# CLIMATE CHANGE FROM THE PERSPECTIVE OF THE THIRD LINE OF DEFENSE

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Associazione Italiana Internal Auditors

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# CLIMATE CHANGE FROM THE PERSPECTIVE OF THE THIRD LINE OF DEFENSE

ROBERTO FARGION, *General Director - AIIA*

Associazione Italiana Internal Auditors

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institut français de l'audit et du contrôle internes

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# WORKING GROUP

**Alessandro Nespoli**
*Prysmian Group – Chief Compliance & Internal Audit Officer*

**Dirk Meissner**
*Robert Bosch GmbH – Director Technical Auditing Headquarters, Real Estate, EHS, Security*

**Arjan Man**
*Atotech Group – Director Global Internal Audit*

**Stefano Russo**
*EssilorLuxottica S.A. – Head of Internal Audit*

**Marie Laure Vacherot**
*Capgemini – Vice President Internal Audit*

**Davide Saredi**
*KPMG Advisory S.p.A. – Associate Partner*
**Andries Terblanche**
*KPMG Global Services – Global Lead for Dynamic Risk Assessment*
**Vincenza Del Fabbro**
*KPMG Advisory S.p.A. – Manager*
**Eleonora Dell'Acqua**
*KPMG Advisory S.p.A. – Consultant*

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# AGENDA

1. Introduction
2. How to assess Climate change related risks
3. Dynamic Risk Assessment of Climate change related risks
4. The level of integration of Climate Change in business and IA processes

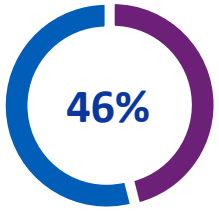
# INTRODUCTION

ALESSANDRO NESPOLI, *Chief Compliance & Internal Audit Officer*
*Prysmian Group*

# Trends in regulatory framework

## Paris Agreement

Risk of **Changes in laws and regulations** is among the top five risks for 46% of CAEs.

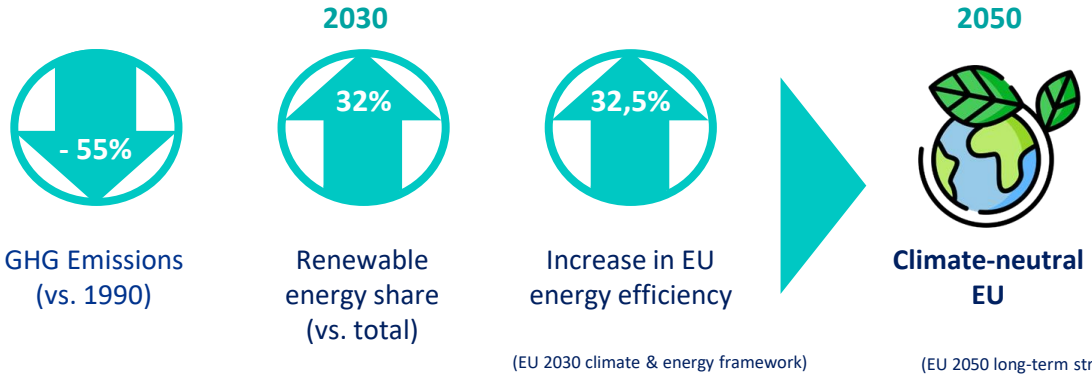



(ECIIA - Risk in Focus 2022)

The US and the UK are developing legislation to make climate risk disclosure mandatory. Such countries are evaluating the adoption of recommendations by **Task Force on Climate-Related Financial Disclosure**:


(TFCD – Recommendations 2017)

## European Challenges and Goals




GHG Emissions (vs. 1990)

Renewable energy share (vs. total)

Increase in EU energy efficiency

(EU 2030 climate & energy framework)

**Climate-neutral EU**

(EU 2050 long-term strategy)

## European energy transition and decarbonization objectives

- incentives for energy efficiency
- coal free and gas contribution increase
- energy community
- energy efficiency
- green mobility
- smart gride, smart meter
- hydroelectric concessions
- revamping & repowering
- carbon capture
- circular economy

# Climate Change: a «hot» topic

## From the Global Risks Report 2021…

Top Global Risk by likelihood

1. Extreme weather
2. Climate action failure
3. Human environmental damage
4. Infectious diseases
5. Biodiversity loss

Top Global Risk by impact

1. Infectious diseases
2. Climate action failure
3. Weapons of mass destruction
4. Biodiversity loss
5. Natural resources crisis

Since 2012 **Environmental risks**, such as climate action failure or extreme weather, **have ranked the top global risks** both by likelihood and impact.

In **2020 all five top risks by likelihood** and **4 out of 5 risks by impact were environment-related**. In the beginning of 2021 their presence in the Top Global Risks slightly decreased due to Covid-19 spread, but neutralized such effect they would probably rank as critical as in 2020.

## From KPMG 2021 CEO Outlook…

68%

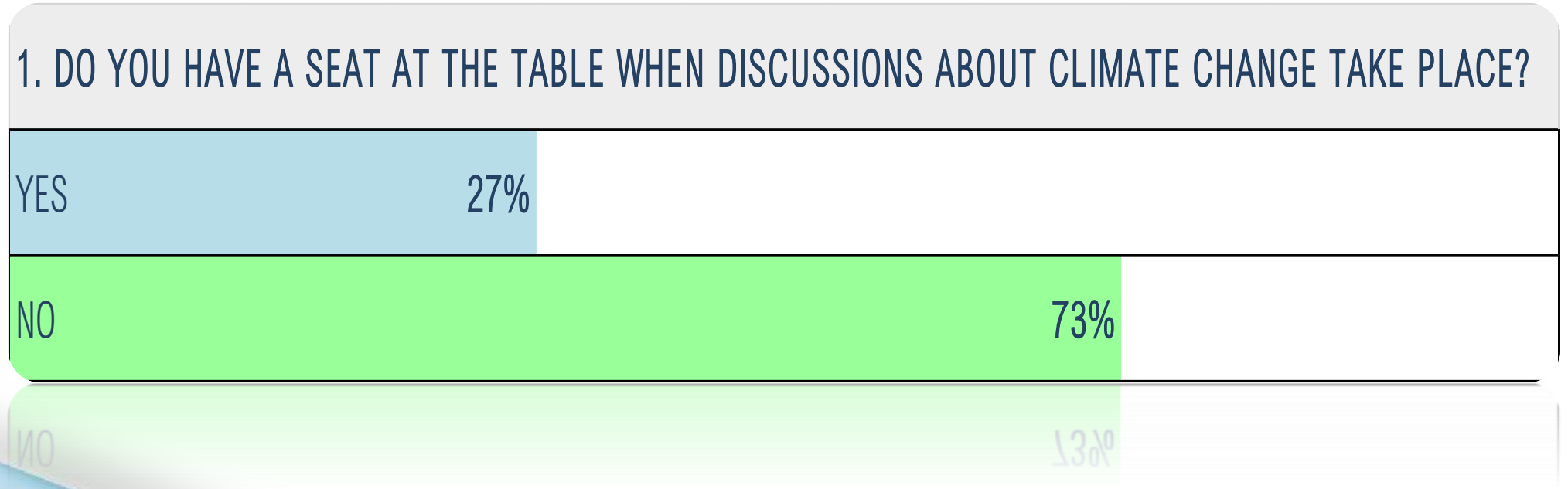
**interviewed CEO** say that "as confidence and trust in governments decline, the public is looking to businesses to fill the void on societal challenges, such as gender inequality or **climate change**".

| 2020 pulse | | 2021 | |
|---|---|---|---|
| Rank | | Rank | |
| #1 | Talent risk | #1 | Cyber security risk |
| #2 | Supply chain risk | #1 | Environmental/ climate change risk |
| #3 | Return to territorialism | #1 | Supply chain risk |
| #4 | Environmental/ climate change risk | #2 | Emerging/disruptive technology risk |
| #4 | Cyber security risk | #2 | Regulatory risk |
| #6 | Emerging/disruptive technology risk | #2 | Operational risk |

Energy CEOs (37 percent) and infrastructure (19 percent) are focused on **climate change**.

KPMG, 2021

# Instant Poll #1: *Discussing the Climate Change risk*



# Climate Change calls for everyone

Climate change requires companies to reflect on how it will impact business in term of risks, opportunities and financial results to increase resilience and create long-term value. As a matter of facts, Climate change triggers **many risks** for organizations:

## Physical Risks

They refer to the economic and financial costs of losses due to climate change

- **Acute Risk:**
  floods, heat waves, tornadoes
- **Chronic Risk**
  changes in precipitation, extreme weather variability, ocean acidification, sea level rise and average temperature rise

## Transition Risks

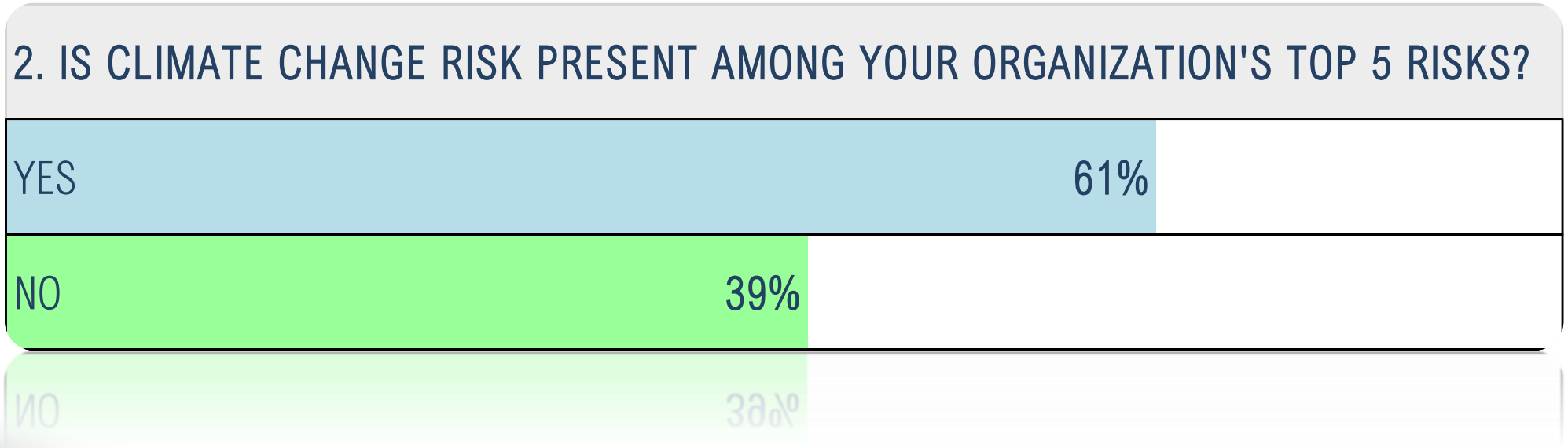
They refer to the process of adjusting towards a low carbon economy, which will have a financial impact

