

ReMA's Sustainability Webinar Series: 2025

Business Resilience and Climate Risk Assessment

March 4, 2025



Recycled Materials
Association
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Presenters



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ReMA Sustainability Resources

- **Quarterly Sustainability Network Meetings**
 - Email nbetts@recycledmaterials.org to join
- **ESG Toolkit- 7 Modules of Information, Tools, and Resources**
 - What is ESG
 - Strategy, Goals & Materiality
 - Environment
 - Social
 - Governance
 - Reporting
 - Value Creation



Agenda

Susan Robinson - ReMA Consultant

- **Setting the Stage**
 - ✓ How are Business Continuity/Resiliency and Climate Risk Assessment related?
 - ✓ What is Climate-related risk?
 - ✓ Who is asking about climate related risks?
 - **Reporting / Regulations**
 - **Turning Risk Mitigation into Resiliency and Opportunity**
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Megan Levy - Texas Mutual Insurance Co.

- **Scenario Risk Assessment:**
 - ✓ Why focus on risk assessment?
 - ✓ Financial impacts of business continuity
- **Business Continuity Planning**
 - Assessing risk & opportunities
 - Creating a continuity plan
 - Mitigating risk
 - Creating a competitive advantage

Setting the Stage

- **Business Risk Assessment**
- **What is Climate-related risk?**
- **What is Climate-related financial risk?**
- **Why spend time on this?**
- **Who is asking about climate risks?**

Business Risk Assessment and Mitigation

Assessing and mitigating risk is a common practice at many companies.

- **Risk assessment identifies a wide range of areas that may pose a threat to your company. Examples:**
 - Physical damage from natural disasters (storms, fires, earthquakes)
 - Business interruptions from power outages, IT interruptions
 - Health related impacts (epidemics/pandemics)
 - Employee disruptions such as labor events.
- **Identifying risks and developing strategies to mitigate their impact on your business creates resiliency.** Response and recovery lessens the disruption to your business – which may create business opportunities.

Customers and regulators understand that companies along their supply chain impact their own resilience.

They expect their vendors to have risk mitigation plans in place.

What is Climate-Related Risk?

World Economic Forum name three key 10-year climate risks:

- Extreme weather events
- Critical change to Earth systems
- Biodiversity loss the top three 10-year risks.

Climate related risk refers to the potentially negative impacts of climate change on an organization. Risks include:

- Impacts on services and physical infrastructure due to climate change.
- Adverse effect on lives, livelihoods and health
- Policies and technology shifts that may impacts operations, consumer preferences and economics

Climate-related risks are created by a range of hazards. Examples of short and long term risks include:

- Storms/flooding frequency and intensity are immediate risks.
- Temperature change is slower in its onset with longer-term implications.

Climate-related risks are far-reaching and differ from other risks to financial stability such as consumer preferences changes

What is Climate Related Financial Risk?

Climate-related financial risks are the financial risks linked to climate change. They can affect balance sheets, increase cost and losses, diminish asset valuations or increased loan defaults.

Physical Risk

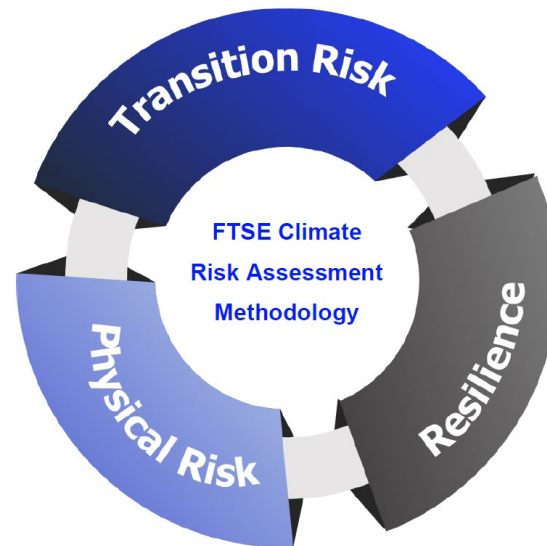
There are seven acute and chronic climate hazards that are considered when building physical risks scores:

- (i) Heatwaves
- (ii) Droughts
- (iii) Water stress
- (iv) Intense precipitations
- (v) Riverine floods
- (vi) Coastal floods and
- (vii) Increasing average temperature.

Transition Risk

- **Increasing regulations**
- **Be aware of potential regulatory changes.** This is the best way to mitigate potential impact on your business. Unprepared companies risk impacts of higher cost.

Figure 1. FTSE Climate Risk Assessment Methodology in a nutshell



Resilience

- **Prepare for climate risks.** Investing in resilient infrastructure and emergency planning will help protect economic productivity and employee well-being. These can help determine whether a company is equipped to adapt to the negative impacts of climate change.
- **Recyclers Provide Solutions for Customer** that Create Opportunities for their Companies

Where Climate Change & Business Risk Intersect

Customers, regulators, investors and communities expect companies to measure, manage and disclose exposure to risk from climate change.

Financial risk from climate change are far reaching to businesses:

- 1. Weather events are expensive.** Increasing severity and frequency of weather events adds cost.
- 2. Increasing temperatures and rain events impact companies.** Excessive heat, rain and biodiversity loss impacts business.
- 3. Regulatory and legal actions increase cost.** Government efforts to mitigate GHG emissions and adapt to climate impacts adds cost to businesses.
- 4. Technology developments.** Shifts in technologies may disrupt business models.
- 5. Shifts in market supply and demand may disrupt operations.** Changes in commodities, products, and services impact companies.

