

TP1: Laboratory Facilities

Leader: Ken Elwood

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The Large-Scale Experimental Facilities Platform is focused on developing an NZinc approach to laboratory testing and achieving a sustained capacity for state-of-the-art experimental research.

Key research thrust areas

There are two key thrust areas in this Technology Platform:

1. Training of research and laboratory personnel on advanced large-scale testing techniques and equipment. (Intended to build long-term capacity, not for students).
2. Development of resources and/or software to facilitate collaboration between laboratories and increase efficiency of operations within laboratories.

Overarching Principles

The three key objectives for this platform are

Sustained capacity for state-of-the-art experimental research

- Move away from reliance on student skills and build sustained capacity in laboratories which is not lost as students graduate.
- This requires upskilling of current workforce in experimental facilities in New Zealand. This is achieved by a combination of training and new hires.

Development of a NZ inc approach to laboratory testing

- Identification of capabilities and equipment in NZ labs. Requires a common platform for cataloguing equipment in all NZ labs.
- Development of policies on sharing of lab space and equipment (including shared equipment which could be shipped to other labs). Requires consensus building through working group meetings.

Enable access to NZ and internationally unique lab facilities for QuakeCoRE projects

- Experimental projects typically involve costs not borne by other projects. For example most labs require some user fees or charging of technician time. This may require some funding for technician time (user fees) on QuakeCoRE projects in NZ labs.
- Enable access through MoUs and collaborative project opportunities to unique international facilities

Personnel

The personnel plan for TP1 is under development.

Key performance indicators

KPI	Start Date	Due Date	Q2 Report
TP1.1:	1/01/2016		
TP1.2:			
TP1.3:			
TP1.4:			
TP1.5:			
TP1.6:			
TP1.7:			
TP1.8:			
TP1.9:			

2018 RfP Information

No applications or Expressions of Interest (EOI) are being sought via the RfP. The Technology Platform Leaders are responsible for delivering a long-term coordinated Technology Platform Programme; investigators are encouraged to engage with the Technology Platform Leaders to see where they may contribute to the Technology Platform Programme.

Updates:

06/10/16

The Large-Scale Experimental Facilities Platform is focused on developing an NZinc approach to laboratory testing and achieving a sustained capacity for state-of-the-art experimental research.

Two short training courses were delivered in September to upskill UC Structural Engineering Laboratory (SEL) facility users, about the potential benefits and hazards associated with high speed hydraulic testing systems. These courses were organized by Tim Sullivan, who is in charge of the coordination of the Structural Laboratory activities at University of Canterbury. Tim secured funding to support the courses from the UC College of Engineering Teaching Grant.

The short courses were delivered by Alberto Pavese, who has more than 15 years' experience as laboratory manager at the University of Pavia and the European Centre for Training and Research in Earthquake Engineering; a laboratory at which high speed dynamic testing is routinely conducted. The courses were attended by several UC Academic Staff, Technicians and Students and three staff from University of Auckland. The ongoing interactions between the UC and UA structural testing facilities are key to supporting the NZinc approach to laboratory testing. Alessandro Palermo will have a planning meeting with the UA Lab manager Felix Scheibmair early in November.

A one day training workshop for technicians is being tentatively scheduled late in 2016. If you are interested in engaging with this platform, please consider submitting an EOI to the 2017 RfP, or get in touch with Ken Elwood or Alessandro Palermo to join the monthly video conference.

05/08/16

QuakeCoRE provides funding for four Technology Platforms designed to develop facilities, equipment and knowledge bases that underpin all QuakeCoRE research. The Large-Scale Experimental Facilities Platform is focused on developing an NZ inc approach to laboratory testing and achieving a sustained capacity for state-of-the-art experimental research. Initial training activities for technical staff at Universities of Auckland and Canterbury have been initiated, including a visit to Swinburne University to for training on advanced hydraulic control and operation of their unique Multi-Axis Structural Testing system (see photo below).

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