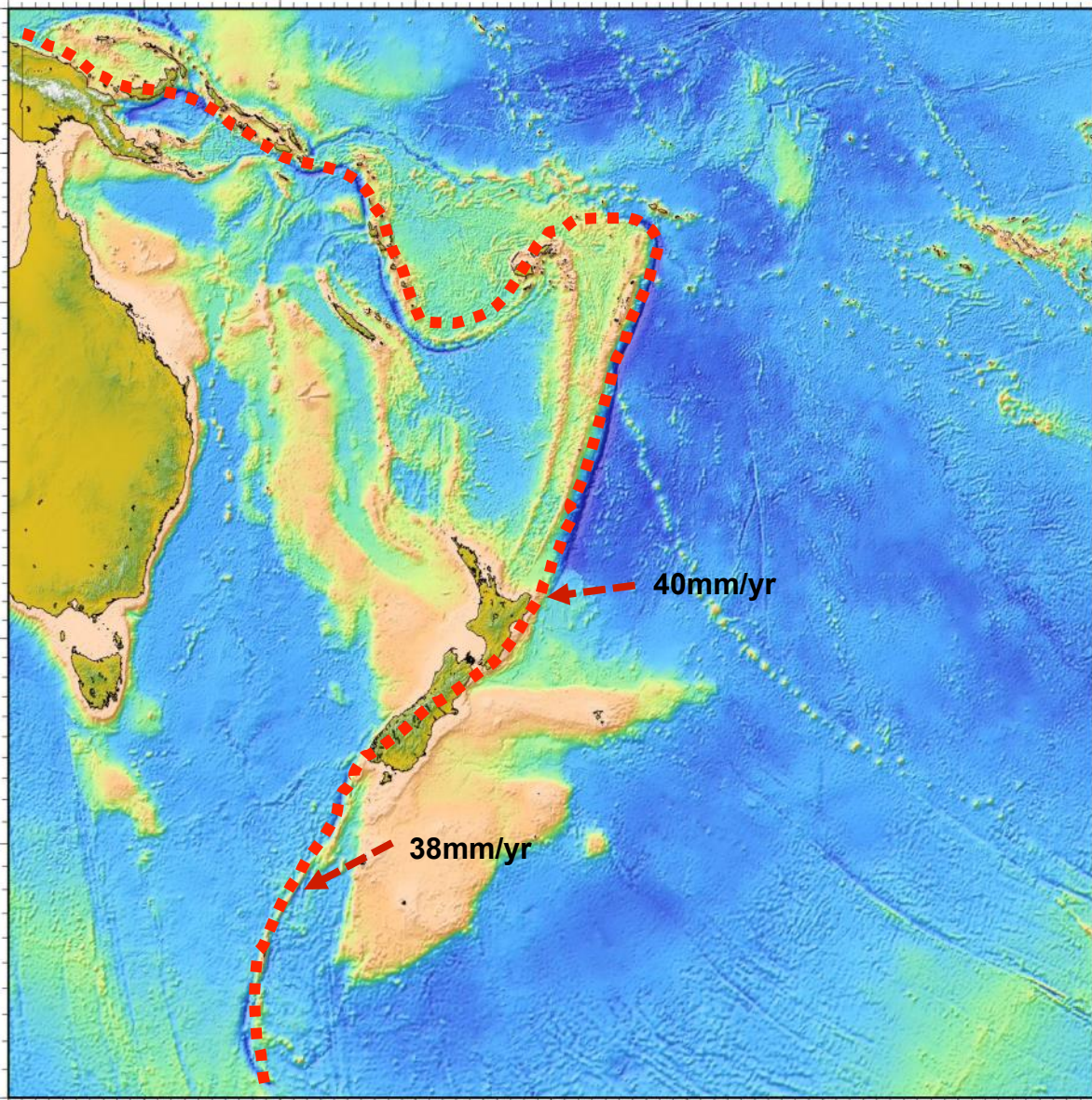




CRISIS MANAGEMENT AND THE INSURANCE RESPONSE TO NEW ZEALAND'S CANTERBURY EARTHQUAKES

Dr Hugh Cowan
GM Reinsurance Research and Education
New Zealand Earthquake Commission
30 June 2016

**OUR MISSION: TO REDUCE THE IMPACT ON PEOPLE
AND PROPERTY WHEN NATURAL DISASTERS OCCUR.**



NEW ZEALAND INSURANCE (1)

- Second highest level of non-life insurance penetration globally (The Netherlands 9.5%, New Zealand 5.2%, ROK 4.6%, USA 4.1% of GDP)*
- Relative to expected losses from natural catastrophes New Zealand also ranked third. Expected annual losses in New Zealand 0.73% of GDP (Bangladesh 1.26%, Chile 0.87%)*
- High quality science and engineering research and practice underpin ability to assess risk, and price it
- Hybrid market for residential customers – EQC and private

*Lloyd's (2012). Lloyd's global underinsurance report.



