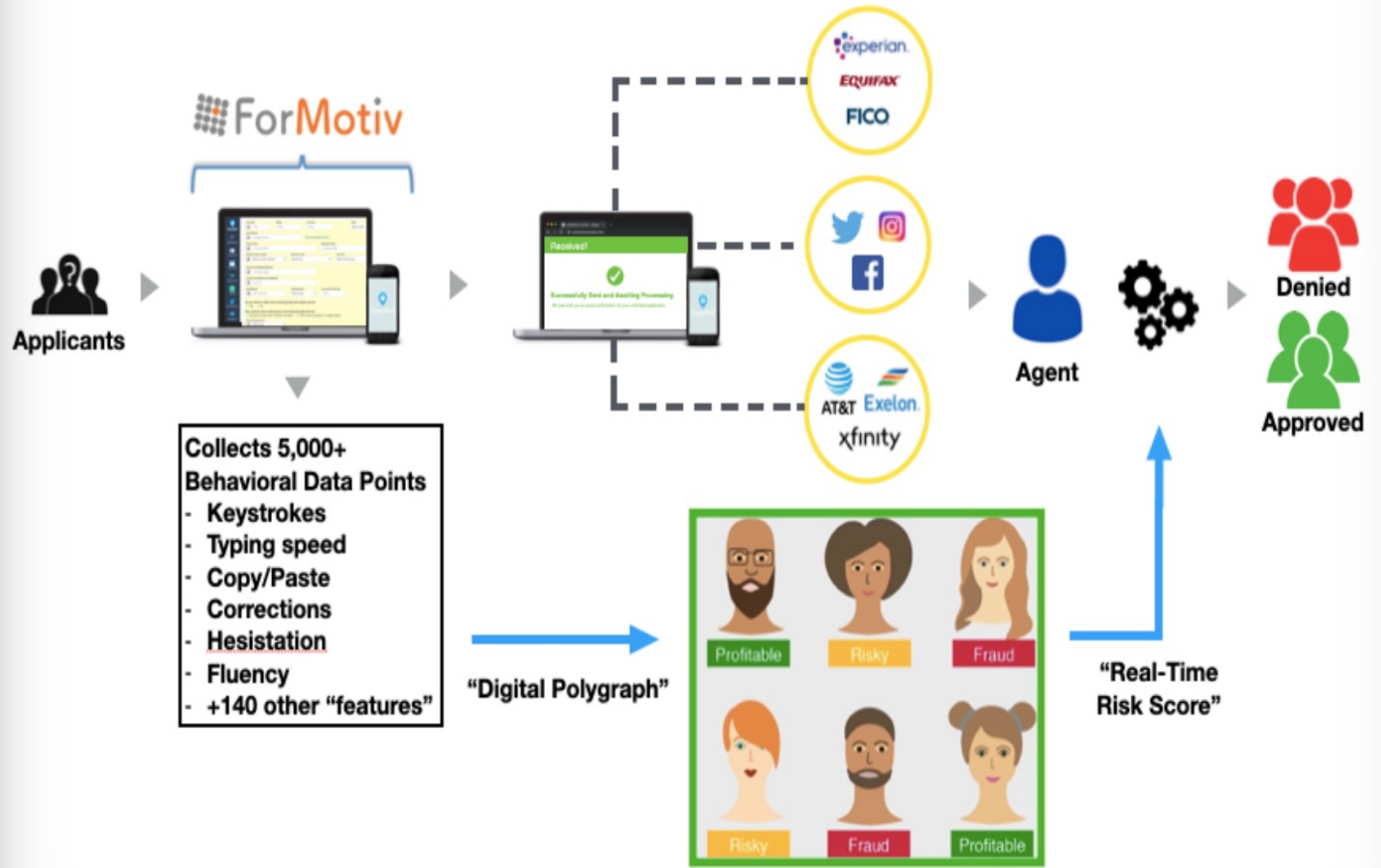


Behavioral Intelligence:

Is Algorithmic Underwriting – the Future?

