



QuakeCoRE  
NZ Centre for Earthquake Resilience

# QuakeCoRE 2017 RfP summary & Flagship 1: GMSV changes

GMSV web calls: 22 Sept, 6&20 Oct

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WEB: [www.quakecore.nz](http://www.quakecore.nz)

GMSV WIKI: <https://wiki.canterbury.ac.nz/pages/viewpage.action?pageId=50626859>

# RfP is the principal mechanism for specific researchers to link into QuakeCoREs annual activities



## 2017 RfP Collaboration Plan

### QuakeCoRE: Centre for Earthquake Resilience

Issued 19 September 2016

Proposals Due Noon (NZT) 25 October 2016

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# What's new?

(critically important!)

## 1. What's new in the 2017 RfP

The structure of the 2017 RfP is similar to that in 2016, with the following main changes:

1. Seed projects: The seed project category has been removed
2. Expressions of interest (EOI): Research proposals related to the Technology Platforms (TP) and Education, Outreach and Training (EOT) can be submitted in response to the RfP as expressions of interest. See section 4 for the distinction of EOIs from proposals.
3. Workshop EOIs: Workshop proposals can now be submitted through the year. The RfP provides the first opportunity to submit a proposal for workshop funding. See section 4 for the distinction of EOIs from proposals.
4. Flagship Programme salary restrictions: When funded projects are grouped at a Flagship Programme-level, the salaries and salary-related costs must not exceed 40% of the total Flagship Programme budget<sup>1</sup>.
5. Refined evaluation criteria and selection process: The evaluation criteria have been modified to allow applicants to more transparently see the weighting of different evaluation criteria. A more specific outline of the review process has also been provided.

### **3. Proposal timelines**

The proposal timelines for Flagship projects and Annual Meeting travel proposals are:

- 19 September 2016: Request for proposals released
- Tuesday 25 October Noon NZT: Applications close. Late proposals will not be accepted
- November: Evaluation process
- Mid-December: Outcome advised
- Mid- December onwards: Contracts negotiated and signed
- 1 January 2017: Projects commence

The timelines for the EOI's related to Technology Platforms, Workshops and EOT are:

- 16 September 2016: Request for proposals released
- Tuesday 25 October Noon NZT: Applications close. Late proposals will not be accepted
- November: EOI evaluated
- December: If appropriate, invitation for full proposal requested
- January-February 2017: Evaluation and potential approval

## 5. Proposal categories

Proposals for one year of funding are encouraged across the following six categories. Indicative percentage allocations from the total RfP budget (~\$1.2M NZD for 2017) are given for each category below as a guide only:

**Flagship Programme linkage (80%):** Flagship Programmes are a collection of high-impact research projects that are advanced to the next level through multi-institution and multi-disciplinary research collaboration, engagement with end-users, and co-funding. Proposals in this category should identify the specific Flagship Programme and associated research thrust their proposal falls under (see Section 9.1)

**Annual meeting travel participation (5%):** We encourage broad participation in the QuakeCoRE Annual Meeting, planned for late August / early September 2017, where the QuakeCoRE community will come together to share ideas and plan collaborations for the following year. Proposals in this category support travel funds

..... (more  
details in RfP)

**Workshops (5%):** QuakeCoRE participants who wish to host a workshop between 1 January 2017 – 31 December 2017 should submit an expression of interest (EOI) for the workshop in response to this RfP Collaboration Plan, or at a later date. Please

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**Technology platform development (8%):** QuakeCoRE has dedicated funding to the support the development and enhancement of four Technology Platforms which provide the underpinning (lab and field) experimental, data, and computational infrastructure need to solve system-level problems in earthquake resilience. EOIs

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**Education, Outreach and Training (EOT) (2%):** EOIs in this category are intended to support researchers and end-users to participate actively in activities which align with QuakeCoRE EOT objectives. Budgets for specific EOT initiatives

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# Flagship 1 changes from 2016 (new text in red)

*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; validating simulations via application to advanced numerical models of engineering infrastructure; and developing guidance for the use of such simulation methods in engineering design and assessment. **Specific emphasis is on validation and utilization of simulation methods that provide broadband ground motions.***

Key research thrusts in this flagship include:

- *Simulation methods **and validation***: Development/refinement **and validation** of ground motion simulation methods that enable the generation of acceleration time series for the seismic response analysis of infrastructure (including kinematic 'rupture generators').
- *Velocity model development **and validation***: Development **and validation** of 'velocity models' of the earth's crust in new regions of NZ, or improvement **of** those in existing regions; such models should provide resolution at the length scales necessary for broadband ground motion simulations
- *Nonlinear site and topographic response **and validation***: Develop, validate, and apply models for nonlinear near-surface site and topographic response for use in conjunction with GM simulation methods.
- *Application for major NZ EQ scenarios*: Utilize ground motion simulations **in regions with validated velocity models** to forecast the severity of ground shaking over spatially-distributed regions in future major NZ earthquakes.
- *Uncertainties and PSHA*: Examination of modelling uncertainties in ground motion simulation methods and utilization for probabilistic seismic hazard analysis
- *Use of simulations in earthquake engineering analyses*: Explore the role of simulated ground motions for use in seismic response analysis of engineering infrastructure, including comparisons with as-recorded ground motions **for realistic structural/geotechnical models**; and development of procedures for simulated ground motions in infrastructure seismic design guidelines.

