

# The New Value of Safety and Health in a Changing World



**John Dony**  
**Vice President, Workplace Strategy**  
**National Safety Council**



**verdantix**

## About NSC

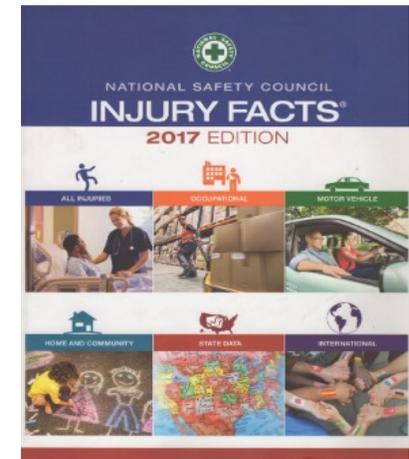
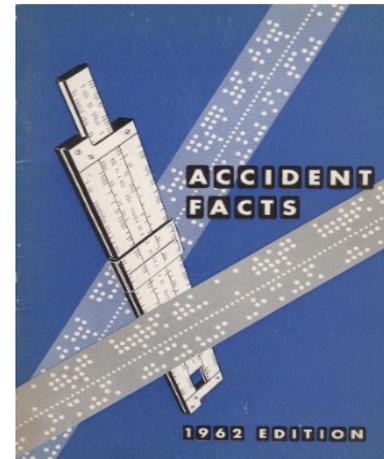
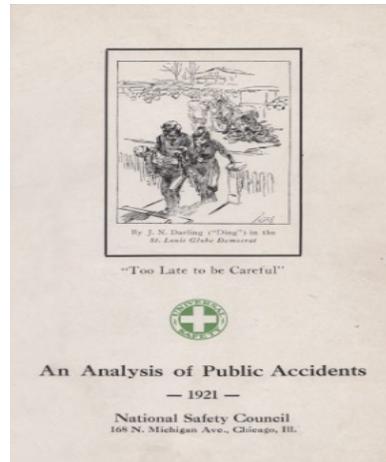
### America's Leading Nonprofit Safety Advocate

- Over a century of safety leadership;  
13,000+ member companies covering over  
41,000+ worksites
- Eliminating leading causes of preventable death  
and injury so that people can live their fullest lives
- Focus efforts where we can make the biggest impact:  
workplace, roadway, impairment
- **Saving lives – from the workplace to anyplace**



# Following the Data

NSC has a long history of building programs and approaches based on sound data analysis and rigorous research



# Workplace Practice At-a-Glance



## **WORKPLACE PROGRAMS**

Identify and advance leading concepts to create value and impact for the field of EHS at large



## **TOOLS & RESOURCES**

Develop and provide guidance, tools, and programs for organizations on their improvement journey



## **SOLUTIONS**

Create, iterate, and activate proven solutions in the field, from workforce training to leadership consulting



## **MEMBERSHIP & IMPACT**

Advocate for and amplify research-driven practices and policies across a variety of influential channels

## About our Funder – Lloyds Register Foundation



### Our values.

The qualities underpinning our culture.

#### **We care**

- We care about the safety of everyone.
- We respect each other and the wider communities we work in.
- We're passionate about giving back to society, leaving the world a betterplace than we found it.

We care about each other, our clients and the environment.

**Background  
& Early Work**

# **The New Value of Safety & Health**

## Early Reactions to Sustainability & ESG

*"I don't understand why we're talking about this...where is safety?"*

*"We're not environmental people, we're safety people."*



*"I was disappointed by what I perceived as a less-relevant topic."*

*"Sustainability is a buzzword and has taken away from our focus on core safety issues."*



**MEANWHILE**

# The Rapid Rise of ESG Frameworks & Schema

Some organizations simply provide frameworks for disclosure and do not evaluate companies.



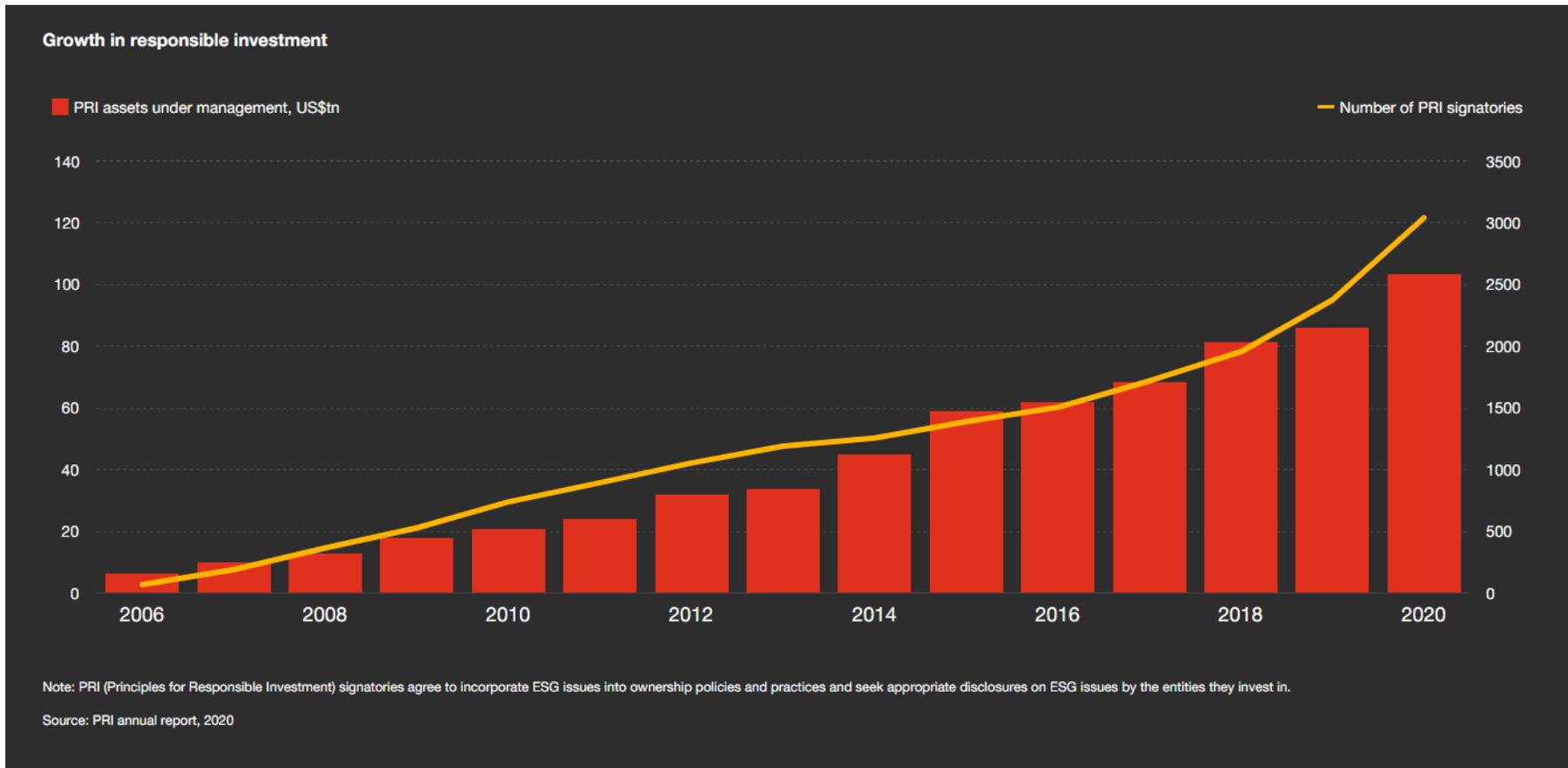
Some passively pull information from sustainability reports, aggregate data, and add ratings.



Some purchase data and ratings from other raters and add rankings.



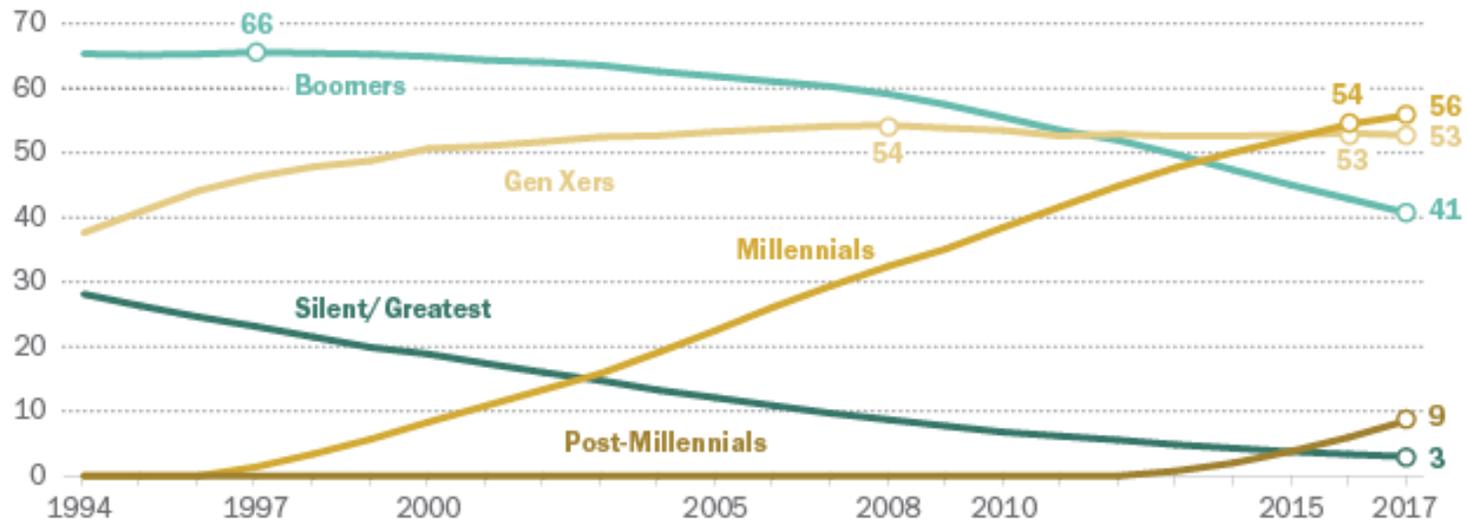
# Concurrent Rise in Investor Interest



## And in the Meantime...

### Millennials became the largest generation in the labor force in 2016

U.S. labor force, in millions



Note: Labor force includes those ages 16 and older who are working or looking for work. Annual averages shown.  
Source: Pew Research Center analysis of monthly 1994-2017 Current Population Survey (IPUMS).