Risk Assessment

In recent years, global leaders have consistently ranked extreme weather events and climate disasters among the top five global risks.

Cascading effects such as the failure of climate action, biodiversity loss and critical changes to earth systems have recently risen to prominence, reflecting the growing recognition of longer-term impacts.

Climate risk assessment should be firmly grounded in scenario-based analysis across three key areas:

- Measuring physical risks,
- Evaluating transition risks; and
- Identifying climate-related opportunities.

To build a comprehensive view, companies should assess these dimensions in the context of their own exposure, their supply chain and the broader societal and economic impacts.

Risk Assessment can create better preparedness and strategic decision-making in the face of climate change uncertainty. In turn, this may create new opportunities for companies.

Why Focus on Risk Assessment?

Regulations

- **U.S. - California's Climate-Related Financial Risk Act (2024).** SB 219 modified several other climate change laws in the state (SB 253 & SB 261). Specifically, SB 261 requires companies with more than \$500 million in revenue that do business in California to report climate-related financial risks and measures to address those risks starting in 2026.
- **European Union.** The EU Taxonomy and the Corporate Sustainability Reporting Directive (CSRD) include requirements for companies to assess their exposure to climate-related risks. CSRD focusing on identifying and assessing physical and transitional climate-related impacts, risks, and opportunities on company level.

Customers

- Companies are increasingly recognizing the role that their supply chain play in the risk assessment process. A company's supply chain can be a benefit or a liability, creating significant financial impacts.
- Vendor/supplier "readiness" impacts a company's ability to adapt and respond to climate related risks.

What are Reporting Expectations and how is information used?



To achieve our net-zero target by 2040, it is essential to reduce suppliers' emissions. We are starting to ask major suppliers to aim for net-zero scope 2 emissions by 2030 and plan to support their capacity building.

Shiro Kambe, Senior Executive Vice President, Corporate Executive Officer, Sony Group Corporation

Organizations asking for Climate Information

Many companies report to organizations that rate companies based on criteria that includes climate change scenario planning.

- CDP and GRI are two of these organizations and include climate change scenario assessment requirements.
- Climate change scenario planning often requires information about supply chains.
- Vendors/suppliers often receive requests from their customers for information on their respective climate change planning in order to fulfill their reporting requirements.
- Stakeholders review these reports for information about their suppliers.

Completing a climate change scenario plan is good for business

- AND -

Information about company continuity planning may be the price of doing business with some vendors.

Physical Risk



Increasing in Event Frequency

Risks from extreme events are increasing

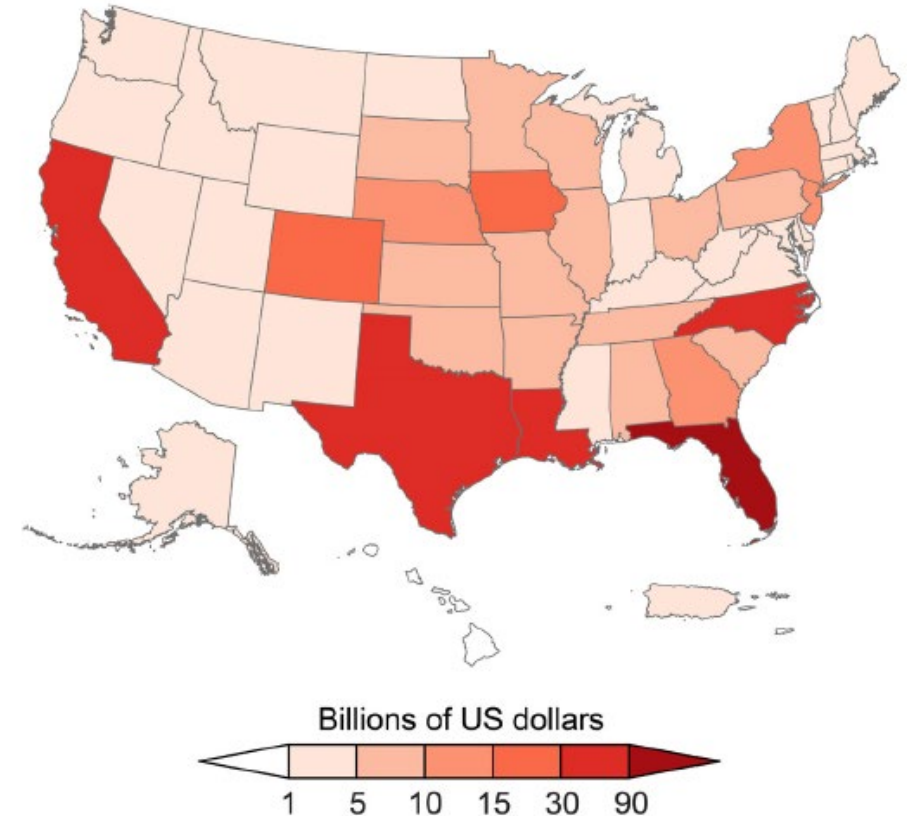
Harmful impacts from more frequent and severe extremes are increasing across the country—including:

- Increases in heat-related illnesses and death,
- Costlier storm damages
- Longer droughts that reduce agricultural productivity and strain water systems, and
- Larger, more severe wildfires that threaten homes and degrade air quality.

Extreme weather events cause direct economic losses through infrastructure damage, disruptions in labor and public services, and losses in property values.

In the 1980s, the country experienced, on average, one (inflation-adjusted) billion-dollar disaster every four months. Now, there is one every three weeks, on average. Between 2018 and 2022, the US experienced 89 billion-dollar events.