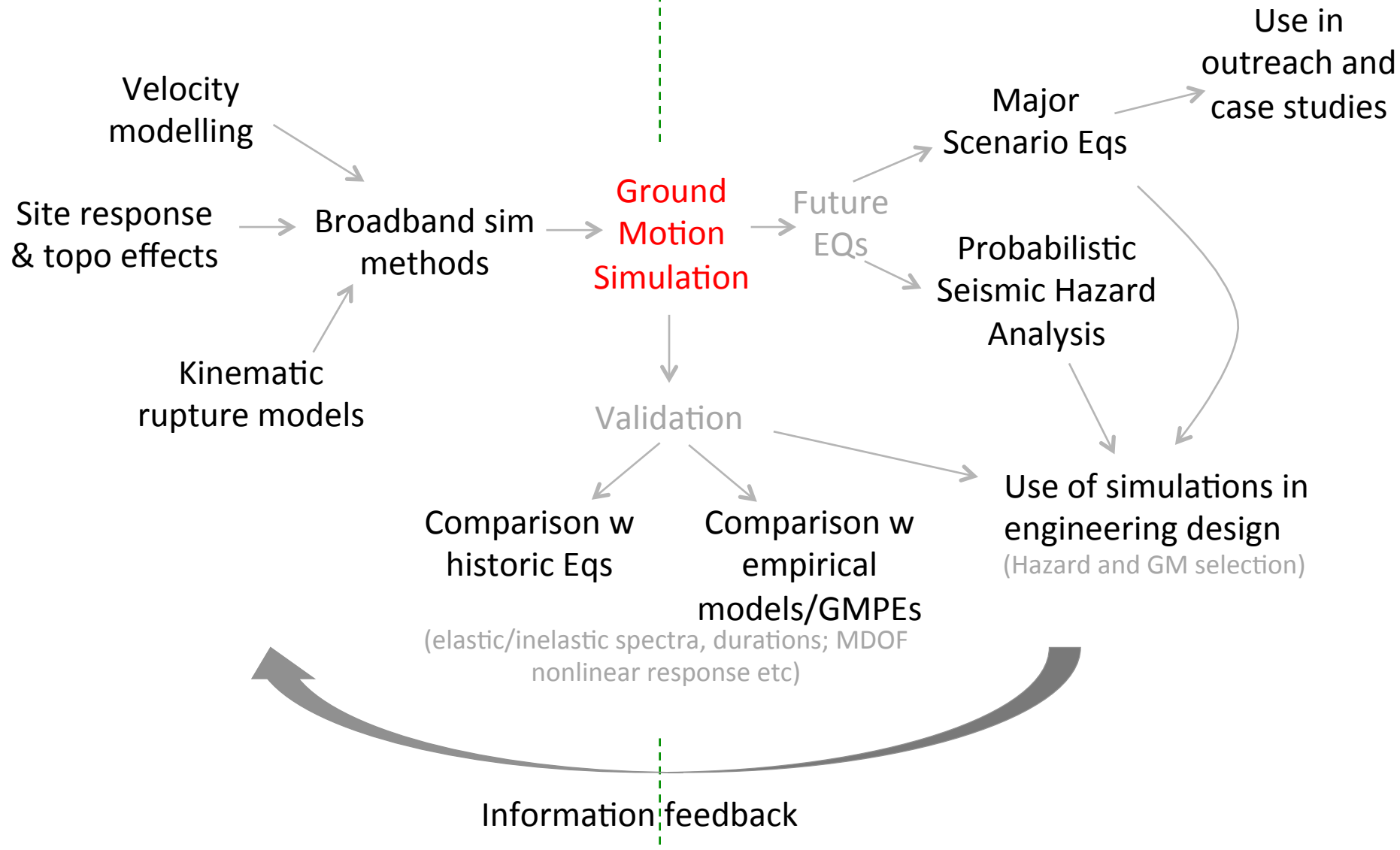
# FP1: Spectrum of research



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Ground motion modelling

Engineering utilization



# Key Attributes of Flagship Projects



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1. Research excellence
2. High-impact (high relevance/need) research
3. Leveraged funding (proven high quality research; co-funded by Marsden, EQC, MBIE, NHRP etc, or international sources)
4. International collaborations, regulatory engagement and substantial links to industry and stakeholders
5. Transformational projects that involve multi-disciplinary and multi-institutional collaborations