- **Policy and Legal Risks**
- **Technology Risk**
- **Market Risk**
- **Reputation Risk**

But organizations' **mitigation and adaptation efforts** to such risks may trigger **several business opportunities** as well:

- **New energy sources**
- **Efficiency in the use of resources**
- **Development of new products and services**
- **Access to new markets**
- **Increased resilience**

# Instant Poll #2: *Rating the Climate Change risk*



# HOW TO ASSESS CLIMATE CHANGE RELATED RISKS

DAVIDE SAREDI, *Associate Partner*
*KPMG Advisory*

Associazione Italiana Internal Auditors

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# ERM to assess Climate Change risk

COSO and WBCSD's 2018 **Guideline on ERM application to environmental, social and governance-related risks** declines the 5 pillars of ERM according to an ESG perspective.


Governance, or internal oversight, establishes the manner in which **decisions are made** and how these **decisions are executed**.

A strong **understanding of the business context, strategy and objectives** serves as the anchor to all ERM activities and the effective management of risks.

Performance should focus on practices that support the organization to **make decisions** in the **pursuit of its strategy and objectives** .

Organizations can develop **specific indicators to alert management of changes** that need to be reflected in risk identification, assessment and response.

Applying ERM to ESG-related risks includes **consulting with risk owners** to identify the **most appropriate information to be communicated and reported** internally and externally to support risk-informed decision-making.

The COSO ERM Framework defines **ERM as "the culture, capabilities and practices**, integrated with **strategy-setting and performance**, that organizations rely on **to manage risk** in creating, preserving and realizing value".

# Do we really need to take action?

Even if Climate change is a very concrete risk and we have some instruments to assess it, **not everyone is committed** to face it…

> Our company will **not be hit by climate** related **risks**, neither in a 2°C scenario nor in a 4°C scenario

> Our company **already has a sustainability plan** and net-zero target, we cover the climate-related risks with this

> Climate change is such a **long term** and **complex** matter, we'll see it when we get there

> Our **risk management** department **looks at all risks**, including climate-related risks

> Taking actions on climate change **only costs money**

# Weaknesses in *Enterprise Risk management*

- **Climate risks LONGER TIME HORIZON:** the risk management process often looks one year ahead, sometimes one to three years and occasionally one to five years**. But climate-related risks often present themselves in the long term**.
- **Climate risks SYSTEMIC DISRUPTION: the occurrence of climate-related risks could cause a chain reaction of events**, disrupting our financial system, economies and business-as-usual activities, which makes them difficult to understand, identify and analyze.

# DYNAMIC RISK ASSESSMENT OF CLIMATE CHANGE RELATED RISKS

ANDRIES TERBLANCHE, *Global Lead for Dynamic Risk Assessment*
*KPMG Global Services*

Associazione Italiana Internal Auditors

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# New perspective on risk: McKinsey & Company

"Risks can be either cyclical and mean reverting or structural and permanent."

"However, the traditional principles of trajectory and cyclicality of risks are increasingly becoming less relevant."

"Companies … need to cast nets wide enough to detect new and emerging risks before they happen. Traditional risk-identification approaches based on ex post reviews and assessments will not suffice."

"Institutions will need to work across business and functional divisions to maintain forward-looking, comprehensive taxonomies of the fundamental drivers of their risks."

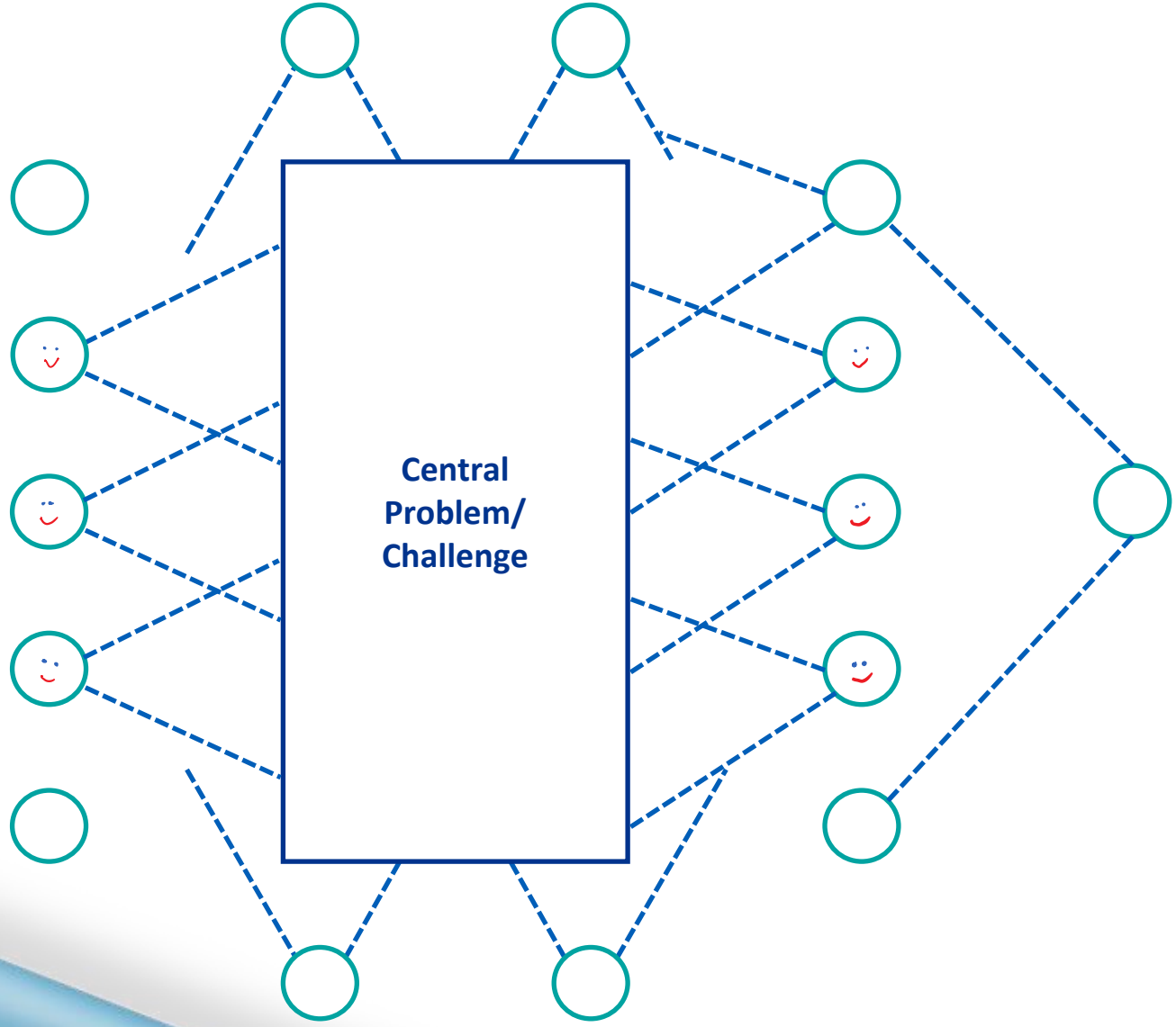
Source: Jain, R., Nauck, T., Poppensieker, T. & White, O.: Meeting the future: Dynamic risk management for uncertain times. McKinsey & Company, November 17, 2020. P. 4 & 5.

