



EXECUTIVE SUMMARY

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



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# Foreword

What does it mean to be safe? This simple question has spawned decades of debate, and even now discussion continues in circles both academically and practically about the true meaning of the word and the best way to manifest it in the field. That this conversation continues to evolve – even occasionally flaring into passionate arguments about human nature – may be difficult for some to believe. Yet we know over time, societal and business perspectives shift, sometimes more radically and rapidly than others. As they do, the models we once used to understand, evaluate and take action on these issues become outdated – even actively unhelpful – in affecting change in the world and the workplace.

Such is the case with safety today. In the past ten years alone, the world has seen a rapid advancement in technologies, faced crises that have imperiled the health and wellbeing of the global population and economy, and gone through significant demographic and cultural change. In the midst of this, our definitions of safety and health could not and did not remain static. Even absent of this level of external turmoil, the definition of safety had already been transforming in the business community, with the emergence of new thinking around leading indicators; decision-making; neuroscience; serious injury, illness and fatality prevention (SIIF); and human and organizational performance (HOP). Taken together, these elements form the basis of “The New View” of safety and health, sometimes called “Safety 2.0.”

The past five years have seen not only a continuation of this “old/new” debate, with numerous points of view and practices developing in the market and research arenas, but a massive influx of attention on areas less traditionally considered as belonging to the safety domain. Two particular areas of influence have dominated this discussion – environment, social and governance (ESG) and total worker health (TWH). These two domains were already seeing an increased focus among more mature organizations in the past decade, with interlinks to traditional safety and health beginning to be established. However, the COVID-19 pandemic, alongside societal and workplace demographic changes, has forced greater attention on issues like physical wellbeing; mental health; psychosocial risk; diversity, equity and inclusion (DEI); sustainability; ethics and governance, driving a true transformation in the dialogue around the scope of safety.

Yet the models we rely on – philosophical and financial – do little, if anything, to account for this sea change. Tools like Heinrich’s Triangle or the Iceberg Model have long been insufficient to express the true value and valuation of safety and health, and even the more modern and sophisticated efforts grounded in accounting principles have not been updated to reckon with the new reality of the safety landscape. Each organization may be at a different point on its path toward understanding and embracing safety. However, it’s increasingly harder to ignore the fact that for many people, the concept of safety has expanded to include not just protecting one’s arms and legs in an industrial facility, but to safeguarding all of the things that make us who we are – and all of the things in and surrounding our work environments.

In this fundamentally changed landscape, new models and new language are necessary – and so are new tools. This report, the outcome of a two-year effort by the National Safety Council, in partnership with and funded by Lloyd's Register Foundation and assisted by a panel of experts from the safety, health, ESG, business, research, investment, insurance, NGO and government communities, represents a first step toward redefining safety in 2023. As may be obvious from the size of the full report, this was no small undertaking, but we have segmented the work into discrete components for easier use:

- This executive summary capturing the key highlights, findings and recommendations of the work
- A full report, which provides a detailed look at the New Value of Safety model and its component parts, as well as recommendations for action
- A full literature review, which provides insights into the trends, frameworks and context informing the synthesis and creation of the model
- An activation guide, which provides methodologies and case studies that can be used to put the model into practice regardless of whether you are a safety and health practitioner or an ESG investor

We encourage you to read through this report and its associated resources and tools with an eye toward actual change and not as a passive conceptual piece. While the topics may be technical, the work has kept practicality in mind, and the recommendations and activation guide are intended to spark conversations, plans and policy change wherever they are used. Also, please note wherever the word “safety” appears, it should be understood as a shorthand for the myriad of issues impacting physical safety, and that utilizing it as a single word is not meant to exclude health, wellbeing and other associated topics.

In the century-old words of the first National Safety Council President & CEO, Robert W. Campbell, safety can perhaps best be understood as, “the study of the right way to do things.” This definition, if nothing else, acknowledges that change is a constant in life. Embracing this means we must also change the way we conceive of safety to remain relevant, responsive and reflective of the context in which we attempt to create it every day.

