OHS
SDGs
健康勞動力

**2025**

# 職場永續健康與安全國際研討會

**International Conference on Sustainable Occupational Health and Safety**

# From Compliance to Culture: Bridging OHS and ESG for a Healthier Future of Work



**Michelle Garner-Janna, CSP, CPE**
Chief Experience Officer & Co-Founder

**WHAT WORKS INSTITUTE**
FOR ENVIRONMENTAL, HEALTH & SAFETY™

# What Works Institute

The What Works Institute partners with organizations globally to transform workplace safety & well-being through:

- Evidence-based research on OHS practices

- Cross-cultural collaboration with local experts

- Strategic integration of well-being into ESG frameworks

# Priority Topics

- AI in EHS
- Culture & Workforce Dynamics
- Human-Centric Safety & Health
- Modernizing Metrics & Measurement
- Climate Change/Heat Stress
- Mental Well-being

# Look Ahead – A Future Ready Approach to ESG

**Environment**
Climate as a driver of human health
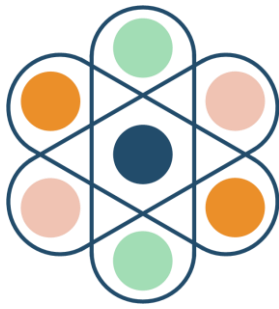
**Social**
Mental well-being as a core social imperative

**Governance**
Integrating OSH into ESG oversight and accountability

# Climate Change is a Human Safety Issue

## Extreme Weather Events

In 2024, extreme weather events led to the displacement of **40 million people** and caused **8,700 deaths** globally.

## Environmental Health Risks

Global cost of air pollution-related illnesses was approximately **$8.1 trillion in 2019**, equivalent to **6.1% of global GDP**.

## Supply Chain Disruption

Winter Storm Uri disrupted nearly **78%** of U.S. ethylene production and **shut down** major semiconductor fabs in Texas, causing **significant workforce disruption**.

Van Dijk, A. I. J. M., Beck, H. E., Boergens, E., de Jeu, R. A. M., Dorigo, W. A., Edirisinghe, C., Forootan, E., Guo, E., Güntner, A., Hou, J., Mehrnegar, N., Mo, S., Preimesberger, W., Rahman, J., & Rozas Larraondo, P. (2025). *Global Water Monitor 2024: Summary Report*. Global Water Monitor Consortium. Retrieved from www.globalwater.online

World Bank. (2022). *The global health cost of PM$_{2.5}$ air pollution: A case for action beyond 2021*. World Bank.https://documents1.worldbank.org/curated/en/455211643691 938459/pdf/The-Global-Health-Cost-of-PM-2-5-Air-Pollution-A-Case-for-Action-Beyond-2021.pdf

S&P Global Commodity Insights. (n.d.). *Impact of Winter Storm Uri on chemical markets*. S&P Global. https://stage.www.spglobal.com/commodityinsights/en/ci/topic/imp act-of-winter-storm-uri-on-chemical-markets.html