Instant decisioning

# Algorithmic underwriting is the future, here's how to stay protected...



behavioral intelligence

# Decision Hygiene

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How to tackle big problems using Decision Hygiene:

- (1) Break the problem up into segments
- (2) Evaluate each segment separately
- (3) Finally, conduct a global evaluation based on how each segment contributes to the problem



# Decision Hygiene

## Managers' trick

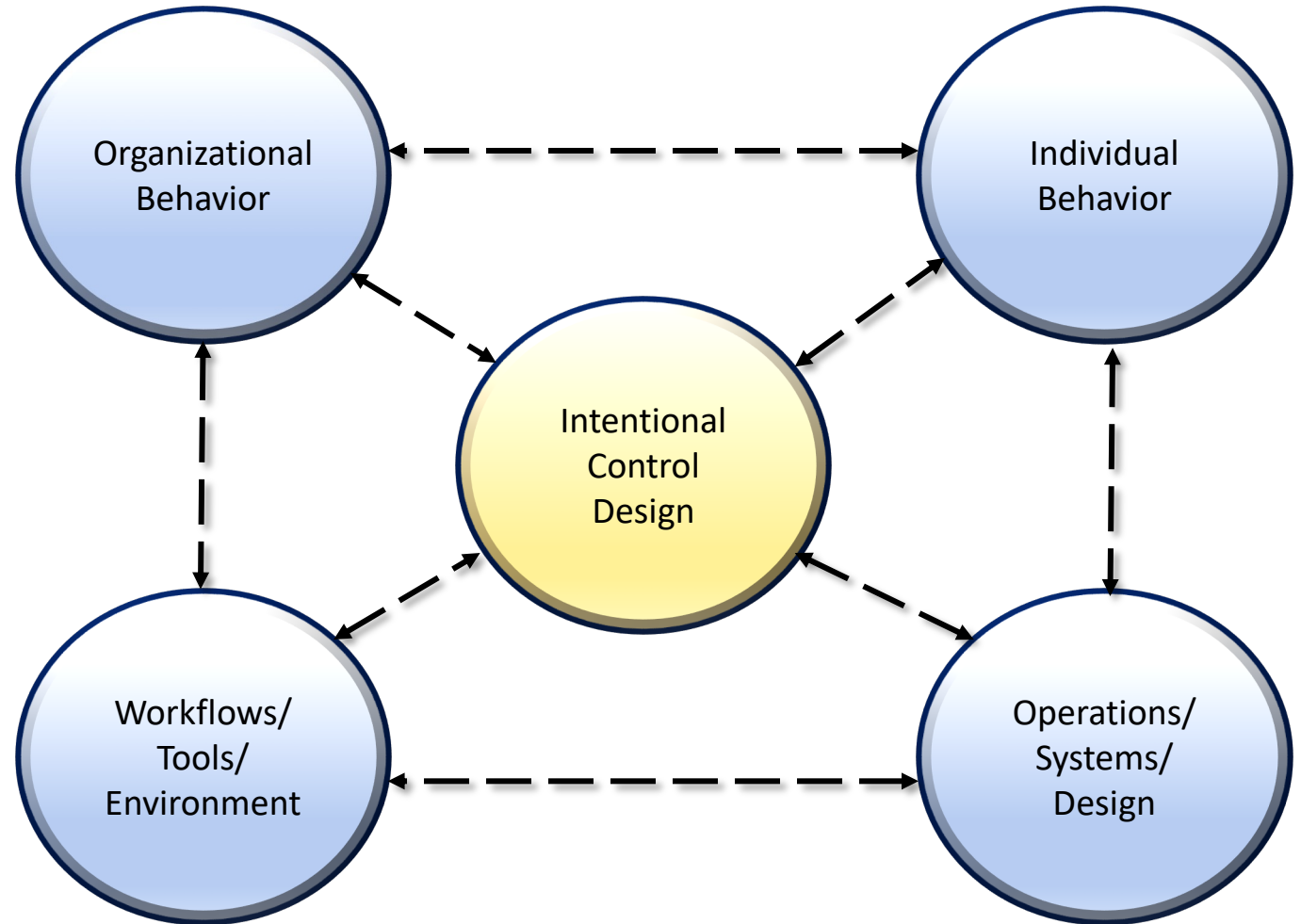
Instead of focusing on the content of recommendations; focus on the process.

