ADDRESSING RESILIENCY IN STATE TRANSPORTATION PLANS; NORTH CENTRAL TEXAS COG--JUNE 26, 2019

"Enhancing Freight Transportation System Resiliency Through the Application of Strategic Asset Management Methodology"

ERIK STROMBERG, EXECUTIVE DIRECTOR, CAPM

CAPM: DEGREES, CERTIFICATES AND CONTINUING EDUCATION

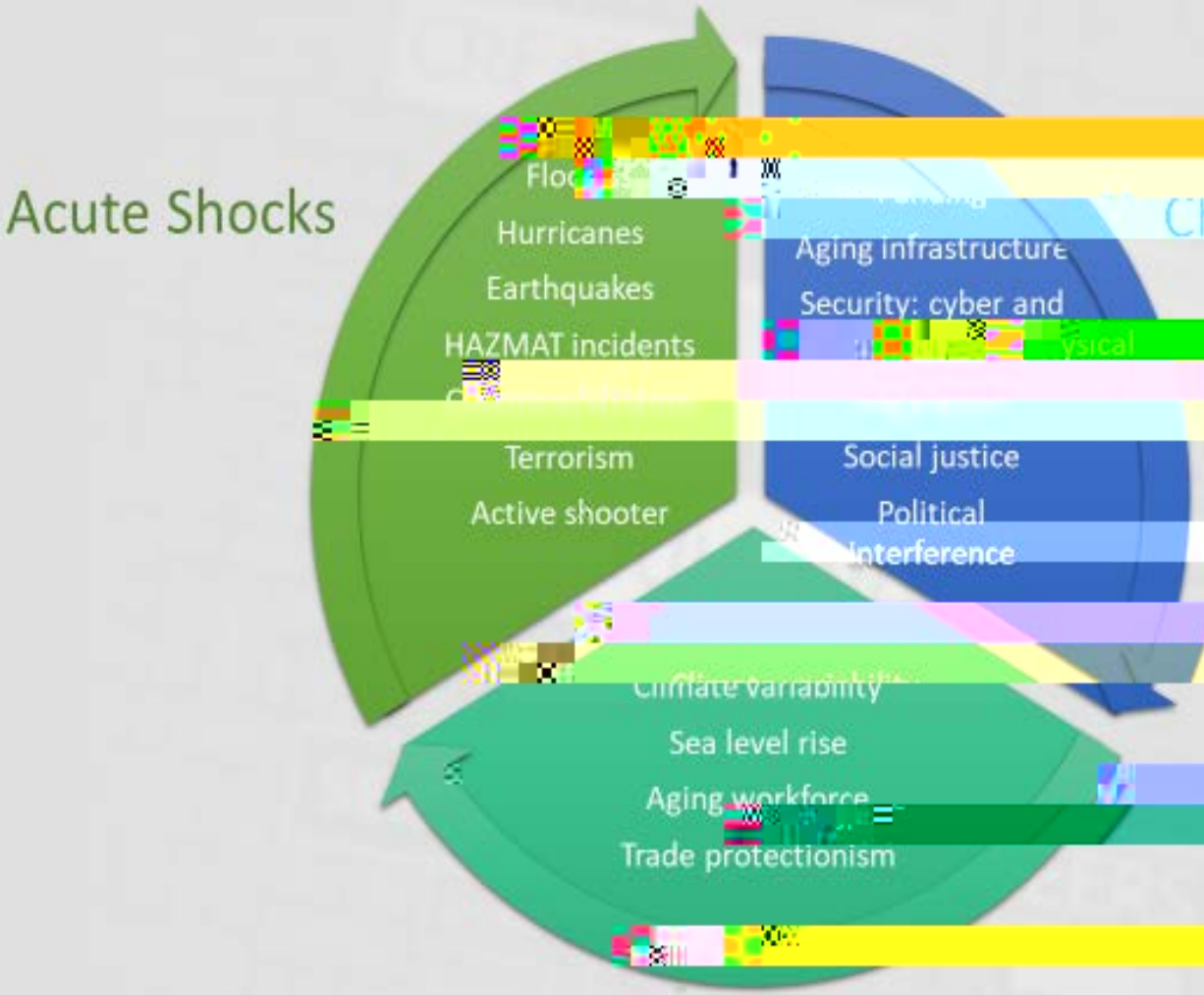
- Degrees/Concentrations:
  - Masters of Science in Port and Marine Terminal Management
  - MBA and Masters of Engineering Management with Concentrations in Port and Marine Terminal Management
- Certificate Programs
  - Global Trade and Logistics
  - Ports and Marine Terminal Development and Operations
  - Management and Leadership

PORT AND MARINE TERMINAL MASTERS DEGREE CURRICULUM

•

WHAT IS STRATEGIC ASSET MANAGEMENT?