# Heat Stress in the Workplace

- Rising global temperatures

- Increased exposure

- Increased risk for employees

- Increased organizational risks
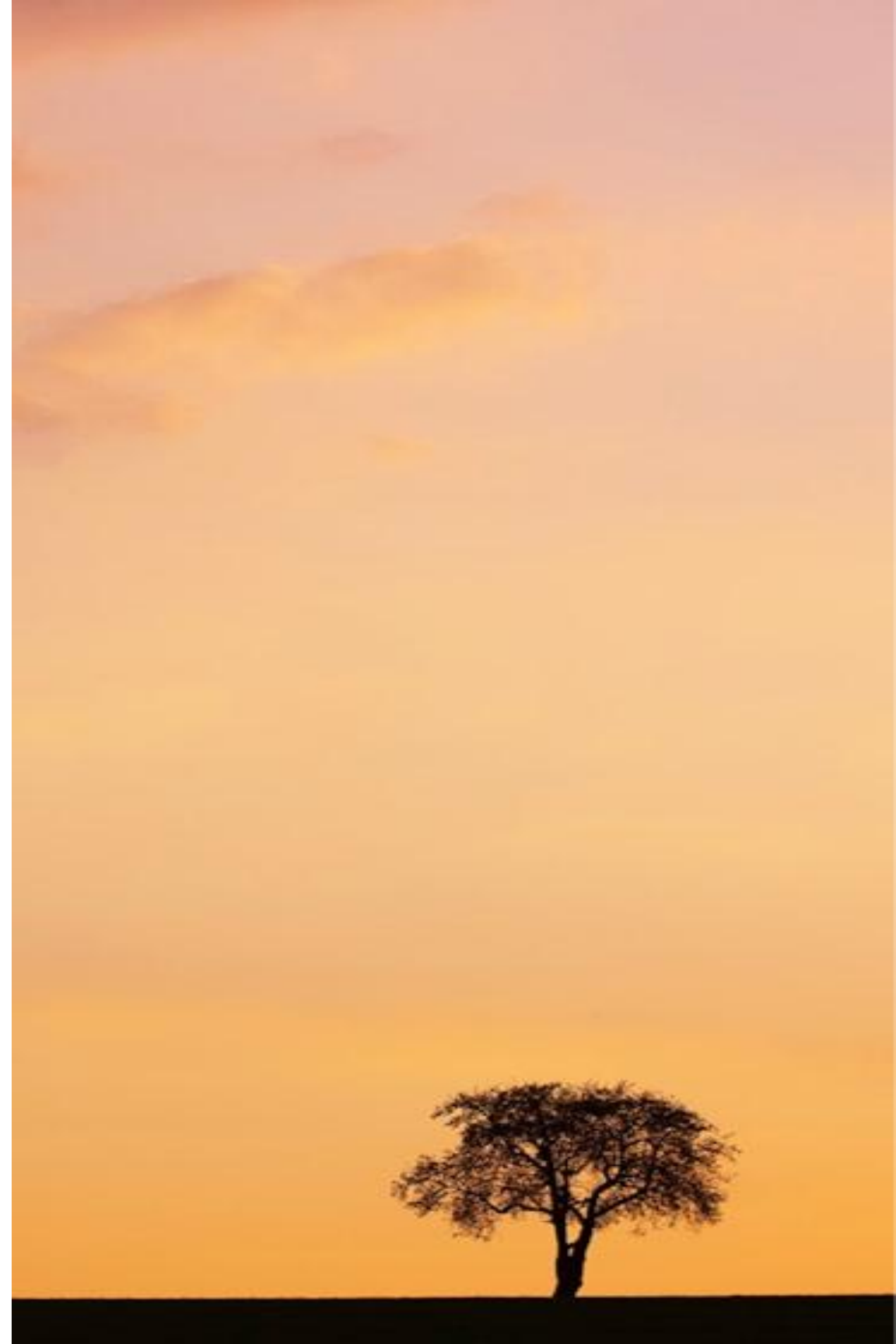
# Productivity and Organizational Risk