NEW ZEALAND INSURANCE (2)

Mixed public/private provision

Residential

Non Residential

Basic cover

Public insurance
through EQC

Automatic with
fire insurance

Top-up cover

Private insurance
Voluntary

Private cover

Voluntary



PUBLIC (EQC) INSURANCE

Long history

- NZ Government has provided disaster insurance since the 1940s

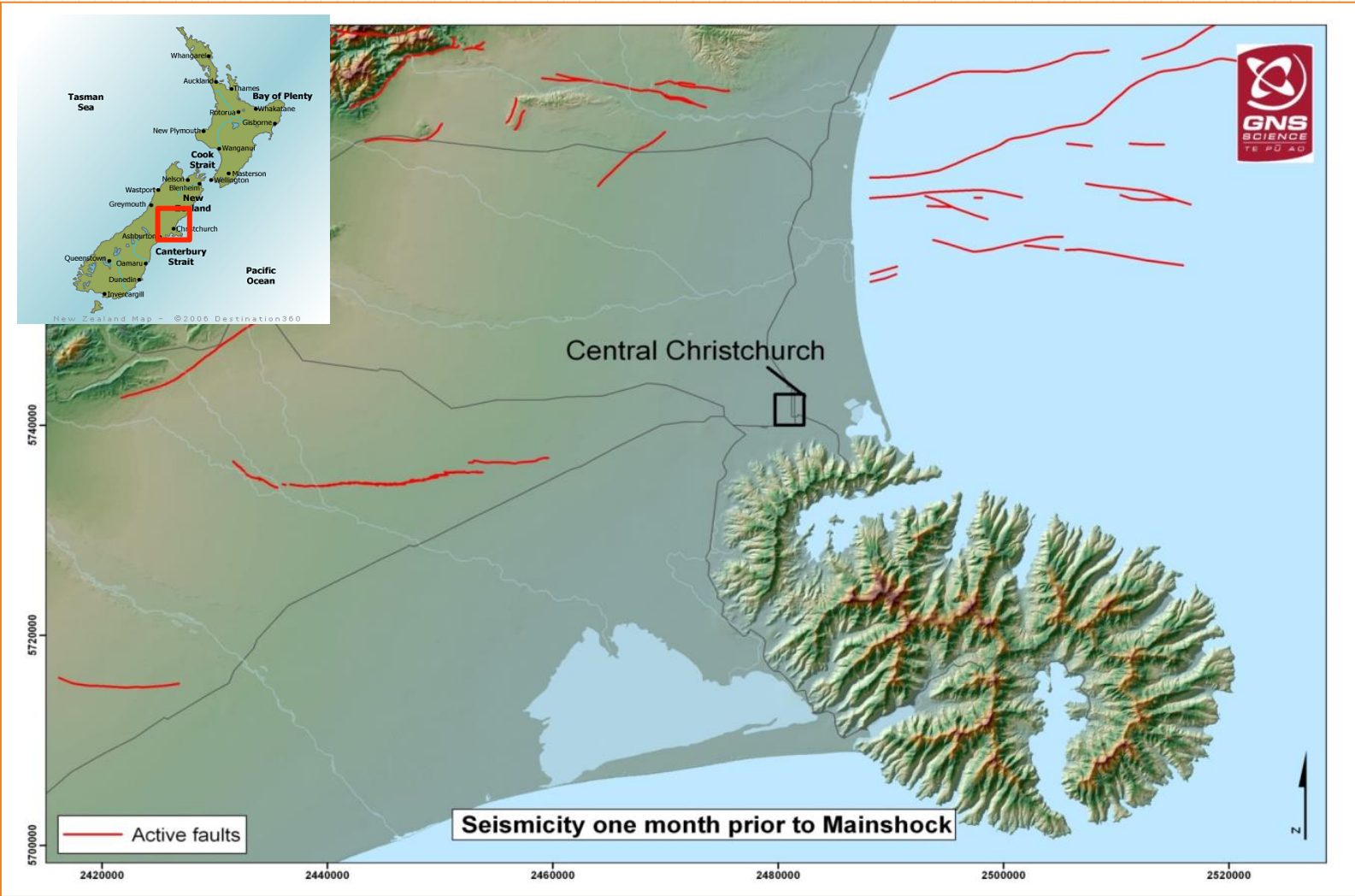
Three objectives

- Social: reduce distress, reinstate housing
- Fiscal: reduce Crown liability
- Economic: liberalisation

