

INFRASTRUCTURE RESILIENCE

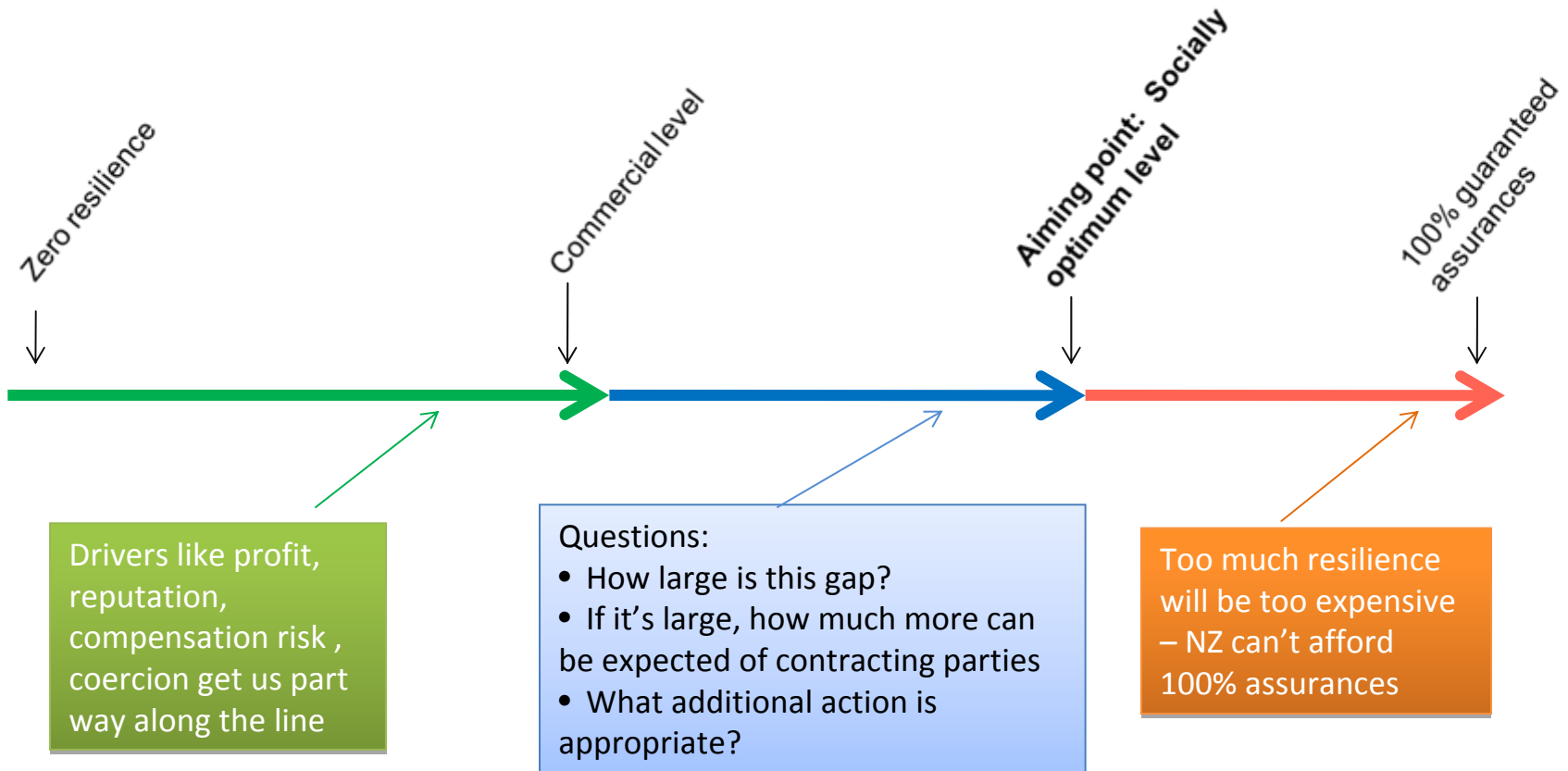
National Lifelines Forum
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Presentation on behalf of NELC
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INFRASTRUCTURE'S CONTRIBUTION TO NATIONAL RESILIENCE

- A strong economy offers inherent resilience to shocks such as natural hazards
 - NZ needs the economic strength to deal with shocks as they arise
- A strong economy also requires well-performing infrastructure
 - Infrastructure failures add business costs
 - They also erode business confidence and reduce investment
- Infrastructure resilience therefore supports overall economic objectives
- Much can be done to promote infrastructure resilience without large (fiscal or private) spending
- Government's Infrastructure Plan: *Vision is that infrastructure will be of a quality, reliability and resilience to support a high-wage economy with good living standards*

