



# *Audit Challenge Conference Series 2023*

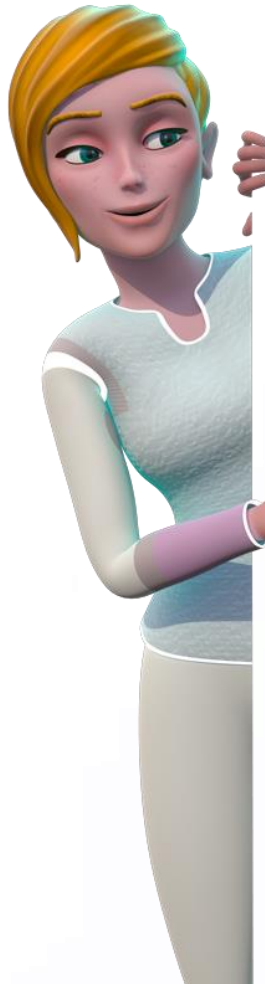


## *Internal Audit in a new Risk World of BANI*

Identifying and Transforming macro risk  
evolutions into micro risk impacts

**FASTER, BETTER AND MORE DISRUPTIV THAN EVER! AUDIT CHALLENGE CONFERENCE SERIES 2023**

# **Geopolitical influences change the audit risk landscape**



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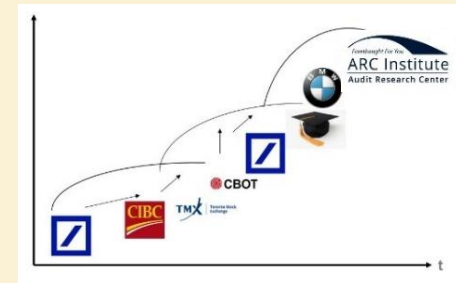
The Audit Research Center as part of the ARC Institute supports audit departments globally and especially national IIA associations with yearly 1.800+ training days and transformation services along an audit knowledge value chain.



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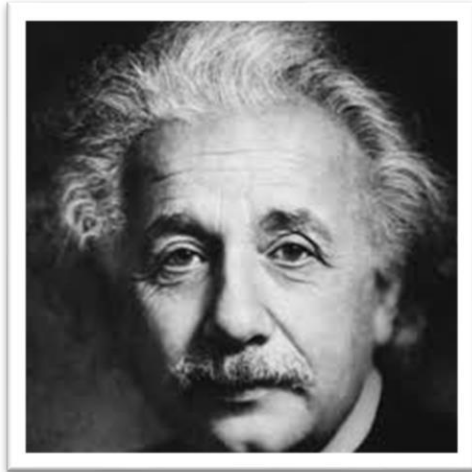
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Chairman of the Digital Transformation Board  
Chief Editor Risk, Compliance & Audit Journal  
Qualified Executive Trainer §33 KWG, SREP  
in Banking Supervision for Audit Committee and C-Level



## Agenda

- 1 Baseline situation: VUCA is the new BANI
- 2 Audit Methodology Set-up
- 3 Extended risk focus: Gross risk, macro risk influencing factors
- 4 Solution approaches to improve audit risk radar at the speed of risk
- 5 Joint conclusion and outlook



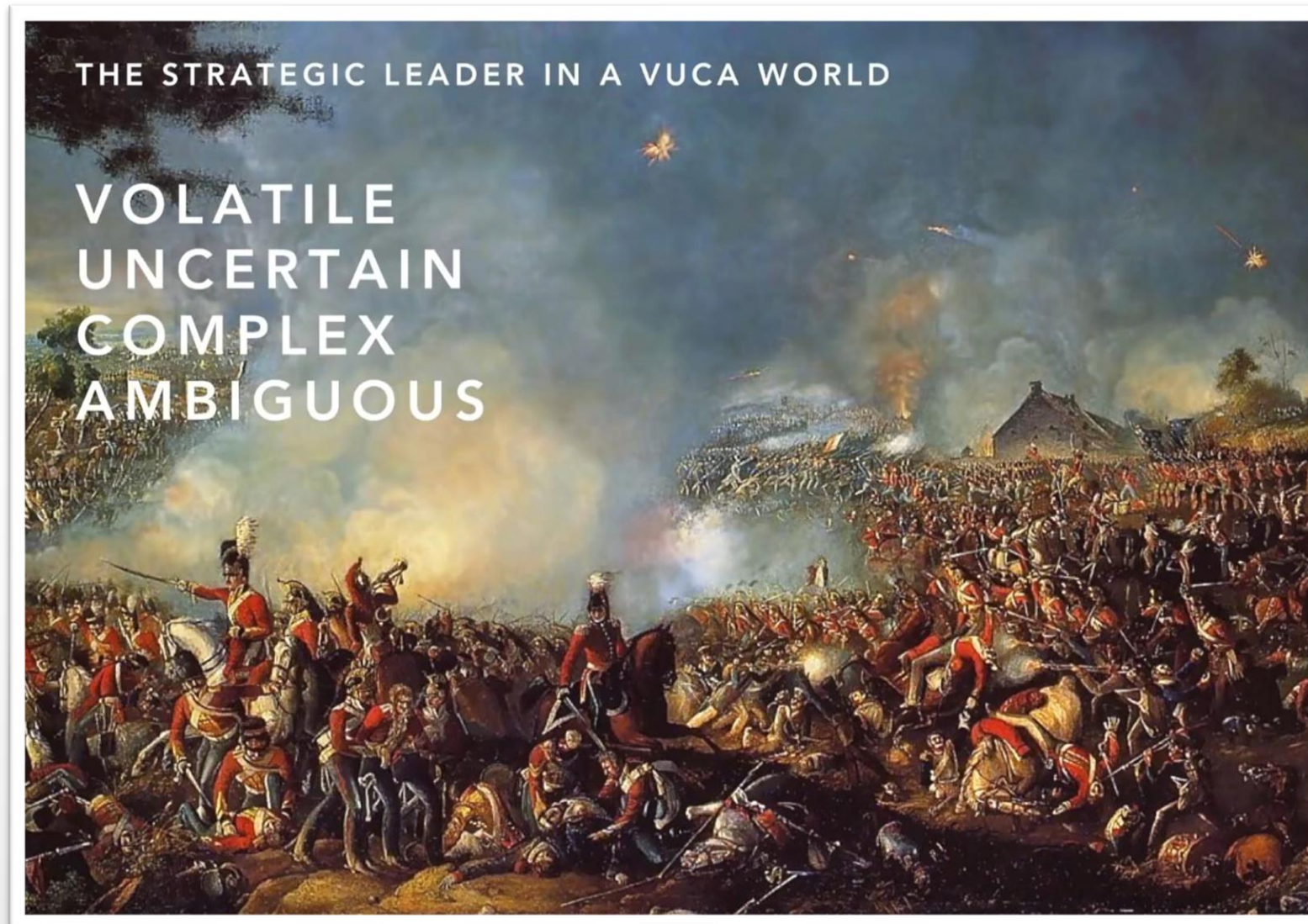
## Key Challenge for Today

*„Everything should be made  
as simple as possible,  
but not simpler.”*

*Albert Einstein*

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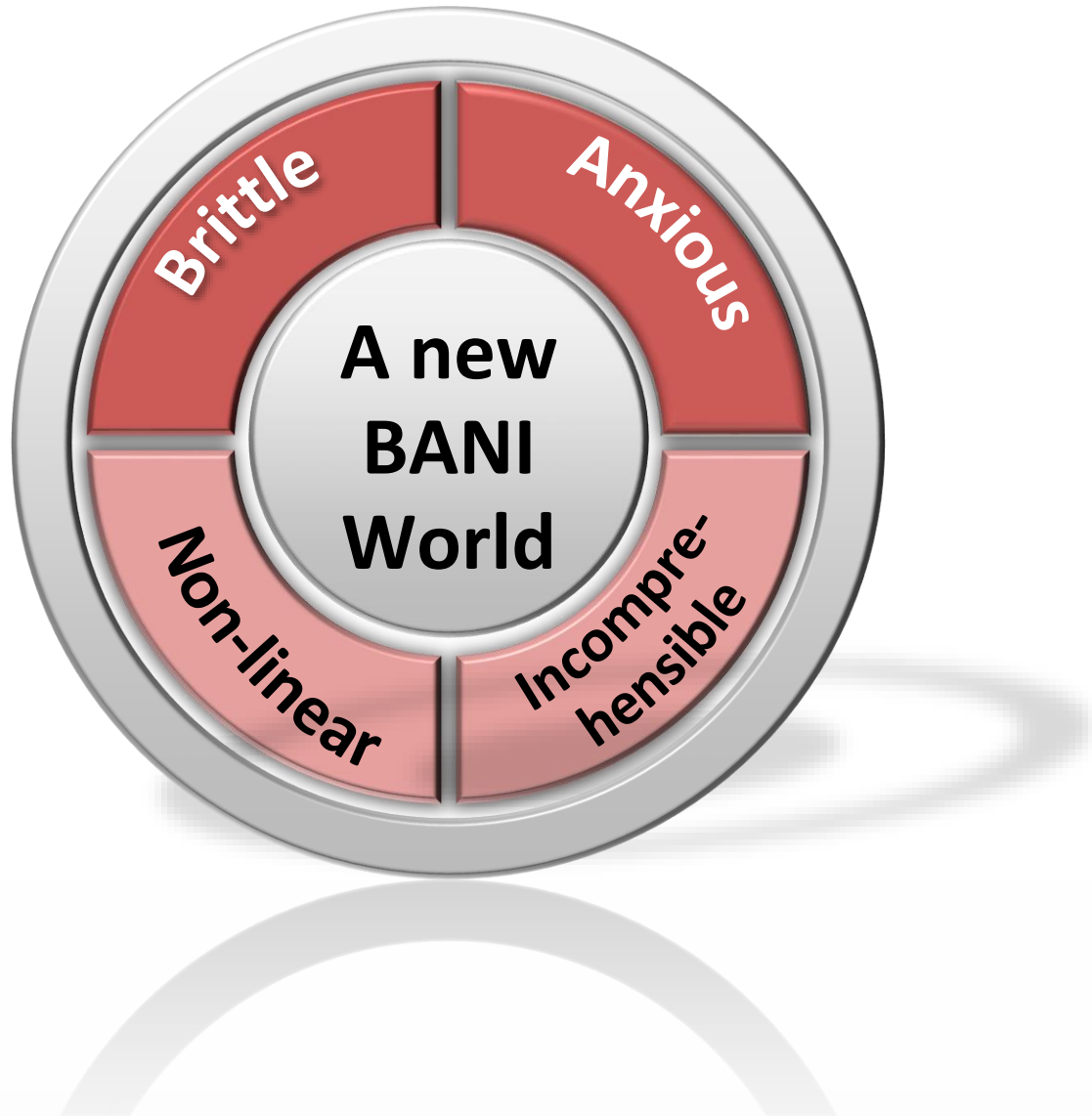


## Interim Conclusion VUCA Approach:

- ✓ VUCA already had disruptive elements in focus,
- ✓ but under the premise of agents operating (relatively) rationally