# In the absence of data

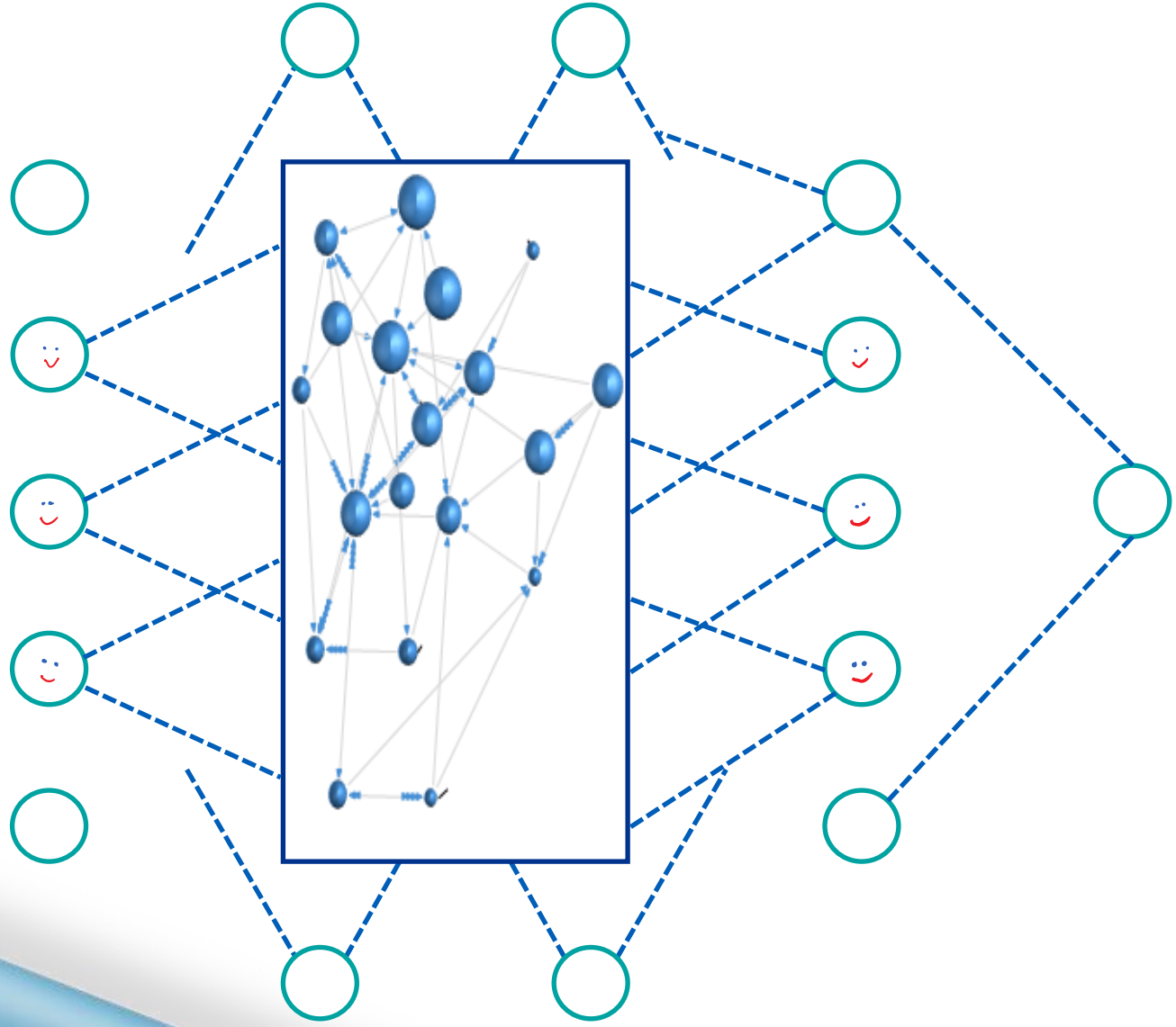
Spetzler, C.S. & Staël Von Holstein, C-A. S.: (1975) Exceptional Paper - Probability Encoding in Decision Analysis. Management Science 22(3): 340-358; Staël Von Holstein, C-A. S., Matheson, J.E.: A Manual for Encoding Probability Distributions: Final Report. Defense Advanced Research Projects Agency, 1978; Morgan, M. G. & Henrion, M.: Uncertainty. A Guide to Dealing with Uncertainty in Quantitative Risk And Policy Analysis. Cambridge University Press: Cambridge. 1990: P. 141-161; Slottje, P., Sluijs, J.P. van der & Knoll, A.B.: Expert Elicitation: Methodological suggestions for use in environmental health impact assessments.  RIVM letter report: 630004001/2008. p.7

Kubelec, C. & Sa, F.: The Geographical Composition of National External Balance Sheets: 1980-2005. World Economic Forum: Global Risk Report. January 2007 (See Appendix F); Bank of England Working Paper No. 384, 2010: International Journal of Central Banking. P. 143-189; Haldane, A. G.: Rethinking the Financial Network. Bank of England: 2009. Speech delivered to Financial Student Association, Amsterdam: 28 April 2009; Castells, M.: The Rise of the Network Society. Economy, Society, and Culture Wiley Blackwell: West Sussex: United Kingdom 2010; Castells, M.: Networks of Outrage and Hope. Social Movements in the Internet Age. Polity Press: Cambridge. 2012.

# Dynamic Risk Assessment of Climate Change related risks



# Dynamic Risk Assessment of Climate Change related risks



# Executive Summary: Some1 of the research underpinning the process

## Pre-work

- Identify experts
- Minimum number: 1
- Schedule two workshops
- Conduct interviews with 5 to 6 of the experts

Week 1 -2

Science of Expert Elicitation. Developed in the 1950s. Significant advances since then. Most recently Kahneman (Nobel Prize 2002) and Tversky. See Judgements under uncertainty: Heuristics and biases (2015). Tetlock and Gardner: Superforecasting (2015).

## Workshop I

- Present baseline of risks from interviews
- Nudge discussion between experts
- Capture risks

Week 3

Heuristics and biases. Kahneman (Nobel Prize 2002) and Tversky. See Judgements under uncertainty: Heuristics and biases (2015). Also Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology of Investing (1999). Tversky and Kahneman: Availability: A Heuristic for Judging Frequency and Probability (2006).

## Analysis

- Online survey populated with risks, sent to experts
- Experts individually complete survey
- Perform network analyses on survey results; produce report

Week 4-5

Heuristics and biases. Kahneman (Nobel Prize 2002) and Tversky. See Judgements under uncertainty: Heuristics and biases (2015). Also Shefrin: Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology of Investing (1999). Morgan and Henrion: Uncertainty: A guide to Dealing with Uncertainty in Quantitative Risk and Policy Analysis. (1990).
Kogovšek and Anuška: Effects on reliability and validity of egocentered network measurements (2005).

## Workshop II

- Explain findings
- All 16 or more participants discuss implications and practical applications of findings

Week 6

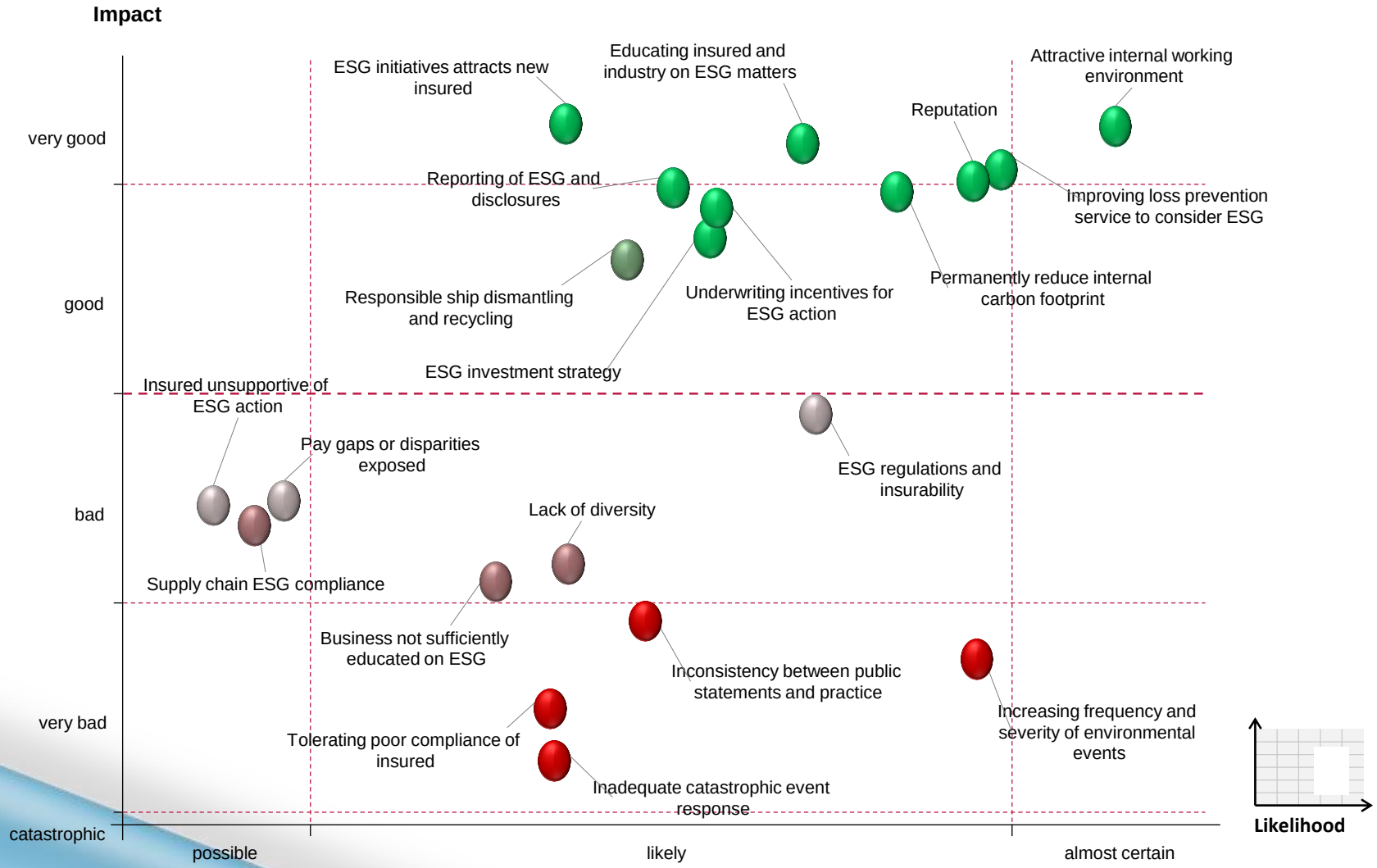
Wisdom of Crowds: Surowiecki (2005). For probabilities: Gonzalez and Wu: On the shape of the probability weighting function (1999). Dehaene et al.: Log or Linear? Distinct Intuitions of the Number Scale in Western and Amazonian Indigene Cultures (2008).