PEW RESEARCH CENTER

# Landscape Survey

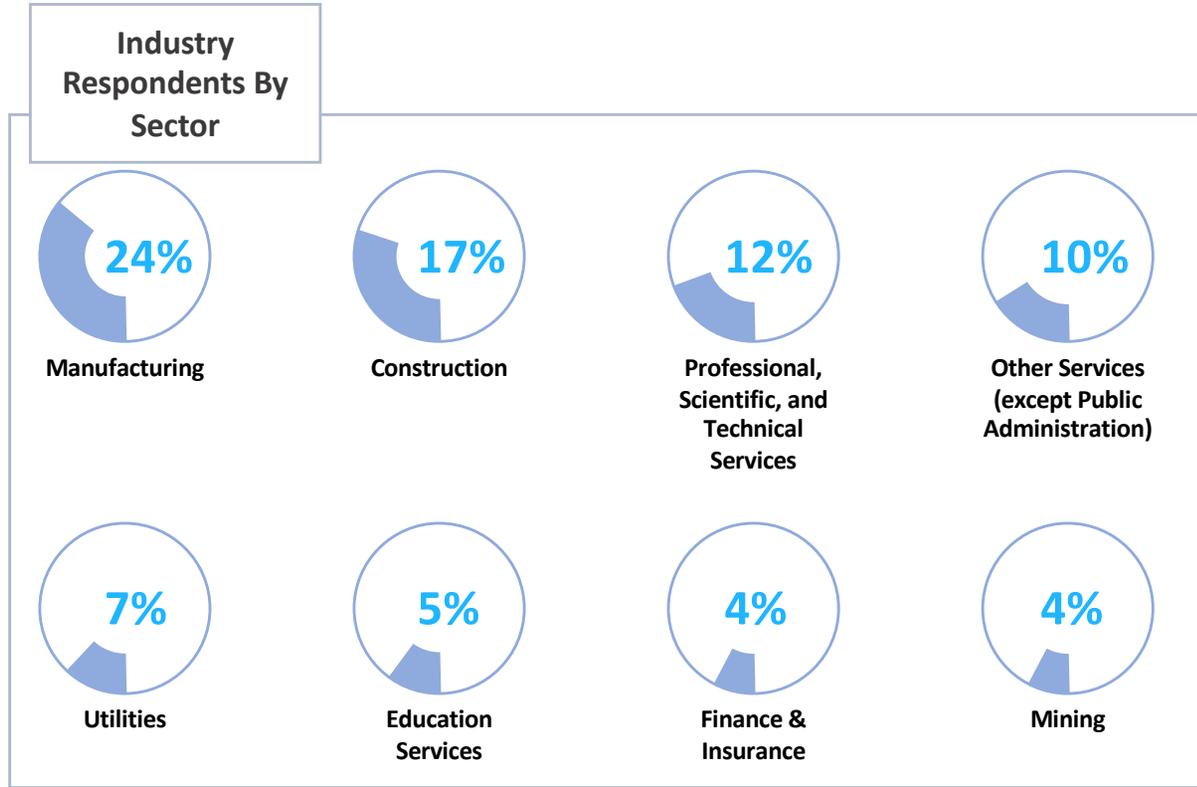
# The New Value of Safety & Health

## Sourcing Insight: NSC/Avetta Survey

- Need to understand current state of safety & health/ESG engagement
- Focused on broad ESG practices, challenges, and S+H role in ESG
- Over 750 respondents, largely comprised of S+H/ESG leaders
- Baseline information for further action



# All Industries are Growing Investment in ESG Strategies



## Interest in ESG Issues

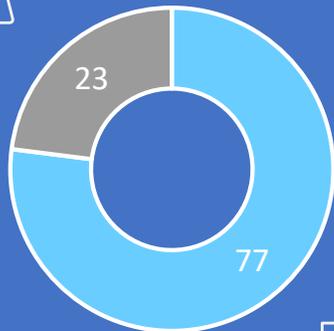


Base : 765 (Among those who have completed the survey)  
Top 8

# 77% of Orgs are Committed to Sustainability Policy

*The priority an organization gives to ESG policies increases with organization revenue*

Organizations with sustainability/ ESG policy



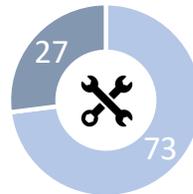
Yes No



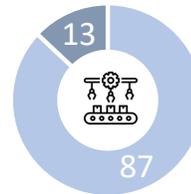
Base : 383 (Among organizations with interest in ESG policy)

All fig in %

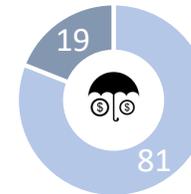
By Industry



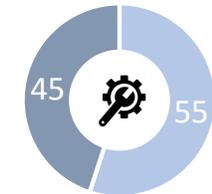
Construction



Manufacturing



Finance & Insurance



Professional, Scientific, and Technical Services

By Annual Revenue



Between \$100M - \$1B



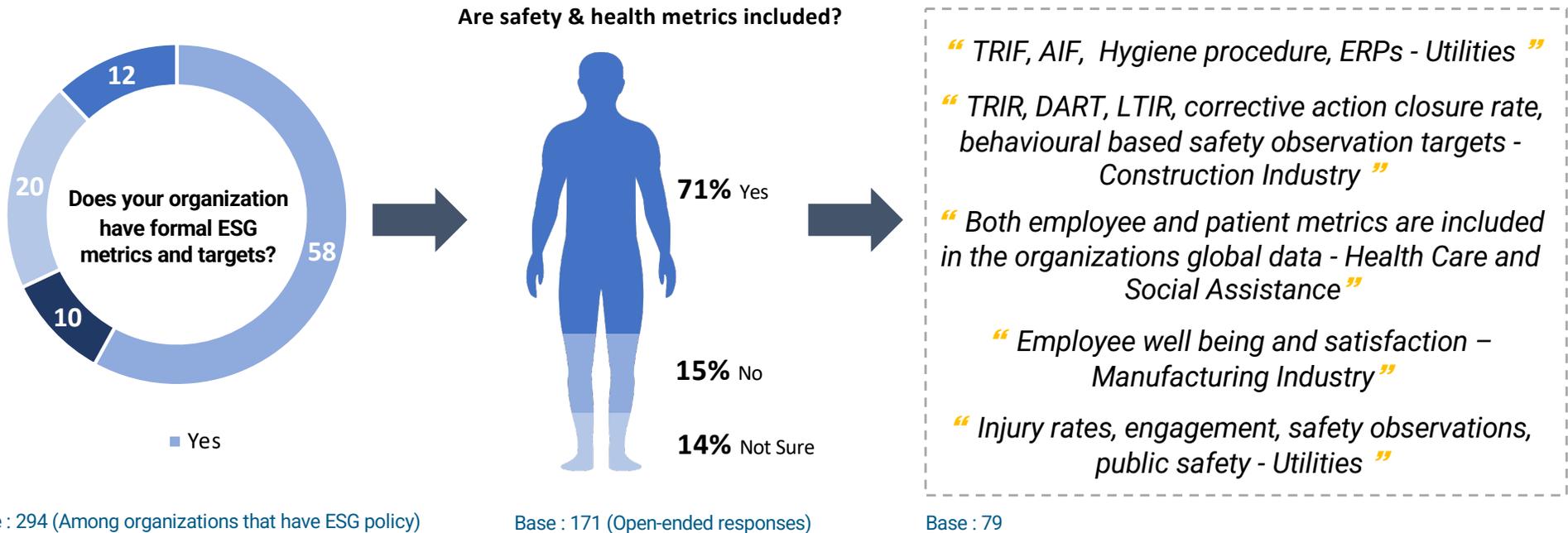
Between \$1B - \$10B



Over \$10B

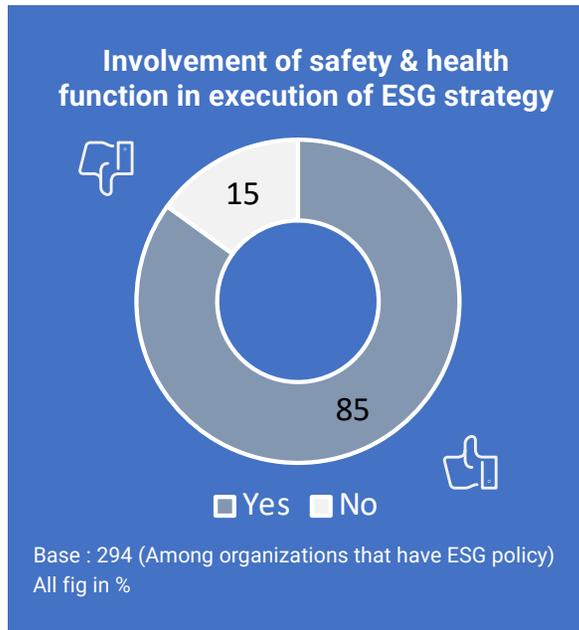
# Most Have Formal Targets / Safety Metrics

