

- **What are the key infrastructure issues that the Lifelines Sector would like to see researched?**

Dave Brunson

Theme Leader, Resilient Buildings and Infrastructure

Key Success Factors

- Infrastructure providers having input into setting the research agenda
- Researchers producing material that can be applied by end users
- Research that links across themes
- Research that has a pathway through to resilience in practice

Infrastructure Resilience: The Three Key Elements

- **Robust assets and flexible networks with appropriate alternative routes**
 - plus adequate response arrangements - it's not just about engineering and \$\$
- **Effective co-ordination arrangements**
 - pre and post-event
 - national and local
- **Realistic end-user expectations**
 - so users are better placed to have appropriate measures of backup arrangements

Who are the 'End Users' in Infrastructure?

Research Providers

**Advisers to Infra
Providers**

Designers Risk Mgrs

Network Planners

**Infrastructure
Providers**

Asset Mgrs Ops Mgrs

Community

Buildings and Infrastructure Programmes Identified (1)

(Pre- 4th September)

- **Resilient Coastal Infrastructure**
 - Tsunami effects on coastal infrastructure
 - Vulnerability of Port facilities
- **Soil Foundation Structure Interaction**
 - Buildings, bridges and retaining walls
- **Damage Free Bridges**

Buildings and Infrastructure Programmes Identified (2)

(Pre- 4th September)

- **Habitability of Post-earthquake Cities**
 - Water supply restoration
- **Modelling the Interdependency of Critical Lifelines**
- **Windflow Effects on Towers and Pylons**
- **Non-structural Elements in Building Seismic Performance**

The Question for You ...

- **What are the key questions that infrastructure end users would like to see researched?**

Supplementary Questions:

- **Do you feel you have a good enough understanding of international research outcomes relevant to your activities?**
- **What activities that you are involved with might be of interest to infrastructure research providers?**

Scan of Research Projects and Relevant Activities: Resilient Buildings and Infrastructure