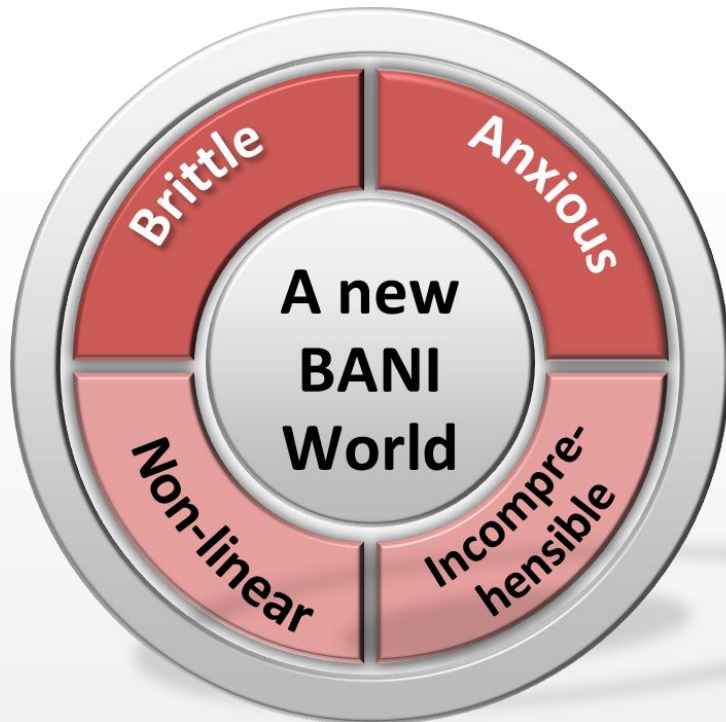
With main focus on win-win situations in the sense of improvement of an original condition





**Jamais Cascio**

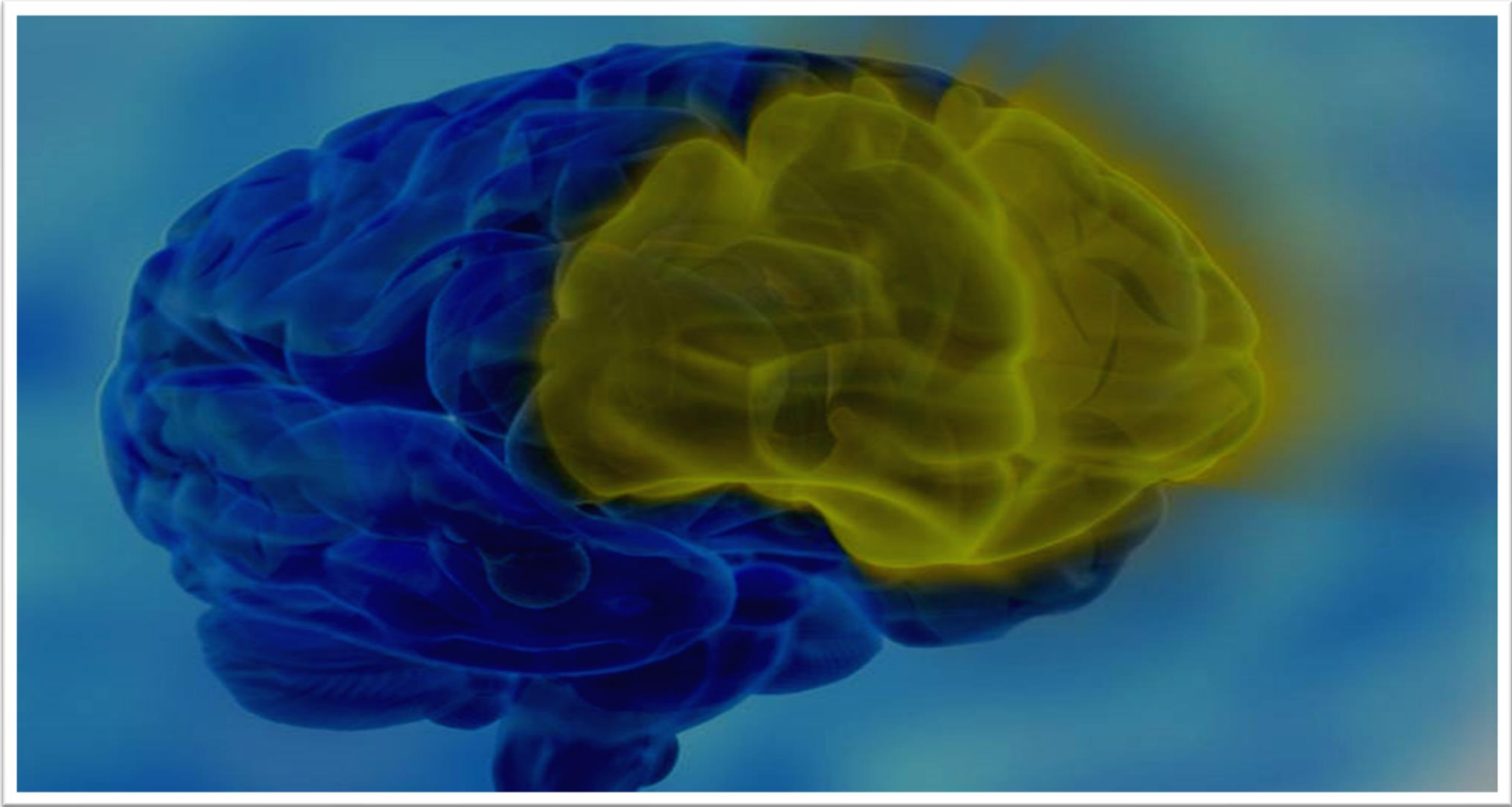




## Interim Conclusion BANI Approach:

- ✓ Multidimensional influences affect people's everyday lives
- ✓ Our brain tries to find simple solutions in coherent linear contexts, cause-effect chains

In this context the geopolitical crises show that irrational behavior of agents leads to lose-lose situations.



## Human brain „infrastructure“

*Important: Hardware ~ not changeable 😊*

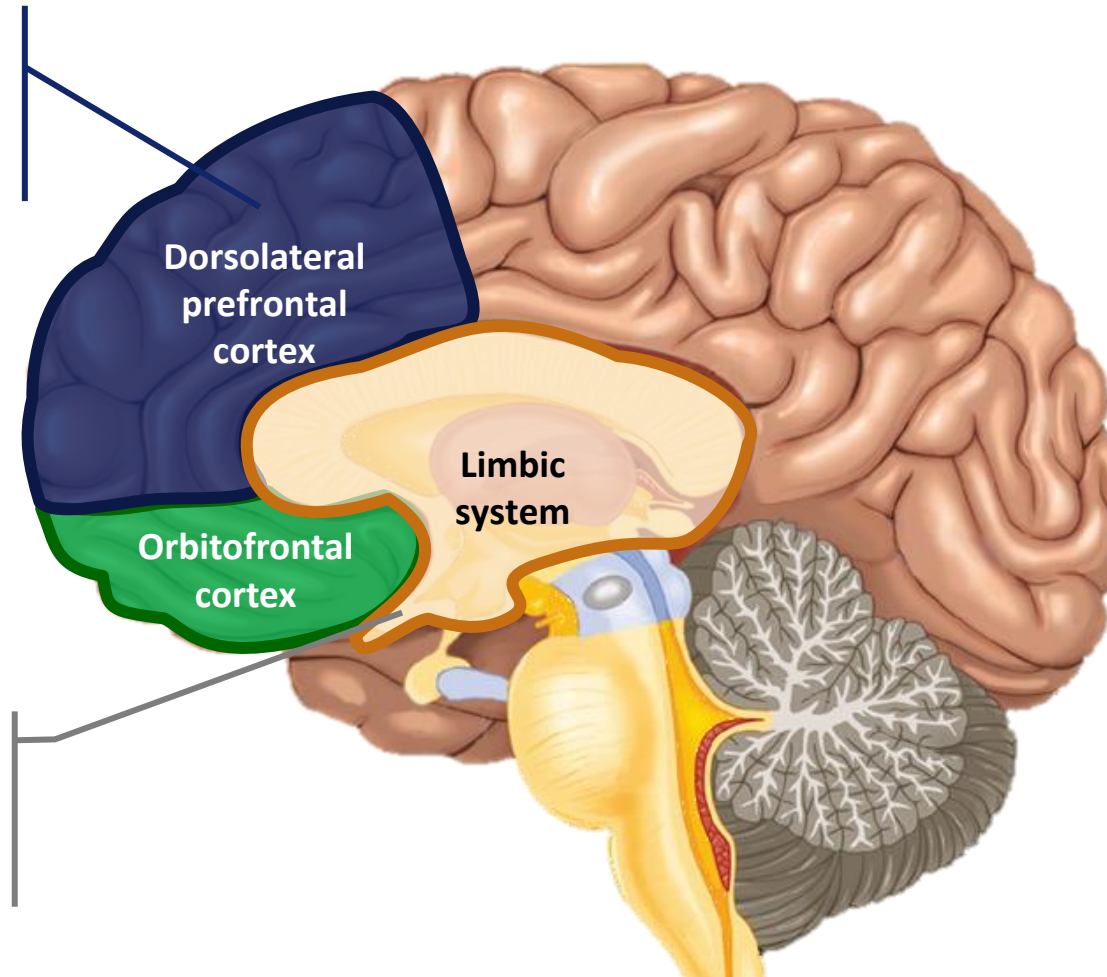
**Prefrontal cortex**  
Rational thinking, analytic, problem solving ~ logical computing capacity

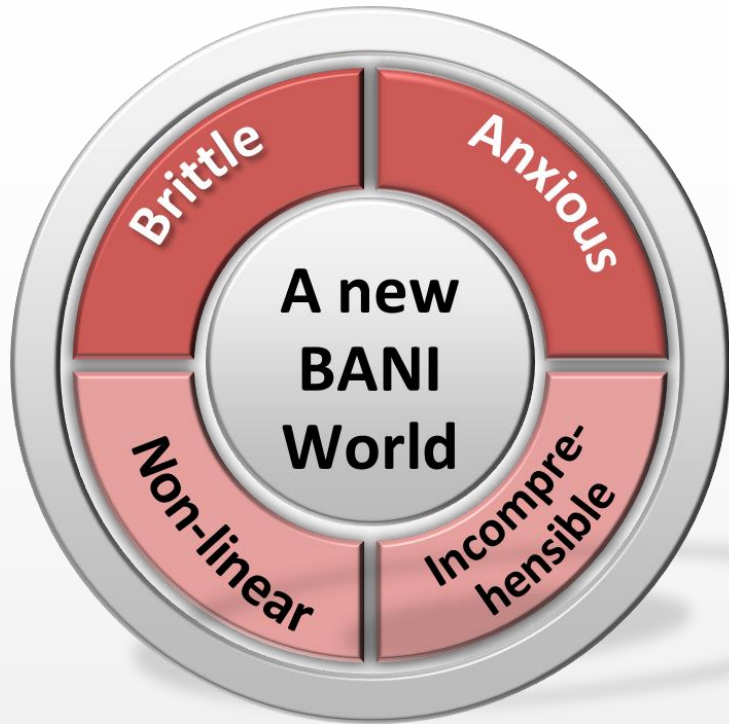


Slows down the evaluation patterns and first impulsive action



**Limbic system**  
Continuous evaluation of the situation based on childhood experiences and patterns

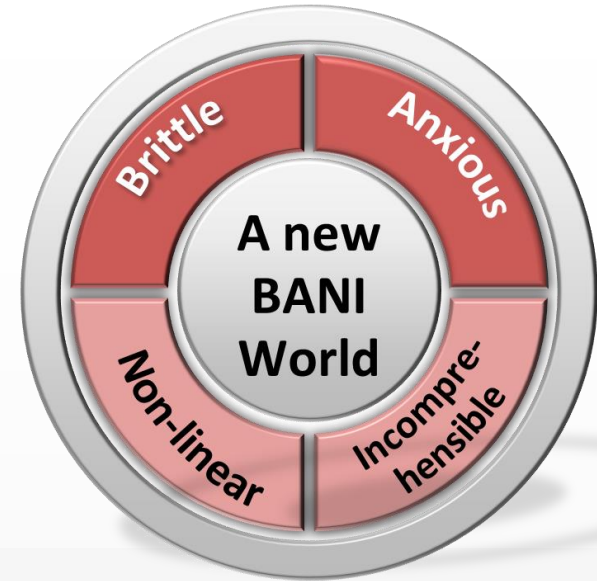




# Top 5 Risk on a global level 2023

*macro risk influencing factors for our audit risk landscape*

Geoeconomic confrontation



1

Energy supply crisis

2

Cost-of-living crisis

3

Rising inflation

4

Food supply crisis

5

Cyberattacks on critical infrastructure

Source

World Economic Forum Global Risks  
Perception Survey 2022-2023.