A faulty process (assumptions, facts, data, conclusions) will reveal the weakness in a recommendation, audit or risk assessment.

Back test the results then repeat....



# What Are Human Influence Factors?

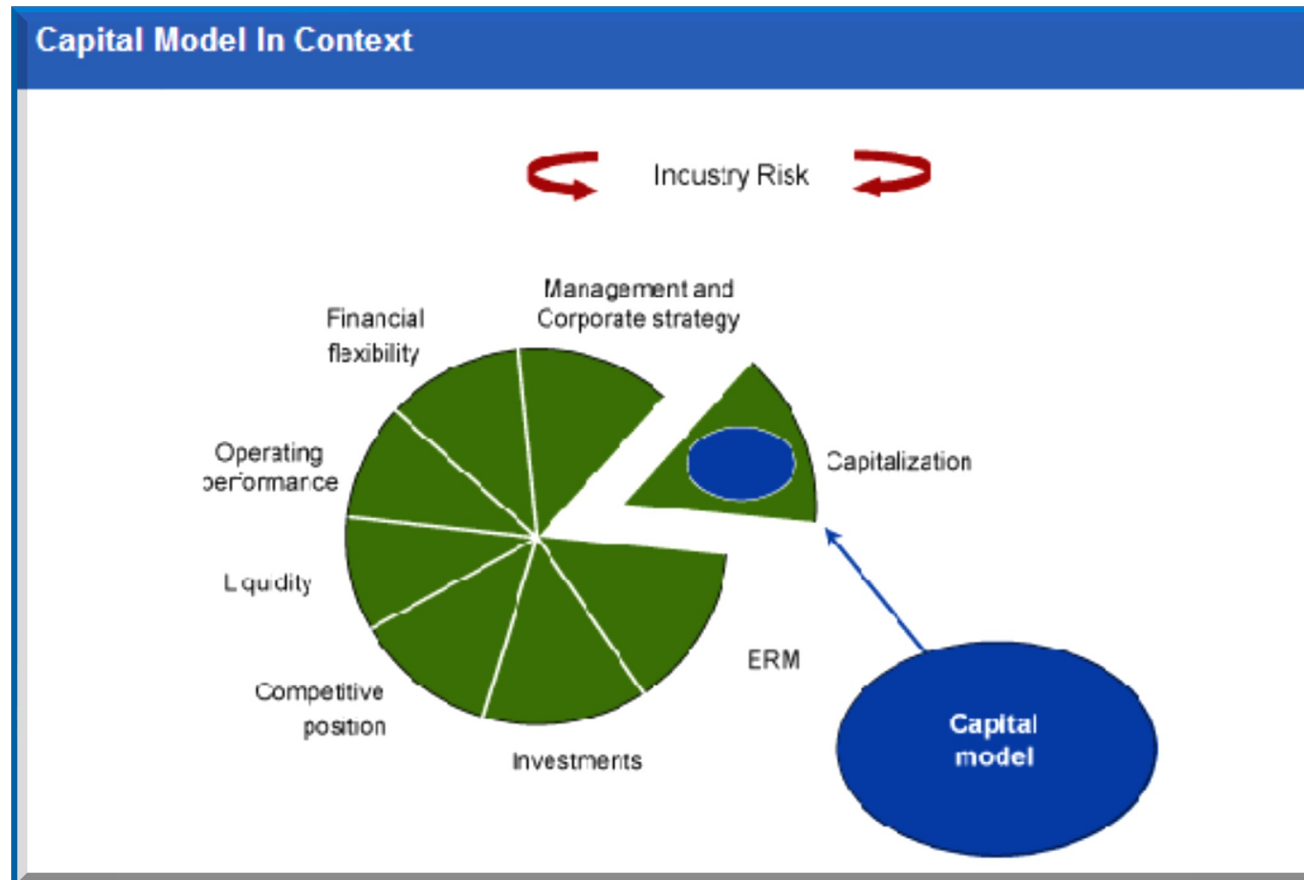


Human Influence Factors:

What Could Go Wrong?