*But the metrics tend to be low maturity/low-hanging fruit*



# Safety & Health Involved with ESG Strategy

*But rarely have a decision-making role*



Base : 320 (Open-end responses)

## 5 Key Safety & Health Issues in ESG

- **Human & Social Capital** – doing right by people, both as a resource for business and as a good steward of communities in which we live
- **Materiality and Risk** – the process of determining and mitigating the most material sustainability issues within your organization or scope
- **Supply Chain Management & Transparency** – addressing the complex and challenging global supply chain, from issues of safety to human rights
- **Investor Engagement** – developing a fruitful relationship with the investment community and helping them better understand and analyze organizational risk
- **Reporting and Measurement** – tracking and communicating progress against goals, setting realistic improvement targets, engaging with external stakeholders

## ...and 5 more

- **Serious Injury & Fatality Prevention/Human Organizational Performance** – focusing on the areas of greatest potential harm and understanding what differentiates them; acknowledging humans as wired for error
- **Physical Wellbeing & Fitness for Work** – valuing the whole person and going beyond straightforward, non risk-based wellbeing programs; tackling fatigue, impairment and other related factors
- **Mental Health & Stress** – particularly post-pandemic, addressing the needs of the workforce, supporting new approaches to mitigation and intervention, and reducing stigma
- **Psychological Safety** – creating a culture and platforms for workers to “feel safe” – both physically and in terms of speaking up on issues – in order to truly be safe
- **Diversity, Equity & Inclusion** – embracing & operationalizing a culture of inclusion to identify hidden biases/gaps (as simple as PPE availability)

**Project  
Scope**

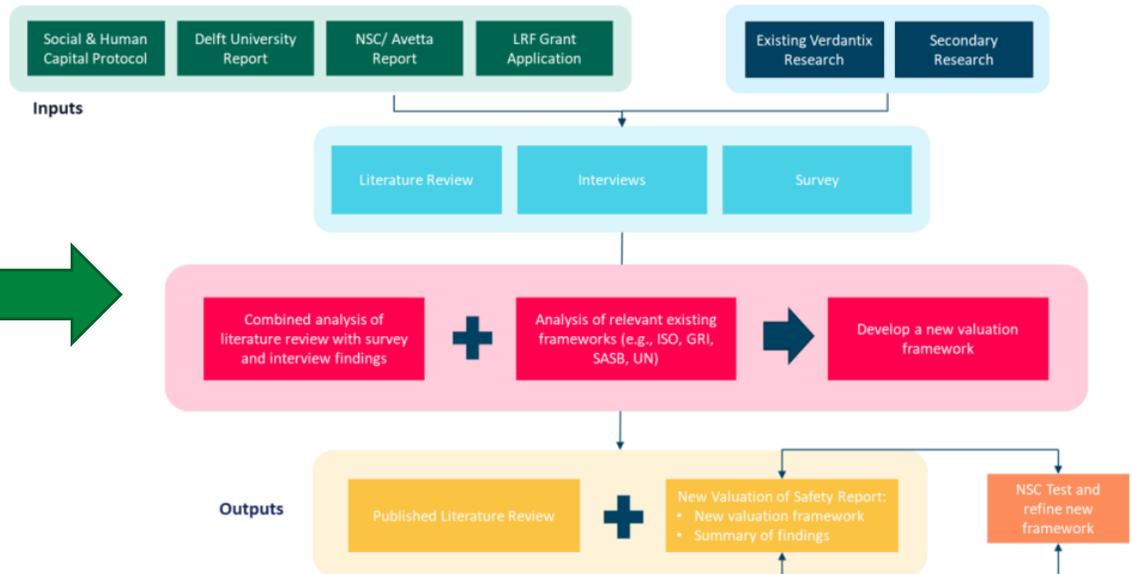
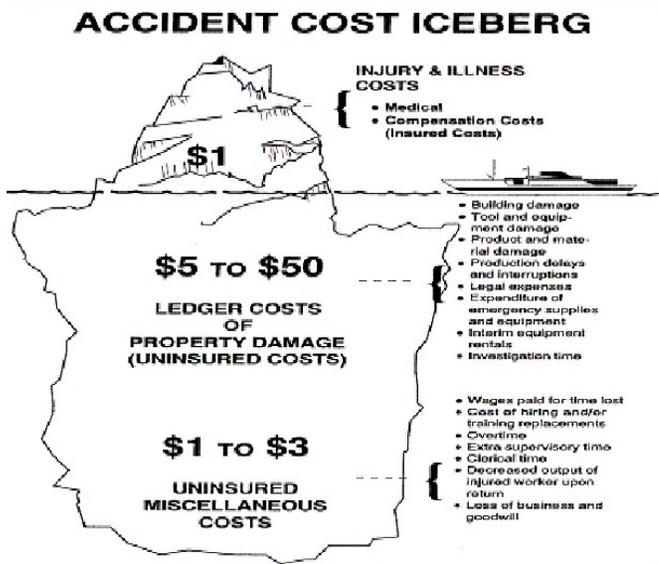
# The New Value of Safety & Health



**We Are Here**

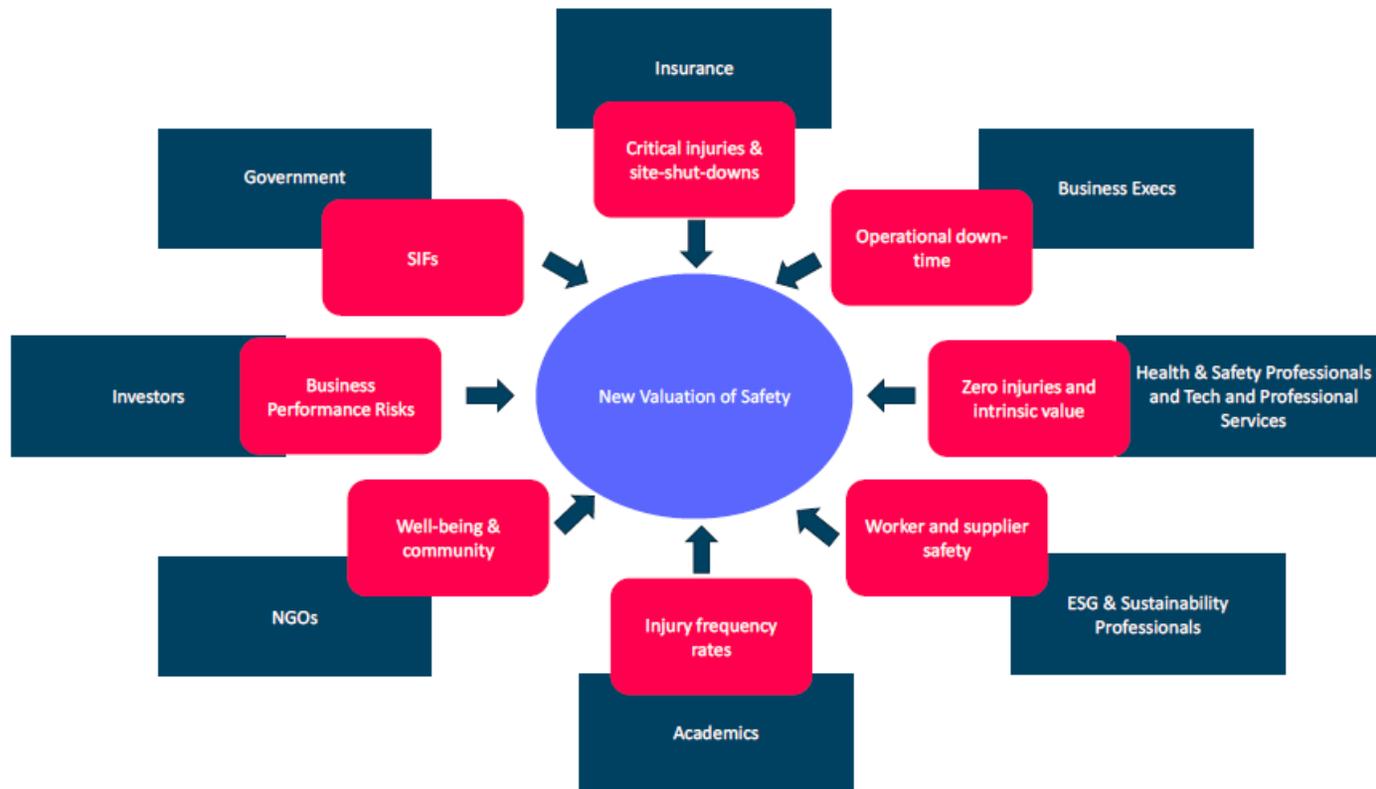
# New Value of Safety – ESG & EHS

*Evolving the understanding of the value and valuation of safety & health for 2023*