Risk categories

Economic

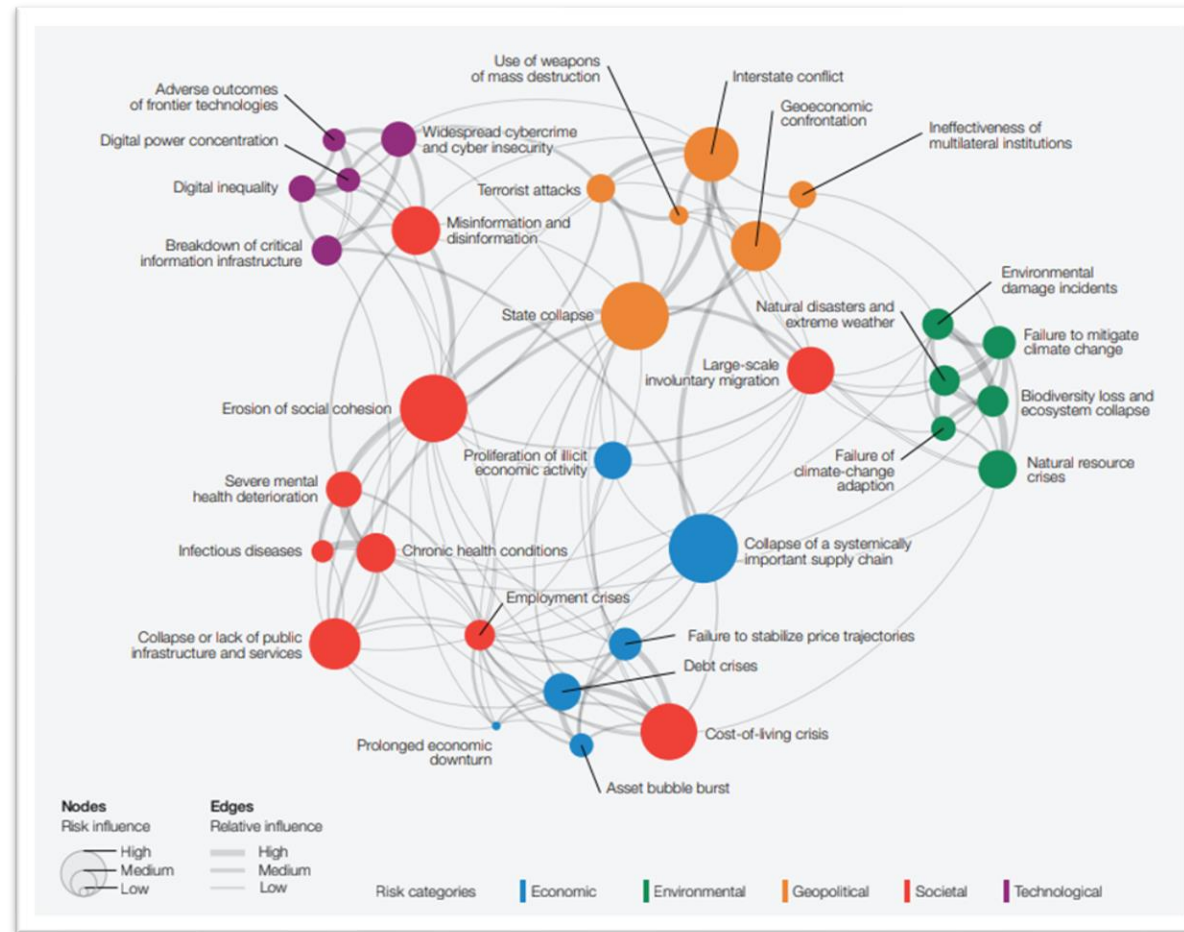
Environmental

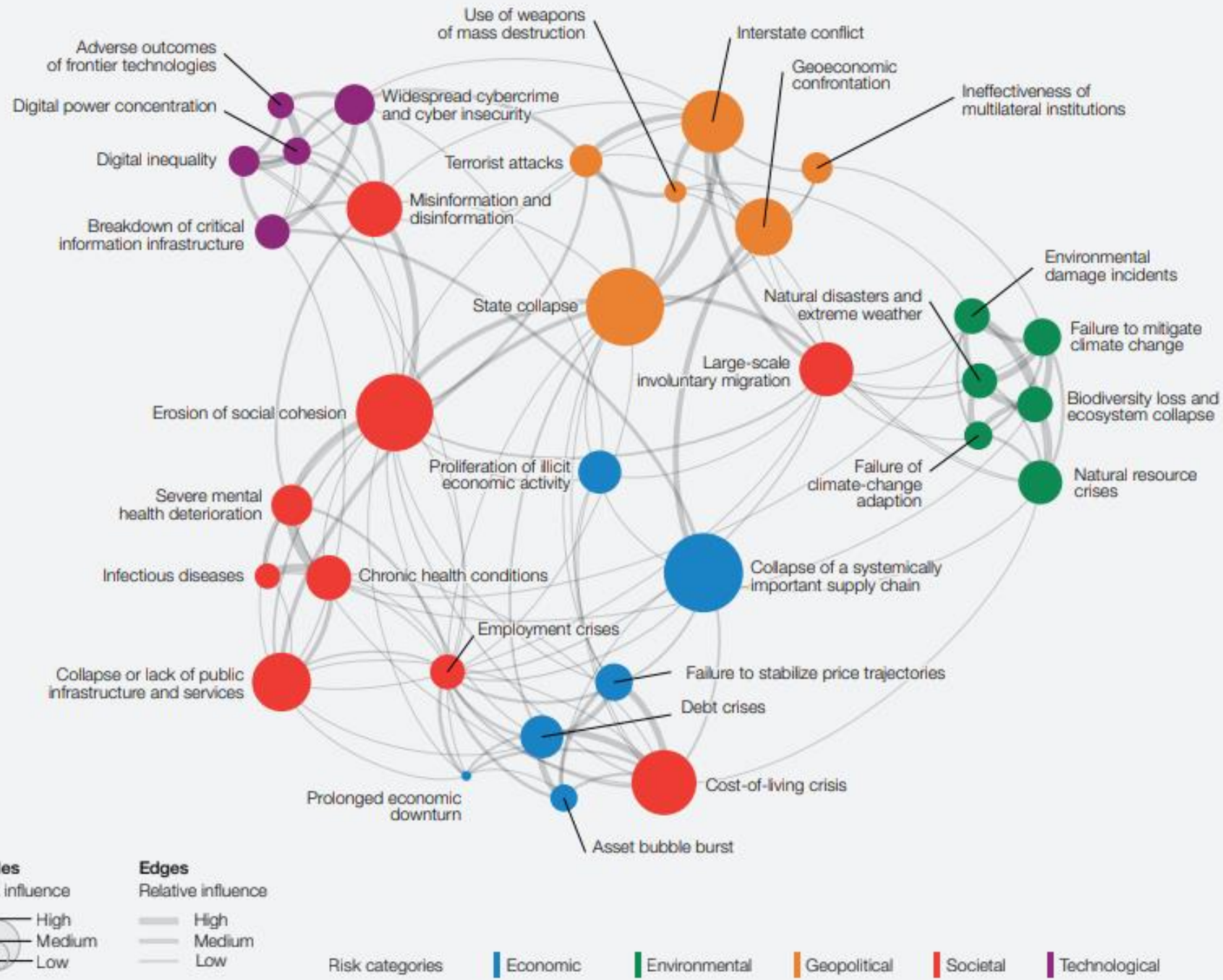
Geopolitical

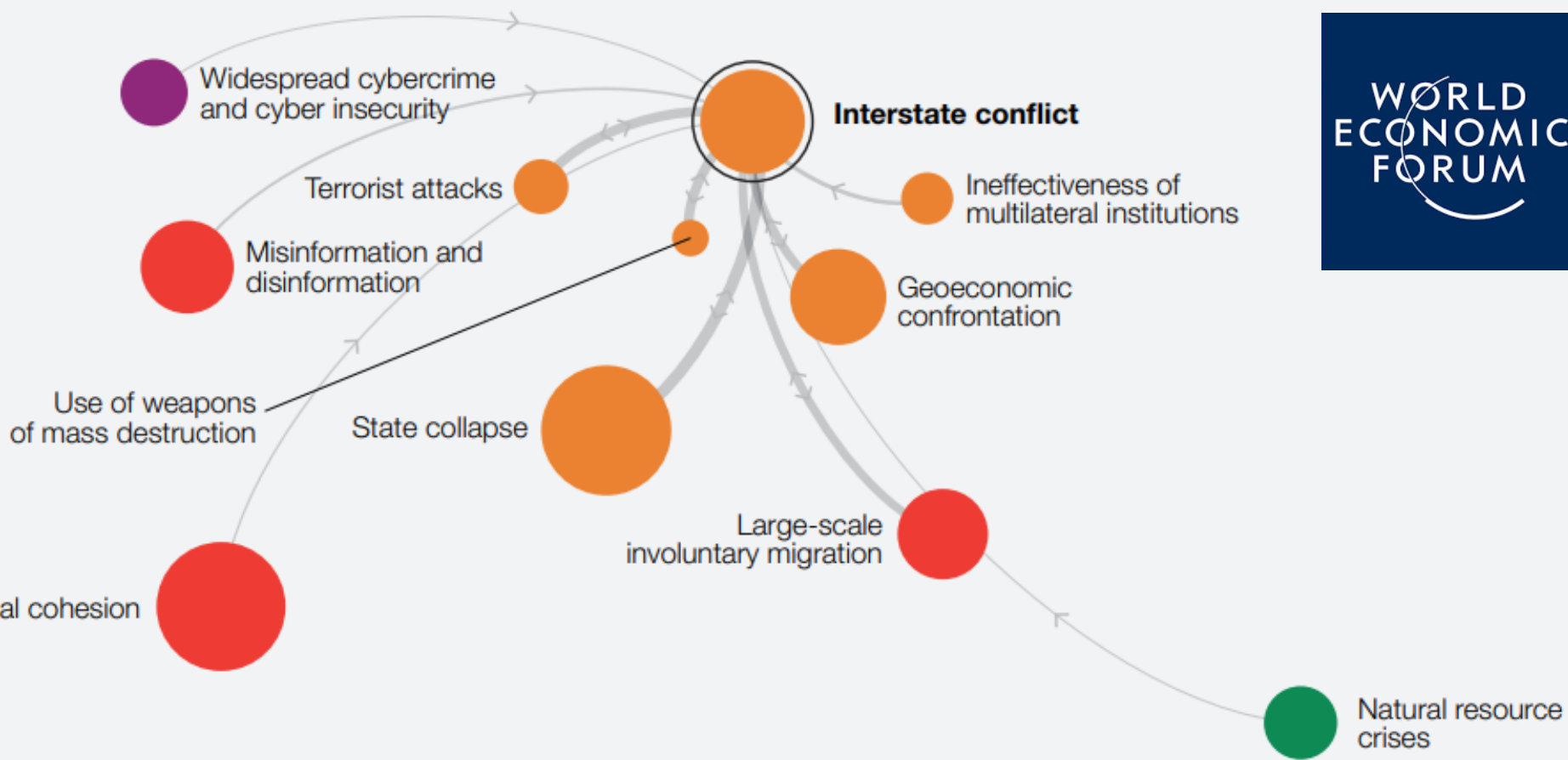
Societal

Technological

# Global Risk Landscape | ESG Audit in Spotlight





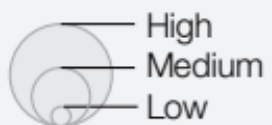


**Reference**



**Nodes**

Risk influence



**Edges**

Relative influence



Risk categories

| Economic

| Environmental

| Geopolitical

| Societal

| Technological



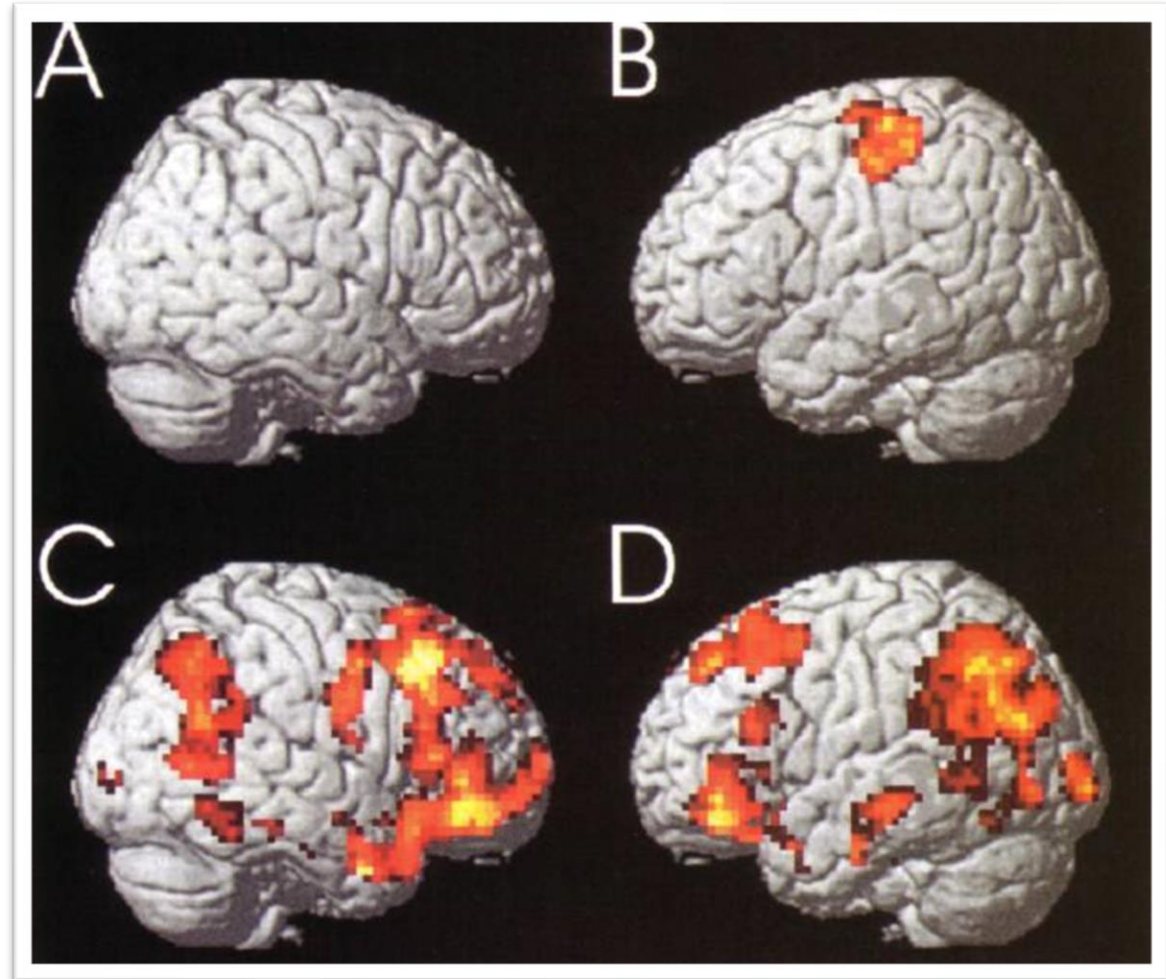
# What happens to the brain when learning occurs...

## Brains A & B

- Low energy expenditure, applying what has already been learned
- Narrow focus and attention

## Brains C & D

- Conscious involvement, new concepts are being considered
- Higher energy as new new links are formed
- New perspectives evolve, knowledge is acquired