**Increased Incidents**

**Reduced Efficiency**

**Legal and Financial Risks**

**Global Impact**

# Physiological Factors Contributing to Heat Stress

1 **Metabolic Heat Production**

2 **Individual Characteristics**

3 **Medical Conditions and Medications**

4 **Clothing and PPE**

# Environmental Factors Influencing Heat Stress

**Temperature and Humidity**

**Solar Radiation & Ventilation**

**Urban Heat Islands**

# Heat Illness & Injury Prevention Plan (HIIPP)



**Mandatory Plan**

Required for all covered employers

**Site-Specific Controls**

Customized hazard evaluation and prevention

**Employee Input**

Non-managerial workers must contribute

**Annual Review**

Regular updates required

# Initial Heat Trigger Requirements (26.7$^0$ C+)



**Cool Drinking Water**

Provide 1 quart per employee per hour



**Shade Access**

Ensure air-conditioned or shaded break areas



**Rest Breaks**

Allow and encourage paid breaks as needed



**Monitoring**

Track temperatures and employee heat exposure



**Acclimatization**

Special procedures for new or returning workers

# High Heat Trigger Requirements (32.2°C+)

**Mandatory Rest Breaks**

15-minute paid breaks every 2 hours

**Buddy System**

Paired workers or regular communication checks

**Enhanced Monitoring**

Increased observation for heat illness symptoms
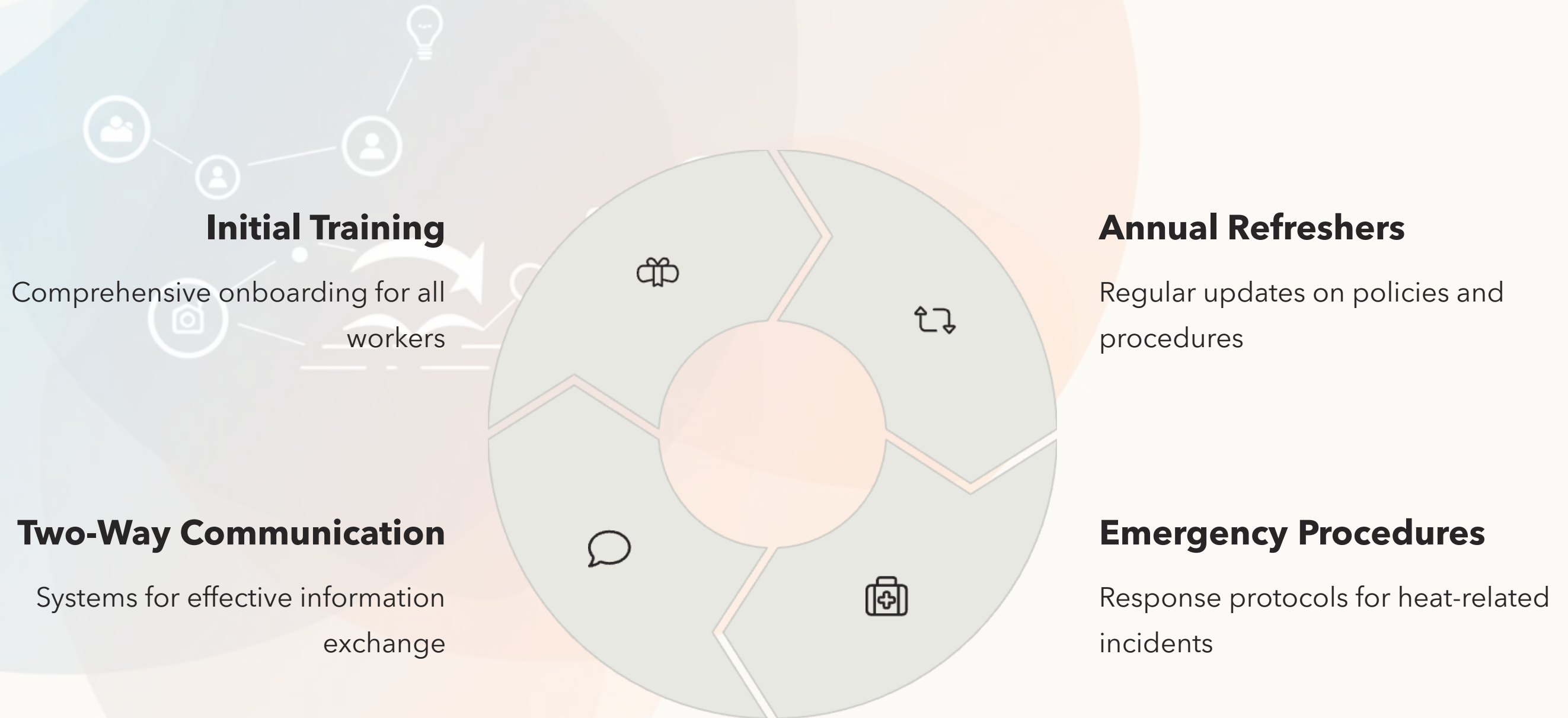
**Additional Training**

Special instruction on high heat procedures

**Heat Hazard Alerts**

Post critical information in work areas

# Training and Communication

**Initial Training**

Comprehensive onboarding for all workers

**Annual Refreshers**

Regular updates on policies and procedures

**Two-Way Communication**

Systems for effective information exchange

**Emergency Procedures**

Response protocols for heat-related incidents

# Workplace Assessments and Monitoring

- Regular assessments, including temperature and humidity monitoring.

- Implement engineering or administrative controls based on these assessments.

# Real World Usage: Wearables in Construction







## Challenge

- Workers in high-heat zones (≥95°F) frequently experienced symptoms of **heat exhaustion** and **dehydration**
- Increased **lost-time incidents during summer months**
- Need for **real-time monitoring** without disrupting work

## Solution

- Deployed **wearable sensors** to 200+ workers over a 3-month pilot
- Sensors measured core body temperature, heart rate, sweat loss, and environmental heat index
- Data streamed to a mobile dashboard monitored by site supervisors

## Results

- **36% reduction in heat-related illnesses** compared to previous summer
- Supervisors received **35 early-warning alerts**, allowing proactive hydration/rest
- Positive employee feedback: 82% reported feeling "safer and more aware"

# Measure What Matters

*To manage heat stress risk responsibly, we must start measuring where it hurts the most: on the health and safety of people.*

| Heat Stress Impact | Example OSH Metrics |
| --- | --- |
| Heat waves | Leading: Number of modified shifts due to heat index<br>Lagging: Heat-related incidents |
| Core body temperature elevation | Leading: % of workers monitored with wearable sensors or real-time body temp checks<br>Lagging: Incidence of heat exhaustion or heat stroke |
| Reduced concentration & decision-making | Leading: % of high-risk tasks rescheduled outside of peak heat hours<br>Lagging: Human error or near-miss incidents during high heat |
| Heat-affected PPE compliance | Leading: % of jobs with heat-adapted PPE (e.g., cooling vests, breathable gear)<br>Lagging: Non-compliance or PPE removal events due to overheating |
| Worker perception of safety | Leading: Frequency of heat-related safety briefings and check-ins per month<br>Lagging: Survey responses indicating heat-related safety concerns |

# What Works Institute
# Heat Stress Maturity Model, Implementation Guide & Toolkit

This toolkit provides a **detailed guide for developing and executing** a heat stress management plan, including policy development, program templates, and **practical guidance** for various work environments.