# Organizational Behavior = Risk-based Capital

Qualitative and Quantitative Factors –  
Measures of Risk Behavior



Composition of capital

Navigate global regulatory standards

Risk appetite

Judgment

Op Risks = Human Errors

Hurdles in Op Risk

- Definitional issues
- Data collection
- Limits in quantification

How do you measure risk reduction?

Target levers of control to adjust risks

- intentional control design

\*Easily recognizable after the fact but seldom measured beforehand

# Cognitive Risk Framework for ERM & Cyber Security

- ❑ 5 Pillars
- ❑ Multidisciplinary
- ❑ Evidence-based
- ❑ Human Centered
- ❑ Blends in traditional risk
- ❑ Tiered – Executive to Line

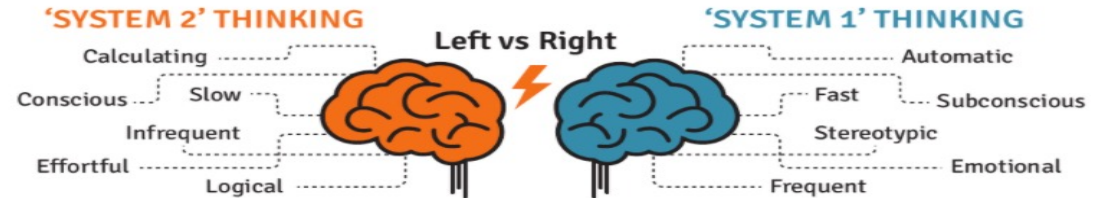
## BEHAVIOURAL ECONOMICS



Traditional economics views humans as robotic machines who make calculated decisions based on logic. In contrast, behavioural economics views humans as irrational and emotional beings who are influenced by biases and experience when making decisions. Traditional economics is the theory; behavioural economics is the reality.

### THE NEUROSCIENCE

Decision making is a mixture of both system 1 and system 2 thinking – it can be considered as a continuum rather than a discrete choice between systems.



### B2B DECISION MAKING IS EMOTIONAL

90% of buyers will buy from one of the brands they very first thought of (usually between 1-3).

B2B customers feel less safe and need more reassurance. We often see softer, relationship factors as the strongest drivers of satisfaction/loyalty.



### BEHAVIOURAL ECONOMICS IN ACTION

#### Loss Aversion & Endowment



- It is often hard to convince companies to change suppliers because they trust the devil they know rather than the devil they don't know. This is called "loss aversion".
- People will pay more for a product they know than a product they don't know. This is called "endowment".

#### Cognitive Framing

The way that information is presented can effect our interpretation of that information.



- Caution should be taken when framing questions so that respondents aren't led in their answers.
- Messages should be clear and major on big benefits - playing on positive and impressive stories.

#### Status Quo Bias

People love their comfort zone and are unwilling to move outside it without a significant incentive for doing so. They need to be persuaded that the gains of a change will far outweigh the potential losses.



- The study of past behaviour is much more reliable than asking hypothetical questions about future intentions
- Suppliers have to provide a significant incentive to encourage switching while at the same time reassuring customers they can match their current offer.

#### Anchoring & Semmelweis Reflex

**Anchoring:** To rely on the first piece of information you receive on a subject.

**Semmelweis Reflex:** The tendency to reject new evidence that contradicts a paradigm.



- Be aware that any pre-codes that are offered as potential answers will bias the results at they provide ready made "anchors".
- Look for "nuggets of gold" in information as this could be the small dot on the radar screen that eventually becomes much bigger.