# New Value of Safety – Sample Inputs

*Peeling back the layers & acknowledging safety “scope creep”*



# Literature Review – Building on Body of Work

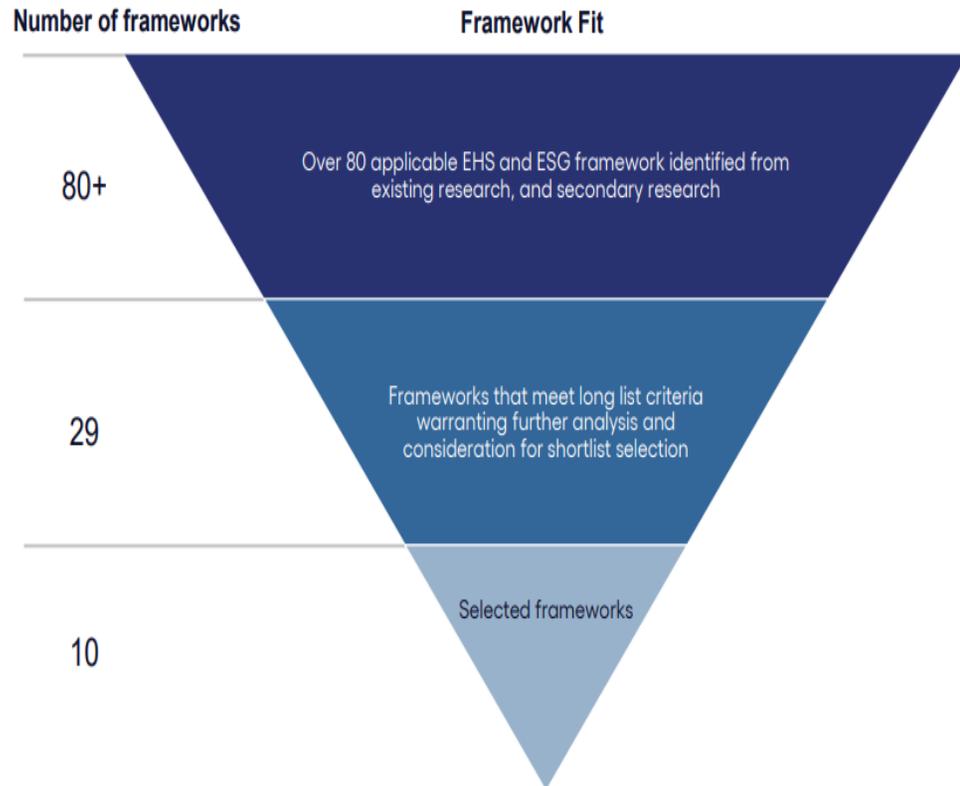
*Following on from Hundreds of Documents Reviewed by Delft University*

Quality Level	Description	Grey Literature In Scope	Count of Documents Reviewed
<b>A</b>	Traditional literature reviews, case reports, quantitative case studies, theoretical papers and other similar material. Academic research.	Conference papers, clinical trials, dissertations and theses, government documents and reports, patents, research reports, statistical reports	15
<b>B</b>	Research outputs produced by organizations. Not traditional academic research.	Datasets, surveys, market reports, whitepapers	7
<b>C</b>	Factual pieces based on business news or verbal accounts	Press release, interviews, newsletters	1
<b>D</b>	Marketing material based on no underlying research. Written outputs that were not initially intended for formal publication	Blogs, discussion forums, email discussions, tweets	3

The meaning and value of safety	Valuation, metrics and measurement	Expanded view of safety	Limitations and gaps
How safety is defined and valued by various stakeholders	Quantitative methods used to value and measure safety performance or safety interventions	The impact of emerging trends on safety	Limitations and gaps in existing safety valuation methods and frameworks

# Making Sense of the Landscape

- How is safety defined, measured and valued?
- How can these frameworks be practically integrated into everyday decision-making?
- How are ESG and safety & health valuation represented/integrated in these frameworks?



# Framework Assessment Shortlist

Framework name	Description	Shortlist Rationale
<b>CAN/CSA-Z1003-13</b>	Psychological health and safety in the workplace - Prevention, promotion and guidance to staged implementation	Detailed framework on stakeholders, implementation, resources, infrastructure, event management and training
<b>Corporate Knights Sustainability Rankings</b>	Scoring methodology providing quantifiable metrics for publicly-listed firms with revenue greater than \$1bn to assess their sustainability. Covers business metrics alongside social, employee, wellbeing, DE&I	Covers variety of detailed metrics for social issues, equality, diversity, injuries, fatalities, turnover. Scheme interacts with over 7000 public companies with over \$1bn revenue, including well-known firms Siemens, Schneider, HP, Cisco
<b>GRI</b>	Global Reporting Initiative 403: Occupational Health and Safety. Provides detailed framework for identifying mental and physical health issues in organizations	Detailed framework for identifying and reporting H&S issues, mental health in workplaces
<b>INSHPO</b>	International Network of Safety & Health Professional Organisation focuses on the occupational health and safety (OHS) profession. INSHPO provides an international forum for engagement on OHS-related matters, advancing the OHS profession through the exchange of evidence-based practices and the development of a harmonized framework	International forum of OHS professionals provides a strong framework based on capability rather than competency in applying a model code of conduct, certifications and education of workforce on OHS
<b>ISO 26001</b>	ISO 26000:2010, Guidance on social responsibility. Guidance document constitutes a stepping stone for organizations in both the public and private sectors who want to implement ISO 26000 as a means of achieving the benefits of operating in a socially responsible manner	Detailed guidance framework on creating and managing a sustainable, socially and environmentally responsible business including worker safety, development and social dialogue
<b>ISO 45001: 2018</b>	Occupational Health and Safety, guidance on implementing OH&S management system, managing risks and improving performance	Detailed guidance framework on creating and managing effective OH&S, reducing workplace incidents, absenteeism, reducing insurance cost, H&S culture, reputation staff, morale
<b>ISO 45003:2021</b>	Occupational health and safety management — Psychological health and safety at work — Guidelines for managing psychosocial risks	Detailed description of psychological safety, definitions, organizational responsibilities, implementation guidelines with examples
<b>Just Capital</b>	JUST Capital search advisory council captures the American public's views and measures corporate behavior on issues most important to the American public with defined methods. Most important issues according to stakeholders in 2022 were: Workers (39%), Communities (20%), Shareholders & Governance (19%), Customers (11%) and Environment (10%)	Covers contemporary corporate ESG and EHS issues as perceived by US public, provides detailed measurement methodology
<b>SASB O&amp;G Exploration &amp; Production</b>	Sustainability Accounting Standards Board industry-specific standards identify the subset of sustainability issues most relevant to financial reporting. Developed based on feedback from companies, investors and market participants	Highly credible standards body that has developed its industry-specific standards through a well-considered consultation program. The Oil & Gas standard has been selected due to its significant safety focus.
<b>UN Sustainable Development Goals</b>	17 Sustainable Development Goals (SDGs) for countries worldwide, developed and developing to end poverty and use strategies to improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve oceans and forests	Wide-ranging goals covering social, environmental, infrastructure, equality, worker and community health with detailed implementation frameworks and success stories

# Framework Assessment Results

	Human & Organizational Performance					
	Total Worker Health			ESG		
Framework name	Serious Injuries, illnesses & fatalities	Mental Health	Psychological Safety	Diversity, Equity & Inclusion	Environment & Sustainability	Ethics and Governance
CAN/CSA-Z1003-13	High Focus	High Focus	High Focus	High Focus	Low Focus	Low Focus
Corporate Knights Sustainability Rankings	Medium Focus	Low Focus	Low Focus	High Focus	High Focus	High Focus
GRI	High Focus	Medium Focus	Medium Focus	Low Focus	Low Focus	Low Focus
INSHPO	High Focus	Low Focus	Medium Focus	Low Focus	Low Focus	Low Focus
ISO 26001	Low Focus	Low Focus	Low Focus	High Focus	High Focus	High Focus
ISO 45001: 2018	High Focus	Low Focus	Low Focus	Low Focus	Low Focus	Low Focus
ISO 45003:2021	Medium Focus	High Focus	High Focus	High Focus	Low Focus	Low Focus
Just Capital	Low Focus	Low Focus	Low Focus	High Focus	High Focus	High Focus
SASB O&G Exploration & Production	Medium Focus	Low Focus	Low Focus	High Focus	High Focus	High Focus
UN Sustainable Development Goals	High Focus	High Focus	Medium Focus	High Focus	High Focus	High Focus

**Key:** ● High Focus   ● Medium Focus   ● Low Focus

# Framework Assessment Results – In Depth (Sample)

Framework	Summary	Framework Category	Safety Theme(s)	Geographic Applicability	Strengths	Limitations
<b>CAN/CSA-Z1003-13</b>	Framework covering stakeholders, implementation, resources, infrastructure, event management and training for issues relating to psychological health, mental well being and safety in the workplace	EHS and ESG	Mental Health Psychological Safety Diversity, Equity & Inclusion	North America	<ul style="list-style-type: none"> <li>Offers guidance and scenario based implementation advice to help firms understand how best to improve workplace management practices to reduce psychological safety risks</li> </ul>	<ul style="list-style-type: none"> <li>Mental health and psychological risk is still quite nascent and corresponding metrics are difficult to quantify. Therefore recommendations may come across as being too simplistic</li> </ul>
<b>Corporate Knights Sustainability Rankings</b>	Assesses over 7,000 public companies with over \$1 bn revenue to provide guidance on equality, diversity, injuries, fatalities. environmental performance and turnover	ESG	Serious Injuries, Illnesses and Fatalities Diversity, Equity & Inclusion Environment & Sustainability Ethics and Governance	Global	<ul style="list-style-type: none"> <li>Ranks the 100 most sustainable companies in the world through a clearly defined methodology based on publicly-disclosed data and 21 ESG related performance indicators</li> </ul>	<ul style="list-style-type: none"> <li>Few guidelines on how to implement recommendations</li> <li>Largely focussed on social responsibility with less than half of the key performance indicators relating to environmental sustainability</li> </ul>