**HEAT STRESS, INJURY & ILLNESS PREVENTION**

*A What Works Implementation Guide*

# Heat Stress Maturity Model

## Basic Compliance

**Focus:**
Minimum Requirements
Provide Water, Breaks, Shade
Some Monitoring Activity
Minimal Training
**Challenges**
Inconsistency & Incidents

## Developing Systems

**Focus:**
Systematic Approach
Formal Policies, Acclimatization
Regular Monitoring and Training
Data Collection & Trending
**Challenges**
Gaps & Integration

## Proactive Management

**Focus:**
Robust Integration
Advanced Monitoring Tech
Dynamic Scheduling & Data
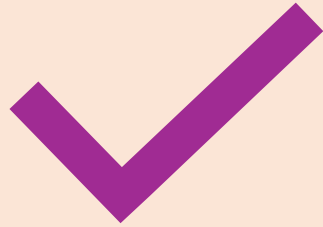Extensive & Tailored Training
**Challenges**
Continuous Evaluation

## World-Class Practices

**Focus:**
Innovation & Improvement
Latest Strategies
External-Facing Contributions
Leadership & Wellbeing Ties
**Challenges**
Cultural Sustainment

# What Works Guidance Document

**Recommended Corporate Heat Stress Policy**

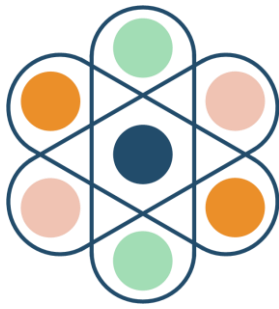**Program Guidance & Sample Program Template**

**Practical Rollout Tools**

# The Invisible Indicators for Sustainability

*Not all workplace risks are visible. Psychological safety and mental well-being are among the most important (and most underreported) factors in a sustainable workforce.*

**15%**
**Working Adults (WHO)**

Suffering from diagnosable mental health conditions
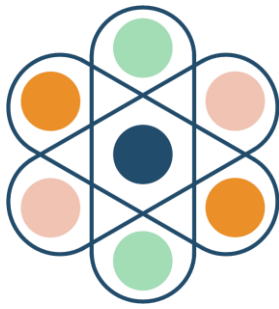
**$1T**
**Annual Cost (WHO)**

Global economic impact of depression and anxiety in lost productivity

**76%**
**Investors (PwC)**

Now consider workforce well-being in investment decisions

# Mental Well-being fits in ESG Reporting

### ISO 45003

Offers a global standard specifically for managing psychological health in workplaces

### ESRS S1 (EU's CSRD)

Requires disclosures on absenteeism, work-related stress, and access to support

### GRI 403

Now encourages reporting on psychosocial risks in sustainability disclosures

| Taiwan GRI 403: Occupational Health & Safety (2018) | Connection to Mental Well-being & Psychological Safety |
| --- | --- |
| Strategic alignment with ESG disclosure requirements | Focus on mental well-being, psychological safety, & long-term workforce sustainability |
| Emphasis on leading indicators (not just injury rates) | Metrics tied to psychological safety, HOP & SIF prevention |
| Worker health beyond physical risk, including mental well-being | Case studies: Johnson & Johnson and Unilever |
| Worker participation & psychological safety | Psychological safety & learning teams |
| Leadership responsibility (Governance pillar) | Modeling ESG culture of care, equity & accountability |

# What is Mental Well-being?

## Emotional Balance

The ability to recognize, understand, and effectively manage the full spectrum of emotions, even during challenging times.

## Cognitive Clarity

Mental sharpness, focus, and the capacity to make decisions without being clouded by stress or anxiety.

## Social Connection

Meaningful relationships and a sense of belonging that provide support and purpose within the workplace community.

# Mental Well-being: A Strategic Imperative

Effective framing focuses on:

- Resilience and energy management

- Work-life harmony and family well-being

- Team cohesion and collective strength

- Stress balance and sustainable performance

# The Business Case for Mental Well-being

## Productivity & Performance

Research by Harvard Business Review found that companies with strong mental health support see up to **36%** higher productivity and **21%** higher profitability than industry peers.

## Talent Retention

Deloitte's 2023 workplace survey revealed that **78%** of Generation Z and **67%** of Millennials consider mental health support when choosing employers, with improved retention rates of up to **40%**.

## Innovation Capabilities

Google's Project Aristotle found that psychological safety was the **#1** predictor of high-performing teams, with psychologically safe environments generating **3.5x** more innovative solutions.

