

Report Out Slides

Presented To: Community Resilience Panel

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Gaps and Needs in Sector

- What are the largest gaps and needs within your sector that need to be addressed in resilience planning and guidance products?
 - Infrastructure specific: New vs existing, aging infrastructure
 - Jurisdictional Issues: Funding, community to community connections
 - How can the conversation be preventative not reactive
 - Public perception, acceptable level of risk, what is the goal for a community?
 - Land Use Planning
 - Consistent Inputs including hazards
 - Unknown probabilities, changing vulnerabilities with climate change
 - Level of risk driven by policy not standards
 - Standards are sector/asset specific (rail, port, highway, etc) not at a system's level
 - Operational capabilities
 - Cyber interdependencies

Gaps and Needs in Sector

- Identify significant interdependencies and gaps with other sectors that impact resilience.
 - Transportation Dependencies
 - Power supply
 - Cyber
 - Communications
 - ROW/Adjacent services, co-location of infrastructure
 - Drainage
 - Supply chain
 - Dependent on Transportation
 - Emergency Management
 - Energy (personel)
 - Water
 - Supply chain
 - Intermodal dependencies

How do we Solve the Problems?

- How do we address the needs and gaps we identified?
 - Acceptable risk performance framework/model including:
 - Identify operational capabilities
 - Identify key parameters
 - Provide forward looking climate inputs for use in planning/design
 - Incorporating full useful life of an asset
 - Service time – valuing downtime and recovery
 - Identify interdependencies – data gaps, private vs. public ownership, site specific dependencies. May not be solved by standards.
 - Tabletop exercises
 - Threat analysis benchmarking (crude by rail as an example)
 - Early assessment to identify issues
 - Procurement methodologies for quicker purchasing (recovery)

How do we Solve the Problems?

- Are there others we need to engage to help us address these needs? Others may include SMEs/groups not at the meeting in your sector or SMEs/groups from other sectors.
 - Multi-stakeholder/Multi-model – systems analyst/logistics
 - Learn from other models (LEED, nuclear, seismic)
 - Risk communication – including social scientists, economist
 - Need to identify other international transportation frameworks (Denmark)

Existing Guidance/Ongoing Efforts for Resilience in Sector

- What are existing codes, standards, guidance, goals, and/or protocol that have been published, or are in-process, in your respective sectors?
 - NEPA
 - MPO's
 - AASHTO
 - AREMA
 - ASCE 7/24
 - Storm modeling
 - Asset Management Systems
 - FRA/FTA mandated risk assessment
 - FEMA
 - FHWA – earthquake
 - FHWA – security
 - NFPA
 - RAMCAP
 - Transportation Resilience Framework from New Zealand
 - TRB (ACRP, NCHRP, TCRP)