Translated based on original concepts from: Gehirn&Geist 2/2002, Seite 57; © Manfred Spitzer

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Extended risk focus: Gross risk, macro risk influencing factors

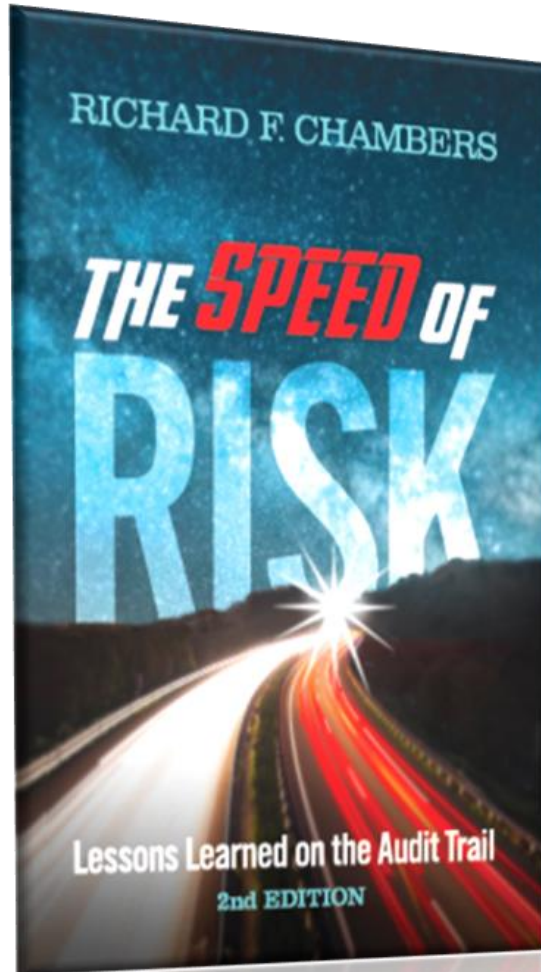
4

Solution approaches to improve audit risk radar at the speed of risk

5

Joint conclusion and outlook

## Auditing at the Speed of Risk



- ⇒ The imperative to audit at the speed of risk
- ⇒ How internal audit must leverage innovation in the face of disruption
- ⇒ Internal audit's role in auditing culture, artificial intelligence, and new technologies
- ⇒ The idea that internal auditors can audit anything—but not everything
- ⇒ The skills future trailblazers will need in internal audit

<https://www.accountingtoday.com/news/longtime-iaa-ceo-richard-chambers-plans-to-step-down-in-march>



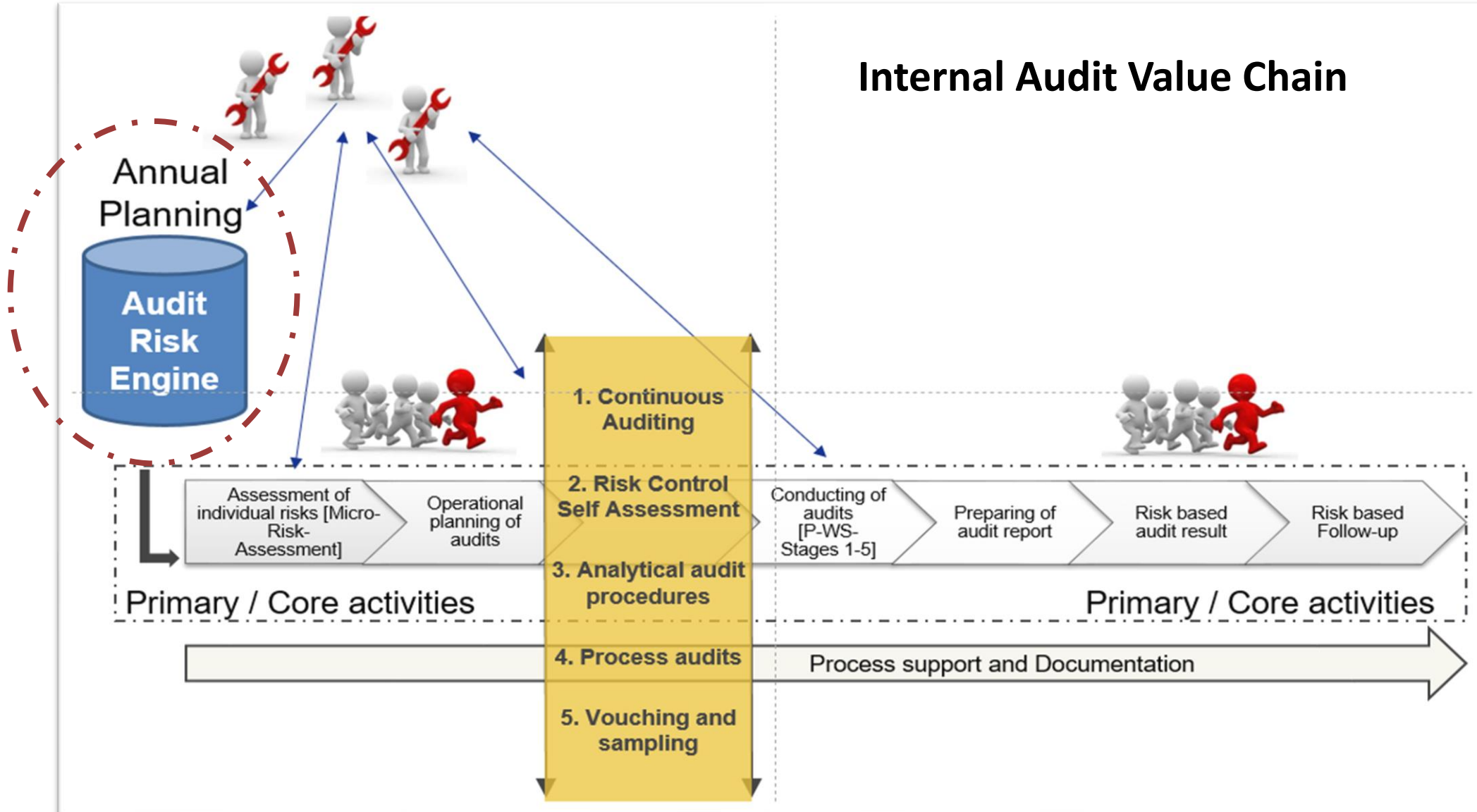
How is that now again  
today in internal audit?