# Psychological Safety: The Foundation of Inclusive Culture

> "Psychological safety is present when people feel free to express relevant thoughts and feelings without fear of negative consequences to self-image, status, or career."
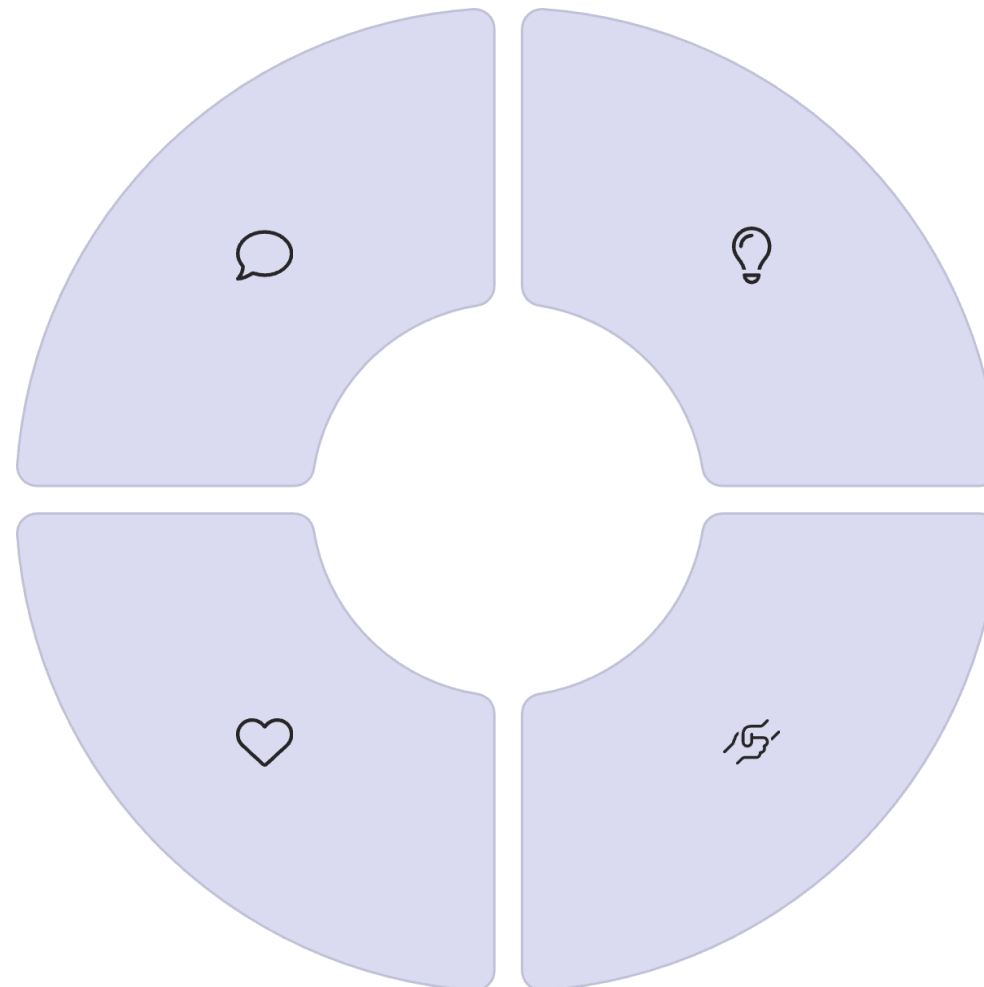>
> – Amy Edmondson, Harvard Business School