[1] By no means exhaustive. The full reference list runs into hundreds of sources

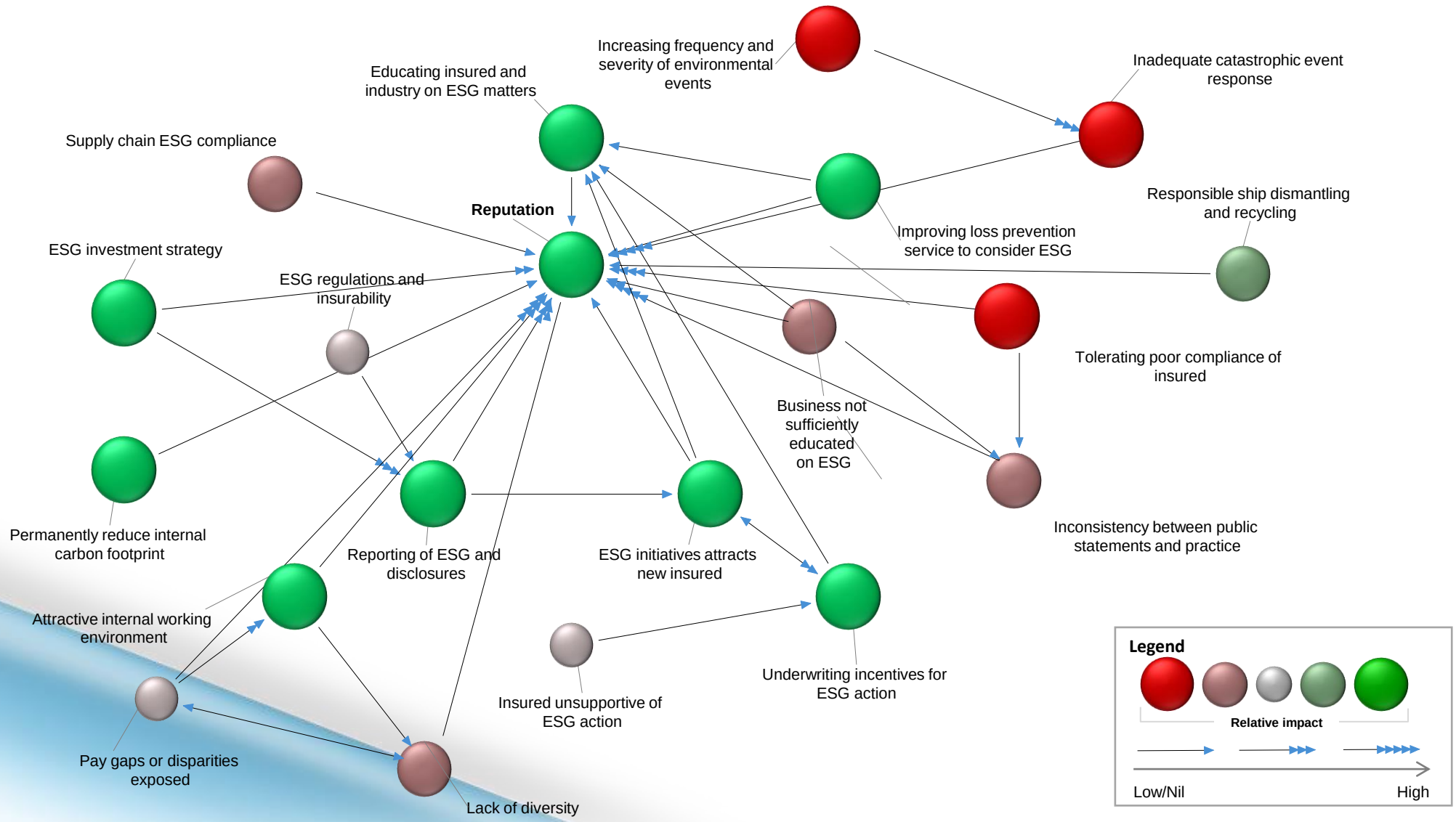
# Severity & Likelihood

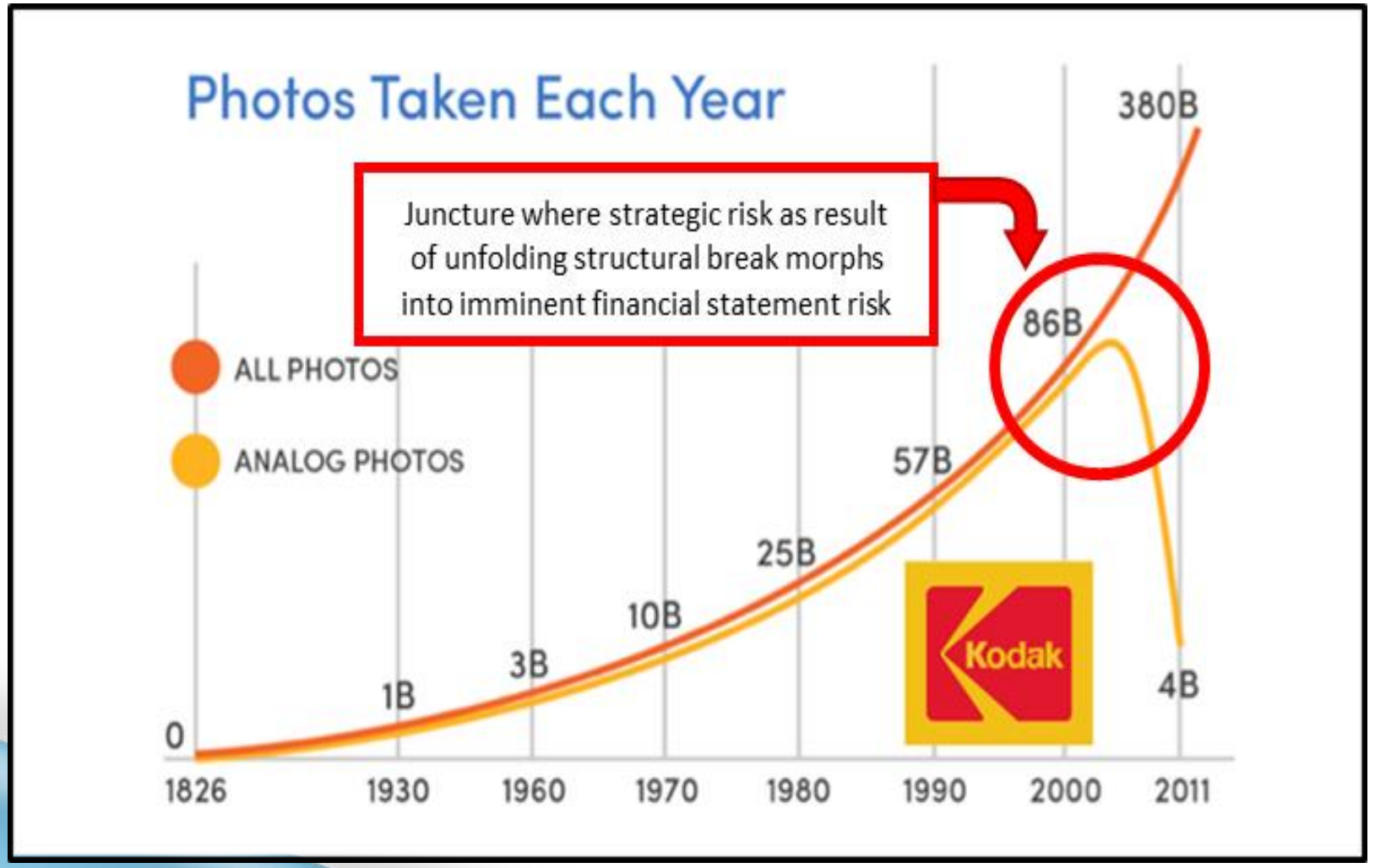
ESG initiatives attracts new insured is perceived to have the greatest positive impact at 13% of gross premium.

Inadequate catastrophic event response is perceived to have the most negative impact at -18% of gross premium.