Damages by State from Billion-Dollar Disasters (2018–2022)



The US now experiences, on average, a billion-dollar weather or climate disaster every three weeks.

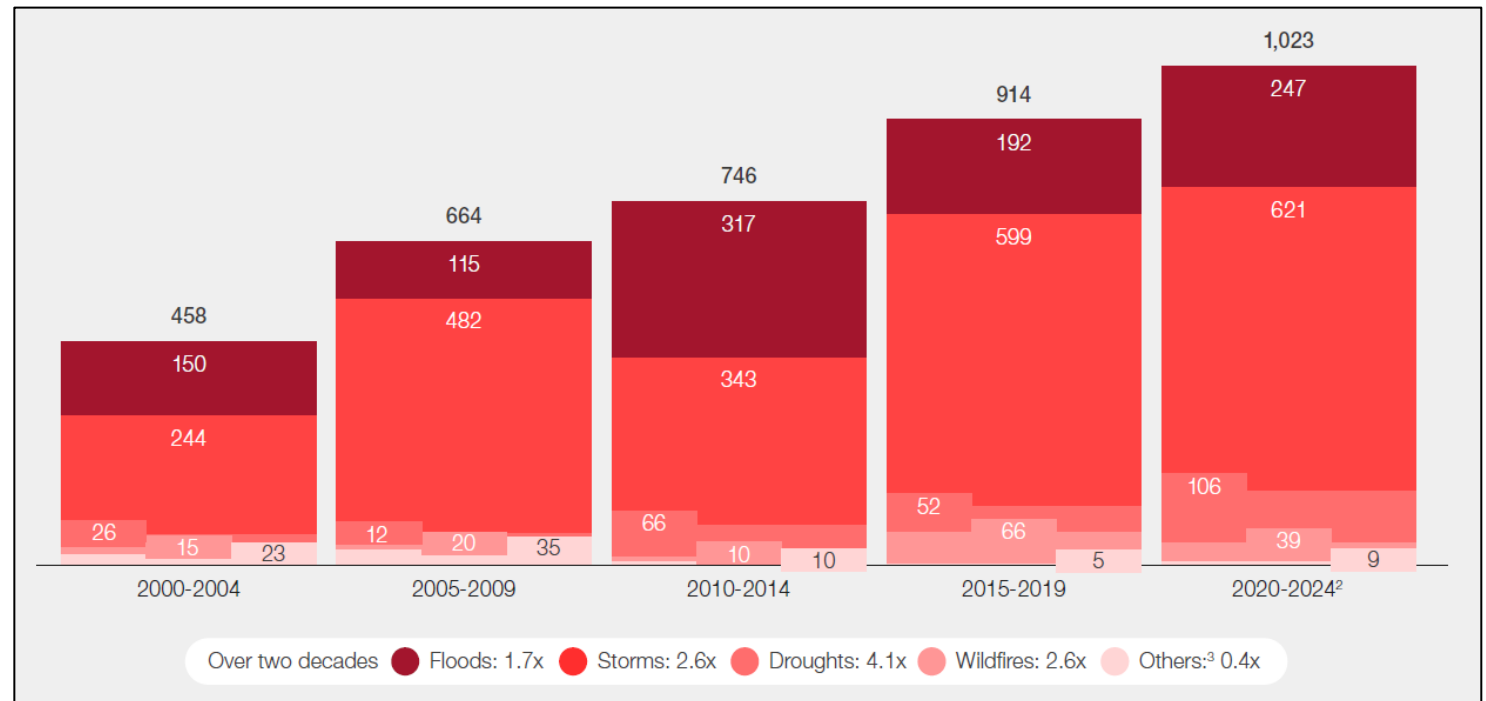
US Global Change Research
Program: Fifth Annual Assessment

The Cost of a Changing Climate

Since the turn of the century, average damage costs have more than doubled. The costs of damage from storms and heat related events has increased from **\$458 billion** between 2000 - 2004 to **\$1 trillion+** between 2020 - 2024.