## Speaking Up
Freedom to voice concerns without fear of punishment or ridicule

## Taking Risks
Permission to experiment, innovate and occasionally fail

## Being Authentic
Acceptance of genuine self-expression and diverse perspectives

## Seeking Help
Ability to admit knowledge gaps and ask for assistance

# Practical Leadership Levers for Psychological Safety



## Manager Mental Health Literacy

Equip leaders with skills to recognize warning signs, have supportive conversations, and appropriately direct team members to resources
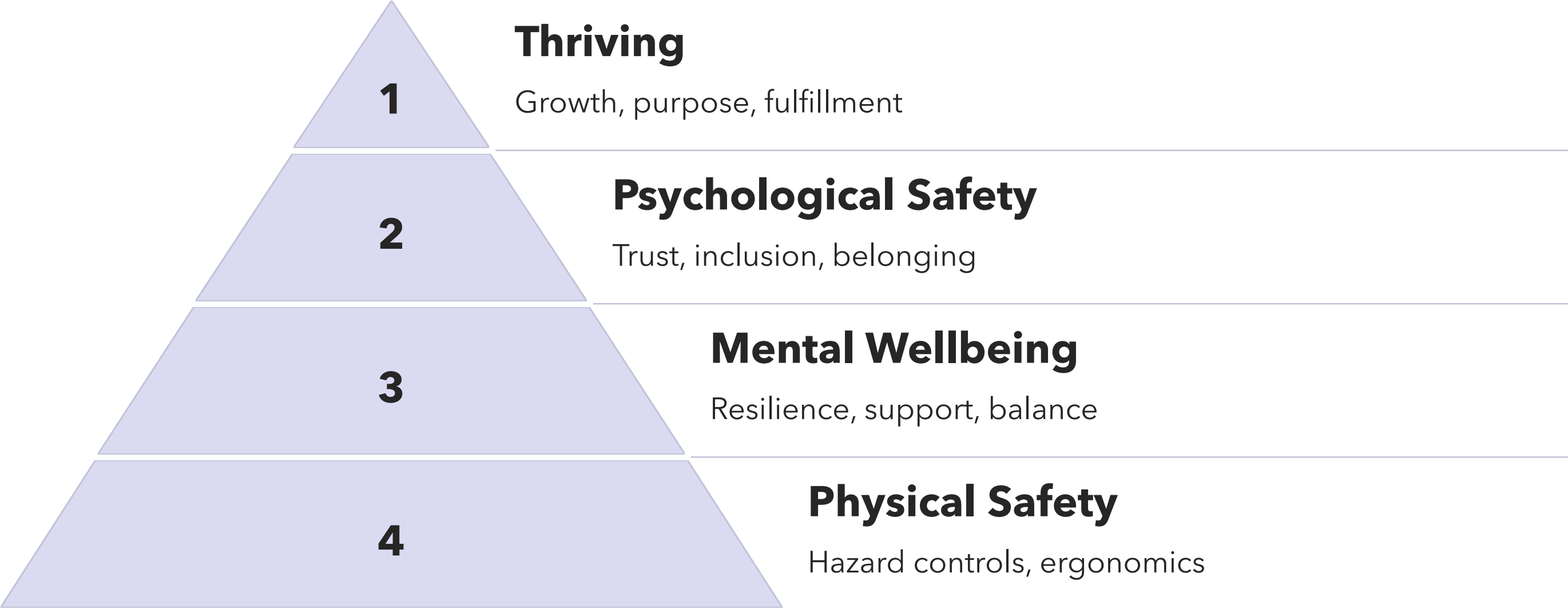
## Peer Support Networks

Establish structured programs that train colleagues to provide initial support, reducing stigma and creating multiple pathways to help

## Worker Voice in Safety

Create meaningful participation opportunities in safety decisions through committees, town halls, and regular feedback channels

# Building a Sustainable Workforce



**Thriving**
Growth, purpose, fulfillment

**1**

**Psychological Safety**
Trust, inclusion, belonging

**2**

**Mental Wellbeing**
Resilience, support, balance

**3**

**Physical Safety**
Hazard controls, ergonomics

**4**

A sustainable workforce requires building from fundamental physical safety through psychological wellbeing to create environments where people can truly thrive.

# Practical Implementation: Start Small, Move Strategically

**Assess Current State** — 1

Add well-being questions to employee surveys; conduct focus groups with cultural sensitivity

2 — **Build Awareness**

Launch communication campaigns using culturally appropriate language and examples

**Develop Leadership** — 3

Train managers on empathetic listening and psychological safety principles

4 — **Create Support Systems**

Implement peer support networks alongside professional resources

**Measure Progress** — 5

Track positive indicators: trust, team cohesion, workload balance, engagement

# ACT NOW: MENTAL WELL-BEING CAN BE A ROBUST SAFETY METRIC

## ASSESS NOW

Implement mental fatigue checks before high-risk tasks

## MEASURE IMPACT

Track near-misses against well-being metrics

## PREVENT SIFs

Mental well-being = lives saved

# Measure What Matters

*To manage mental well-being responsibly, we must measure what we too often miss: how people are coping, struggling, and sustaining at work.*

| Mental Well-being Impact | Example OSH Metrics |
| --- | --- |
| Chronic Stress | Leading: % of employees in high-stress roles receiving stress prevention training;<br>Lagging: Absenteeism or burnout-related sick leave rates |
| Workplace Harassment | Leading: % of managers trained in respectful workplace practices;<br>Lagging: Number of formal harassment complaints filed |
| Isolation/Loneliness | Leading: Frequency of team engagement activities and inclusion check-ins;<br>Lagging: Survey-reported feelings of disengagement or exclusion |
| Trauma Exposure | Leading: Participation in post-incident psychological debriefing sessions;<br>Lagging: Post-incident mental health claims or PTSD diagnoses |
| Job Insecurity | Leading: Number of communications around job stability and career support programs;<br>Lagging: Exit interview mentions of job-related anxiety or trust erosion |

# Real World Use Cases – A Western Approach

A look at how two organizations have integrated employee well-being and psychological safety with sustainability efforts.