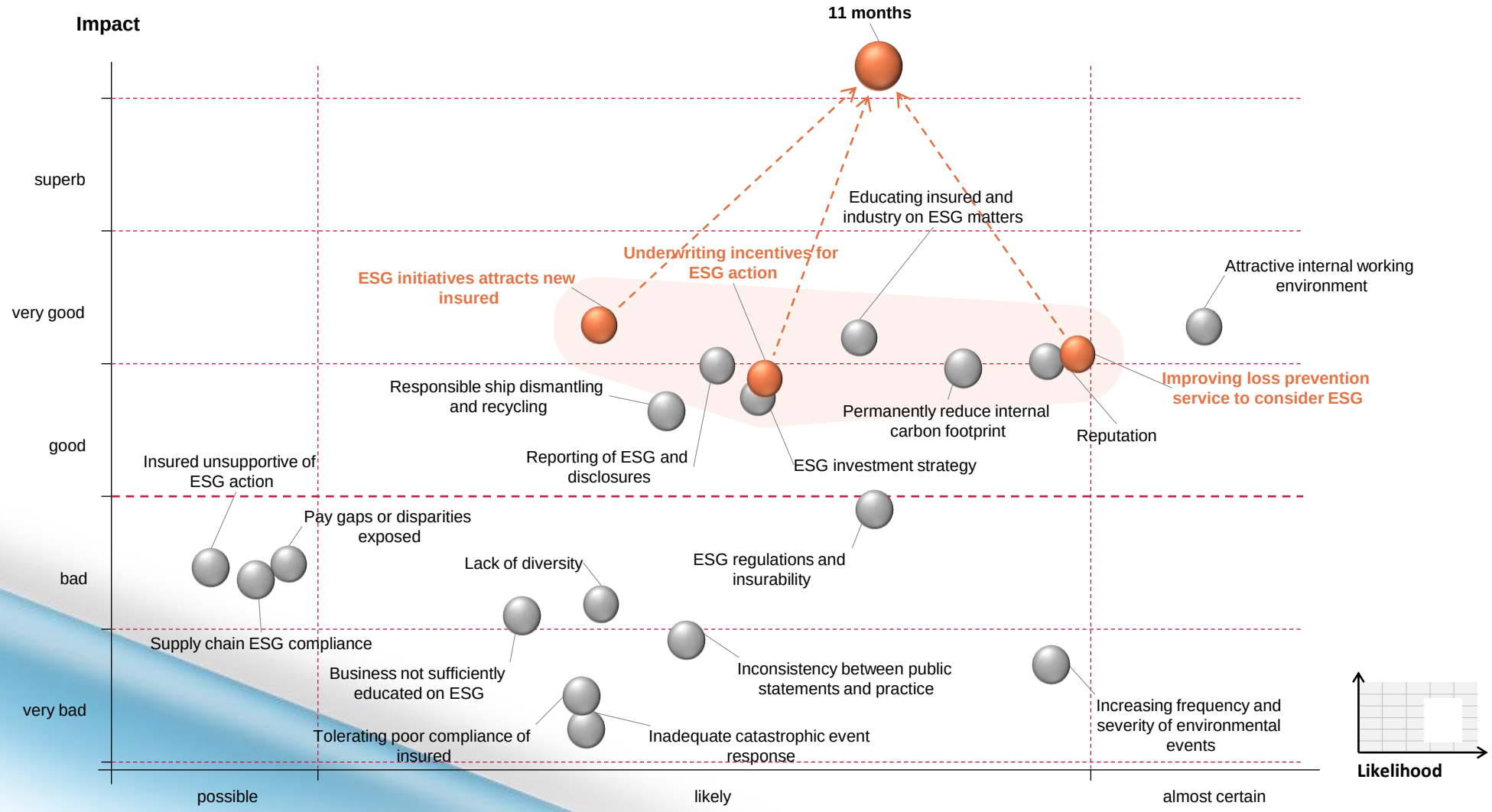
# Cognitive Risk Network



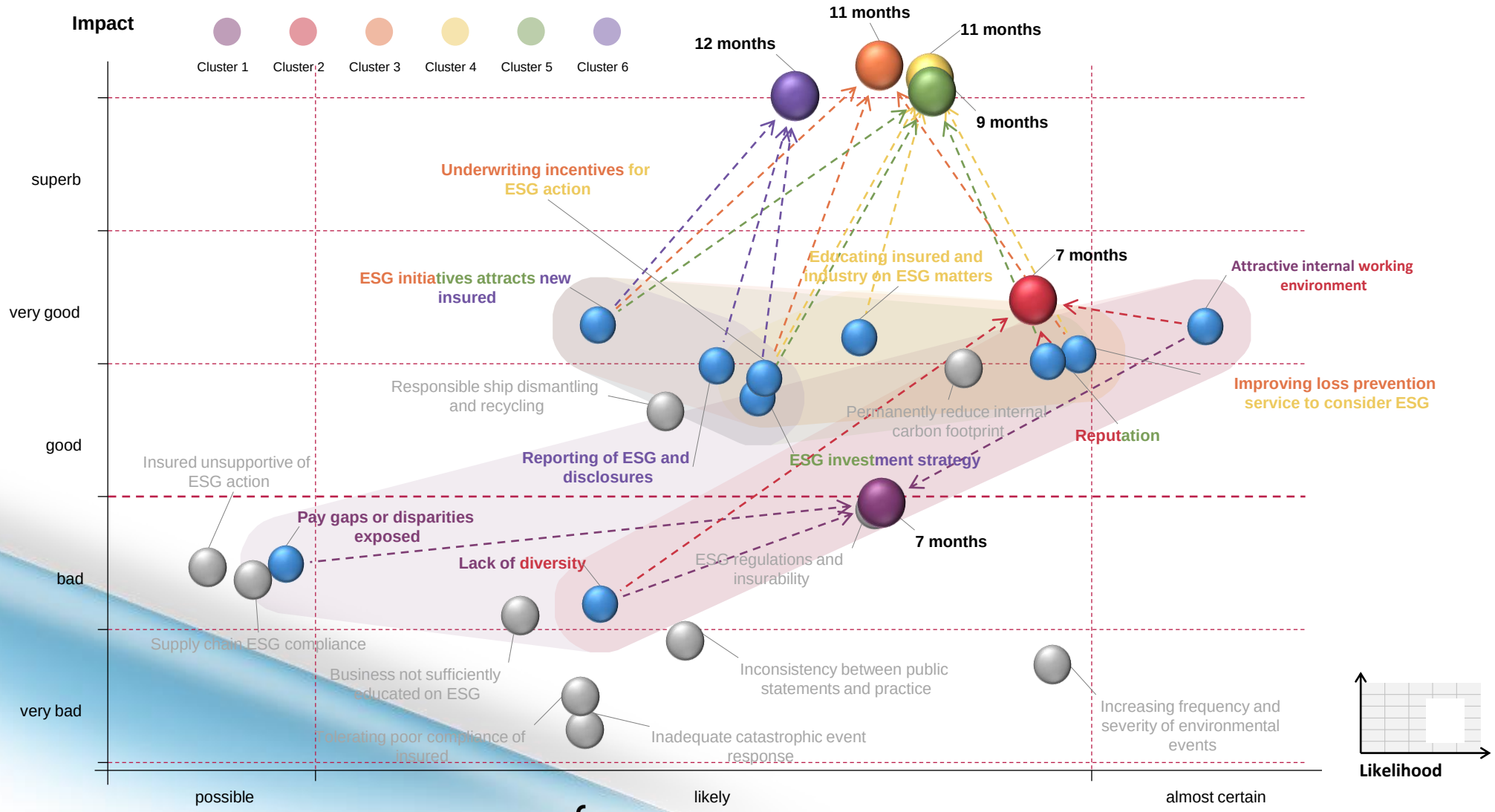



Source: https://singularityhub.com/2016/06/06/vital-lessons-on-disruption-from-the-demise-of-corporate-giants/ accessed on 12.08.2020

# Aggregated view of cluster 3 and its time to impact



# Aggregated view of most expected clusters and their time to impact

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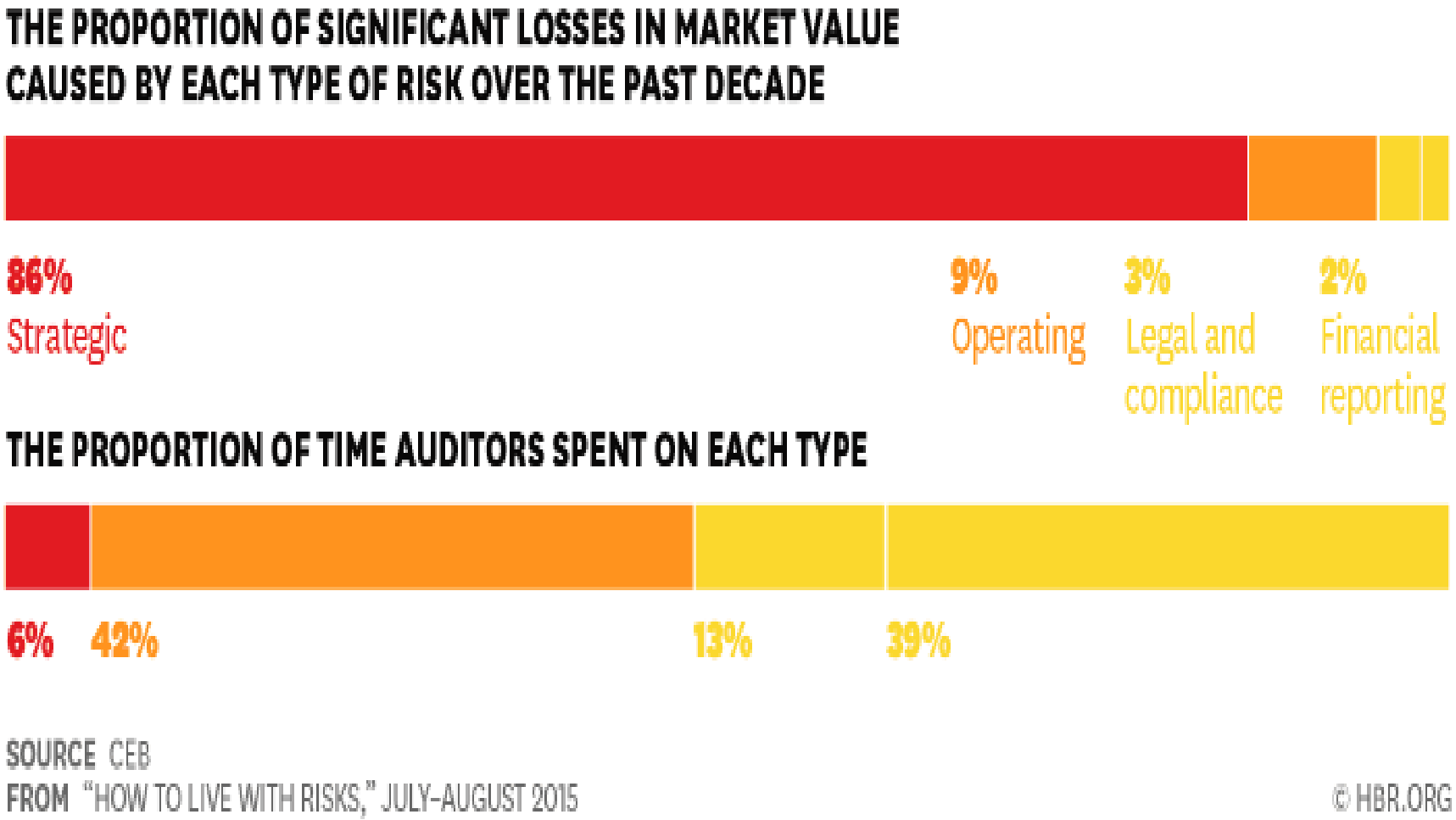
# Weaker linked, high aggregate risk scenario

| Cluster | Risks | Cluster Groups | Average weight of influence[1] | Rating | Aggregated Impact | Insights |
|---|---|---|---|---|---|---|
| 7 | ▪ ESG investment strategy<br>▪ ESG regulations and insurability<br>▪ Reporting of ESG and disclosures | | 24% | 3.42 | 16.24 | ▪ The aggregated impact of this cluster falls in the "very good" category.<br>▪ The velocity of this cluster is 12 months. |
| 8 | ▪ Inconsistency between public statements and practice<br>▪ Reputation<br>▪ Tolerating poor compliance of insured | | 24% | -3.64 | **-15.77** | ▪ The aggregated impact of this cluster falls in the "very bad" category.<br>▪ The velocity of this cluster is 8 months. |
| 9 | ▪ Business not sufficiently educated on ESG<br>▪ Inconsistency between public statements and practice<br>▪ Tolerating poor compliance of insured | | 24% | -6.31 | **-34.90** | ▪ The aggregated impact of this cluster falls beyond the "catastrophic" category.<br>▪ The velocity of this cluster is 8 months.<br>▪ This contains the most central emitter, suggesting potential to generate contagion across the network when triggered. |