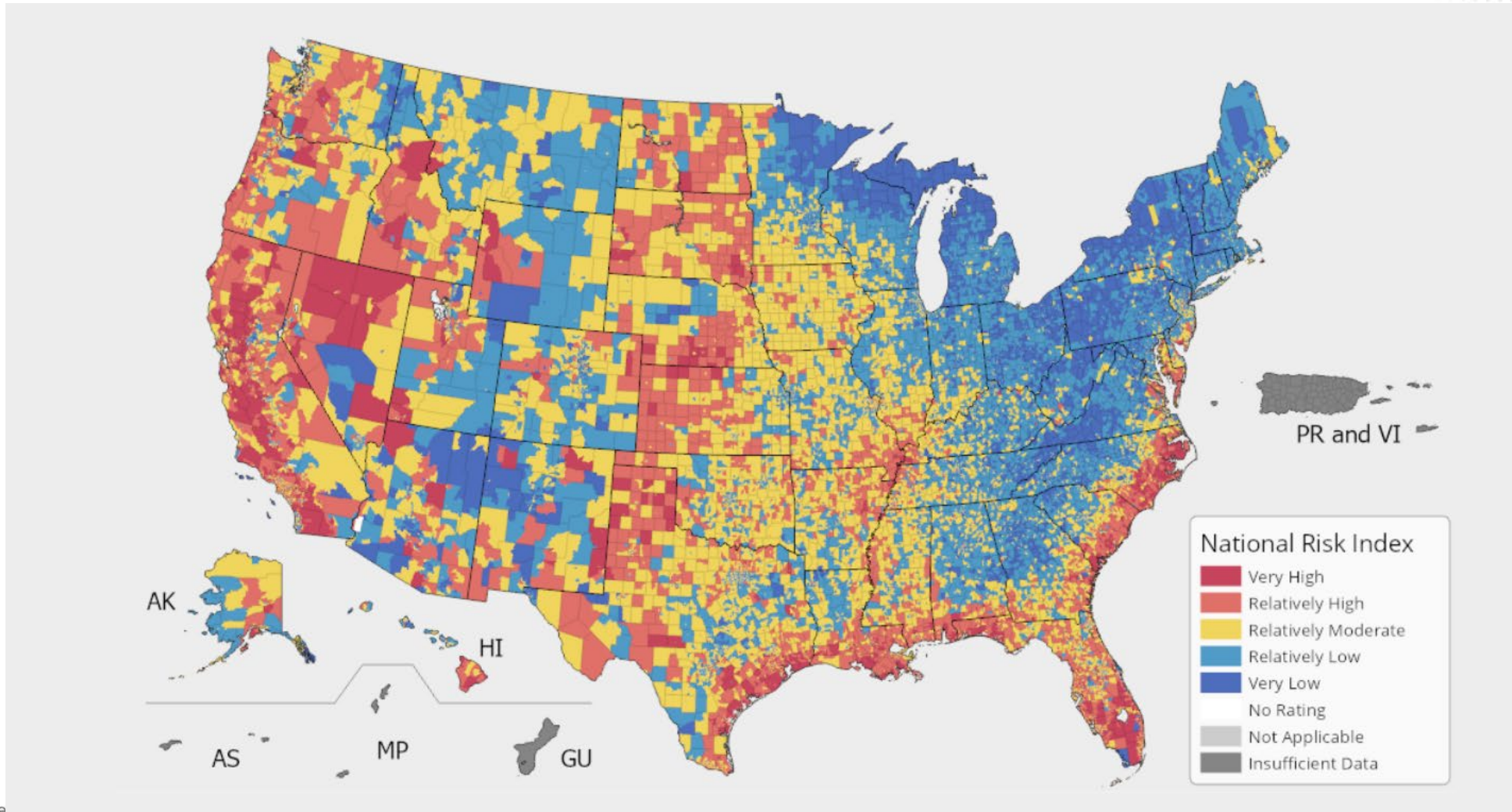
- **Drought / Extreme Heat.** Extreme heat reduces productivity, especially in outdoor labor such as construction and agriculture. Heat stress alone could reduce global work hours by 2% by 2030*.
- **Fires.** Prior to 2025, the annual cost of fires in the U.S was estimated at over \$250B/year. The cost of the recent LA fires alone are estimated at \$95 billion and \$164 billion. (LA Times)
- **Storms /Hurricanes.** Hurricane Helene may ultimately be responsible for over \$100 billion worth of damage

Increasing frequency and intensity of climate related events means that costs are likely to continue to escalate.