# Johnson & Johnson:
# Health & Wellness Framework

**1** — Live for Life® (1979)

On-site fitness centers, health screenings, and educational resources on nutrition and stress management

**2** — Incentivized Health Risk Assessments (1995)

$500 health-benefits credit increased participation from 26% to 90%

**3** — Culture of Health

Global initiative with goals of 90% participation and 80% achieving "low risk" health profiles

**4** — Energy for Performance® (E4P)

Two-day energy management course with 60,000+ participants; 91% anticipated productivity gains

# **Johnson & Johnson**:
# Psychological Safety Measures

### Healthy Mind Policy

Educates employees on mental well-being, conducts workplace risk analyses, provides training to reduce stigma, and offers stress management resources

### Mental Health Diplomats

600+ employees across 21 countries raising awareness and providing resources for mental health challenges

### meQuilibrium App

Utilizes behavioral psychology to reduce stress and improve resilience, available to employees and families in the U.S. and Puerto Rico

# Johnson & Johnson:
## ESG Integration

### Employee Well-being as ESG Cornerstone

- Empowering employees through caring, learning, and inclusion initiatives

- Health for Humanity Goals aligned with UN Sustainable Development Goal #3

- Transparent reporting through annual Health for Humanity Reports

**$565**
**Annual Savings**
Per employee from wellness programs

**$2.71**
**Average ROI**
For every dollar spent on wellness programs

**$250M**
**Cost Savings**
In healthcare costs (2002-2008)

# **Unilever**: Global Mental Health Strategy

## Comprehensive Approach

- Employee Assistance Programs providing confidential support
- Mental health training for managers to recognize and address issues
- Stress management resources accessible to all employees

Part of broader ESG strategy emphasizing the 'Social' component by prioritizing employee well-being

# Unilever: Measurable Impact

**33%**
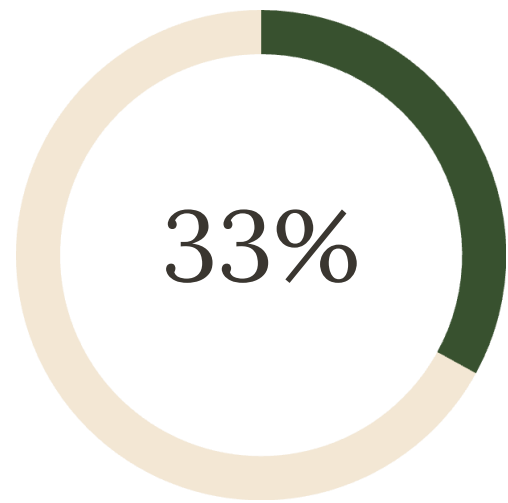
## Reduction in Absence

Decrease in employee absence due to mental health issues

**$10M**

## Annual Savings

Cost savings from reduced mental health-related absences

# **Your Call to Action:** From Insight to Implementation

## **Individual Actions**

- Advocate for psychological safety in team meetings
- Develop personal wellbeing strategies
- Model vulnerability and open communication

## **Organizational Steps**

- Conduct psychological safety assessments
- Train leaders in mental health literacy
- Integrate wellbeing metrics into executive scorecards

## **Measure & Evolve**

- Establish baseline psychological safety metrics
- Create quarterly review mechanisms
- Link ESG goals to mental wellbeing outcomes