... about the speed?



**Auditing @ the Speed of Risk?**

## Internal Audit Value Chain



## From gross risk to net risk

How good is our Enterprise Supervisory System?



### Inherent or Gross Risk

- Internal Control System
- Governance System
- Risk Management System

= Residual- or Net-Risk

▶ The audit risk analysis relates in each case to a specific audit object within the audit universe

- ▶
- Each audit object in the audit universe includes various inherent risks and their sub-risks

## IIA – Definition of Internal Auditing

Providing a Globally Uniform Understanding



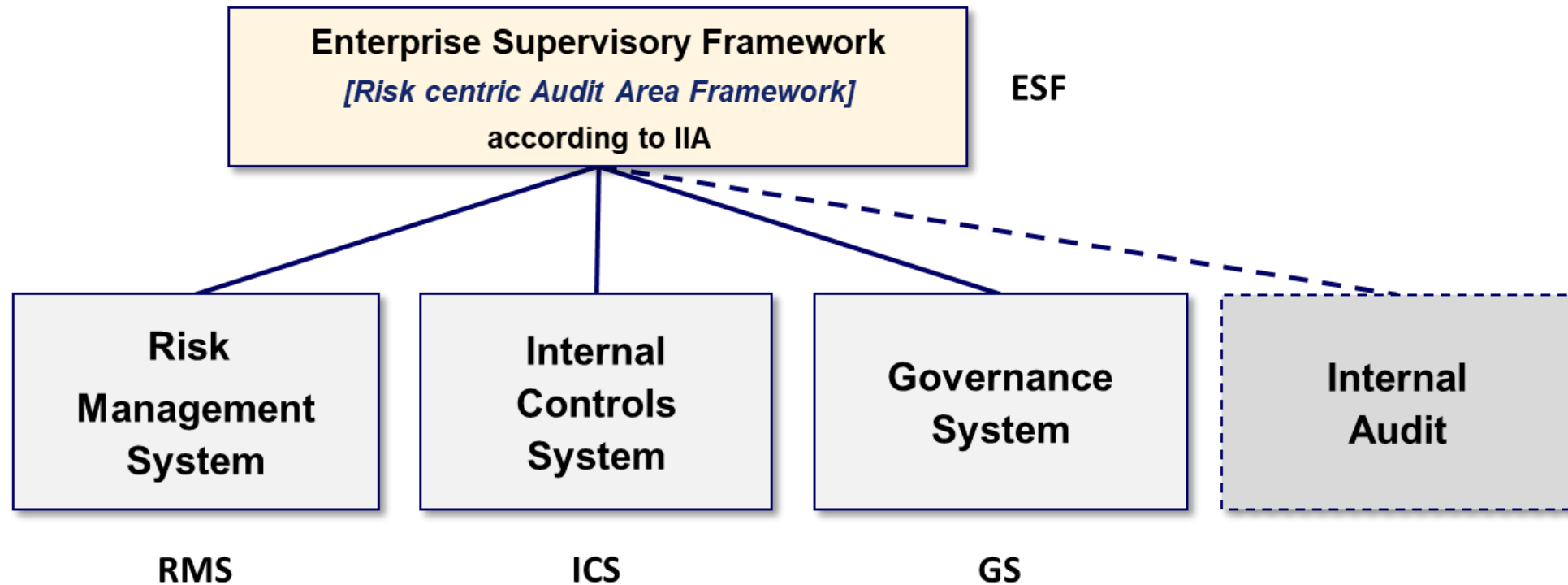
The Institute of  
**Internal Auditors**

"Internal auditing is an independent, objective assurance and consulting activity designed to **add value and improve** an organization's operations.

It helps an organization accomplish its objectives by bringing a **systematic, disciplined approach** to evaluate and improve the effectiveness of **risk management, control, and governance processes.**"



# The Enterprise Supervisory Framework



## From gross risk to net risk

How good is our Enterprise Supervisory System?



### Inherent or Gross Risk

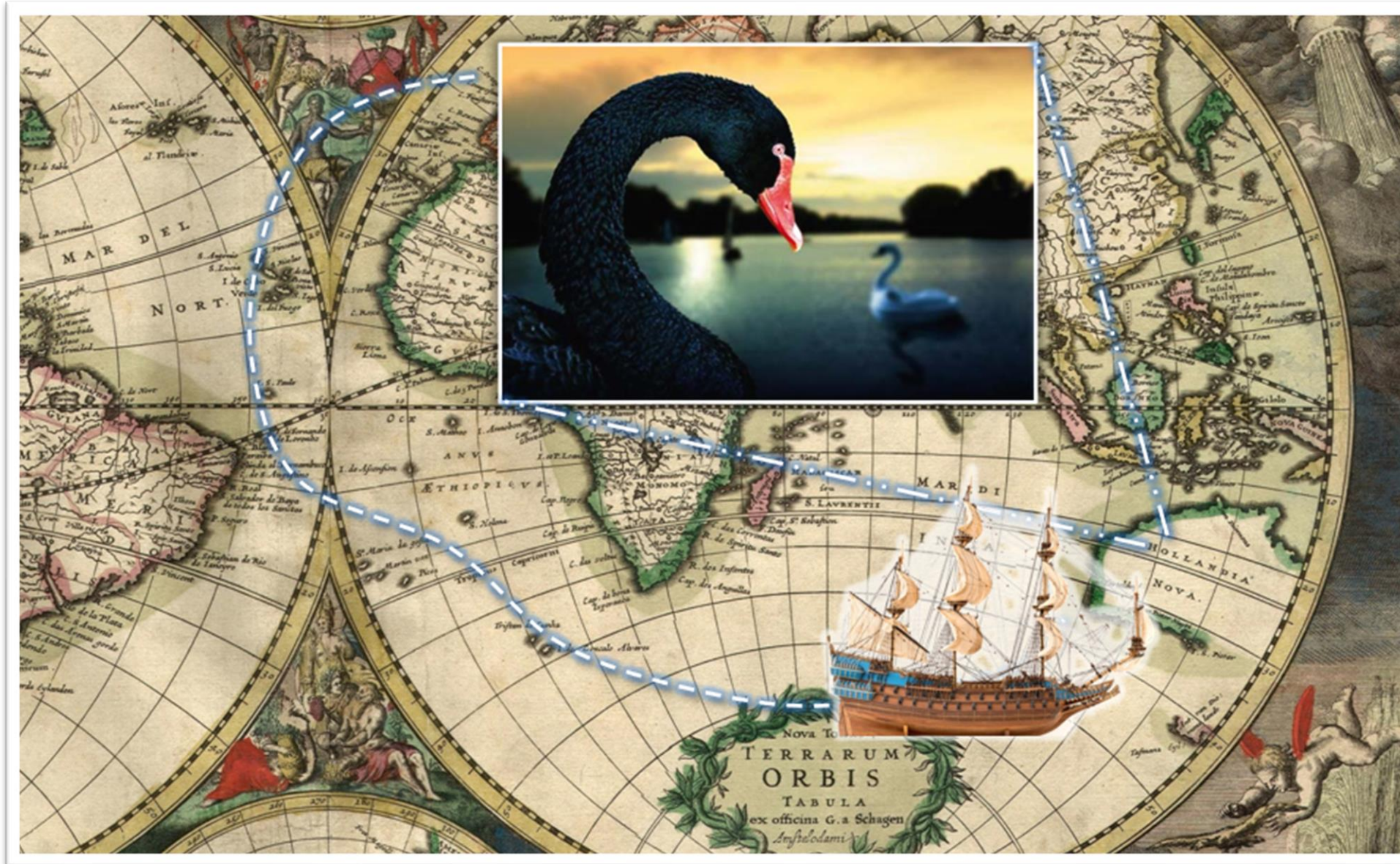
- Internal Control System
  - Governance System
  - Risk Management System
- = Residual- or Net-Risk

- ✓ How can we get better at measuring macro risk impacts early on?
- ✓ To get even better at assessing gross risk and its impact level?

- ✓ So that we can audit and improve the components of the ESF in a more purposeful way according to the new insights of the macro risk impacts,
- ✓ enabling us to better establish the resilience of our corporate business models in this respect.

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# A good visual example is the turkey dilemma



Generous feeding of the turkey for 1000 consecutive days. What does the turkey learn?

# A good visual example is the turkey dilemma

*Result:  
Positive bias of the expected value and  
underestimation of the variance.*



Generous feeding of the turkey for 1000 consecutive days. What does the turkey learn?

Butchering the turkey on day 1001 - preparing for Thanksgiving.

## A good visual example is the turkey dilemma



- ▶ Generous feeding of the turkey for 1000 consecutive days. What does the turkey learn?
- ▶ Butchering the turkey on day 1001 - preparing for Thanksgiving.
- ▶ From a finite set of observations, the generality of the facts can never be concluded.
- ▶ Very significant extreme but rare events may never have occurred in the past period under consideration. Or never occurred in this combination.

# Create a better macro risk radar and meta-know-how to be able to evaluate it

*...for future success*



Johari Window

It was developed in 1955 by the American social psychologists Joseph Luft and Harry Ingham. With the help of the Johari Window the so-called "blind spot" in the self-image of a person is illustrated.

		Knowledge	
		Knowns	Unknowns
Metaknowledge	known	known <b>Knowns</b>	known <b>Unknowns</b>
	unknown	unknown <b>Knowns</b>	unknown <b>Unknowns</b>

*made popular again by  
US Secretary of Defense Donald Rumsfeld*



# Geopolitical influences change the audit risk landscape



		Knowledge	
		Knowns	Unknowns
metaknowledge	known	known <b>Knowns</b>	known <b>Unknowns</b>
	unknown	unknown <b>Knowns</b>	unknown <b>Unknowns</b>

# Create a better macro risk radar and meta-know-how to be able to evaluate it

*...for future success*

Things that are known by you and also seen and acknowledged by others.

		Knowledge	
		Knowns	Unknowns
Metaknowledge	known	Open available	
	unknown		

# Create a better macro risk radar and meta-know-how to be able to evaluate it

*...for future success*

Things that are unknown by you but seen and acknowledged by others.

		Knowledge	
		Knowns	Unknowns
Metaknowledge	known		<b>Blind</b>
	unknown		

# Create a better macro risk radar and meta-know-how to be able to evaluate it

*...for future success*

Things that are known by you but things that are not known to you in terms of content.

