Response to questions posed at NHRA webinar for Resilience of Lifelines for Regional and Remote Communities project

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Q. There are huge issues with local authorities having the capacity and capability to restore critical infrastructure such as roads in periods that do not impact communities. They need to be priortised based on criticality and resourcing which inevitable leads to frustration. I was wondering though how the impacts and resourcing requirements for not only restoring but building resilience into infrastructure can be quantified, especially when communities are feeling the need to individually take action?

A: Many of our interviewees spoke about the need to make resilience a part of core business for infrastructure owners. This requires a mindset shift but also adaptations to legislative and regulatory structures. Quantification flows from prioritisation. In terms of community frustrations and the need to take action, these highlight the importance of centring community in infrastructure resilience decision-making.

Q. Since 2009 Black Saturday fires in Victoria, additional to radio, Twitter had been a reliable (very low data with GPS capability) and real-time communication tool by ESTA sectors, especially for rural and regional AUS.

A: Absolutely. What the rise of Twitter (X) and other such platforms demonstrates is the rapidly evolving lifelines landscape. We can't rely on assumptions from the past. These evolutions bring both significant opportunities as well as risks – like this case exemplifies.

JFR: We also need to be thinking with the rise of social media platforms, the ability exists to distort messaging, leading to disinformation and loss of trust in systems. Wherever agencies use these platforms they also need to plan to manage disinformation.

Q: Lifeline - What do we use now for social infrastructure communication? [Because the State Emergency tool, nor Digital ABC Radio will not work - in data drought areas]. What is the central best social tool?

A: I'm not sure we can definitively state that one tool is best. What we found in this research is we get more resilient outcomes when decision-making is more localised and values redundancies.

JFR: Community Radio was a significant broadcaster during the 2019/20 bushfires. Its run by local volunteers and does have significant reach. It's a low cost approach.

Q. Agree that lifleines are the way that we are going to adapt to living with impacts of cliamte change. Do you have any good examples of statewide governance arrangemnets between all 'infrastrcture' owners? We currently have multiple levels of government authority, industry, peak organisations operating in silos of excellence. How do we build governance structures to

actually build resilience and preparedness prior to an event rather than when the inevitable happens and typically everyone will work together?

A: This is exactly the challenge and a key priority for the research agenda is research around developing and sustaining these types of collaborative governance structures (also with community voice) that will enable this type of work.

Q. How to balance the tension between promoting people-based resilience while also make sure to acquit our obligations for system based resilience?

A: The first step is shifting our mindset that sees these as somehow in opposition, or that one needs to be traded off for the other. What our research has shown is that both work best when working together. People need systems and systems need people.

Q. is there any linkage between lifelines and your research and the draft international standard for ISO/DIS 22372 Security and Resilience - Community Resilience - Guidelines for resilient infrastructure? or the research of Dr Liz Varga?

A: The draft guidelines are yet to be released however, from looking at trends in the literature and policy landscape globally, we anticipate that they will be advocating for a more resilience-oriented approach.

Q. Sometimes the concept of 'resilience' is used to push the responsibility and onus for coping, recovering and adapting back on to individuals and community, downplaying (or even completely obscuring) the role of organisations and institutions in creating the conditions that generate risk, and the unequal power individuals and communities have in influencing this.

A: Absolutely agree and have seen this, although less so over the last few years. Resilience is not about communities alone, it's about communities being supported to thrive in the face of disaster risk and having access to flexible, adaptive systems. Resilience is a useful catch-all term but when we start digging into details I find it important to be specific about what we're talking about. So in regard to infrastructure systems, we might talk about systems that are actively reducing risk, preparing for events, planning to fail well if that does occur, and above all engaging widely with community.

JFR: this is true, but I think we are also seeing an emerging situation where resilience is being seen as community capacity, which already exists (communities self organise everyday of the week to put football and netball teams on the park), and programming is supporting this capacity within the context of disaster risk. Profiling Australia's Vulnerability recognised the unequal distribution of power from individual through to institutional level. We need to do more to embed this thinking across the sector.

Q. Can you talk to how the project is working to avoid this in its resilience framing?

A: The project is centred on designing a conceptual framework and research agenda around lifelines resilience. Part of that means very specifically defining and demonstrating what we

mean by resilience. Our understanding of and appreciation for resilience comes from its roots in social-ecological systems thinking and that's what comes out through the project.