**Themes  
& Model**

# The New Value of Safety & Health

# Mapping Frameworks & Topics to Value

Example Activity	Primary Value Creation	Secondary Value Creation	Tertiary Value Creation
SIF prevention and mental health programs	Health	Economic	Sustainability, Resilience, Ethics, Society, Reputation
Fatigue management to enhance productivity	Economic	Health, Ethics	Resilience, Society, Reputation
Emissions reduction and management	Environmental	Economic, Sustainability	Health, Resilience, Ethics, Society, Reputation
Diversity, equity, and inclusion programs	Sustainability	Resilience	Health, Economic, Ethics, Society, Reputation
Business continuity management	Resilience	Economic	Health, Environmental, Sustainability, Ethics
Ethical supply chain initiatives	Ethics	Health, Economic, Environmental	Sustainability, Resilience, Society, Reputation
Impact assessments & interventions for ecosystems and communities	Society	Health, Environmental	Economic, Sustainability, Resilience, Ethics, Reputation
Brand enhancement campaigns promoting safe working practices	Reputation	Economic	Health, Environmental, Sustainability, Resilience, Ethics, Society

# Topic Value Mapping – in Depth

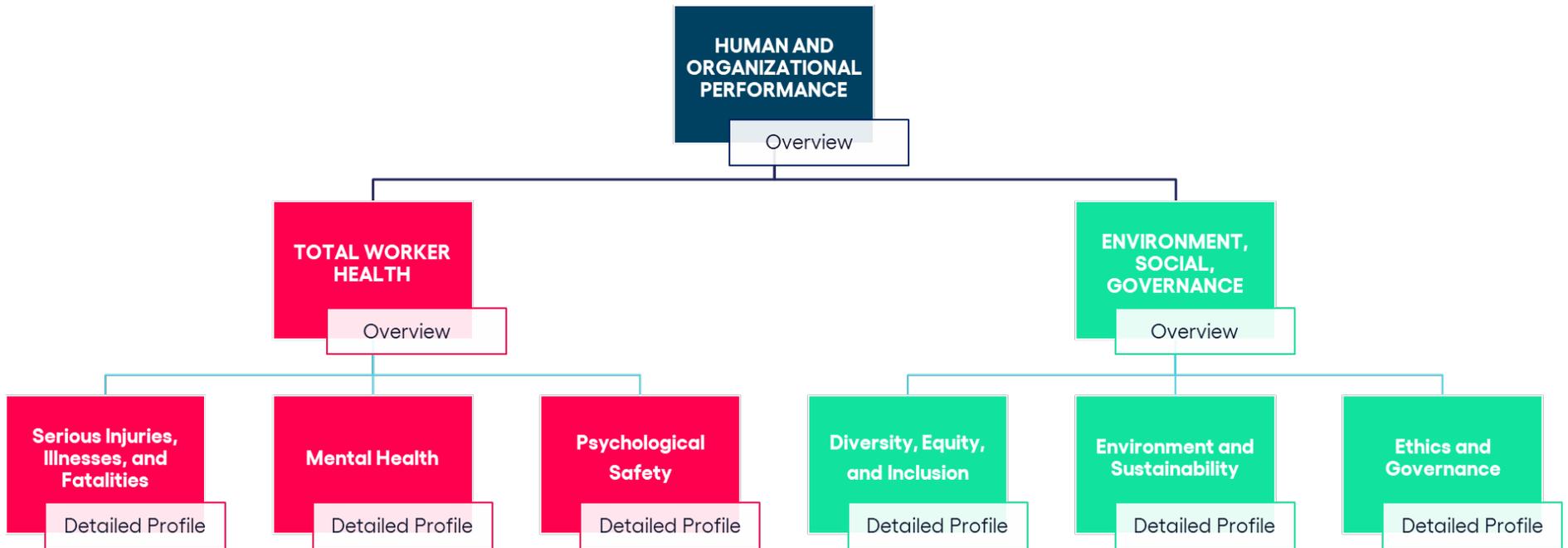
SIIF EHS Value Creation

Focus Level	Value of Safety	Rationale
Primary Value Creation	Health	SIIF reduction initiatives and active risk mitigation and eradication improve the physical, <u>mental</u> and social wellbeing of workers.
Secondary Value Creation	Economic	SIIF management and avoidance offsets potential fines, legal fees, and workers' compensation costs. Serious incidents and negligence can result in noncompliance and loss of social license to operate having significant financial impacts. Beyond cost avoidance, worker productivity is seen to increase in safe environments.
Tertiary Value Creation	Resilience	Teams with robust systems for reducing SIIFs will be better able to withstand disruption and overcome challenges while reducing exposure to legal and financial risk.
	Ethics	Organizations focused on reducing SIIFs will see greater trust and participation in safety-related activities, with executive buy-in improving organizational safety culture and trust.
	Society	SIIFs have far-reaching consequences impacting colleagues, <u>families</u> and communities. Commitment to and investment in risk mitigation and eradication will reduce the negative impact of an organization on society.
	Reputation	SIIFs can tarnish the brand perception of the organization, impacting employee retention and attraction, and inhibit access to finance. SIIF reduction will reduce the risk of non-compliance and help maintain and win new business.
	Sustainability	SIIFs are a key ESG and sustainability metric, the reduction of which will provide valuable improvements to ESG ratings for organizations, with benefits to financing and insurance. As ESG reporting maturity on safety increases, we expect to see a greater focus on proactive leading indicators.

Mental Health EHS Value Creation

Value Creation Level	Value of Safety	Rationale
Primary Value Creation	Health	Mental health promotion safeguards worker wellbeing, focusing on reducing stress and burnout and promoting productivity.
	Sustainability	Proper consideration of mental health empowers workers to manage it actively and openly, thus promoting a more sustainable work environment.
	Society	Supporting mental health provides a greater work-life balance by minimizing work-related stress, improving the standard of <u>living</u> and offering positive contributions to wider society.
Secondary Value Creation	Economic	Improved worker wellbeing and health drives enhanced work quality and productivity.
	Resilience	Greater capabilities and support for workers enable them to handle adverse situations, such as stress or trauma and to adapt to new challenges.
	Reputation	Prospective employees, investors and stakeholders are increasingly considering mental health KPIs when considering working at, investing <u>in</u> or purchasing from an organization.
Tertiary Value Creation	Ethics	Managing worker wellbeing and mental health is a focus across ethical operating and supply chain practices.