		Knowledge	
		Knowns	Unknowns
Metaknowledge	known		
	unknown	<b>Hidden</b>	

# Create a better macro risk radar and meta-know-how to be able to evaluate it

*...for future success*

Things that are unknown by you but which also do not appear on our risk radar screen.

		Knowledge	
		Knowns	Unknowns
Metaknowledge	known		
	unknown		<b>Unknown</b>

# Create a better macro risk radar and meta-know-how to be able to evaluate it

*...for future success*

**This means we have to make ourselves even more aware of where our blind spots are.**

		Knowledge	
		Knowns	Unknowns
Metaknowledge	known	Open available	Blind
	unknown	Hidden	Unknown

# Create a better macro risk radar and meta-know-how to be able to evaluate it

*...for future success*

**This means we need to get better at identifying weak risk signals earlier.**

		Knowledge	
		Knowns	Unknowns
Metaknowledge	known	Open available	Blind
	unknown	Hidden	Unknown

# Create a better macro risk radar and meta-know-how to be able to evaluate it *...for future success*

**1986**



**2004**



**2011**



**Fukushima**



# Create a better macro risk radar and meta-know-how to be able to evaluate it

*...for future success*

**2021**



**2022**



## Create a better macro risk radar

*...for future success*

- ✓ **No brainers:** Short-term impactful trends that should be embedded in the current audit risk planing cycle
- ✓ **Speed-ups:** Trends evolving faster than thought, which may demand immediate audit action.
- ✓ **Alarms:** Trends for which further investigation may be urgently required.
- ✓ **Observatory:** Trends with considerable impact, but only to materialize mid/ long-term.
- ✓ **Parking:** Trends with low impact on the company business model.



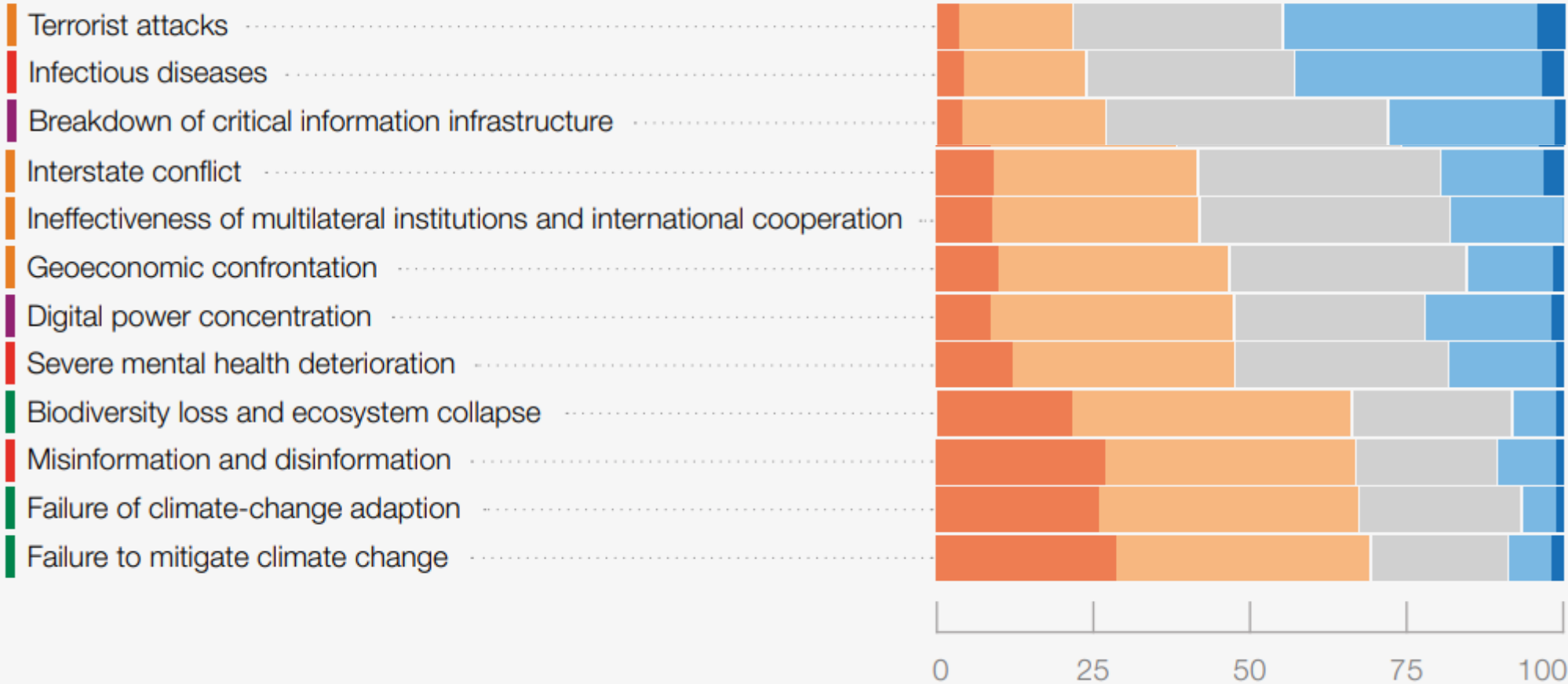
# Build an enhanced macro risk radar *....to better assess inherent risks.*



Risk name

Risk preparedness

Please indicate the current effectiveness of risk management, taking into account mechanisms in place to prevent the risk from occurring or prepare to mitigate its impact



**Perception**

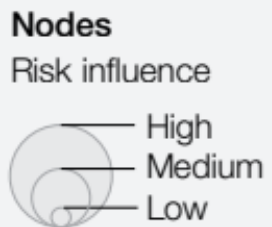
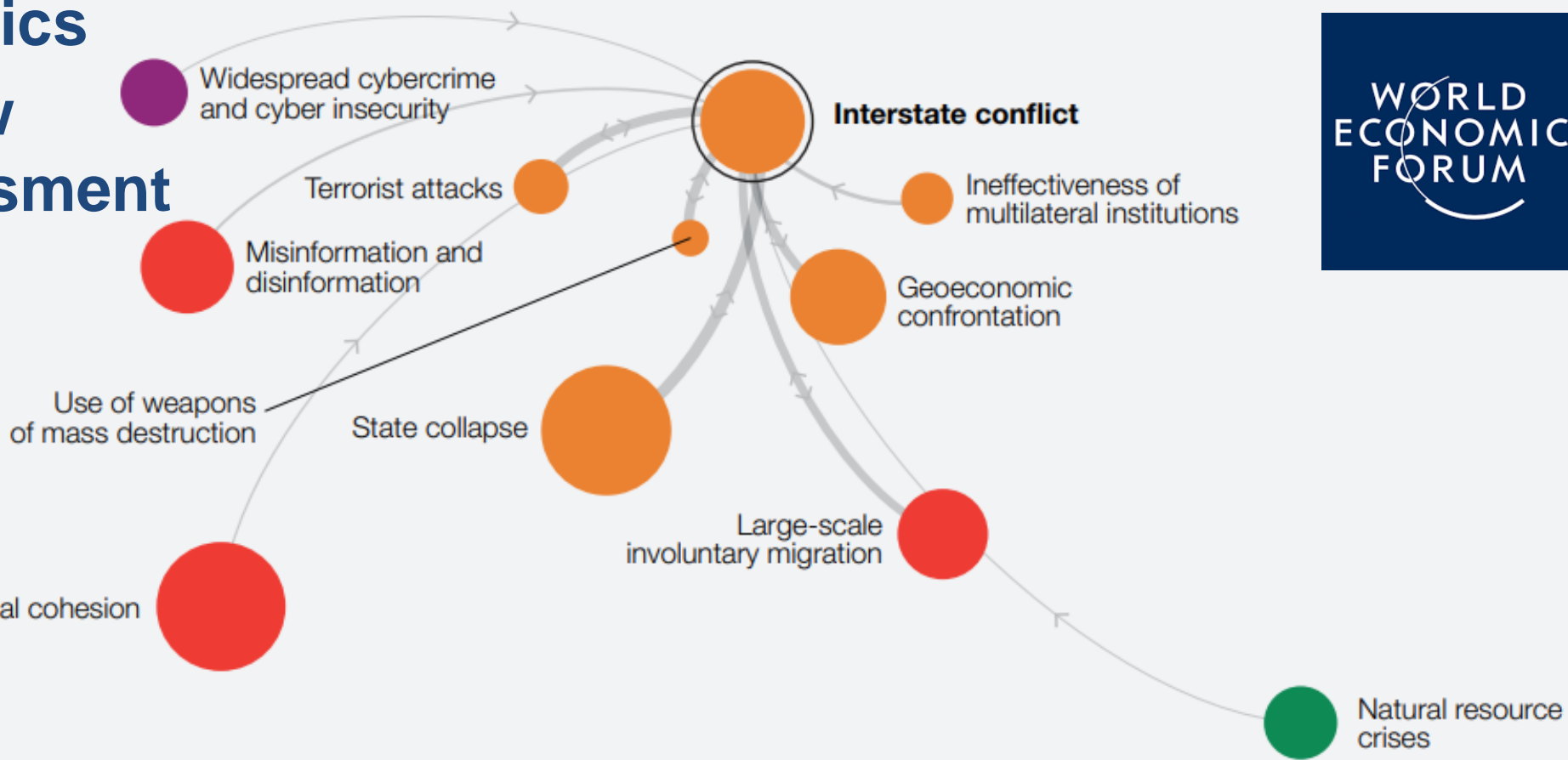
- Highly ineffective
- Ineffective
- Indeterminate effectiveness
- Highly effective
- Effective