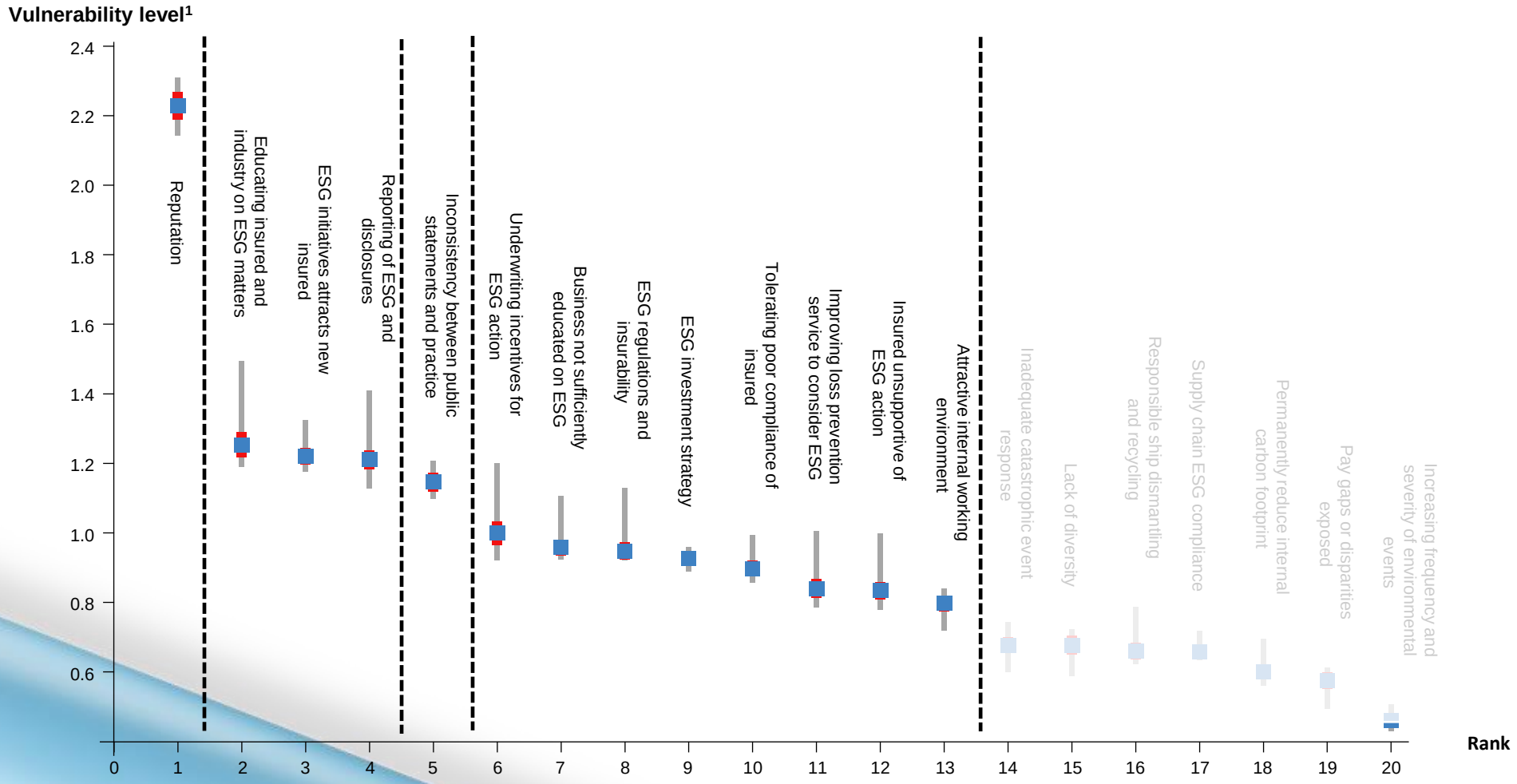
[1] The fraction of times a theme causes linkages to another theme, as averaged by all survey participants

Cluster 1 Cluster 2 Cluster 3 Cluster 4 Cluster 5 Cluster 6



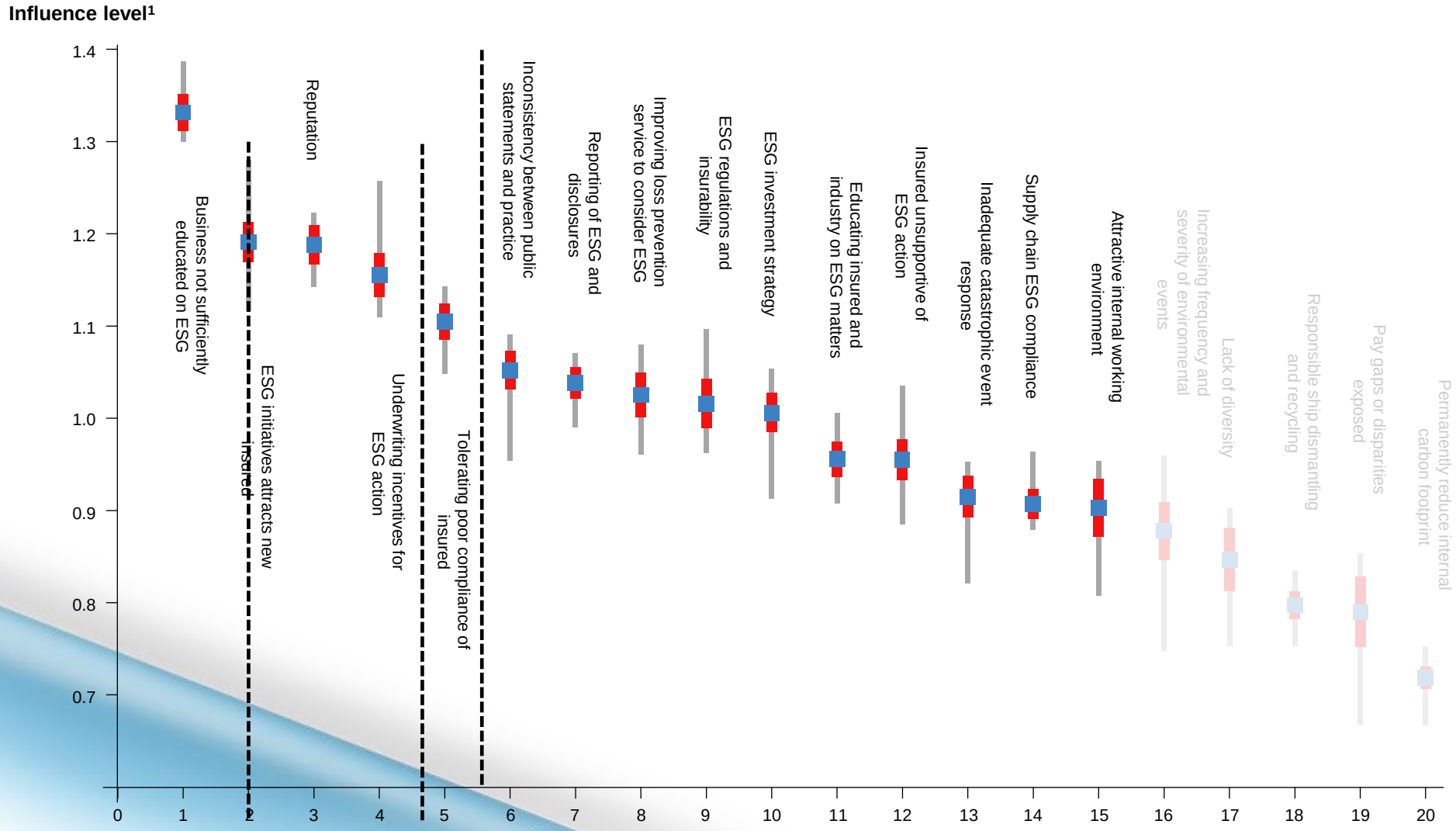

Source: Harvard Business Review. July – August 2015. From: CEB: Reducing Risk Management's Organizational Drag. "How to Live with Risks."

# Outcomes boosted by network




[1] Vulnerability level refers to the non-parametric measure of the level of susceptibility of a theme across the network by virtue of its centrality. It is ranked in order to allow for comparison to other themes. The black dashed line shows a cut-off point for where (right of the black dashed line line) the level of susceptibility becomes increasingly less vulnerable to the entire network.

# Rank order of network-wide influence of individual events




[1] Influence level refers to the non-parametric measure of the level of influence of a theme across the network by virtue of its centrality. It is ranked in descending order to allow for comparison to other themes. The black dashed line shows a cut-off point for where (right of the black dashed line line) the level of influence becomes less influential to the entire network.