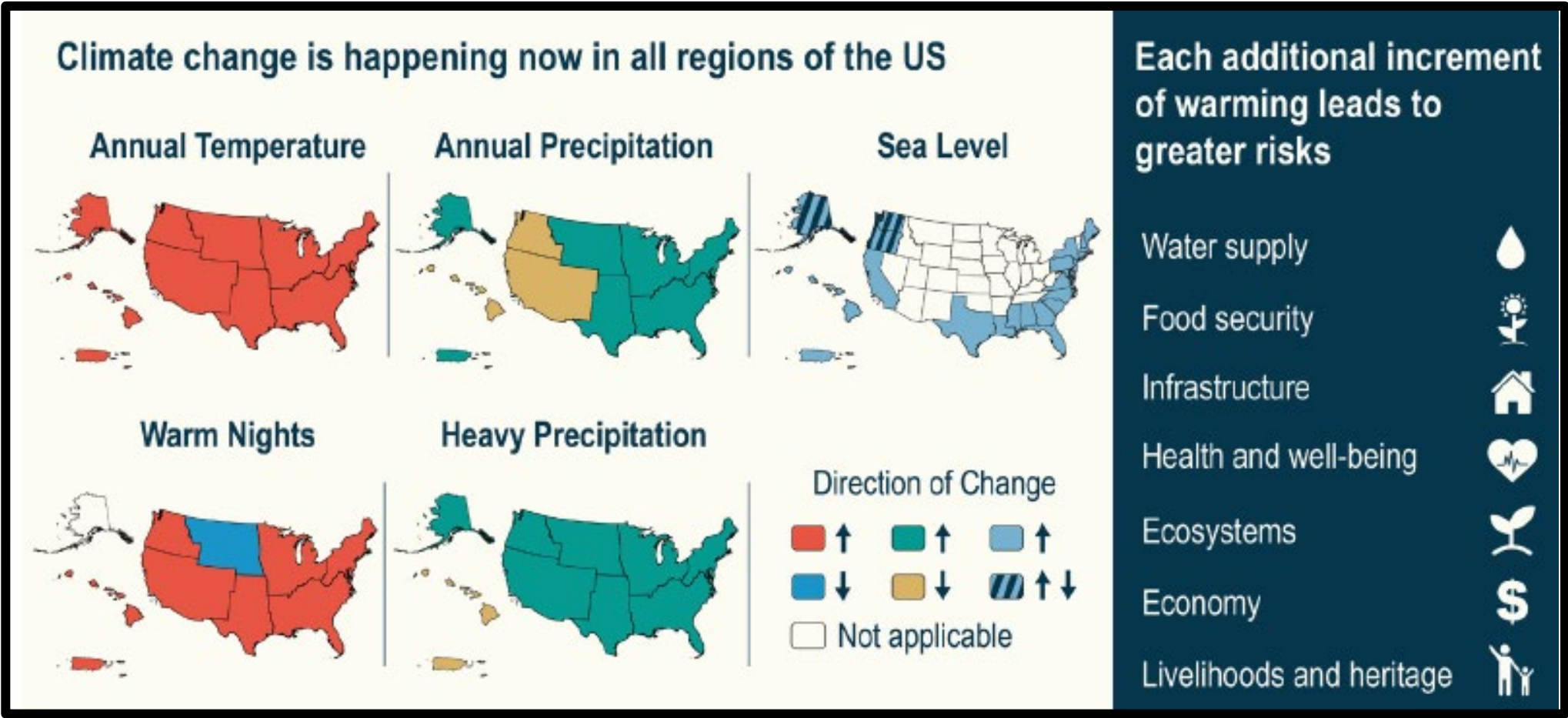


Natural Hazard Risks and Opportunities in the U.S.

Financial regulators, business leaders, investors, and policy makers around the world pay attention to the threat that climate change poses to financial systems and economies at global, national, and local scales.



Climate Change Risks and Opportunities in the U.S.



Climate Impact: Regional Trends

Northeast



Extreme weather events damage critical infrastructure. {21.1}



Warming temperatures shift distributions of coastal and marine species and habitats. {21.2}



Extreme heat and flooding disproportionately impact overburdened communities. {21.3}

Southeast



Sea level rise and coastal flooding harm rapidly growing communities. {22.1}



Extreme heat threatens human health, especially stressing urban communities. {22.2}



Heavy rain and longer dry spells reduce water supply and access. {22.4}

Midwest



Rising temperatures and extreme events threaten livelihoods and trades. {24.2}



Extreme weather events harm public health. {24.3}



Rising temperatures and extreme rainfall damage buildings, homes, and businesses. {24.4}

Southwest



Intensifying drought and decreases in groundwater recharge reduce water supply. {28.1}



Economic losses to farmers and ranchers increase. {28.3}



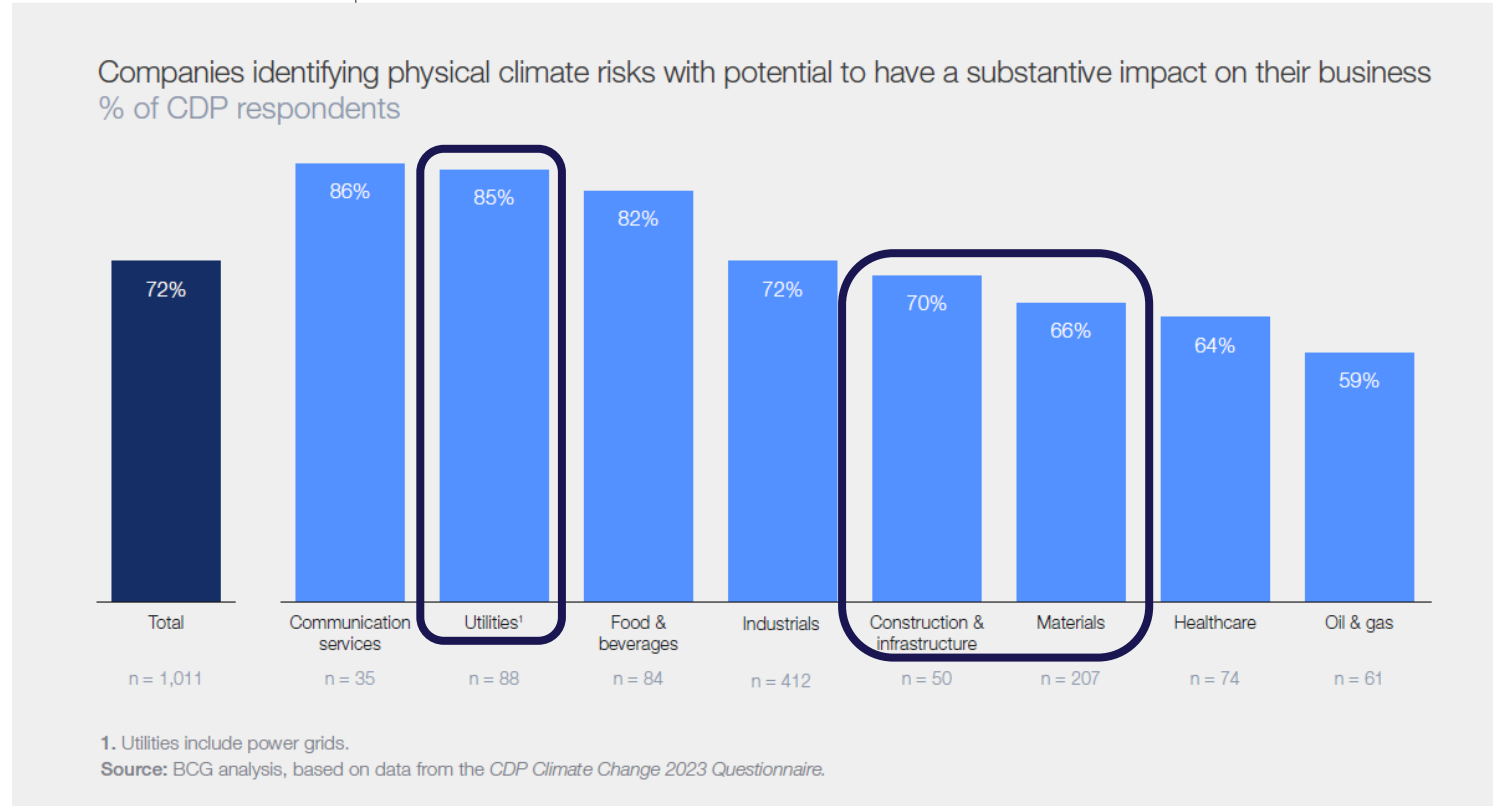
Extreme heat, drought, wildfire smoke, and coastal flooding harm physical and mental health. {28.3, 28.4}

