

## Driving Change in Injury Prevention: Impact Stories from the MSD Pledge



The MSD Solutions Index (Index) is a survey developed by the MSD Solutions Lab designed to assess an organization's musculoskeletal disorder (MSD) prevention initiatives. It offers a safety maturity assessment focused on three main areas of MSD prevention at the organizational level – risk reduction, safety culture, and innovation and collaboration – and provides a holistic assessment of MSD prevention strategies. Organizations that participate in the Index receive scores that fall into one of the following five categories:

- **Innovating:** Indicates an organization should continue its current practices of learning and investing in new innovations, and share successes with others, and should also continue to actively search for ways to grow and improve.
- **Proactive:** Indicates an organization has well-executed prevention efforts where MSDs are anticipated and prevented before they occur, with some areas for growth and improvement.
- **Advancing:** Indicates an organization is building solutions to manage MSD risks and hazards, with several areas for growth and improvement.
- **Reactive:** Indicates an organization is responsive to injuries when they occur, with many areas for growth and improvement.
- **Novice:** Indicates an organization has few MSD prevention efforts in place, may not be fully aware of the issues related to MSDs or may not know where to start.

Organizations that are in the MSD Pledge community are offered an opportunity to complete the Index annually to better understand and track their progress in MSD prevention maturity over time. The Index was first launched to organizations in 2022, and to date, three full cycles of Index responses and subsequent insights have been generated. Annual findings from the MSD Solutions Index for [2022–2023](#), [2023–2024](#) and [2024–2025](#) are published on the MSD Solutions Lab website.

The first three cycles of the Index reveal compelling evidence of the success of organizations' participation in the MSD Pledge, and a growing emphasis on MSD prevention. Among organizations with three years of Index participation, several trends emerged, most notably a general improvement in MSD mitigation efforts. Specifically, 72.2% of organizations that completed the Index in all three years have improved their overall Index scores. Risk reduction scores were improved for 55.6% of organizations, safety culture scores improved for 77.8% of organizations, and innovation and collaboration scores improved for 55.6%. Lastly, 50% of organizations experienced increases overall and across all domains from 2022 to 2023 and from 2024 to 2025. Collectively, these results suggest that organizations involved in the MSD Pledge and completing the MSD Solutions Index are experiencing improvements to their MSD initiatives over time.

Other year-over-year trends since the first annual MSD Solutions Index in 2022–2023 include:

- An increase in organizations tracking more leading indicators than lagging indicators, emphasizing a shift from reactive safety efforts to proactive safety efforts
- An increase in organizations recognizing the impact of non-physical risk factors, such as stress, supervisor support or work schedules, implying that organizations are reaching a higher level of maturity by being data-driven and genuinely invested in worker well-being, rather than focusing solely on physical risks and regulatory compliance
- An increase in safety and health leaders stating they involve their frontline workers in decision-making and ask for their feedback when making ergonomic or workplace safety decisions, reflecting more [participatory approaches to ergonomics](#)

Seeing MSD mitigation efforts reflected in the data across the MSD Pledge community is powerful, demonstrating meaningful progress for many participating organizations, and the value of benchmarking tools like the MSD Solutions Index. Beyond these quantitative insights, several organizations have chosen to share a deeper, more personal look at their MSD prevention journeys. Through interviews and firsthand reflections, they highlight lessons learned, improvements made and the broader impact of their participation in the MSD Pledge and MSD Solutions Index.





Cargill's corporate ergonomics team oversees MSD prevention efforts across more than 80 food manufacturing sites in the U.S. and Canada. Among those are meat processing facilities, which are some of the highest-risk environments for MSDs and the primary focus of Cargill's participation in the MSD Pledge and MSD Solutions Index.

When Cargill first participated in the MSD Solutions Index in the 2022–2023 cycle, the organization already had a mature, over 15-year-old ergonomics program in place for its meat processing operations. However, the team noted that for many years they were largely “living in their own world” when it came to evaluating their MSD prevention efforts. The Index provided an objective, third party benchmarking tool, grounded in ergonomics and industry expertise, that allowed them to challenge internal perceptions and clearly see how their program aligned with recognized best practices. The results were validating: Cargill achieved a *Proactive* level of MSD prevention maturity in its first Index cycle and has consistently scored in the *Proactive* or *Innovating* categories across all Index domains for three years.

At the same time, the Index offers valuable insight into where even a strong, established program could improve. While Cargill maintains a *Proactive* score organization wide, the team notes that individual sites vary in maturity, with some likely closer to the *Advancing* or *Reactive* levels. The Index helps identify potential gaps and guide targeted improvements, reinforcing the idea that sustained progress, especially in a large, complex organization, takes time and long-term investment.

Engagement with the MSD Pledge and participating in the Index has also accelerated innovation and collaboration. Cargill began in the *Proactive* category for Innovation and Collaboration and has since advanced into the *Innovating* category. A driving force behind this advancement in innovation is Cargill's interest in trialing new technologies. For example, [Cargill partnered with LifeBooster to pilot](#) their wearable sensors, showcasing a commitment to innovation to improve both worker safety and efficiency. In addition, a [Research to Solutions grant](#) from the MSD Solutions Lab enabled a sustained partnership with the University of Waterloo, allowing Cargill to rigorously evaluate computer vision and sensor technologies already being used in its facilities — capacity the organization did not have internally. This work not only supports internal decision making, but also generates research that is published and shared broadly, extending the impact beyond Cargill. Lastly, since beginning their journey with the Index, the team at Cargill regularly participates in benchmarking sessions hosted by the MSD Solutions Lab with peer organizations to share knowledge regarding MSD prevention and to learn from common challenges across industries.