We welcome you to join us on this journey.



# Executive Summary

Environment, health and safety (EHS) is a constantly evolving field impacted by the latest scientific research, technological advancements, megatrends and associated changes in the regulatory landscape. To gain a better understanding of the importance and benefits of modern workplace safety, the National Safety Council (NSC) in conjunction with and funded by Lloyd's Register Foundation (LRF), commissioned a study into the New Value (and Valuation) of Safety, particularly in the context of modern-day topics, such as environment, social and governance (ESG). The New Value of Safety provides a basis on which a broad range of stakeholders can make commitments to practically modernize EHS programs, implement new safety strategies and improve culture.

While the highest priority of the EHS function will always be the physical safety of workers, this research highlights three organizational concepts that are generating broad value and driving a holistic approach to safety management for highly embedded and emerging risks. These concepts include:

- Human and Organizational Performance (HOP)
- Total Worker Health (TWH), developed by the National Institute for Occupational Safety and Health (NIOSH) and adapted in many formats, covering SIIF, mental health and psychological safety
- ESG, which covers several initiatives shaping modern safety excellence, including DEI, environment and sustainability, and ethics and governance.

The analysis found these concepts and initiatives are inter-related and have distinct areas of overlap. While current organizational structures and resources have predominantly kept ESG and TWH programs separate, some themes, such as DEI, have relevancy across both TWH and ESG, and the benefits of integrating these areas are increasingly evident. A framework developed to visualize these relationships appears below:

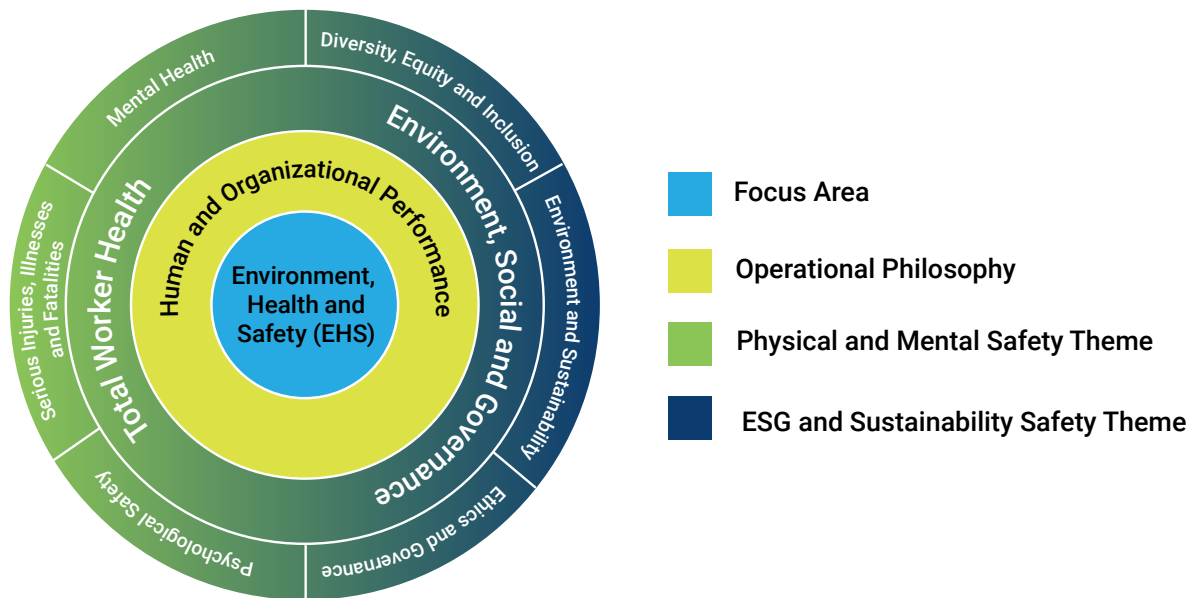
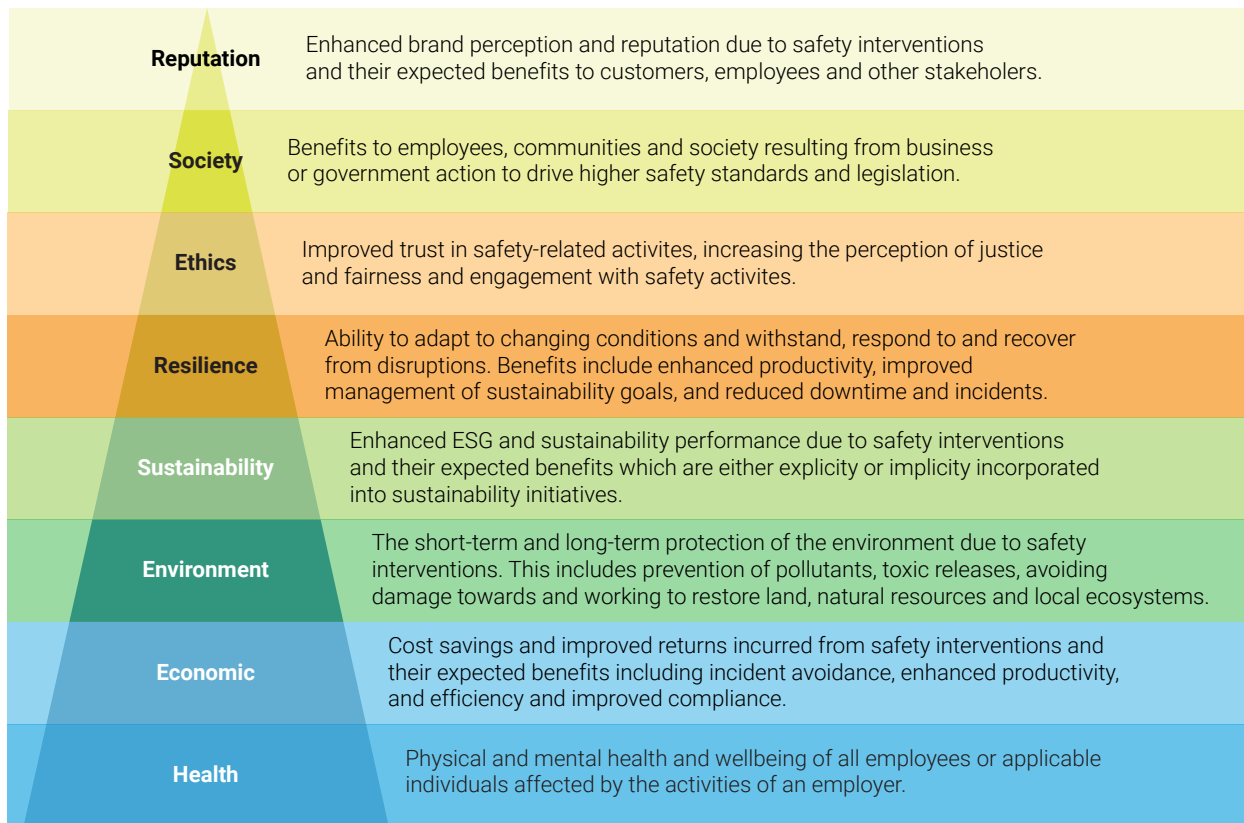


Figure 1: Framework of Environment, Health and Safety Themes

These modern EHS initiatives generate different areas of value for a broad set of stakeholders. As well as creating value for employees, investors and executives, value is generated across communities and society as a whole. Originally developed by The Delft University of Technology, and adapted through this study, the Hierarchy of EHS Value (see below) effectively represents the value generated through EHS programs across eight areas: health, economic, environment, sustainability, resilience, ethics, society and reputation. That said, we believe the relationships between these value creation areas are less a direct, ordinal hierarchy and more a set of closely and complexly interrelated linkages that require additional analysis and interpretation.