Legend



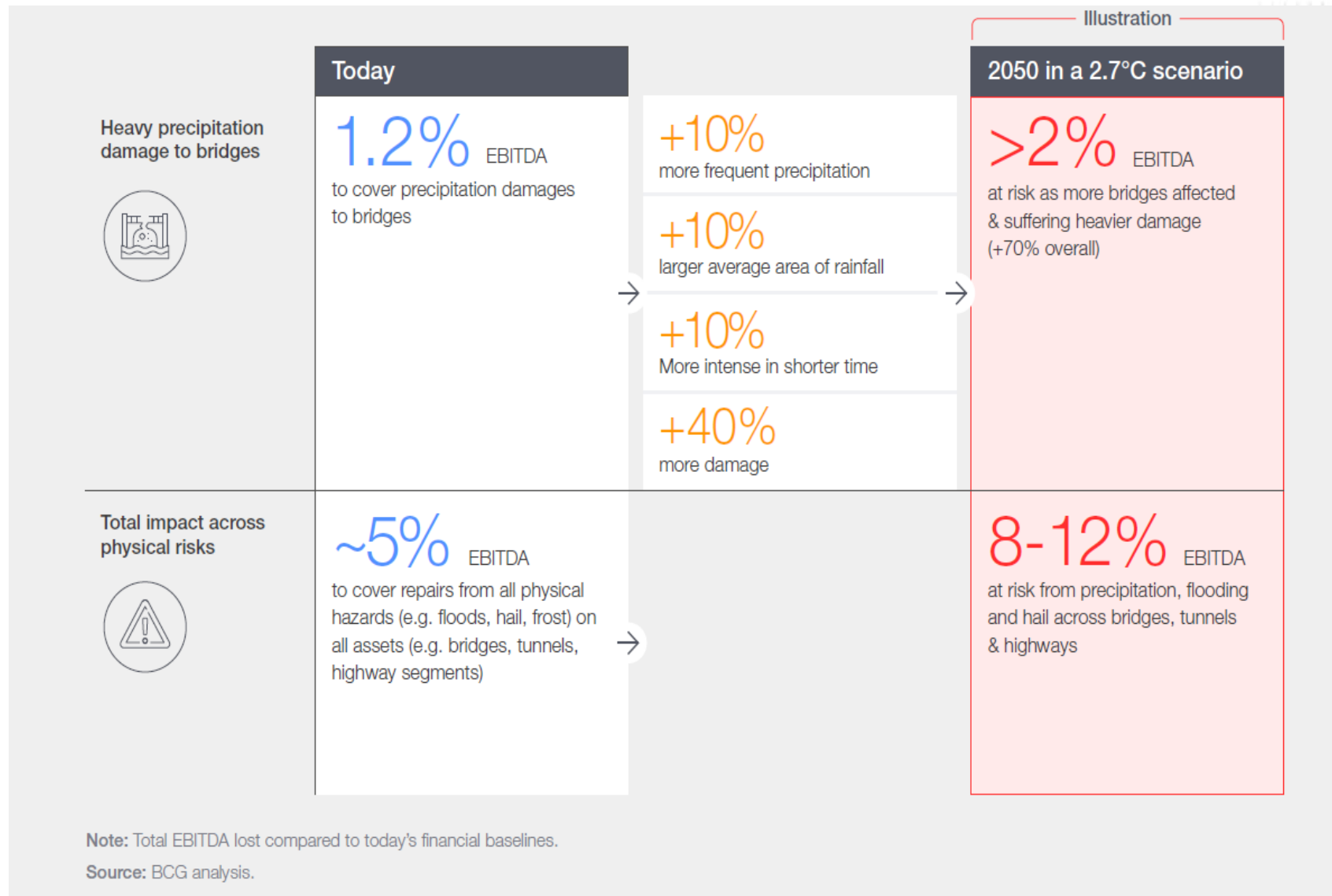
Types of Industries Most impacted

FIGURE 12 | More than 70% of companies see significant impact from physical risks



Companies underestimate the impact of physical climate risks

Increase Maintenance Costs = Reduced Profits



Transition Risks

The cost of inaction: Climate action creates transition risks for companies.

Transition risks include:

- **Policy and legal action** - Carbon pricing rules and the risk of litigation.
- **Technological** - Lower-carbon ways to make steel or power big ships that disrupt incumbents.
- **Changing Market Demand** - Shifts in supply and demand for commodities, products and services.
- **Reputation risk** - Stemming from negative stakeholder perceptions of a company's climate actions.

Transition risks are difficult to predict because they depend on future government decisions, future technological innovation and other unknowns.

Resiliency: Creating Opportunity from Risk Mitigation

Disaster management and risk management in global supply chains can actually be a competitive advantage. It's not pure risk minimization. You have to think of it as an opportunity to get ahead of the game by being better prepared.

Companies like Lowe's Companies Inc., The Home Depot Inc., Walmart Stores Inc., and Waffle House Inc. are role models when it comes to disaster preparedness.

Panos Kouvelis, Ph.D., the Emerson Distinguished Professor and director of the Boeing Center for Technology, Information and Manufacturing,

Why focus on Resilience?

