

MUSCULOSKELETAL DISORDER (MSD) PREVENTION SAFETY INNOVATION CHALLENGE

APRIL 2025 — SEPTEMBER 2025

SUMMARY:

The National Safety Council (NSC) launched the Musculoskeletal Disorder (MSD) Prevention Safety Innovation Challenge with TechConnect to identify and accelerate new technologies capable of reducing workplace injuries caused by repetitive motion, awkward posture, and forceful exertion. The challenge engaged global innovators to explore solutions such as exoskeletons, robotic aids, AR/VR training platforms, and digital twins to help reduce the frequency and severity of MSDs across all occupations.

Through this initiative, NSC aimed to strengthen its long-term partnership with Amazon, raise awareness of its TechHub Marketplace, and introduce new technology providers to its safety ecosystem. The Challenge furthered NSC's mission to eliminate preventable workplace injuries and fatalities through innovation and collaboration.

ABOUT THE COMPANY:

The National Safety Council (NSC) is the nation's leading nonprofit dedicated to workplace safety, with a mission to reduce preventable deaths and injuries across all industries. By leveraging partnerships, research, and innovation, NSC identifies and promotes technologies and best practices that improve worker safety and well-being.

TIMELINE:

Challenge launched: **April 30, 2025**

Submission deadline: **June 5, 2025**

NSC Congress and Expo: **September 15–17, 2025**

THE CHALLENGE:

The U.S. workforce faces persistent risks from musculoskeletal disorders — conditions often caused by repetitive motion, awkward positioning, or overexertion. These injuries are among the most common and costly workplace hazards.

NSC sought innovative technology-based approaches to reduce these risks. Participants were invited to submit solutions that could improve worker safety by addressing any aspect of MSD prevention. Selected innovators were evaluated on technical merit, effectiveness, innovation, scalability, and user experience, with semifinalists presenting their solutions during the NSC Congress and Expo.



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THE OPPORTUNITY:

The challenge provided a unique platform for innovators to connect with global safety leaders and demonstrate solutions designed to mitigate MSD-related risks. With its broad scope — covering all occupations and all risk types — the challenge encouraged diverse solutions spanning advanced robotics, wearable systems, AI-driven posture analysis, and immersive training platforms.

THE SOLUTION:

TechConnect designed and executed the single-stage global innovation challenge on behalf of NSC.

Activities included:

- » Developing all public-facing challenge content and materials with NSC oversight
- » Executing global outreach through TechConnect's innovation network
- » Hosting a live informational webinar with NSC to engage prospective applicants
- » Coordinating semifinalist readiness for booth engagement and live pitching at NSC Congress

From 19 applicants across eight countries, NSC selected ten semifinalists to exhibit at the NSC Congress and Expo. A panel of experts narrowed the field to three finalists who pitched live to conference attendees. Audience voting determined the overall winner.

The ten semifinalists are now the only eligible partners for MSD Solutions Lab grantees - corporations receiving up to \$20,000 each to implement innovative MSD prevention solutions.

RESULTS AND BENEFITS:

The MSD Prevention Safety Innovation Challenge achieved its goal of expanding NSC's network of safety innovators and identifying new solutions for workplace injury prevention. Nine of the ten semifinalists were new to NSC, underscoring the success of TechConnect's global outreach.

The challenge strengthened NSC's relationship with Amazon's safety grant initiative, providing semifinalists access to pilot-scale funding that can accelerate technology adoption in real-world environments. Through this collaboration, NSC broadened awareness of its TechHub Marketplace, introduced new innovators into its ecosystem, and reinforced its leadership in advancing safer workplaces.



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THE PROGRAM:

Challenge Design, Submissions, and Evaluations

TechConnect collaborated with NSC's technical and program teams to ensure accurate messaging and alignment with MSD risk priorities. All submissions were reviewed for eligibility and compliance before evaluation by NSC experts. Ten semifinalists were selected and invited to Congress, where on-site voting determined three finalists and one overall winner.

Preliminary Program Consultation

Having previously partnered on innovation projects, NSC and TechConnect quickly aligned on scope, evaluation criteria, and communications strategy.

Opportunity Scouting

TechConnect's outreach identified a diverse range of solution providers in exoskeleton design, robotics, AR/VR, computer vision, and digital ergonomics.

Request for Innovations

Promotion included targeted outreach via TechConnect's network, new contact discovery, LinkedIn campaigns, and an informational webinar co-hosted with NSC.

Opportunity Evaluation Support

TechConnect pre-screened submissions, highlighting top technologies and ensuring client alignment prior to expert evaluation and selection.

OUTCOMES AND METRICS:

19
SUBMISSIONS

78.9%
OF APPLICANTS ADDRESS MORE THAN ONE
OF THE THREE STATED FOCUS AREAS

10 SEMI-FINALISTS

73.7%
OF APPLICANTS HAVE
A COMMERCIAL
PRODUCT OR A
PROTOTYPE

8
COUNTRIES