**Programme Title:** Cultural Resilience  
**Programme Leader:** Dr Julia Becker (GNS Science), Prof David Johnston (GNS Science / Massey University)

**Programme Overview**
The Cultural Toolbox research will investigate three priority research areas focused on understanding, harnessing and building social norms that underpin a resilient culture in New Zealand. Integral to this research will be an outcome-focused plan to clearly define the best tools and strategies to facilitate resilience becoming an integral “part of what we do and who we are”. Diverse research methods will include a co-creation approach to build trust and respect-based relationships with key stakeholders/users from the outset. We will investigate new and rapidly evolving technologies, and the ways these can be harnessed to develop social norms of resilience across diverse communities and hazard profiles. We will engage with citizens to build their desire for involvement in hazard-related science, and develop a framework for citizen-science initiatives.

**Programme Outcomes**

**Contribution to Challenge Mission:** This research will develop a means to enhance existing, or develop new social “norms” of resilience to nature’s challenges in New Zealand communities. For a step-change in Resilience, its practice and understanding must become embedded in our communities and workplaces. If the need for resilience is a socially embraced concept, resilience norms will drive resilience behaviour and decision-making at all levels in New Zealand.

**Vision Mātauranga (“VM”) outcome:** The project will make several distinct contributions to the Vision Mātauranga themes:

- **Taiao/Environment:** Identification of kaupapa will encourage acknowledgment of this relationship as a key consideration and the diverse ways the kaupapa or social norm katiakitanga, is embedded in tikanga pertaining to disaster risk reduction will be explored.

- **Hauora:** Tikanga that interface traditional Māori and contemporary disaster risk reduction practices will be identified and documented.

- **Mātauranga Māori:** Consideration will also be given to how kaupapa and tikanga may be drawn on/leveraged by marae communities to generate context specific Mātauranga Māori that contributes to effective disaster risk reduction, recovery and marae sustainability in the aftermath of natural hazard events and other disasters.
Indigenous Innovation: The research project will examine ways in which social media technologies (e.g. Facebook, texting) may be drawn on by tangata whenua to facilitate kōrero and whakawhanaungatanga in disaster risk-resilience context.

**10-year outcome:** A New Zealand society is engaging in resilient initiatives and activities as normal practice (and even possibly doing this in an unconscious or instinctive way). New Zealander’s involvement in citizen science research to help frame and solve hazard-related problems has become a strong part of our culture and learning process.

**5-year outcome:** We will have a better understanding of how to develop and implement a resilient culture where resilience is a social norm. Emerging technologies and citizen-science will be contributing to building resilience in and around our case-study areas. Resilience benefits within NZ will start being seen through this wide social acceptance of adaptive and mitigative approaches to natural hazards.

**Specific Projects within Programme**

This Programme is formed by four Projects:

1. **Developing social norms towards a culture of resilience** will seek to understand existing and prospective social norms around resilience to natural hazards, and how these norms can be enhanced or developed to contribute to a resilient culture. We will consider norms in the context of location, sudden shocks (e.g. earthquakes, storms, wildfires) and incremental hazards (e.g. sea-level rise).

2. **Emerging Technologies** will investigate social norms in the context of emerging technologies, and look at how people’s interaction with information and communication technologies (ICTs) can contribute to a resilient culture.

3. **Connecting Citizens to Science** will investigate citizen science as a tool for increasing opportunities for New Zealanders to become involved in science activities, and improving the strategic framework for citizen science.

4. **P-TECH in CITSCI.** This project, funded from the Challenge’s contestable funding process in 2017, is assessing the role and contribution of technology in fostering genuine participation and citizen science in strengthening resilience to natural hazards in New Zealand.