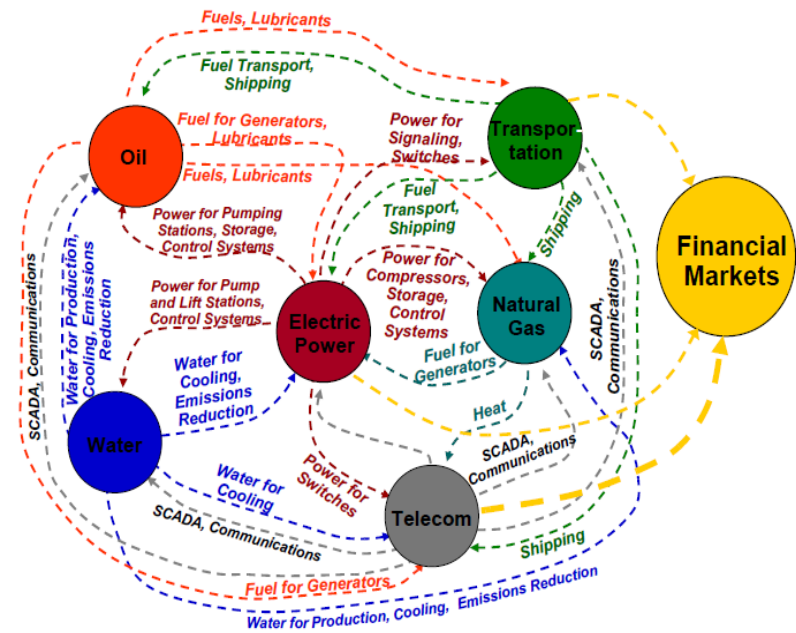
HOW MUCH RESILIENCE DO WE WANT?



HOW LARGE IS THE GAP?

- Interdependencies
 - Diagram illustrates Direct infrastructure connections (from Peerenboom, Fisher and Whitfield)
 - Downstream cascade impacts: Business supply chains (including SMEs), Households etc
- Aging assets
- Societal / commercial fragility
- Climatic pressures

In brief, the gap is large /growing
Complicating factor – diverse infrastructure ownership and market structures



HOW MUCH CAN BE EXPECTED FROM CONTRACTING PARTIES?

- “Consumers can contract for the resilience they are prepared to pay for”
- But market development is uneven and pricing incomplete

CONSUMERS	VERY LARGE	LARGE	SMEs	H/HOLDS
SUPPLIERS				
Electricity	Light Green	Light Red	Light Red	Dark Red
Gas	Light Green	Light Green	Dark Red	Dark Red
Petroleum	Light Green	Light Green	Light Red	Light Red
Telecomm’s • Landlines • Cellular	Light Green	Light Green	Light Red	Light Red
Transport • Road • etc	Light Red	Light Red	Dark Red	Dark Red
Water	Light Green	Light Green	Light Red	Light Red
Sewerage	Light Green	Light Red	Dark Red	Dark Red

WHAT CAN BE DONE?

- Market failures – the case for policy action
 - Externalities
 - Information asymmetries
 - Public goods
- Wide range of possibilities
 - Coercion
 - Review regulatory impediments
 - More advice / support (e.g. information, research, standards)
- Much can be done without large (or any) capex
 - Not just more assets or duplicated assets

WHAT WE ARE LOOKING FOR (THE “OBJECTIVE”)

Three key elements

- Robust assets
 - or satisfactory “Plans B”
- Effective coordination
 - pre and post-event
 - national and local
- Realistic end-user expectations
 - so users are aware and well-placed to consider options
- Note: It’s not all for Government
 - Emphasis should be on partnerships / collaboration
 - At sector level
 - With and within government

SUBMISSION FOR THE NEXT INFRASTRUCTURE PLAN

- Recognition of resilience as an objective
- Development of a programme to be progressed over time
 - Indicators / intervention logic to be developed
 - guided by a set of principles, leading to
 - firm recommendations to Government on an agreed programme end-2011

Tentative Set of Principles

- building on what we've got
- improving knowledge of hazards and mitigation
- adopting externally-focussed risk management
- understanding sector differences and similarities
- promoting collaboration
- leveraging off commercial drivers
- ensuring proportionality and cost-effectiveness
- promoting continuous improvement

PROGRESSING FROM “END-2011” TO THE “OBJECTIVE”

- Possible process and output elements for programme (to be pursued over time)
 - a starter for consideration as indicators / intervention logic developed

- **Processes**

- Coordinated infrastructure resilience programme
- delivered through a single government agency
- bringing together CDEM and policy agencies
- based around sector groups working to agreed terms of reference
- addressing pre-event and response issues

- **Outputs**

- Agreed principles and terms of reference
- Identification of nationally significant infrastructure
- Review of policy / funding / investment settings
- Improved metrics
- Post-event reviews