Note: Although called a "hierarchy," these concepts are not meant to be thought of as strictly or ordinally hierarchical in nature.

Figure 2: Hierarchy of Environment, Health and Safety Value (adapted from Yang, M (2022))

The holistic approach driven by contemporary safety programs creates an opportunity for businesses to generate long-term systemic value over and above physical safety and direct cost reduction. For example, SIIF prevention and mental health programs directly create health value, but they also ensure workers are more productive, which drives economic value. Additionally, a team that feels physically and emotionally safe is more resilient and able to withstand, respond to and recover from disruptions. More broadly, SIIF prevention and mental health programs can boost trust between employees and employers. They can also enhance an organization's reputation by mitigating the risk of serious incidents, and, by driving up safety standards, they contribute to healthier communities.

This shift is being increasingly supported by the regulatory and standards landscape developing to align with the New Value of Safety. While current coverage of safety frameworks is still heavily focused on physical safety risks, an increasing number of safety frameworks exist discussing ESG themes such as equality, culture and the environment.

However, silos and coverage gaps are created as a result of frameworks still viewing TWH and ESG as separate themes. Furthermore, regulations are also often voluntary and focused on offering deep technical support for industry-specific hazards which can inhibit a holistic approach to EHS. This has resulted in non-workplace hazards that materially impact wellbeing and safety at work being poorly supported across the regulatory landscape. A map of these themes to existing frameworks covering ESG, EHS and operational excellence appears below:

Framework name	Human and Organizational Performance					
	Total Worker Health			ESG		
	Serious Injuries, Illnesses and Fatalities	Mental Health	Psychological Safety	Diversity, Equity and Inclusion	Environment and Sustainability	Ethics and Governance
CAN/CSA-Z1003-13	Low 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	Low Focus	Low Focus	Low Focus	High Focus	High Focus	High Focus
UN Sustainable Development Goals	High Focus	High Focus	Low Focus	High Focus	High Focus	High Focus

**Key:** ■ High Focus ■ Medium Focus ■ Low Focus

Figure 3: Framework Coverage of Environment, Health and Safety Initiatives

To improve the awareness and understanding of the organizational concepts and initiatives shaping modern safety programs, the New Value of Safety has been broken down into distinct concept and theme profiles. These profiles can be used by safety professionals, business executives, investors and policymakers to gain insight into the role and benefits of these initiatives in modern EHS programs and guide decision-making with respect to EHS strategies, best practices, investment decisions and performance tracking. Regardless of current maturity level, there is an opportunity to benefit from the compounding value modern safety programs create.

These themes and initiatives have been further studied to understand the primary, secondary and tertiary value they create across a variety of dimensions, and the full report includes quantitative and qualitative data regarding each initiative, program implementation guidance, sample metrics and KPIs, and recommended actions for the future. A summary appears below:

Health and Safety						
Human and Organizational Performance						
Total Worker Health				ESG		
Theme	Serious Injuries, Illnesses and Fatalities	Mental Health	Psychological Safety	Diversity, Equity and Inclusion	Environment and Sustainability	Ethics and Governance
Definition/Description	<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 wellbeing 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 the 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 and long term</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>
Value Creation	<ul style="list-style-type: none"> <li>• Health, Economic, Resilience, Ethics, Society, Reputation and Sustainability</li> </ul>	<ul style="list-style-type: none"> <li>• Health, Sustainability, Society, Economic, Resilience, Reputation and Ethics</li> </ul>	<ul style="list-style-type: none"> <li>• Health, Resilience, Economic, Ethics and Reputation</li> </ul>	<ul style="list-style-type: none"> <li>• Sustainability, Resilience, Society, Reputation, Economic, Health and Ethics</li> </ul>	<ul style="list-style-type: none"> <li>• Environment, Economic, Health, Sustainability, Reputation, Resilience, Ethics and Society</li> </ul>	<ul style="list-style-type: none"> <li>• Ethics, Health, Economic, Environment, Sustainability, Resilience, Society and Reputation</li> </ul>
Framework Coverage	<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-Z1003-13</li> <li>• ISO45003:2021</li> <li>• UN SDGs</li> <li>• GRI 403</li> <li>• INSHPO</li> </ul>	<ul style="list-style-type: none"> <li>• CAN/CSA-Z1003-13</li> <li>• ISO45003:2021</li> <li>• UN SDGs</li> <li>• INSHPO</li> </ul>	<ul style="list-style-type: none"> <li>• ISO26000:2010</li> <li>• Corporate Knights Sustainability Rankings</li> <li>• Just Capital</li> <li>• UN SDGs</li> <li>• CAN/CSA-Z1003-13</li> <li>• SASB</li> </ul>	<ul style="list-style-type: none"> <li>• ISO26000:2010</li> <li>• Corporate Knights Sustainability Rankings</li> <li>• Just Capital</li> <li>• UN SDGs</li> <li>• SASB</li> </ul>	<ul style="list-style-type: none"> <li>• INSHPO</li> <li>• ISO26000:2010</li> <li>• ISO45001:2018</li> </ul>
Initiatives/Programs	<ul style="list-style-type: none"> <li>• Safety culture and leadership</li> <li>• Continuous learning and 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 and 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 and psychological safety</li> </ul>
KPIs/Metrics	<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</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 and 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>

The New Value of Safety Report is intended to collate the actionable insights and value generation potential of key areas in modern EHS programs. Businesses should use the guidance provided in the theme profiles to implement targeted interventions for these areas. To effectively drive these changes and align with the New Value of Safety, several general areas of best practice were identified via analysis carried out across the research. The full report includes further recommendations and KPIs derived from this work, and a short list appears below. Recommendations that include an asterisk are suggested for those just beginning their journey:

- Assess the extent to which your strategy, policies and procedures address the full scope of modern EHS beyond physical safety and short-term environmental impacts\*
- Review your activities against key safety frameworks to align and identify the coverage gaps with respect to legacy and emerging EHS themes
- Perform a holistic assessment, including materiality and risk analyses, to identify how these themes impact workers in your organization and the value they can generate to support initiative prioritization\*
- Engage relevant functions to update the overarching safety and sustainability strategy, align with key frameworks and assign KPIs to track performance
- Develop programs (such as TWH or the pillars of ESG) to establish a hierarchy of accountability and organize workstreams (such as mental health or DEI initiatives)
- Create cross-functional committees to eradicate silos between safety, ESG and HR, and designate Safety Champions to drive ownership of and engagement with the safety strategy
- Develop a transformation and investment plan focused on value creation to gain leadership buy-in and support and encourage a leader-engaged safety culture
- Create an implementation plan and delegate ownership of specific activities at the functional and individual levels that will close the targeted gaps in your safety program\*
- Develop a communication program to roll out the New Value of Safety program and the benefits this will drive, leveraging training and engagement tools to boost adoption
- Establish mechanisms enabling learning and feedback loops that drive continuous improvement and increase the agility and impact of safety programs\*

In addition, this research has been leveraged to develop a targeted Activation Guide for stakeholders to support continuous improvement and help organizations evolve with the changing landscape of EHS, available on the NSC website. This guide will enable businesses to address safety holistically and mitigate risks from multiple directions. Regardless of current level of safety and health performance, there is an opportunity to benefit from this approach, and we encourage using it to inform your safety strategy going forward.

If you are interested in additional information stemming from this research, please visit [nsc.org/nvos](https://nsc.org/nvos)