# Overall Topic Structure & Model

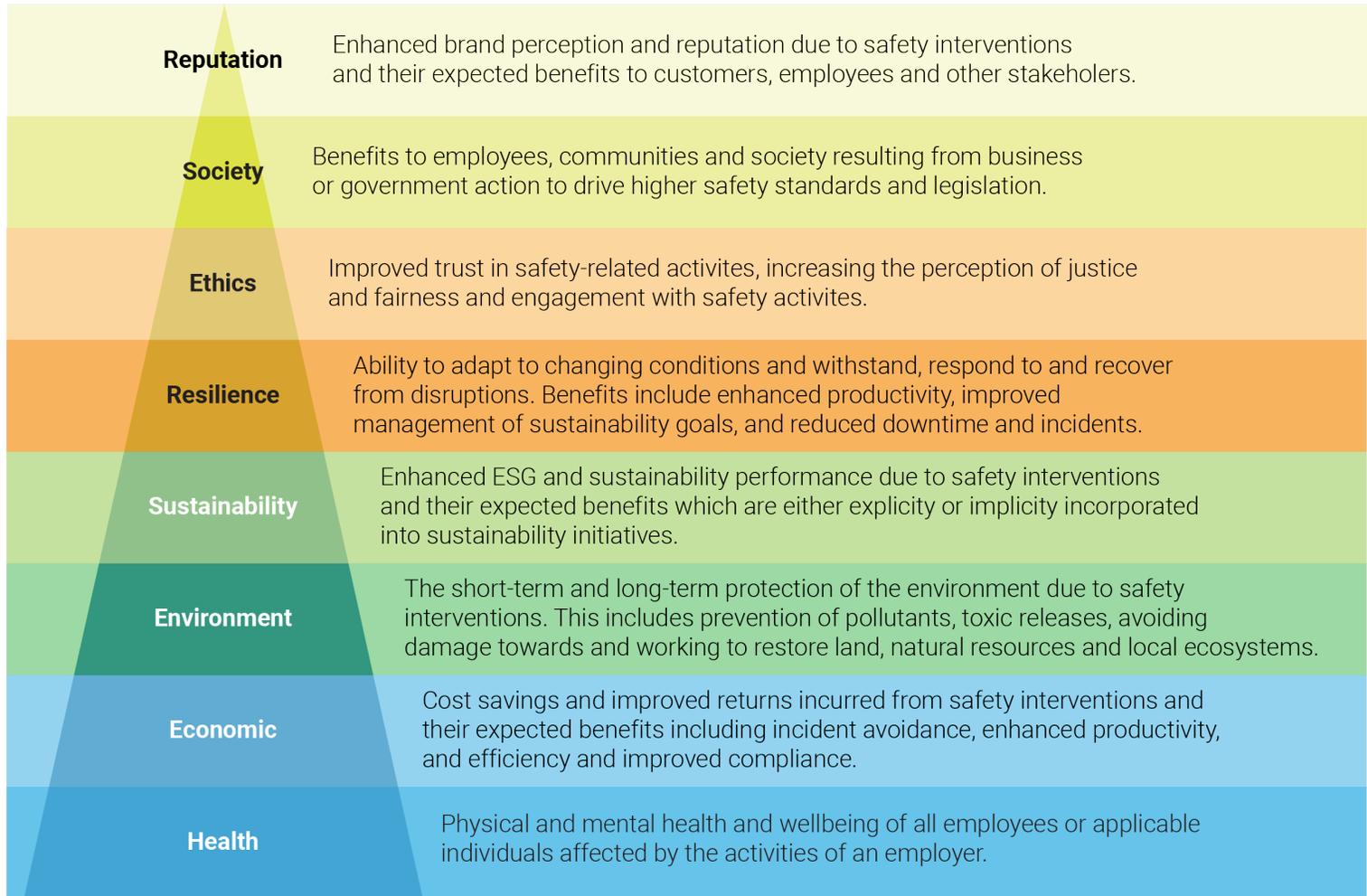


# Topic Drilldown – Example

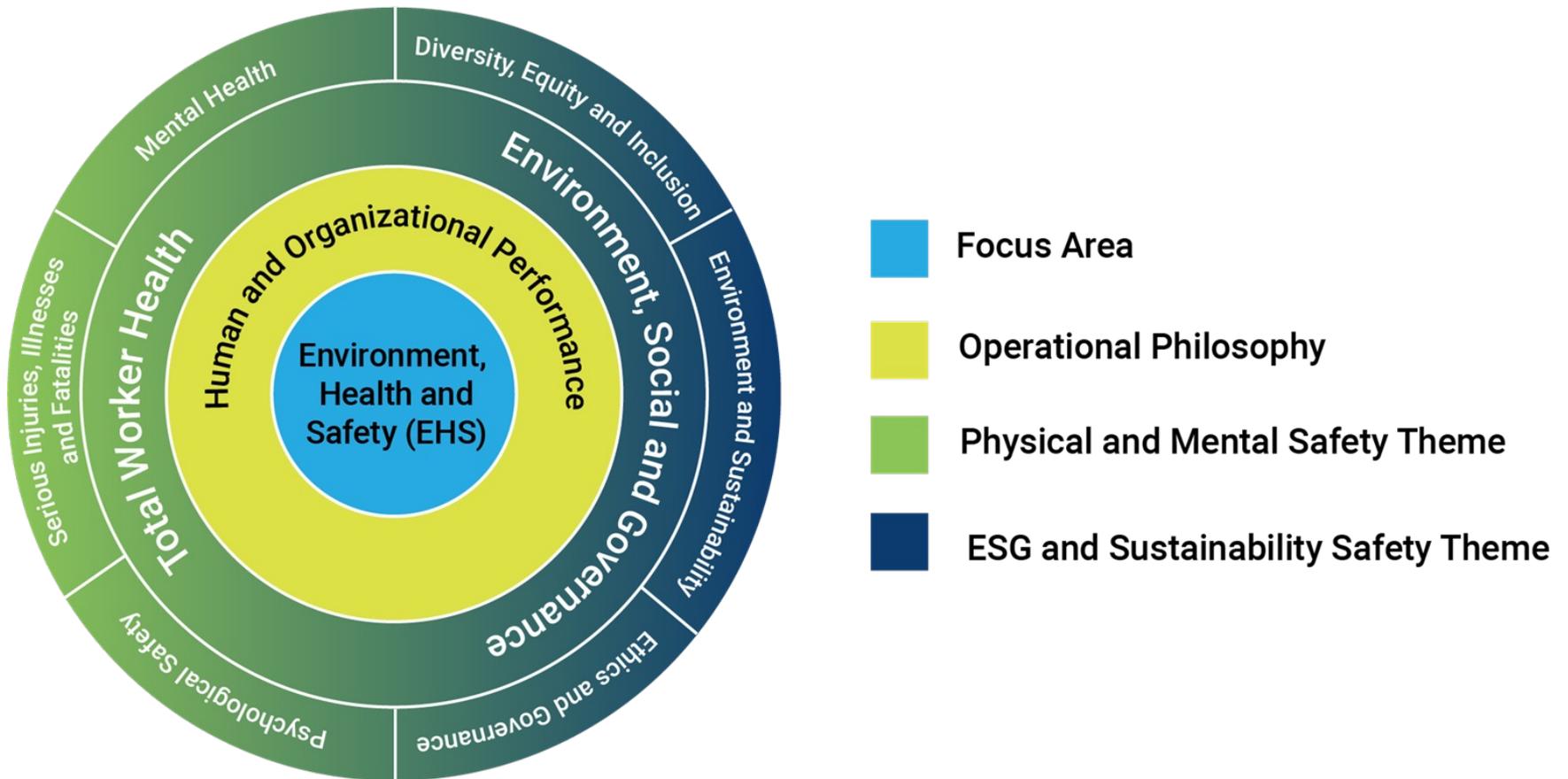
Theme	Serious Injuries, Illnesses & Fatalities	Mental Health	Psychological Safety	Diversity, Equity & Inclusion	Environment & Sustainability	Ethics and Governance		
<b>Definition/Description</b>	<ul style="list-style-type: none"> <li>Serious injuries, illnesses and fatalities are contributors to a significant reduction or total loss of human health</li> </ul>	<ul style="list-style-type: none"> <li>State of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community</li> </ul>	<ul style="list-style-type: none"> <li>An organizational state where workers from diverse backgrounds are included, allowed, and encouraged to learn, contribute, and challenge co-workers without fear of ridicule and absence of interpersonal fear</li> </ul>	<ul style="list-style-type: none"> <li>Principle that people should be subject to policies, processes and practices that are fair, free from bias, and ensuring inclusion of all stakeholders in organizational contexts</li> </ul>	<ul style="list-style-type: none"> <li>Protection of the environment and ability for a company to sustainably maintain resources and relationships with and manage its dependencies and impacts within its whole business ecosystem over the short, medium</li> </ul>	<ul style="list-style-type: none"> <li>Guiding principle which implies moral conduct, showing consideration for the rights and interests of others reflected in the processes and practices of governing</li> </ul>		
<b>Value Creation</b>	<ul style="list-style-type: none"> <li>Health, Economic, Resilience, Ethics, Society, Reputation, Sustainability</li> </ul>	<ul style="list-style-type: none"> <li>Health, Sustainability, Society, Economic, Resilience, Reputation Ethics</li> </ul>	<ul style="list-style-type: none"> <li>Safety culture &amp; leadership</li> <li>Continuous learning &amp; improvement</li> </ul>	<ul style="list-style-type: none"> <li>Employee engagement</li> <li>Flexible work</li> <li>Training and continuous learning</li> </ul>	<ul style="list-style-type: none"> <li>Leadership engagement</li> <li>Transparent goals and performance measurement</li> <li>Group training</li> </ul>	<ul style="list-style-type: none"> <li>Equal treatment and remuneration</li> <li>Impact assessments across genders, races, orientations</li> <li>Ethical hiring and sourcing</li> </ul>	<ul style="list-style-type: none"> <li>Pollution prevention</li> <li>Sustainable resource use and supply chains</li> <li>Climate change mitigation</li> <li>Biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>Ethical sourcing and supply chains</li> <li>Hazard and risk identification and elimination</li> <li>PPE and controls</li> <li>DEI, Psychological safety</li> </ul>
<b>Framework Coverage</b>	<ul style="list-style-type: none"> <li>ISO45001:2018</li> <li>GRI 403</li> <li>Corporate Knights Sustainability Rankings</li> <li>INSHPO</li> <li>ISO26000:2010</li> </ul>	<ul style="list-style-type: none"> <li>CAN/ CSA-13</li> <li>ISO45003:2</li> <li>UN SDGs</li> <li>GRI 403</li> <li>INSHPO</li> </ul>	<ul style="list-style-type: none"> <li>Near miss and root cause analyses</li> <li>Worker engagement indicators</li> <li>Job Hazard analyses</li> <li>Equipment reliability and process control</li> <li>Number and frequency of corrective actions</li> </ul>	<ul style="list-style-type: none"> <li>Training and support resources</li> <li>Frequency of communication</li> <li>Productivity</li> <li>Risk controls</li> </ul>	<ul style="list-style-type: none"> <li>Employee engagement and feedback rates</li> <li>Training and support resources</li> <li>Risk controls</li> </ul>	<ul style="list-style-type: none"> <li>Board, executive, director diversity</li> <li>Workforce demographics</li> <li>Fair Play Score and Rating</li> <li>Living wage</li> <li>EEOC Violations and Worker Grievance Fines</li> </ul>	<ul style="list-style-type: none"> <li>Energy, GHG emissions, water, waste, air, and particulate matter productivity</li> <li>Clean revenue and investment</li> <li>Supplier sustainability scores</li> <li>Resource efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Public and community sentiment polls</li> <li>Employee turnover</li> <li>Employee satisfaction</li> <li>Sanctions and fines</li> <li>CEO-average employee pay</li> <li>Sick leave and pension</li> </ul>
			<b>Initiatives/ Programmes</b>					
			<b>KPIs/ Metrics</b>					

