Flagships

Flagship Programmes are a collection of QuakeCoRE-funded projects involving multi-institution and multi-disciplinary research collaboration, engagement with end-users, and co-funding. The initial Flagships described in this Collaboration Plan integrate successful on-going projects by QuakeCoRE researchers and leverage additional funding to achieve significant impacts for NZ.

FP1: Ground Motion Simulation & Validation: *This Flagship aims to induce a paradigm shift in strong ground motion prediction through the use of high-fidelity physics-based simulation methods; merging state-of-the-art knowledge in strong motion seismology and geotechnical earthquake engineering*

FP2: Liquefaction Impacts on Land and Infrastructure: *This Flagship focuses on soil liquefaction as one of the principal earthquake hazards affecting land and infrastructure of New Zealand*

FP3: Addressing Earthquake-Vulnerable Buildings - A multidisciplinary Approach *This Flagship seeks multi-disciplinary research on existing buildings vulnerable to significant damage and potentially collapse in future earthquakes*

FP4: Next-Generation Infrastructure - Low damage and repairable solutions: *This Flagship seeks a new design paradigm whereby reparability and damage-control is explicitly considered in the design process. This requires the development of new low damage systems, quantification of the reparability of conventional systems, and addressing barriers to implementation.*

FP5: Pathways To Improved Resilience: *This Flagship focuses on determining how we decide where to invest attention and finances to improve NZ's resilience to earthquakes.*

Cross-FP initiatives

In addition to the activities within each FP, there are also cross-FP initiatives, as noted below:

Alpine Fault Earthquake Case Study

Special Projects

Large externally-funded research programmes aligned with the QuakeCoRE mission:

Special Projects