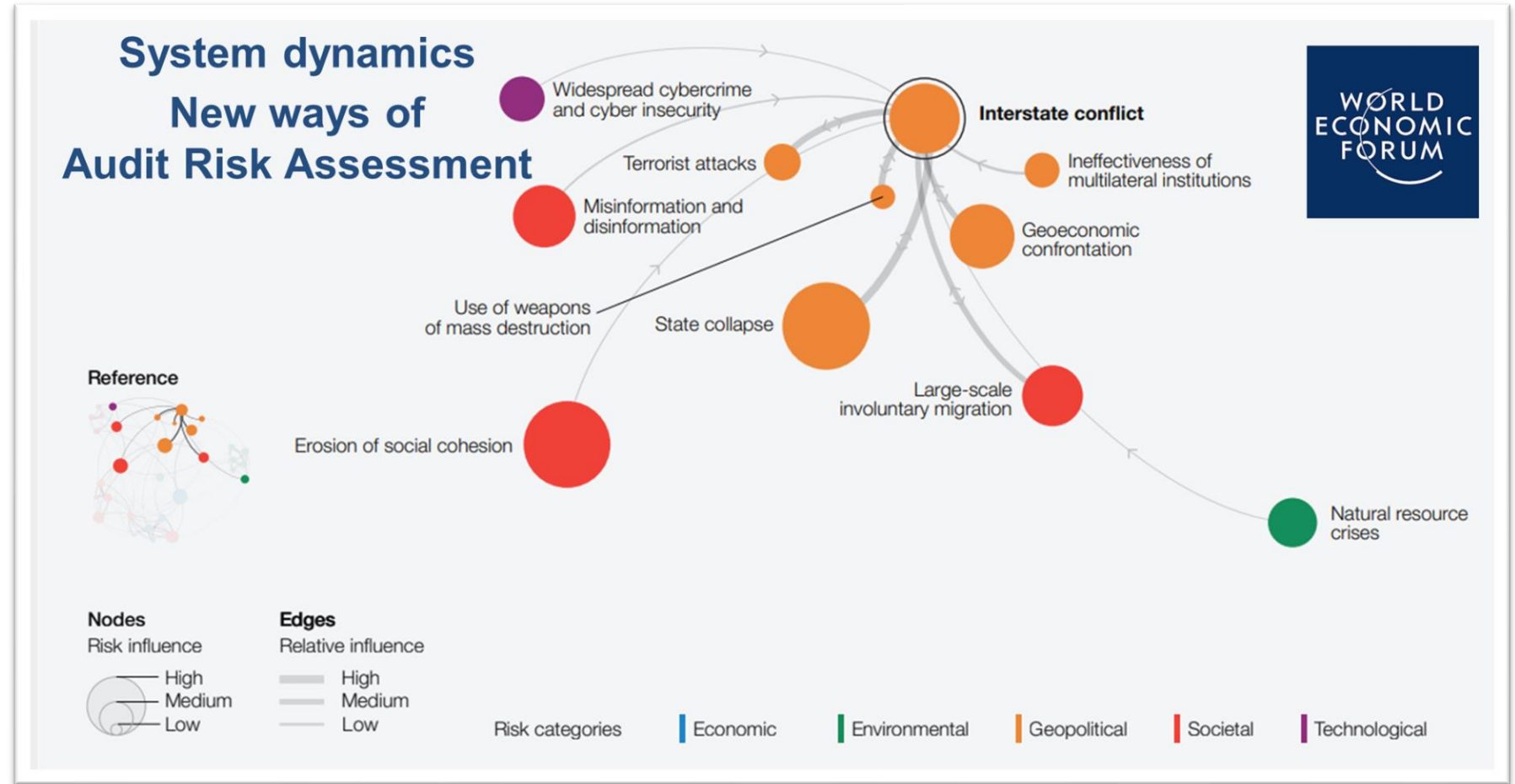
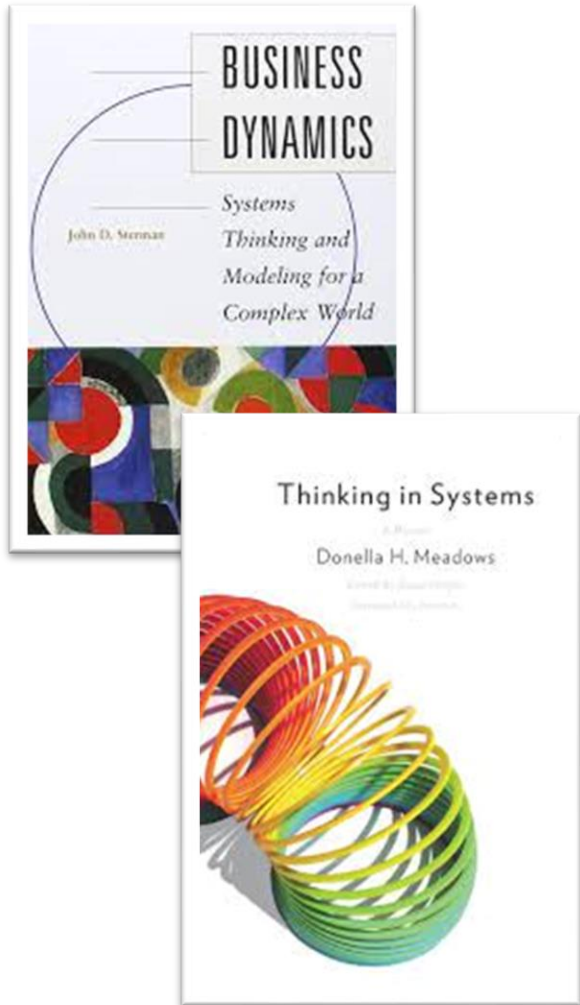
**Risk category**

- Economic
- Environmental
- Geopolitical
- Societal
- Technological

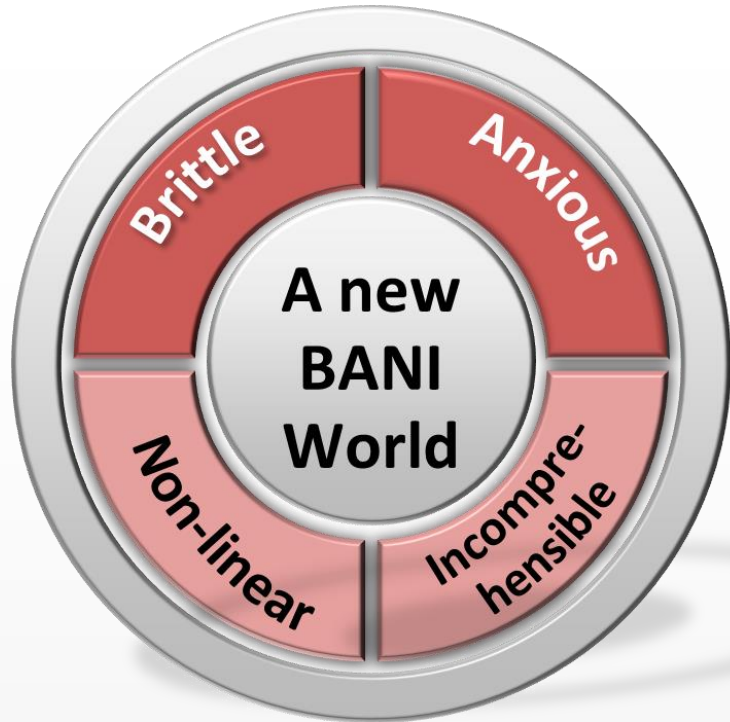
# System dynamics

## Ways of New Audit Risk Assessment





Business Dynamics: Systems Thinking and Modeling for a Complex World, John D. Sterman



## Interim Conclusion enhanced Macro Audit Risk Radar:

- ✓ Pre: Internal audit must learn to better interpret weak signals, and learn to understand their potential effectiveness
- ✓ Post: Internal Audit must create technical and competency-based resources to be able to perform direct event and impact analysis, depending on the occurrence of the events.

**The really interesting and challenging part of this is:** To understand the dynamic links between the potential or occurred macro risk events and the own company business model as well as the audit objects in the audit universe.

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# Auditing @ the Speed of Risk?



**Auditing @the Speed of Risk**

### **The Idea**

behind Speed of Risk | velocity is to include a time element in the risk assessment.

Typically, this is referred to as either **Time to Cause** or **Time to Impact**.



**Auditing @the Speed of Risk**

- ✘ **Dynamics** is the rate at which risk changes over time.
- ✘ Take, for example, the spread of COVID-19:
  - ⇒ **Time to Cause** would measure the rate at which the virus spreads from person to person,

⇒ while **Time to Impact** is the velocity at which people get sick or when businesses are affected.

*By doing this, you could focus on one or both of these measurements.*

## Option 1: Likelihood and Velocity "added"

### Auditing @ the Speed of Risk

Time to Cause	Time to Impact
<b>When and how quickly can this happen to us?</b>	<b>At what point will we feel the impact of the risk event?</b>
<b><math>(\text{Likelihood} + \text{Velocity}) \times \text{Impact} = \text{Audit Risk Score}</math></b>	<b><math>(\text{Impact} + \text{Velocity}) \times \text{Likelihood} = \text{Audit Risk Score}</math></b>

Option 1b: Likelihood and Velocity "added",  
multiplied each by a weighting factor

## Auditing @ the Speed of Risk

Time to Cause	Time to Impact
<b>When and how quickly can this happen to us?</b>	<b>At what point will we feel the impact of the risk event?</b>
$(\text{Likelihood} \times w1 + \text{Velocity} \times w2) \times \text{Impact} = \text{Audit Risk Score}$	$(\text{Impact} \times w1 + \text{Velocity} \times w2) \times \text{Likelihood} = \text{Audit Risk Score}$

## Option 2: Likelihood and velocity "multiplied"

### Auditing @ the Speed of Risk

Time to Cause	Time to Impact
<b>When and how quickly can this happen to us?</b>	<b>At what point will we feel the impact of the risk event?</b>
<b>(Likelihood x Velocity) x Impact = Audit Risk Score</b>	<b>(Impact x Velocity) x Likelihood = Audit Risk Score</b>

Option 2b: Likelihood and velocity "multiplied" as well as multiplied each by a weighting factor

## Auditing @ the Speed of Risk

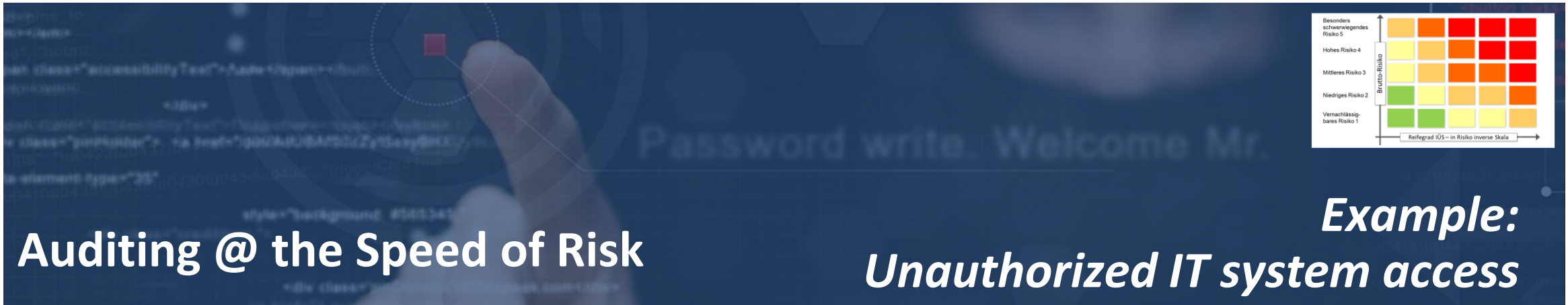
Time to Cause	Time to Impact
<p><b>When and how quickly can this happen to us?</b></p>	<p><b>At what point will we feel the impact of the risk event?</b></p>
<p><b><math>[(\text{Likelihood} \times g1) \times (\text{Velocity} \times g2)] \times \text{Impact} = \text{Audit Risk Score}</math></b></p>	<p><b><math>[(\text{Impact} \times g1) \times (\text{Velocity} \times g2)] \times \text{Likelihood} = \text{Audit Risk Score}</math></b></p>

## Auditing @ the Speed of Risk

## *Example: Unauthorized IT system access*

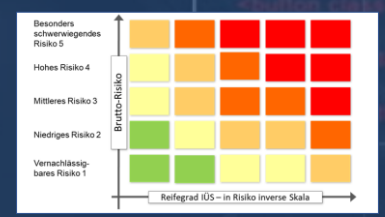
- ✘ Let's now apply this idea to a risk assessment.
- ✘ Risk is calculated as impact and probability, but this risk also passes through an organization at a certain speed.
- ✘ Let's take a simple example like "Unauthorized IT System Access" as a risk and use the new metrics **Time to Cause** and **Time to Impact**.
- ✘ For the following example, let's assume that all metrics use a CMMi 5-point inverse risk scale, where 1 = Low Risk and 5 = High Risk.