In an industry with historically high MSD rates, these efforts have led to measurable results. After an initial drop and subsequent plateau following early ergonomics investments, the Index helped Cargill identify program elements that could be strengthened. Entering the MSD Pledge, the organization set a goal of reducing MSD injury rates by 25 percent — and achieved that goal within three years. Today, Cargill reports the lowest MSD rates it has ever had, with some plants experiencing months with zero MSDs. Cargill's experience demonstrates that even highly mature programs benefit from structured external benchmarking, and that using tools like the MSD Solutions Index can help to validate performance, drive continuous improvement and advance MSD prevention across the field.



**Pacific Gas and  
Electric Company**

Prior to participating in the MSD Solutions Index in the inaugural 2022–2023 cycle, PG&E had maintained an ergonomics program for more than 20 years — reflected in its overall *Proactive* and *Innovating* ratings for MSD prevention across three years of taking the Index. Even so, the team recognized an opportunity to move toward a more consistent, data-driven approach that anticipates and prevents MSDs, rather than relying primarily on lagging indicators and historical injury trends. The ergonomics team’s goal became to confidently state that they operate a proactive ergonomics program enterprise-wide — one that identifies risks before injuries occur and directs resources where they are most needed.

Results in the Safety Culture domain of the MSD Solutions Index — where PG&E was rated at the *Advancing* level in 2022–2023 — highlighted specific opportunities to strengthen partnerships with frontline workers to identify and address ergonomic risks and ensure a centralized process for concerns to be raised. At the time, PG&E’s ergonomics risk management system primarily supported office based workers and did not adequately address the dynamic and variable environments of frontline work. Findings from the Index led to the conclusion that achieving a truly proactive program required a more systematic way to identify and manage risk across both office and frontline roles.

In response, PG&E worked with Cardinus Risk Management to implement a centralized ergonomics risk management system to provide a consistent experience across the workforce. Core components include ergonomics risk factor training, customized self assessments with risk scoring and structured corrective action plans. In line with Index recommendations, the system also incorporates general health and wellness training and tools for people leaders to better support ergonomics through communication, workload considerations and resources to address risk.

These changes have strengthened engagement and early intervention by making ergonomics risks more visible and actionable. PG&E has seen increased participation in identifying and addressing risks, along with more consistent follow through on corrective actions. Leaders now have greater visibility into key risk factors and outstanding actions, enabling more informed decision making and support. PG&E has since achieved a *Proactive* rating in the Safety Culture domain.

In addition, PG&E’s collaboration with Cardinus to develop this risk management system and engagement in the MSD Pledge community, through sharing [case study](#) experiences and consistent participation in benchmarking meetings, reflect continued progress in the Innovation and Collaboration domain. The ergonomics team at PG&E notes that the MSD Pledge community provides a valuable forum to learn from peer organizations, share challenges, and gain insight into different approaches to MSD risk reduction, and supports continuous improvement across industries.

Ultimately, PG&E’s experience highlights the value of third party benchmarking in providing external validation and alignment with best practices, while helping uncover gaps that may not be visible internally. The ergonomics team at PG&E explained the value of the MSD Solutions Index as follows:

“Because MSDs are complex and influenced by multiple factors, the Index’s research-based framework — addressing physical, mental, cultural, environmental and psychosocial factors — provides a well-rounded approach to program maturity and injury reduction. The report offers expert guidance, balancing near-term tactical actions with longer-term goals. Participation also lends credibility to the program, reassuring employees and leaders that initiatives are evidence-based and aligned with recognized best practices.”



CONTACT US: [msdsolutionslab@nsc.org](mailto:msdsolutionslab@nsc.org)



LEARN MORE: [nsc.org/msd](https://nsc.org/msd)





Meteorite, a founding member of the MSD Pledge, is an impact firm that builds private-sector coalitions and communities to solve complex social issues. The company's experience with the MSD Pledge demonstrates how annual benchmarking through the MSD Solutions Index can translate directly into workplace improvements. Meteorite has demonstrated significant multi-year progress in the MSD Solutions Index, moving from a *Reactive* to *Advancing* to *Proactive* stage of maturity in how it identifies, manages and prevents MSD risks across the organization.

In the 2022–2023 Index cycle, Meteorite's ergonomics/MSD prevention program focused on core ergonomics elements, such as addressing existing MSD risks, preventing new hazards and providing new hire training. Over time, Index insights helped guide the expansion and formalization of a comprehensive MSD prevention program. By the 2024–2025 cycle, Meteorite had implemented a formal MSD prevention policy. The organization now actively assesses MSD risk factors and develops, pilots, implements and monitors ergonomic interventions.

Insights from Index participation also helped codify best practices in Meteorite's employee handbook and safety and operations policies. All employees complete an annual ergonomics self assessment, and open communication about MSD-related concerns is actively encouraged. One standout outcome was the introduction of a home office ergonomics allowance for ergonomic chairs, standing desk converters, keyboards and monitors. As one employee shared, "The financial benefit helped me buy a standing desk, which I wouldn't have been able to justify purchasing otherwise... It's made my work-from-home setup much more flexible."

Alongside program improvements, Meteorite has seen growth in its safety culture since participating in the Index – particularly in senior leadership consistently reinforcing the importance of MSD prevention and encouraging collaborative problem solving. Meteorite's experience highlights how the MSD Solutions Index can serve as both a starting place for recommendations on building out MSD prevention efforts and a practical roadmap for sustained, proactive MSD risk reduction.