- "…coordinated activity of an organization to realize value from assets." (ISO 55000)
- …links the organization's (system's) assets to its strategic and business goals
- It is not a project, but a process: data driven, risk based
- Success is derived through the engagement of the entire organization (or system).


Acute Shocks
Hurricanes
Earthquakes
HAZMAT incidents
Terrorism
Active shooter
Aging infrastructure
Security: cyber and
Social justice
Political
Sea level rise
Aging workforce
Trade protectionism
Potential Accelerators

Hurricane

Port Resilience Assessment and Decision Guide

Increasing cost and information

TIER 3

ÆAnalyze the system's key functions and structure throughout disruptions and drops in function.
Outcomes – qualitative metrics and understanding of the recovery process in order to ID intervention opportunities and management plans.

TIER 2

ÆID structure of the system including cascading events during disruption by utilizing both experts and observational data
Outcomes – reveal structure of system and interrelated components to be able to compare project or investments.

TIER 1

ÆSeek to understand and prioritize the critical functions of the system
Outcomes – quickly IDs critical functions, key sectors, and any easy wins. If more information is needed to control for resilience, ID's necessary for Tier 2.

Proceed through tiers until there is adequate information for decision making

SABINE-NECHES WATERWAY PORT AND TRANSPORTATION SYSTEM RESILIENCY

- SNWW and connecting transportation infrastructure critical to regional, state-wide and national prosperity and security
- Approach:
  - Utilize SAM methodology
  - Build on 2009 USCG 'Port-wide risk mitigation study' (one-time, nation-wide initiative)
- Proposed study supported by all major SE Texas private and pub stakeholders
- Over-arching study on SE Texas Economic Resiliency Underway (funded)

SNWW RESILIENCY STUDY: APPLICATION OF SAM METHODOLOGY

- Outcome: Identification through a data-driven, risk-based process, critical infrastructure projects and 9.9T

3. Identify, assess and inventory assets/asset classes critical to resilient SNWW port and waterway system

- Navigation channel
  - Dimensions–average and under stress
  - ATON
  - Levees, drainage and other flood control assets, including wetlands
  - Pilots
  - Tugs
  - VTS and PCT
- Docks and wharves
- Roads and highways
- Railroads–Class I and short lines
- Pipelines
- Airports (international and regional)
- Communication infrastructure
- Power supply infrastructure
- Emergency management facilities
- Workforce

STAKEHOLDER SURVEY SAMPLE QUESTI

- What is your organization's mission/goal(s), as related to your corporate priorities as well as those of your Texas location?
- What assets or asset classes under your control (built, natural, human) are strategically critical to the achievement of your mission/goal(s)? Have these assets been identified as part of a deliberate ottothl B961.3739 384.305 Tmmat beAKEle(r)2Q8w7 (a)8 (tt)2.7 (o)

PRELIMINARY SELECTED KEY ISSUES

- Public/private sector support—partnership with SETWAC critical
- Communication networks and processes--critical
- Assembling/harmonizing data across public and private sectors—institutionalize data and processes (aging workforce retires)
- Private sector (e.g., oil and gas) proprietary concerns (e.g., plant vulnerabilities; impact on nation's gas prices)
- Corporate Hq vs plant managers
- Railroad participation
- Corporate interest and resource availability (staff/funding)—measuring benefits and costs (run to failure) vs competing priorities. Making the business case.
- Freight transportation forecasting and lack of capacity for redundancies and workarounds. (Regional approach.)
- Integrate planning initiatives—freight interests and COGS (SETWAC and SETRPC, statewide, Gulf)
- Model risks—implications for transportation system and asset classes (including regional/functional particularities, eg nitrogen)
- Collecting appropriate data and detail to extent necessary to facilitate decision making
- Current and relevant flood plain maps
- Regulatory role (waivers?)
- Study and implementation funding!

Q&A

- Contacts:
  - Erik Stromberg rstromberg@lamar.edu, rolferikstromberg@gmail.com, 409-880-7114, 910-617-6800