Climate inaction comes at a cost, even for businesses. The companies that fail to act could face substantial operational, financial and reputational risks in the near term, while early movers are already realizing tangible benefits from adaptation and decarbonization. For those who take bold steps, there is a path to sustained success.

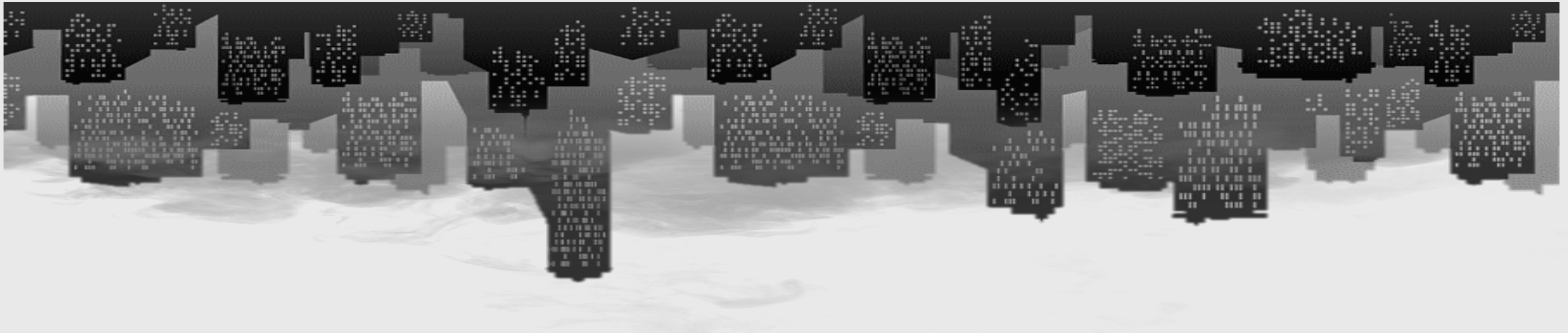
Pim Valdre
Head, Climate Action,
World Economic Forum

Eric Herbold,
Managing Director
& Senior Partner,
Boston Consulting Group

Megan Levy
Business Resilience
Manager
Texas Mutual
Insurance Company



Business resilience is the ability of an organization to plan for, practice, respond to, and learn from disruptive events while lessening the impact of the event to its operations and decreasing the length of a disruption.



WHY IS IT IMPORTANT?



Protects your business

Many businesses fail after a disaster.
Planning helps you reopen and survive.



Control Costs

It helps with insurability. Mitigations reduce
potential damages.