*"The greatest danger in times of turbulence is to act with yesterday's logic"*

*Peter Drucker*

# THE LEVEL OF INTEGRATION OF CLIMATE CHANGE IN BUSINESS AND IA PROCESSES

ALESSANDRO NESPOLI, *Chief Compliance & Internal Audit Officer* - ***Prysmian Group***
***ARJAN MAN,*** *Director Global Internal Audit* - ***Atotech Group***
***STEFANO RUSSO,*** *Head of Internal Audit* - ***EssilorLuxottica S.A.***
***DIRK MEISSNER,*** *Director Technical Auditing HQ* - ***Robert Bosch GmbH***

***Disclaimer***

*The charts and the information shown from page 36 and thereafter are the results of the answers to the questionnaire of CAEs belonging to the chapters of the IIA of Italy, France, the Netherlands and the DIIR Germany. The results of the questionnaire on climate change presented during this webinar is not based on specific methods or approaches.*

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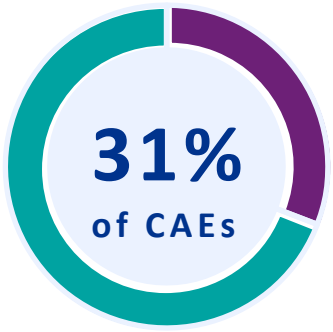
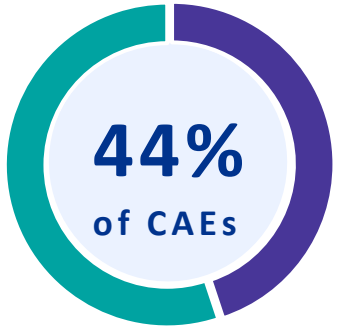
# Which direction for Internal Audit?

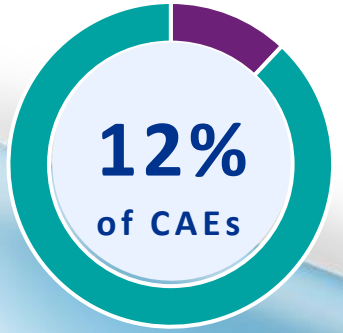
## Insights by the Risk in Focus 2022



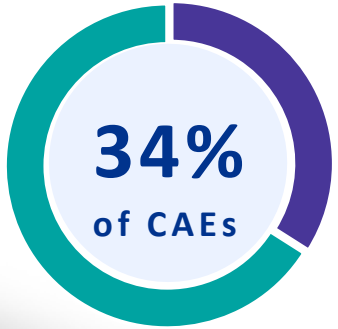

see **Climate change and environmental sustainability** as a top five **risk**




see **Climate change and environmental sustainability** among the top five **risks** their organization will face **in three years**




rank **Climate change and environmental sustainability** as a top five risk on which Internal Audit spends the most **time and effort**




rank **Climate change and environmental sustainability** among risks they will spend the most **effort** on **in three years**

## Climate Change and Environmental Risk in the Netherlands, 2021

**54%** of the respondents see CCE risks as **medium risk or higher**

**81%** of the respondents see **CCE** expressed in **reputational risk**

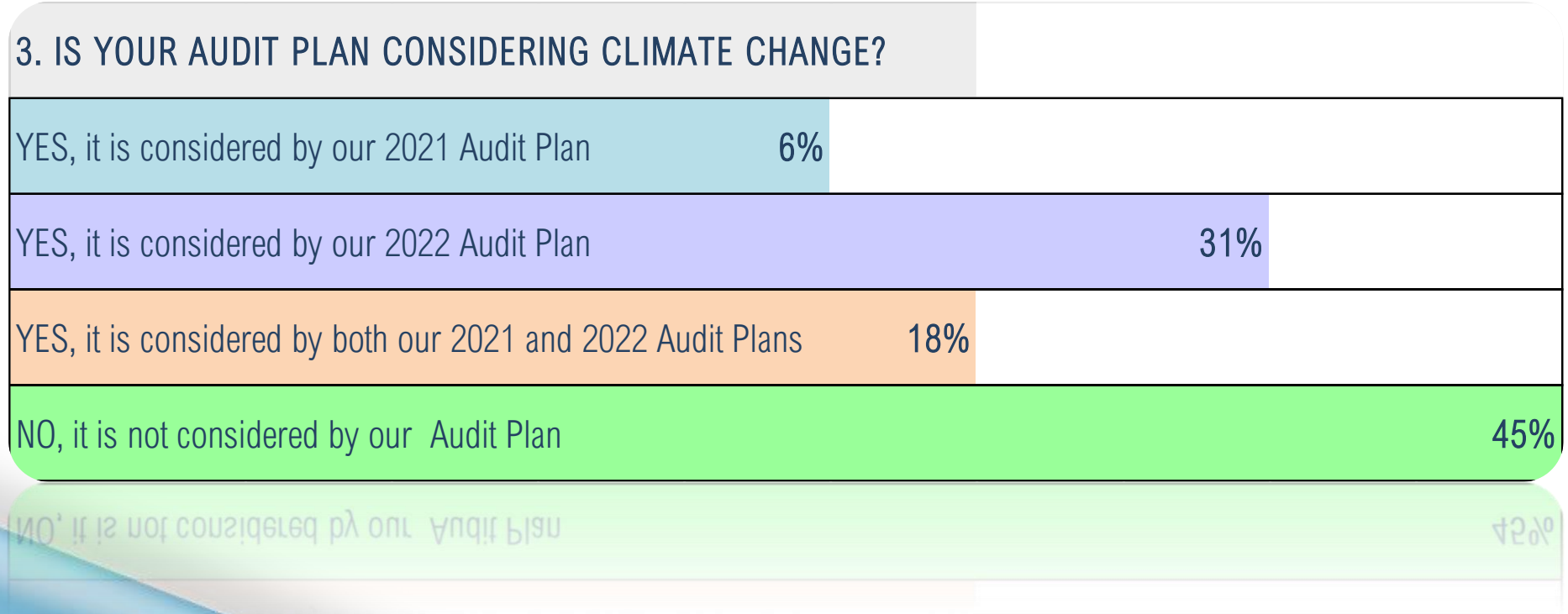
**46%** As a risk driver **social responsibility** is the most important (46%), against 30% **compliance** and 24% **business opportunities**

**80%** of IA Functions, spend **less than 5% of their time on CCE risks**, of whom 30% spend no time

**78%** say that they are still **insufficiently informed** to study CCE risks

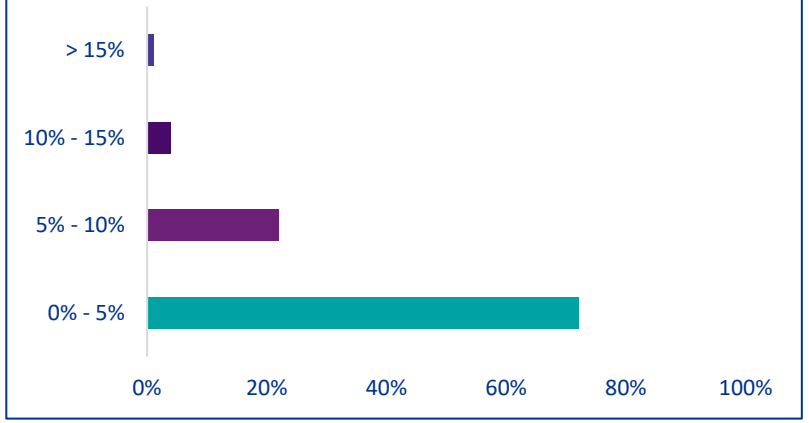
IIA Netherlands, 2021

# Instant Poll #3: *Auditing the Climate Change risk*



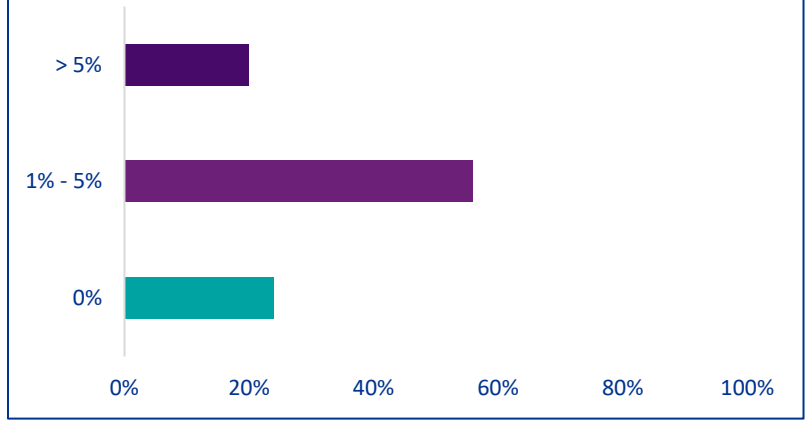
# Which perception on Climate Change & Environmental?

**ITALY – IA Efforts on Climate Change topics**



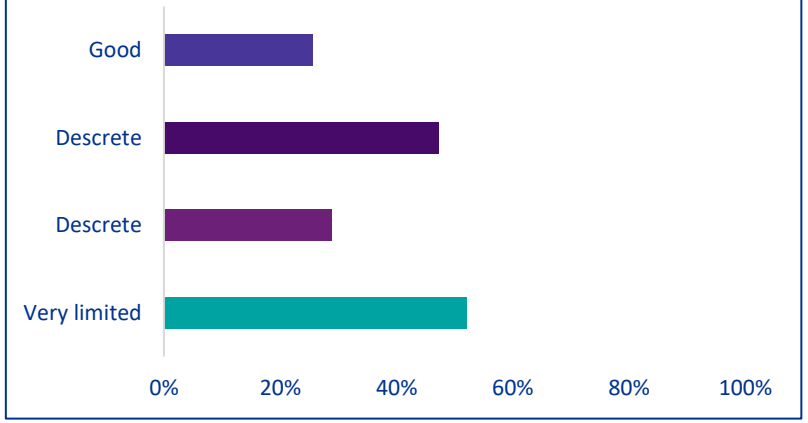

IIA Italia, 2021

**NETHERLANDS – IA time spent on Climate Change topics**




IIA Netherlands, 2021

**UK – IA attention to Climate Change topics**




IIA UK, 2020

- The surveys confirm the **dystonia** highlighted by Risk in Focus and IIA studies in several European Countries **between perceived risk relevance and current effort by IA**.
- IIA's surveys in Italy, the UK and the Netherlands showed that CAEs are either **not working on CCE related matters or their work is marginal** (less than 5%).
- An **overall consistency** can be seen across countries observed.