# Governance: The Foundation of Safety Leadership

Good governance transforms safety policies into protection for our workforce. As occupational safety and health leaders, you serve as the critical connection between frontline workers and executive decision-makers. Your leadership approach directly impacts how effectively we address heat stress, mental wellbeing, and other occupational hazards.
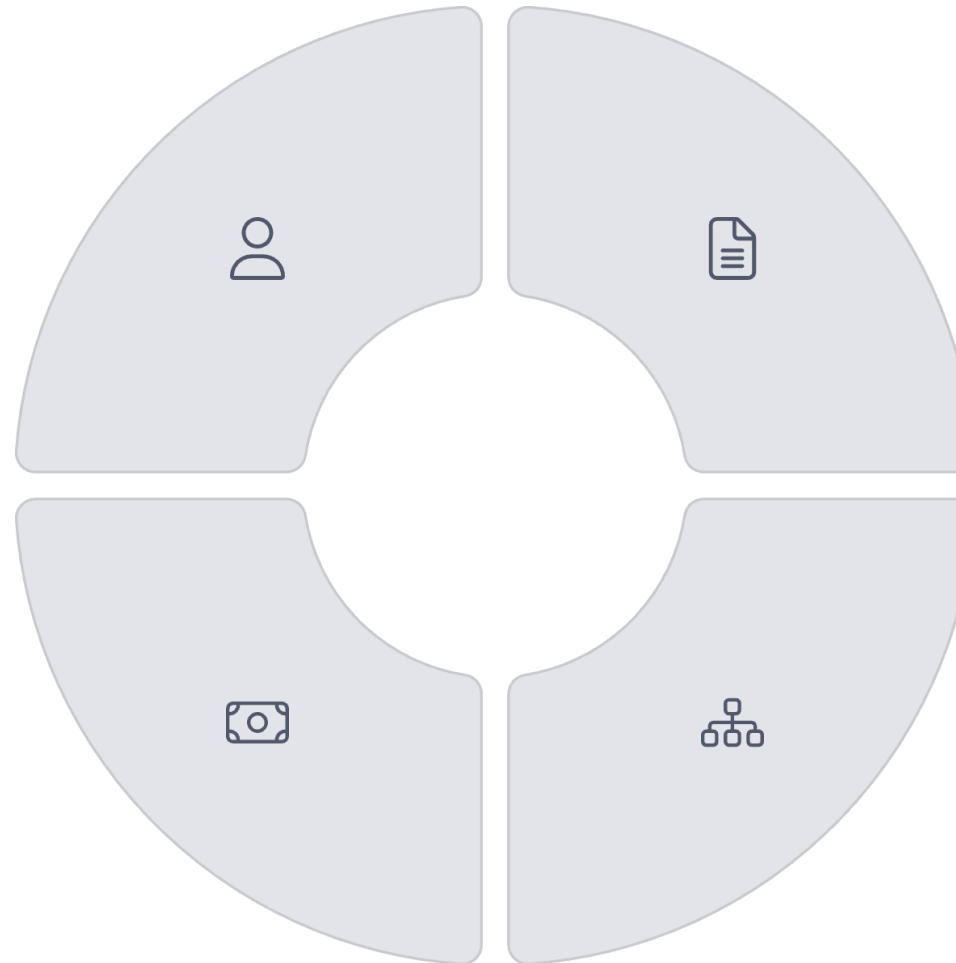
# Integrating OSH into Oversight

## Board Oversight

Risk committees informed about climate and mental health impacts on workers, with regular reporting on key OSH metrics and trends

## Transparent Disclosure

Comprehensive OSH reporting integrated into ESG disclosures following established frameworks (TCFD, GRI, SASB)

## Incentive Alignment

Executive compensation linked to safety and well-being improvements, creating financial motivation for OSH excellence

## Cross-functional Accountability

Structured collaboration between HR, Safety, Legal and Sustainability teams to address emerging OSH-ESG challenges

# Principles of Strong OHS Governance

## 1

### Visibility

Make heat stress and mental health **visible in safety metrics** and leadership dashboards. Remember that what isn't tracked isn't effectively managed.

## 2

### Voice

Encourage **bottom-up communication:** listen deeply to workers' experiences with fatigue, stress, and safety challenges under heat conditions. Psychological safety enables physical safety.

## 3

### Responsiveness

Translate identified risks into **actionable recommendations**. Escalate when needed, but also **educate and empower** teams at all levels to address safety concerns.

## 4

### Accountability

Build systems where everyone, from frontline staff to executives, knows their **role in protecting people**. Safety is not one person's job; it's **everyone's responsibility**.

# Governance & Safety Leadership Excellence



### Be Proactive

Anticipate potential hazards and implement preventive measures before incidents occur.

### Be Relational

Build trust with both your workforce and leadership through consistent communication and demonstrated care.

### Be Courageous

Speak up when conditions aren't safe, even when it means challenging established processes or timelines.

### Be Collaborative

Engage HR, Facilities, Environmental teams, and Finance—safety requires cross-functional partnership.

### Be Consistent

Make safety not just a program but an integral part of your organizational culture and daily operations.
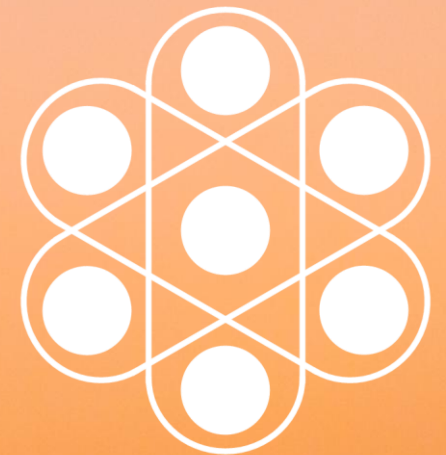
# You Are Guardians of Human Potential

You are not just safety professionals, you are guardians of human potential. Whether facing rising heat or rising stress, your voice, your vigilance, and your values are what keep people safe.

# Questions?

**michelle**@whatworksinstitute.com
**whatworksinstitute.com**

Follow on LinkedIn

What Works Institute

**WHAT WORKS INSTITUTE**
FOR ENVIRONMENTAL, HEALTH & SAFETY™