**Auditing @ the Speed of Risk**

*Example: Unauthorized IT system access*



Time to Cause	Time to Impact
<p><b>When and how quickly can this happen to us?</b></p>	<p><b>At what point will we feel the impact of the risk event?</b></p>
<p><b>[[Likelihood x g1) + (Velocity x g2)] x Impact = Audit Risk Score</b></p>	<p><b>[(Impact x g1) + (Velocity x g2)] x Likelihood = Audit Risk Score</b></p>
<p><math>[3 \times 0,5 + 5 \times 0,5] \times 4 = 16</math></p>	<p><math>[4 \times 0,5 + 5 \times 0,5] \times 3 = 13,5</math></p>

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## TYPES OF DRIVING FORCES



### MEGATRENDS

Drive paradigm shift. While they often take time to form, they have strong, deep and long-lasting impact (e.g. climate change, urbanization)



### TRENDS

Gradual and long-term shift in the forces shaping the future of a nation, region, industry or society (e.g. decentralization of energy grids, increasing use of biointerfaces, geopolitical fragmentation)



### WEAK SIGNALS

First symptoms of change that may become significant in the future. While difficult to see now, it will have a big impact (e.g. ice free arctic oceans)



### WILDCARDS

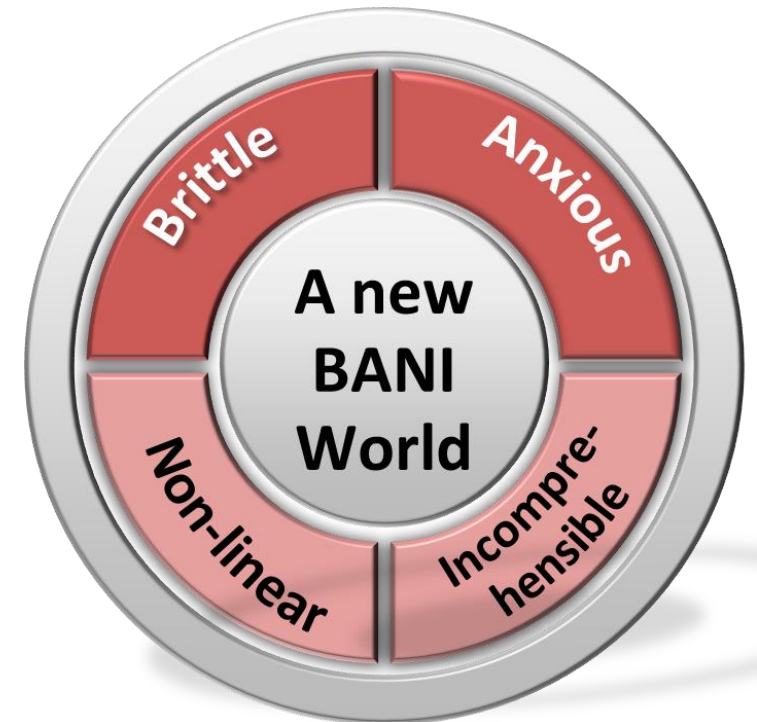
Discontinuities and sudden events with a low probability of occurrence, high impact and unexpected character (e.g. 9/11, COVID19)



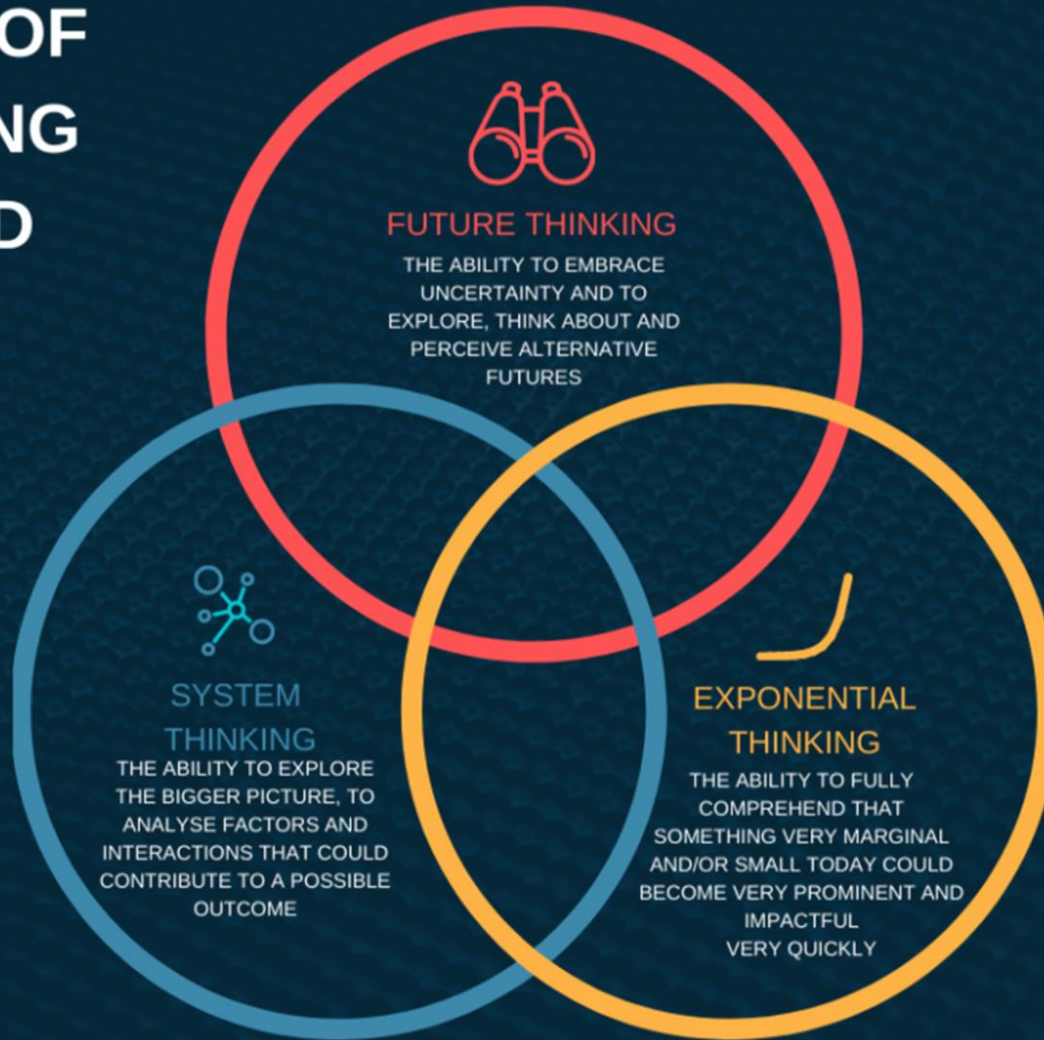
### UNCERTAINTIES

A critical driving force that points or could lead to alternative and contrasting evolutions or implications (e.g. the long-term impact of chat GPT)

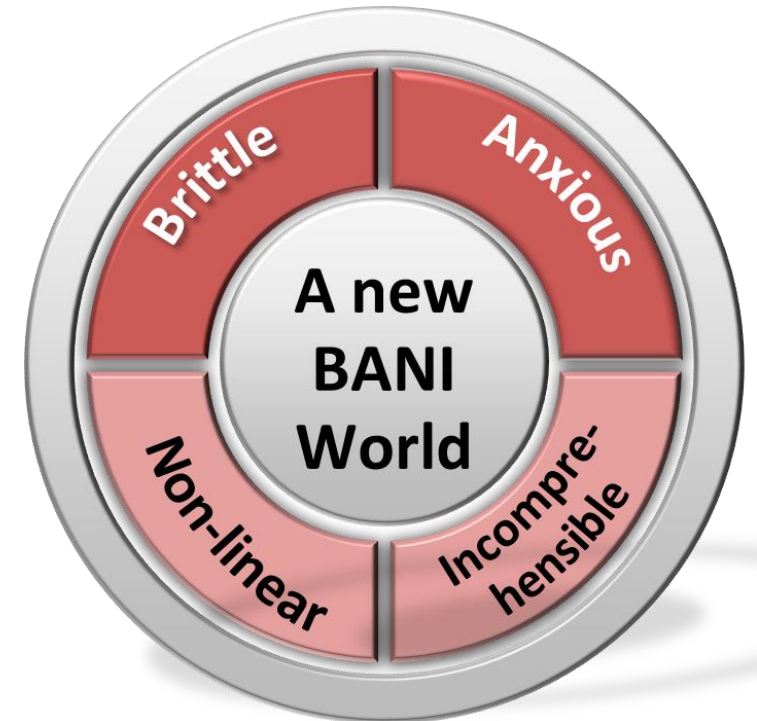
Types of driving forces of change. Image: World Economic Forum



# TYPES OF THINKING NEEDED



Types of thinking needed for better foresight. Image: World Economic Forum



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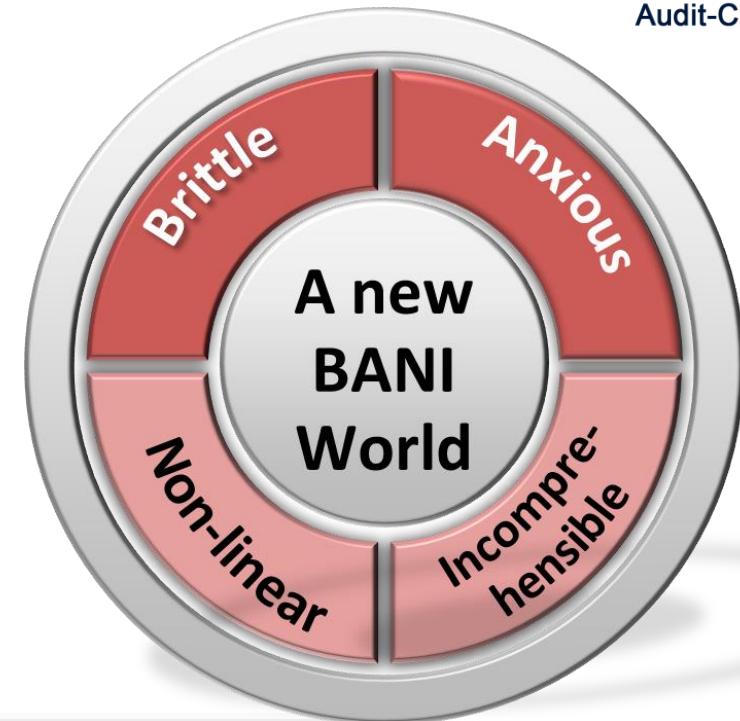
Solution approaches to improve audit risk radar at the speed of risk

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Joint conclusion and outlook

## Key messages and joint conclusion

*...with the aim of identifying macro risks for our companies earlier and better analyzing their level of risk influence in terms of **Time to Cause** and **Time to Impact**.*



**1. Expanding the risk focus from pure net risk to gross risk | Macro Risk Focus**

**2. Raising employee awareness of weak signals in the Audit Risk Radar area**

**3. Interconnected impact analyses for evaluation of risk mitigation activities in and the level of impact on the company's business model**

„It always seems impossible until it's done.“



*Nelson Mandela*

**Dr. Dominik Foerschler**

Managing Director | Senior Equity Partner  
Chairman of the Digital Transformation Board

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