

International, Bridge Tunnel and Turnpike Association Sustainability & Resilience Framework



The International Bridge, Tunnel and Turnpike Association (IBTTA) recognizes the evidence and current impacts of climate change, and the perilous long-term implications of inaction or inconsequential outcomes. As a leader of the road transportation sector, IBTTA acknowledges transportation's role in contributing to harmful greenhouse gas emissions and the industry's responsibility to mitigate and reverse the effect on the environment. Our association is committed to helping our members across the globe understand and adopt sustainable investments, operating practices, decision-making, and business processes. Our aim is to become a proactive part of the solution.

We also acknowledge that despite the best efforts of the global community to address sustainability, we will be living with the effects of climate change for years and decades to come. Our intent is to also focus IBTTA's activity on resiliency of road facilities, assets, and systems to maintain their functionality and availability to serve, to rebound quickly when impacted by extreme events, and to thrive as changing environmental conditions manifest themselves.

Sustainability & Resilience Objectives

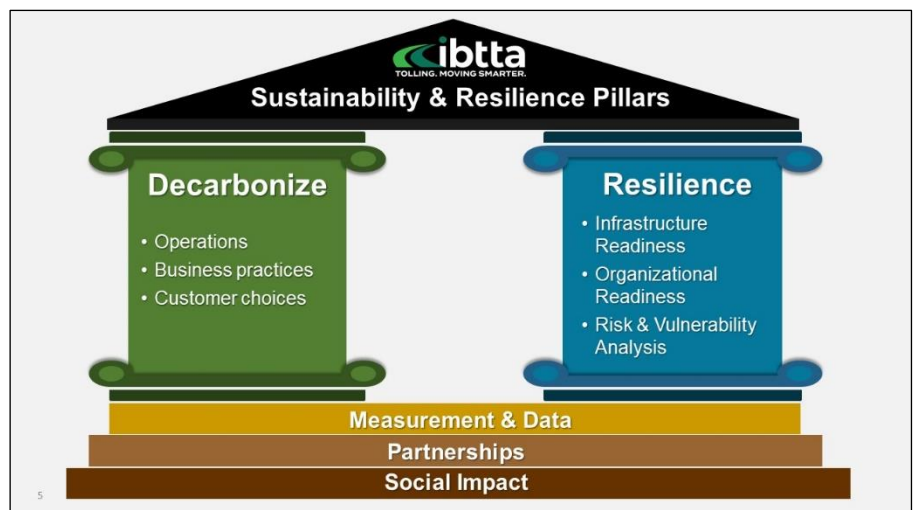
This framework not only affirms sustainability and resilience as a strategic priority for IBTTA, but also documents how the association will make a difference, the actions we will take, and the partnerships we seek to get the job done on a global level. Our program is centered on two primary pillars:

1. **Decarbonize** - Advance actions to support efforts to decarbonize operations, business practices and customer choices.
2. **Resilience** - Support efforts to bolster infrastructure resilience and organizational readiness for future conditions and risks.

To ensure that our activities and programs contribute

meaningfully to the reduction of greenhouse gas emissions and strengthen assets and systems to face the consequences of changing global conditions, our plan is being established with three cross-cutting focus areas:

- **Measurement** - Appraise and value existing conditions to formulate action plans, monitor performance, and guide decision making.
- **Partnership** - Broaden collaboration and attract expertise to increase engagement and develop relationships with new individuals and organizations.



- **Social Impact** - Increase awareness and decision criteria around social impact that may be embedded into sustainably focused business and management programs.

The Concepts Guiding Our Efforts

As we progress IBTTA's environmental efforts, we will recognize some basic concepts that will ensure that we get the job done and make a difference.

- **Focus on mobility**, not just roads or even transportation. Understanding the connectedness of transportation facilities and systems will produce the most effective outcomes. Multimodal solutions are an essential ingredient to meaningful environmental responses and will bring more stakeholders to the conversation. Recognizing the relationship between transportation and clean energy will be important as well.
- **Be evolutionary, not revolutionary**. Large projects are not always essential or necessarily preferred. Small incremental steps are effective, achievable, and help change organizational culture. Examples and practical actions are often persuasive and replicable.
- **Communicate and educate**. Ensure a broad understanding of the path forward, by employees, business partners, customers, stakeholders, and the public. Outreach can attract expertise to increase engagement and develop the right partnerships.

The Sustainability & Resilience Pillars and IBTTA Actions

1. Decarbonize

Decarbonize

By incorporating decarbonization as part of day-to-day decision-making, we can accelerate emissions reductions, resulting in wins for the environment, as well as for our businesses, customers, and overall mobility. Transportation organizations need support to embrace and promote the adoption and conversion to low/zero emission vehicles. Facility pricing may be helpful in creating incentives and value propositions that drive customer choice. But effective transport decarbonization extends to every aspect of the business, including operations, construction, materials, and procurement. Initiatives to use low carbon materials, adopt circular economy concepts, invest in alternative fueling and charging infrastructure, integrate solutions through the transport network, and reduce emissions from construction are all aspects that will drive responsive industry outcomes.

IBTTA Actions:

- A. Develop guidance, case studies, best practices, business case analyses, and implementation guides to address decarbonization and emissions reductions.
- B. Promote an understanding and awareness of decarbonization actions and emissions reduction throughout the supply and value chains that may help members meet or exceed policy goals and legislative requirements for emissions reduction.

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- Operations and Policy
- Data and Performance Measurement

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- Procurement
- Transportation Asset Management
- Construction

- C. Listen and solicit input and viewpoints from members and stakeholders who understand and recognize the gravity and depth of social impact as it relates to sustainability.

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- The "Triple Bottom Line" - environment, economy, and people.
- Best Practice and Case Studies

- D. Broaden collaboration and seek new partnerships.

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- International Partnerships
- Transportation Organizations Across Modes and Jurisdictions
- Energy Sector
- Academia and Research Organizations

2. Resilience

Bolster Infrastructure Resilience and Organizational Readiness for Future Conditions and Climate Risks

Resilience depends upon the risks that confront transportation facilities and operations which vary by location, type of infrastructure, design features, operating conditions, landscape, etc. How these factors play together also make certain assets more vulnerable to disruption than others. As such, addressing resiliency involves an analysis of risks and assessment of vulnerability at its core. Risk and vulnerability analysis is an essential tool to help infrastructure managers set priorities, make tradeoffs, and invest scarce resources wisely.

Transportation infrastructure has been designed to handle a broad range of historic climate conditions, but as the frequency and intensity of significant events increase, the likelihood and impact of the risks have grown significantly. Transportation assets and their operators must be fully prepared to handle the implications of extreme precipitation levels, sea level rise, and extreme temperatures, as well as natural disasters triggered by environmental conditions, such as wildfires. Transportation operators are also facing new 21st century demands and growing expectations from motorists and government officials that the transportation system will function for emergency mobility purposes throughout extreme events and recover rapidly afterwards.

IBTTA Actions:

- A. Promote a widespread understanding of the need to incorporate resiliency criteria into infrastructure investment and design decisions based upon structured risk evaluations.
- B. Ensure IBTTA members are aware of the best-in-class response and recovery practices during extreme events and effective business resumption actions.
- C. Identify resilience measurements to enhance the effectiveness of decisions through all aspects infrastructure operating organizations including engineering, construction, operations, and management.

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- Risk Analysis and Risk Management
- Asset Management and Capital Program
- Mitigation
- Project and Design Standards
- System Redundancy

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- Emergency Management

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- Physical Characteristics
- Construction and Maintenance
- Information and Resources
- Funding and Investment
- Knowledge and Awareness
- System Redundancy