# Surfacing the Iceberg





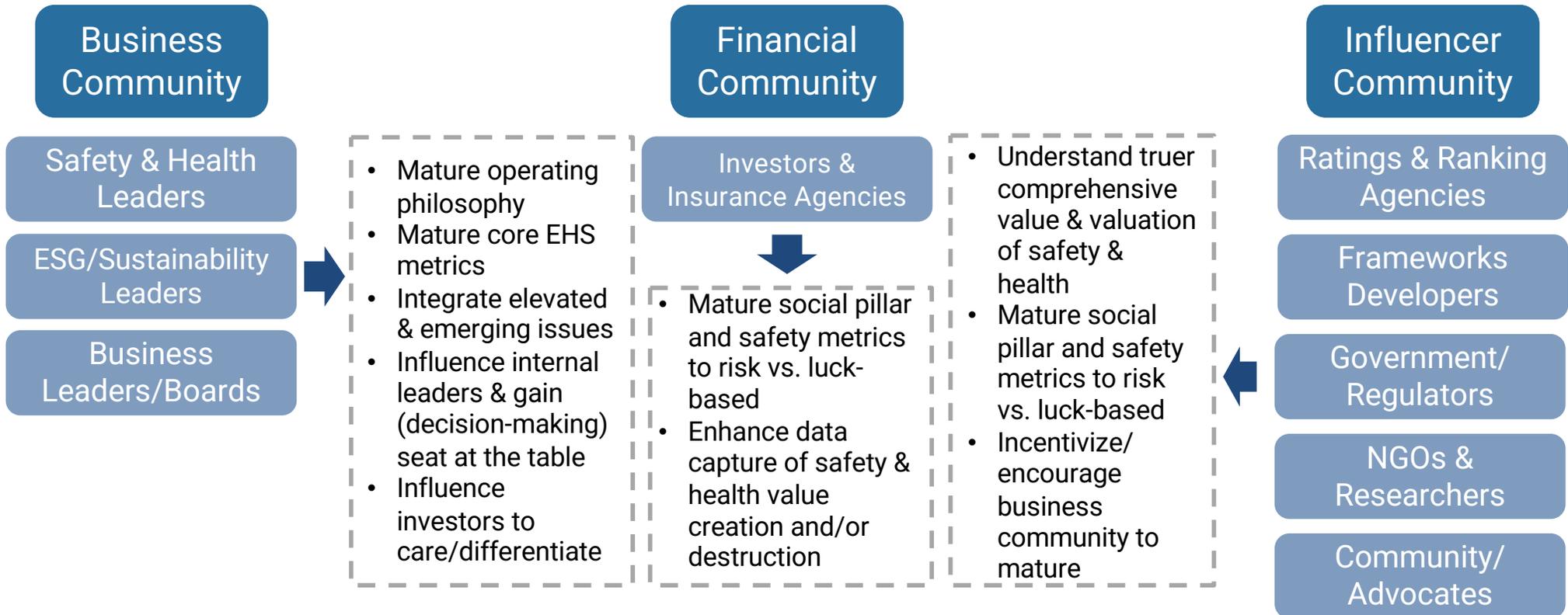
# A Model for 2023 and Beyond



**Case Study  
& Activation  
Guide**

**The New Value  
of Safety & Health**

# What Actions Do We Want to Drive?



# 10 Recommendations for Businesses

- 1.** Assess strategy, policies and procedures for full scope of modern EHS
- 2.** Review activities against key frameworks to align and identify the coverage gaps
- 3.** Perform holistic assessment, including materiality and risk analyses, to identify how these themes impact workers and the value they can generate
- 4.** Engage relevant functions to update safety and sustainability strategy, align with key frameworks, and assign KPIs
- 5.** Develop programs to establish hierarchy of accountability and organize workstreams
- 6.** Create cross-functional committees to eradicate siloes between safety, ESG and HR, designate Champions to drive ownership and engagement
- 7.** Develop transformation and investment plan focused on value creation to gain leadership buy-in
- 8.** Create implementation plan and delegate ownership of specific activities at functional and individual levels to close targeted
- 9.** Develop communication program to roll out New Value of Safety and benefits this will drive, leveraging training and engagement tools
- 10.** Establish mechanisms enabling learning and feedback loops that drive continuous improvement

# How to Get There – Activation Guide

- Value mapped by stakeholder with use cases and justifications included
- Follows validated “theory of change” methodology already in use in ESG domain
- Generates clear value chains and impact frameworks for organizational use

Value dimensions	Impact framework outcomes name	Stakeholder audience
Health	Improved quality of life	External stakeholders
Economic	Increased employees’ productivity	Business leaders/boards ESG practitioners and investors
	Employees’ retention	Business leaders/boards ESG practitioners and investors
	Career opportunities	External stakeholders
	Changed operation costs	Business leaders/boards
	Avoided households’ costs (worker/family)	External stakeholders
Environment	Reduced environmental impact risks	External stakeholders
Sustainability	Business continuity	Business leaders/boards ESG practitioners and investors
Resilience	Employees’ Productivity	Business leaders/boards ESG practitioners and investors
Ethics	Belonging	External Stakeholders ESG practitioners and investors
Society	Reduced cost to society (healthcare system/social benefits)	External Stakeholders
	Belonging	External stakeholders ESG practitioners and investors
Reputation	Business reputation (goodwill value)	Business leaders/boards ESG practitioners and investors

