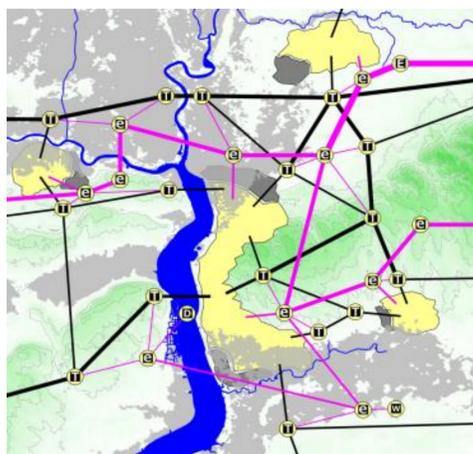


Background

- There is a relatively well established literature identifying inherent features of infrastructure networks that pose resilience challenges. This literature defines the networks as complex, tightly coupled and at risk of cascade failures.
- Recent work has focused on additional challenges posed by barriers to cross-agency collaboration. This includes institutional restructuring, differences in organisational goals, commercial imperatives, and more.
- In spite of this, critical infrastructures (CI's) tend to cope remarkably well with threats of large-scale disruption.
 - For example, de Bruijne & Van Eeten (2007) found no significant differences between outage rates before/after restructuring in 2000 and 2001 Californian power outages.
- This coping success has been attributed to human factors, including:
 - Rich informal communication
 - Flexible response capacity
 - Ability to deal with surprises
- In conclusion, "in the immediate aftermath of a [catastrophic] breakdown, an effective response will depend on the adaptive behaviour of citizens, front-line workers and middle-managers" (Boin & McConnell, 2007).

Method

12 x 2 hour focus groups with infrastructure stakeholders (N=41) employed a map based simulation to:



Explore concepts of infrastructure and community resilience

Examine planning assumptions and communication strategies in relation to a natural and malicious hazard

Provide feedback on the prototype to help develop the interactive version of the demonstrator

Each group was exposed to one of the four Resilient Futures scenarios.

Inaccurate Expectations about public Response Inform Emergency Plans

- Although not a uniform response:
 - "generally people don't panic in emergencies as demonstrated in London on 7/7 with Kings Cross before that and fires and everything" (G8, P4))
- Many predicted a panic response:
 - "Major panic" (G1, P1)
 - "Probably panicking" (G2,P1)
 - "Panic and the need for direction and reassurance" (G5,P3)
 - "Panic, likely to be scared as a result" (G9P2)
 - "Probably disorientation – panic" (G10, P2)
- This led to a focus on reassuring the public:
 - "Reassurance and where risks are" (G10,P2)
 - "Reassure members of the public and media and reduce panic." (G2,P3)
 - "Above all they will need reassurance" (G3,P1)
 - "Reassuring people that there is no further threat from terrorists" (G9,P1)

Discussion

- Reassurance may be useful:
 - In particular situations (e.g. unfamiliar threats)
 - For managing low risk patients
- However, it is important to recognise that under response may be as problematic as over response (e.g. people not wanting to leave homes, people not being willing to take vaccinations).
- Expectation of panic obscures the ways in which infrastructure resilience may be enhanced by adaptive behaviour of citizens, front-line workers and middle-managers.
- Effective communication should be targeted at encouraging specific behaviours rather than solely targeted at reassurance.
(Pearce et al. 2012; Rogers & Pearce, 2013)

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