**EUROPEAN MANUFACTURING WORKING GROUP QUESTIONNAIRE**

Between June and September 2021 a **Questionnaire** was spread among manufacturing **Chief Audit Executives** in **four European Countries** (France, Germany, Italy and the Netherlands) by The Institute of Internal Auditors operating in each Country.

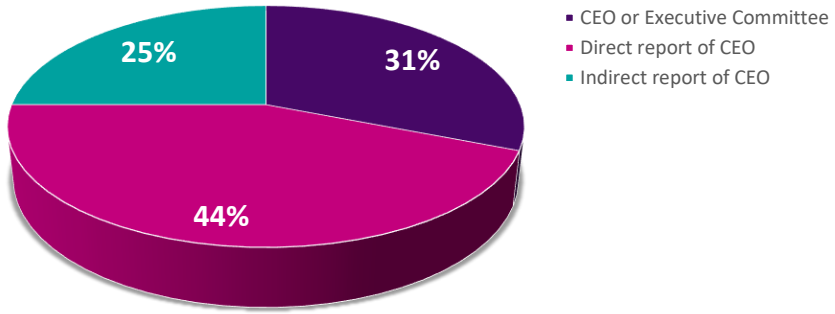
**Climate change is quickly moving up the agenda** of all relevant organizations worldwide and the IIA believes it is an **area where internal audit can add real value** and demonstrate their worth to the organization they serve.

The Questionnaire investigated the **level of integration of Climate change topics in strategic and operational plans** of interviewed corporations and whether **European Internal Audit Functions are taking the matter seriously,** with focus on impacts on business model, strategy and financial planning.

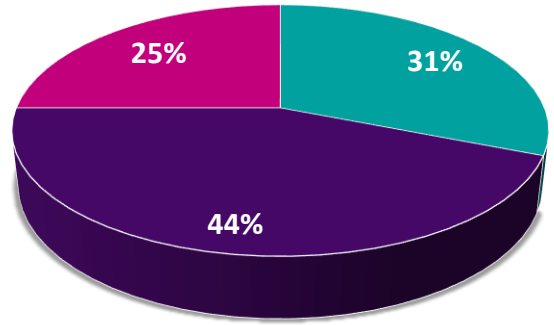
# Questionnaire's highlights

Below, main results collected from the working group of the European Manufacturing **Chief Audit Executives**:

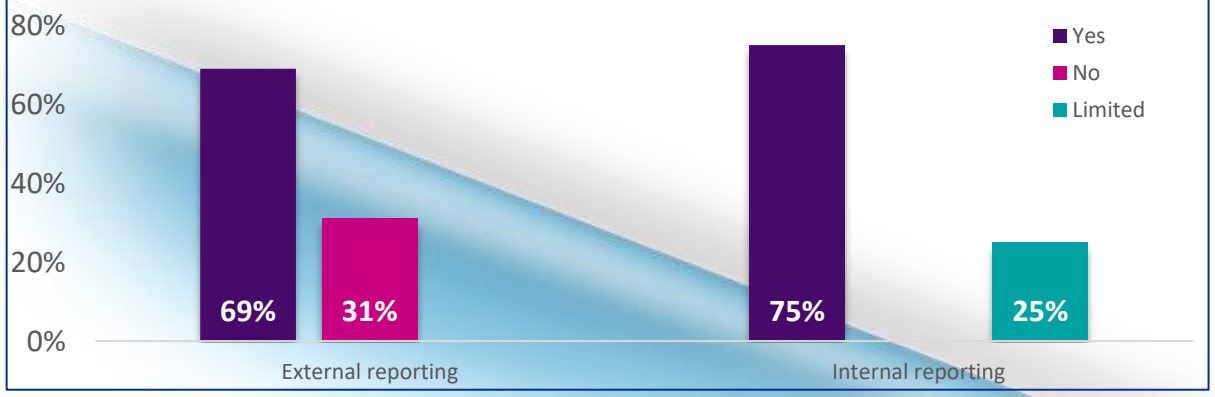
## Accountability of Climate Risk



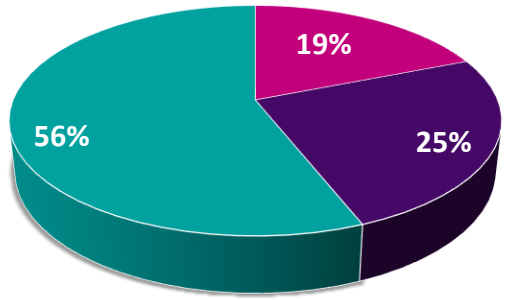

## Awareness on Task Force on Climate-related Disclosures




## Reporting on Climate Risk related goals




## Delivering assurance on CR reporting by IAF



# Impact on business model, strategy, financial planning

**The Questionnaire found some common ground about Climate change impact on business model, strategy and financial planning**

**Climate change risk** has **a huge impact** at almost all respondents' companies, and for some its even crucial for the **company's survival**

Several organizations recognize Climate change as an **opportunity for growth rather than a threat** and in some cases climate-related actions **are drivers of operational efficiency, innovation and competitiveness.** For instance, **climate change is a key** factor triggering **energy transition**, meaning reduction of natural gas consumption, development of green gas and hydrogen production

Awareness on the topic is quite present among management. For instance, in one company a **CSR Committee annually reviews climate change topics** and **advises the Group's Board of Directors**

**Climate change risks** are reviewed periodically by senior managers

Several companies are **integrating Climate change risk** (as part of ESG) within the **Enterprise Risk Management** process

**Climate-related risks** and **opportunities** have a **significant** impact on companies' business model, **confirming company purpose and development of offerings**

Specific Climate change related **KPIs** are **monitored and disclosed**

# Climate change topics inclusion in operational processes

**The Questionnaire found points of contact on how Climate change topics are considered when planning and executing operational processes and day-to-day activities**

In most companies Corporate Responsibility and Climate change is drilled down towards operational processes with targets for executives and managers

**Specific KPIs** are monitored with regards to organizations' **Environmental Performance within their operational processes** (e.g. energy consumption, water consumption, waste, emissions)

All companies are working on energy efficiency measures

For some respondents, the key factors that led to climate risks inclusion in **operational processes** have been **$CO_2$ quotas and taxes**

**Climate change** related topics are **a key criterium for investment decisions and acquisitions for many organizations**

Some companies have implemented **new criteria for investment decisions** (e.g. low energy, emissions, water scarcity)

In one case climate related risks have been said to be included in the **Business Impact Analysis** performed by the main **Operations sites** in the Company (flood, ice/snow, droughts)

# How to better address Climate Change-related risks

**Concluding the Questionnaire, respondents provided suggestions on how Internal Audit may address Climate change risks and opportunities. The following tables summarize the most popular contributions, clustering them in *consulting* and *assurance* actions**

## Consulting

'Build-up **knowledge and competencies** @IA in the Climate Change Risk subject'

'Support the **transfer** of a *high level risk* (e.g. 'rise of the sea level') to **effective and specific measures** for the **organisation** (find a way to define the effect of individual company measures on CR)'

**'Early involvement** of IA **as** a **sparring partner** for top management and 2nd Line (i.e. several involved)- **setting up a Sustainability Risk Framework'**

'Support a **systematic risk analysis** (e.g. industry specific)'

## Assurance

**'Internal Audit** needs to provide **independent Climate Change Risk 'assurance'** (e.g. compliance with supply chain act, CO2 neutrality accounting, policies, processes and internal control system)'

'....as well as for **management concerns'**

**'Internal Audit** should consider **more** CR related **Audits in the audit plan** (e.g. based on input from risk management, monitoring processes, related KPI)'

'IIA/DIIR could support by setting-up a framework/best practice which could provide guidance for inexperienced companies'

# Which role and opportunities for Internal Audit?

As organizations are starting to cope with Climate Change risks, the role of the Internal Audit is **constantly evolving**.

Although responsibilities of the Internal Audit may vary across different organizations, discussions within the European Manufacturing Working Group highlighted a clear trend towards the Internal Audit providing **value-added consulting services** and being a **sponsor for integration**.

Supporting with **objective assurance, insights, and advice.** Providing **independent assurance** that policies, processes, and internal controls as well as related activities are properly **designed and operating effectively**.

Including **specific audit engagements** over the **risk management and monitoring process for climate change-related risks**, as well as for the **assessment of KPIs** relevant to stakeholders.

Playing an **Advisory role** in recommending the available frameworks to manage/mitigate ESG risks, advise on developing specific internal controls over ESG reporting and governance.

Acting as a **Facilitator,** in an **integrated assurance** perspective, bringing different perspectives on climate-change risks and facing the volatility of the context with the **agile** methodology

Building stronger **ESG competences** within the Team, growing in capabilities and knowledge to address Climate Change related risks.

# CLIMATE CHANGE FROM THE PERSPECTIVE OF THE THIRD LINE OF DEFENSE

*Thank you for your participation*

Associazione Italiana Internal Auditors

ifaci
institut français de l'audit et du contrôle internes

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IIA Nederland