### Inputs

Resources necessary to carry out an activity

### Activities

The activities whose effects on social capital are to be analysed and measured

### Outputs

The results of the activity in question

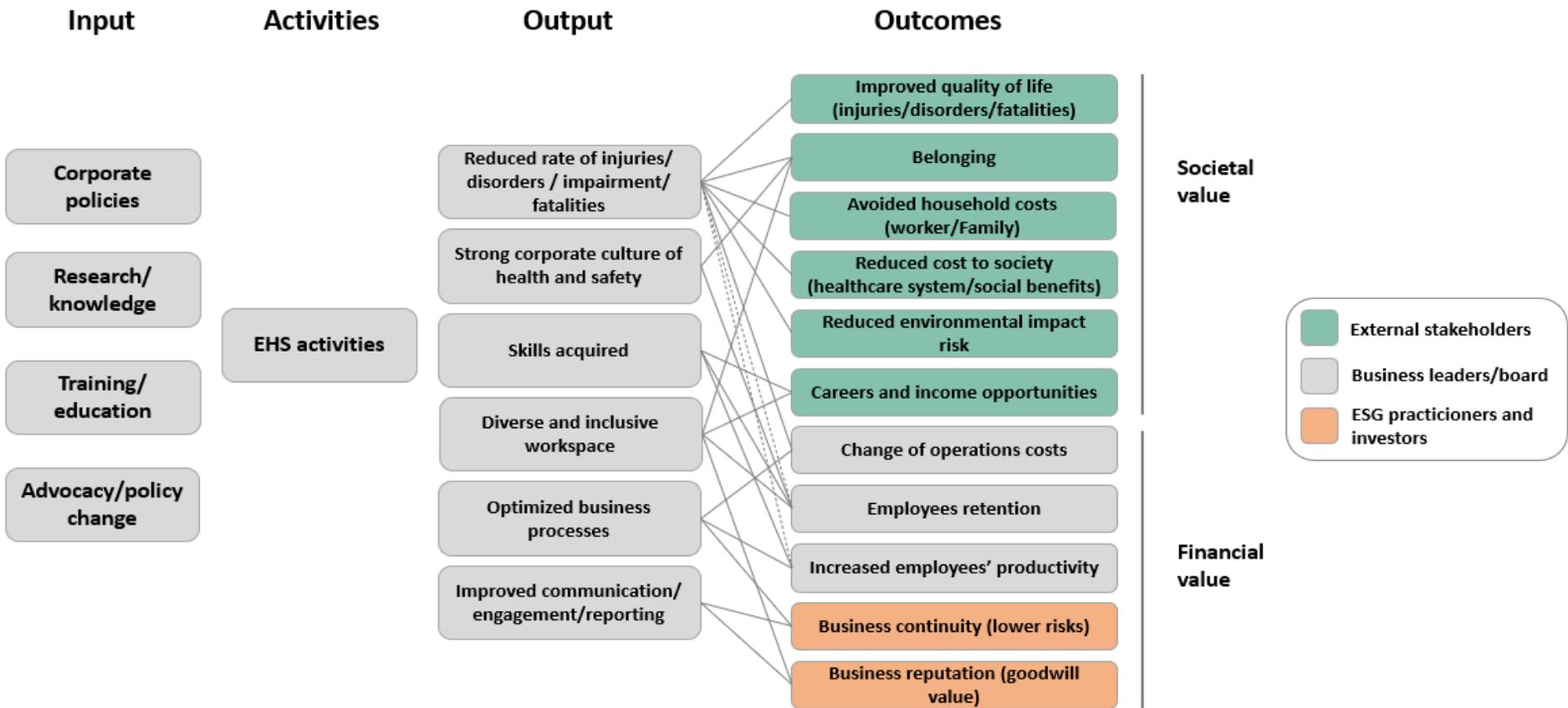
### Outcomes

Changes in the lives of the target population

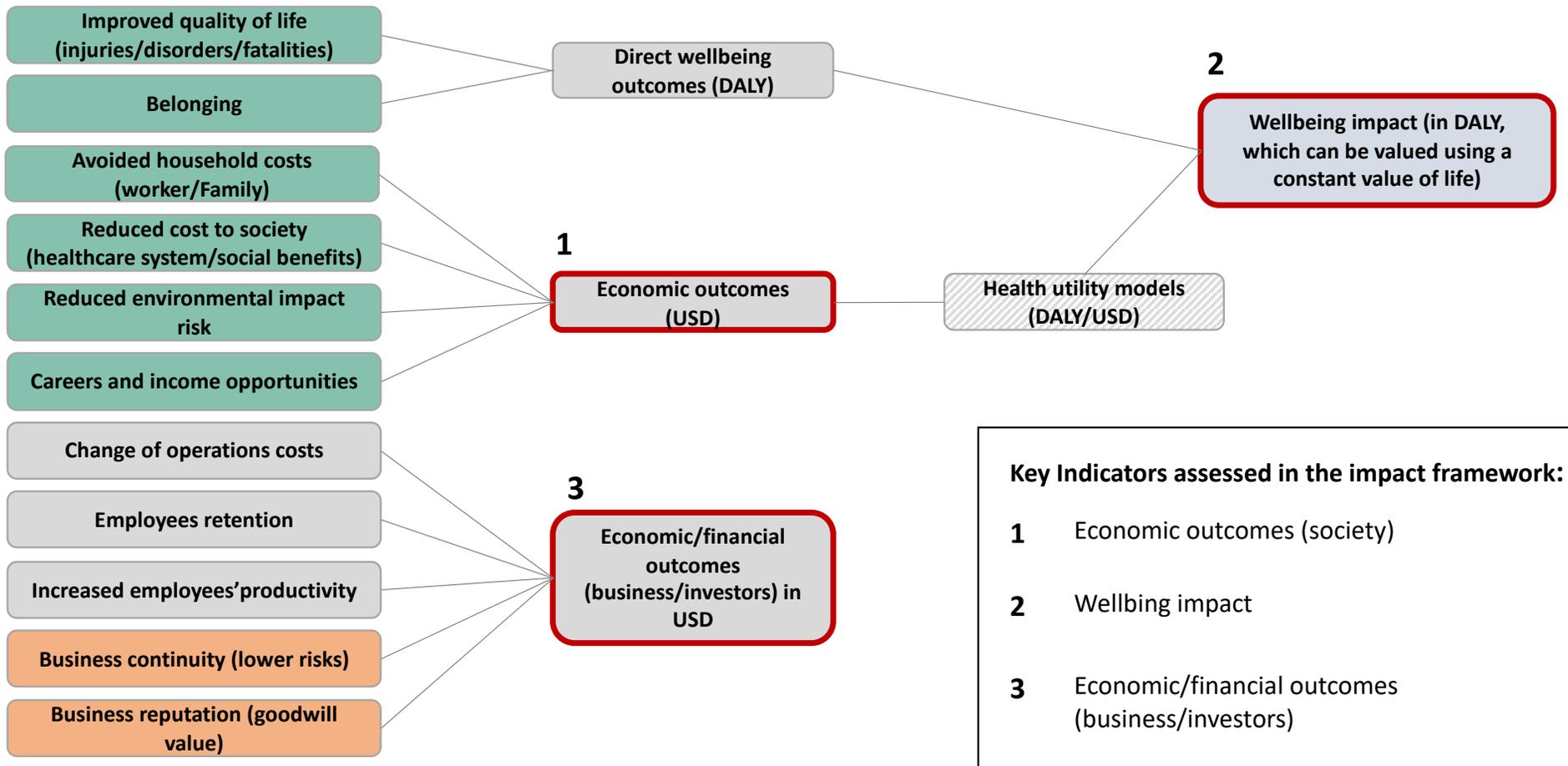
### Impacts

Change in the well-being of those affected over the longer term

# Activation Guide – Impact Framework Example



# Activation Guide – Impact Framework Indicators



# Activation Guide – from Framework to Case Study

Factory	Recordable incident rate	Lost workday rate	Turnover %	Unplanned absenteeism %	Hours worked (thousands)	# incidents/cases	# workdays lost
Treatment 1	0	0	0.7	1.27	459	-	-
Treatment 2	0	0	0.47	0.74	680	-	-
Treatment 3	0	0	1.41	0.98	581	-	-
Treatment 4	0.16	0	0.77	1.33	1,229	1	-
Treatment 5	0	0	3.23	0.09	604	-	-
Treatment 6	0	0	0.7	0.45	324	-	-
Treatment 7	0	0	1.75	0.02	463	-	-
Treatment 8	0	0	0.96	0.07	326	-	-
<b>Aggregated treatment</b>	<b>0.04</b>	<b>0</b>	<b>1.24</b>	<b>0.75</b>	<b>4,665</b>	<b>1</b>	<b>-</b>
Control 9	0.17	1.57	1.44	1.98	18,133	15	0.12
Control 10	0.18	0.63	1.13	1.11	29,605	27	0.08
Control 11	0.24	3.18	0.79	0.34	38,633	46	0.74
Control 12	0.44	6.65	1.06	1.67	49,920	110	3.65
Control 13	0.33	6.47	3.83	0.15	16,874	28	0.90
Control 14	0.39	4.02	0.8	0.48	11,231	22	0.44
Control 15	0.1	2.2	1.87	0.18	7,739	4	0.04
Control 16	0.24	0.34	0.97	0.27	8,280	10	0.02
<b>Aggregated control</b>	<b>0.29</b>	<b>3.75</b>	<b>1.34</b>	<b>0.99</b>	<b>180,415</b>	<b>262</b>	<b>4.91</b>

General model parameters	Value	Unit	Comments/Reference
DALY VALUE	54,015	USD/DALY	OECD GDP per capita
# Employees considered in baseline	1,000,000	employees /workers	supply chain involves roughly 1 million employees/workers
<b>Career and income opportunities</b>			
Duration training: Equivalent number of days education/training equivalent for skill acquired	15	days	Estimation
Fraction of employees impacted	1%	%	Estimation
Increase in knowledge parameter	5.30%	%	Secondary dat. Source: World Bank study.
Weighted value of training	100.00%	%	Estimation
Earning premium of education per day	69.96	USD/day	Secondary data
<b>Quality of life/Avoided household's costs</b>			

Project	Country	Value perspective	Impact pathway/outcome	Indicator	Capital	Societal value (USD)	Economic/ Financial value (USD)
suppliers China	China	Society	Improved Quality of life	Direct health and well-being	Human Capital	92,491	
suppliers China	China	Society	Avoided household costs	Income change	Human Capital	173,163	323,400
suppliers China	China	Society	Belonging	Direct health and well-being	Human Capital	675,188	
suppliers China	China	Society	Reduced costs to society	Avoided social costs	Social Capital	439,585	2,260,000
suppliers China	China	Society	Career and income opportunities	Earning premium	Human Capital	5,618,972	10,494,000
suppliers China	China	Business - Supplier	Change of operational costs	Avoided costs	Business		5,854,200
suppliers USA	USA	Business - Supplier	Business continuity	Avoided costs	Business		428,082
suppliers USA	USA	Business - Supplier	Business reputation	Sales value	Business		140,376,000

# Activation Guide – Equations & Appendices

## 7.2. Outcomes impact valuation for societal value

### 7.2.1. Improved quality of life (occupational injuries/fatalities)<sup>15</sup>

$$\text{Impact} = \# \text{Occupational injuries/diseases} \cdot \text{Disability weight (\%)} \cdot \text{Duration of change of wellbeing} \cdot \text{Value of life} \left( \frac{\text{USD}}{\text{DALY}} \right)$$

$$\text{Impact} = \# \text{Occupational fatalities} \cdot \text{Remaining life expectancy (year)} \cdot \text{Value of life} \left( \frac{\text{USD}}{\text{DALY}} \right)$$

**Outputs:** # of injury/diseases/fatalities cases is an existing business KPI.

**Outcome:** the outcome is the multiplication between the average disability weight (in %) and its duration (in years). The Global Burden of Disease (2019) publication [provide](#) disability weight for a range of injuries and diseases that you can use directly to match to the injuries/disease's experiences by employees. The duration is typically based on primary data (the duration of the disability or absence from work) but can be estimated with EHS or medical experts (an average can be considered between 5 and 25 days per case depending on the industry and country).

**Well-being valuation factor:** DALY valuation factor (see chapter 8.1).

**Data sources:** -

**Primary data from organization:**

- 1) # injuries/diseases/fatalities
- 2) Duration of the disability (years): days lost at work, expressed in years.
- 3) Remaining life expectancy (year): based on the age of employees or using an average for the organization.

**Secondary data:**

- 4) Disability weight (%): Global Burden of Disease 2019<sup>16</sup>

*For each metric/calculation, the raw equation as well as necessary primary and recommended secondary data sources are provided for execution-oriented stakeholders*

# Agenda

- 01 | About NSC
- 02 | Context: the Future World of Work
- 03 | The New Value of Safety & Health
- 04 | Q&A

# Thank You & Questions?

**John Dony**

**Vice President, Workplace Strategy**

**National Safety Council**

*[john.dony@nsc.org](mailto:john.dony@nsc.org)*