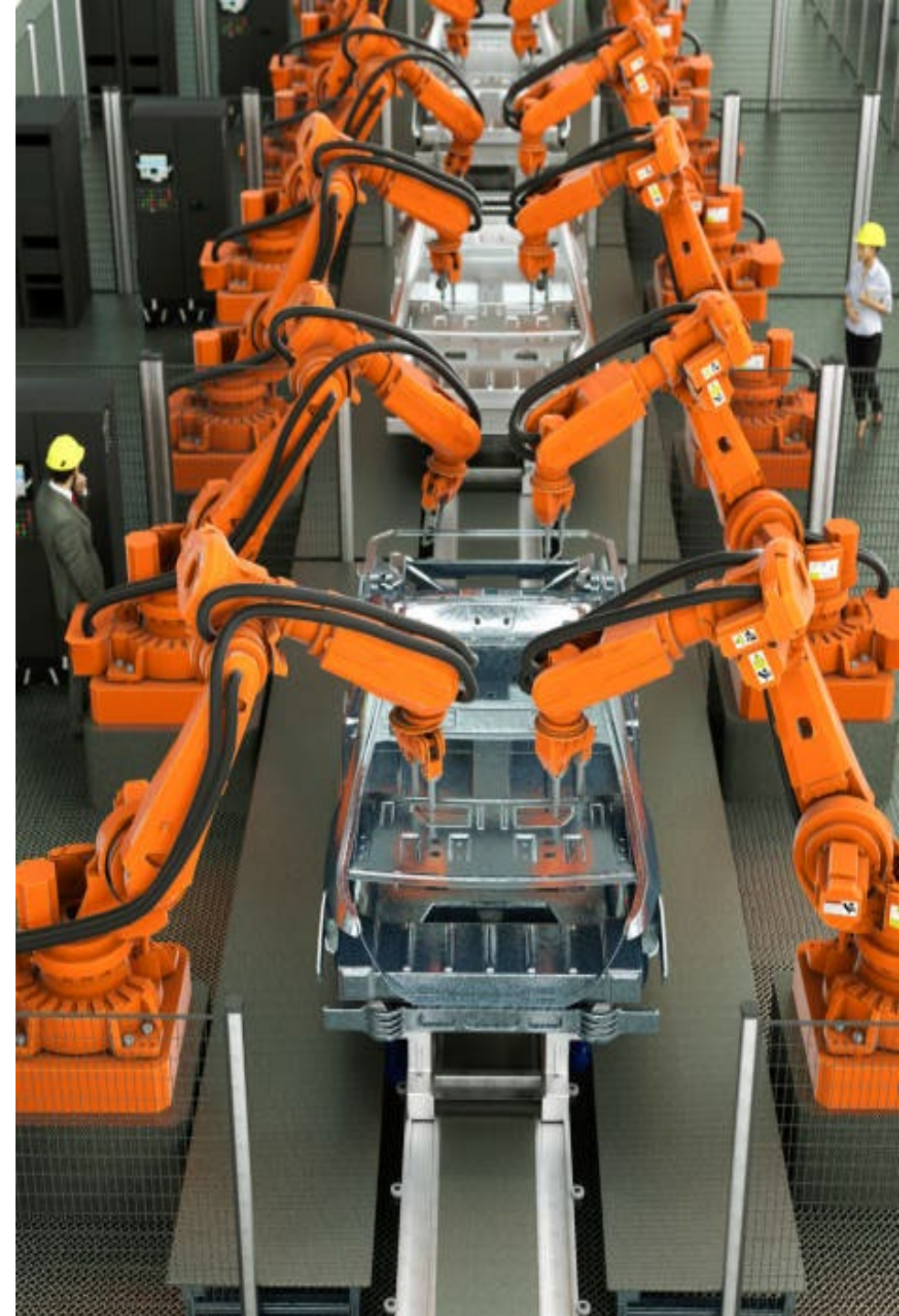
Competitive Advantage

Ensures you can adapt to changes and
meet stakeholder needs



Evolving Risk Landscape

Climate change, increasing reliance on
vendors and supply chain, cyber systems
and aging infrastructure



WHY DON'T PEOPLE PLAN?

Many businesses think it can't happen to them. Others find it expensive or difficult..



- It can't happen to me
- It's expensive
- Everyone will understand
- We've always figured it out

KEY STEPS TO TAKE



Risk Assessment

Identify potential threats

Business Impact Analysis

Analyze potential
disruptions

Continuity Solutions

Create recovery strategies



Train and exercise

Prepare your team

Learn

Evaluate what went well and what
went wrong

NEED ASSISTANCE?



FEMA



Small Business
Administration



Before/after
during
after.com

Make Your Business Resilient

Roughly 40 to 60 percent of small businesses never reopen their doors following a disaster. But you can.



How to Be Prepared



Make an evacuation plan and exercise it regularly



Know how you'll notify your employees, customers, and stakeholders of an emergency



Have redundancy for key resources like power, equipment, and supplies



Create a Business Continuity Plan to become operational again quickly

Be Prepared for Everyday Disasters



Burst pipes



Server failure



Fires



Flu

Have a Continuity Plan



1 in 5 companies spend no time maintaining their plan.



Following a disaster, 90% of smaller companies fail within a year unless they can resume operations within 5 days.



Meanwhile, 20% of larger companies spend over 10 days per month on their continuity plans.

Disaster Recovery Plan:



Installation disks, software licensing keys, hardware inventory with serial numbers, and equipment

IMPORTANT RECORDS



Insurance policies, contracts, employee records

EMERGENCY SUPPLIES



Cash, water, first aid kit, paper towels, garbage bags, battery-powered radio, 3-day supply of non-perishable food, etc.

Emergency Kits for Employees

Encourage your employees to have grab-and-go emergency kits at the office, in the event of a disaster during the work day:



Include a small first aid kit, cash, energy bars, bottle of water, phone charger, etc.



This information is only a portion of what you need to be prepared; for more information and resources, visit [Ready.gov](https://www.ready.gov) and [FEMA.gov](https://www.fema.gov).

CAN'T DO IT ALL?

*Prioritize
practice— regular
exercises are key*



SCENARIO BASED DISCUSSION

Ransomware

Employees returning from lunch find that when they try to log in to their locked computers, they are met instead with a ransomware screen demanding money in exchange for the unlock code.

Infrastructure Failure

A severe ice storm disrupts power to 60% of employees, affecting those in Austin and Dallas most significantly.

Facility Loss

A fire occurs in mail processing, causing significant damage to the space and equipment. The estimated time to restore the area is 30 days.

Duty of Care

During an AASCIF conference in Los Angeles, a major earthquake occurs. We have a large number of employees in attendance, and communication systems are down

Reputation

A Tik Tok video from a young female employee called “how men treat me at work” goes viral. Viewers quickly notice the company logo on one employee badge, and begin making response videos calling out the company.

Financial Risk

An extreme heat event is causing a significant increase in heat related worker’s compensation claims from policy holders, threatening financial health

Vendor Failure

The HR software is inaccessible for 36 hours, causing work stoppage of all connected processes. Upon recovery, the vendor reports that they have experienced a ransomware attack and an unknown number of records have been exfiltrated, including employee PII.



Start your planning now; Take the first step today

Implement regular exercises: Practice is the most valuable thing you can do

Utilize available resources: Don't start from scratch when so much already exists

Pulling it together: Turning Risk into Opportunity

1. Focus on Resiliency

- Assess risk across your value chain
- Develop continuity plans to mitigate exposure to weather events
- Develop continuity plans for employees and productivity

2. Identify Opportunities

- Pay attention to trends and changing customers preferences

Engaging with stakeholders and paying careful attention to trends and customer preferences, while developing and maintain robust continuity plans will help companies identify and execute future growth opportunities.

3. Look Across Your Value Chain

- Collaborate with vendors and to identify economic, environmental and social interdependencies
- Engage with local governmental regulators/policy makers.
- Engage with local NGO's, advocacy and assistance programs.

Q&A



2025 Sustainability Series

**Up Next: April 15- Communicating Sustainability:
Certifications, Messaging, & More**

Past workshops and webinars available:

<https://videos.isri.org/category/video-library/esg-workshops/>



Recycled Materials
Association

ReMA Spring Calendar

- March 10: Battery Safe Interaction and Dismantling- Ostrander, OH
- March 11: WEBINAR- Becoming an Employer of Choice in the Recycled Materials Industry
- April 22-23: EV Safety Training- Ostrander, OH
- May 12-15: ReMA2025 Convention- San Diego, CA

Thank You

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