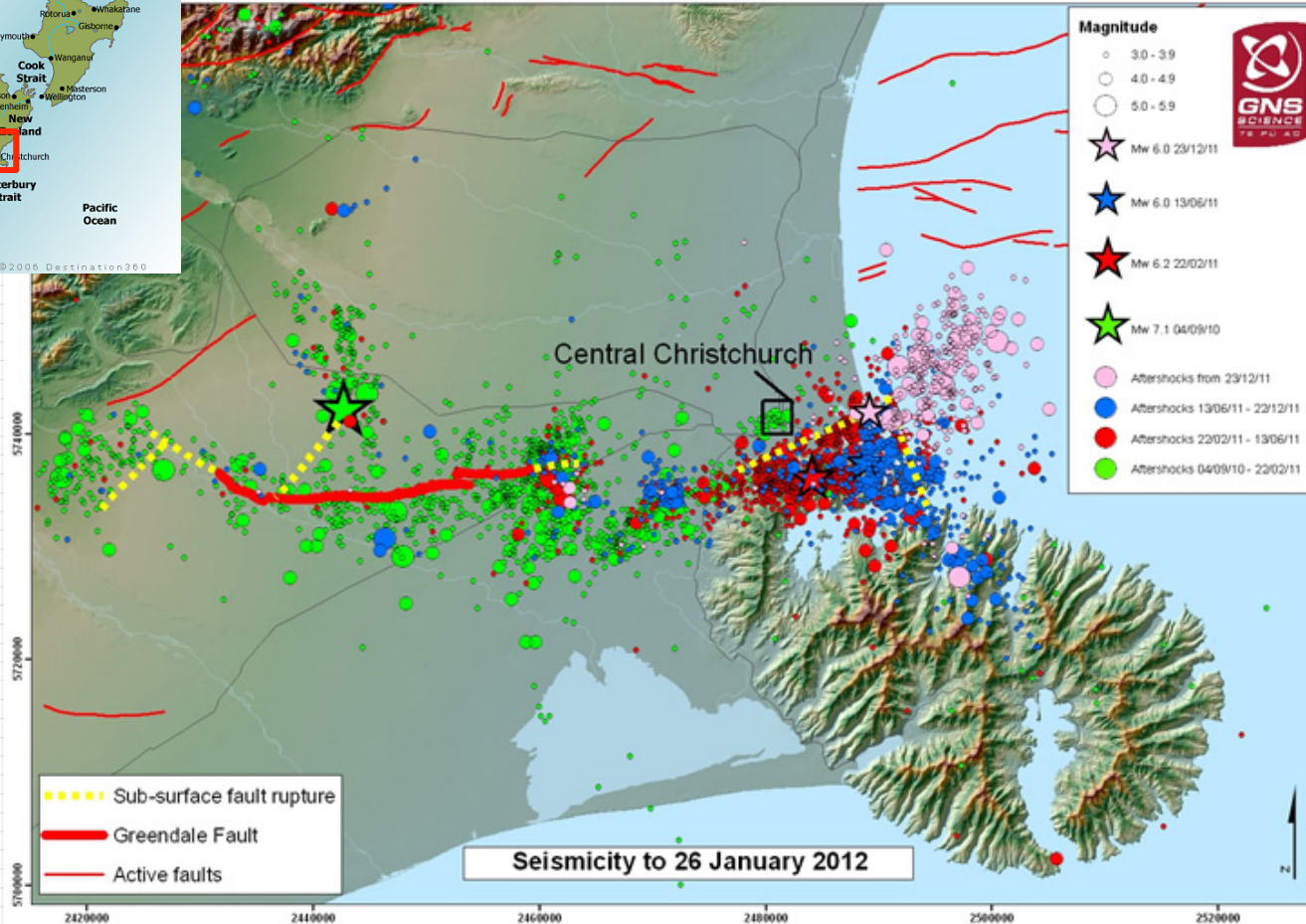
Non commercial

- A Crown agency governed by an independent board
- Provides basic disaster insurance on a non-commercial basis
- Funds research and education on natural hazards

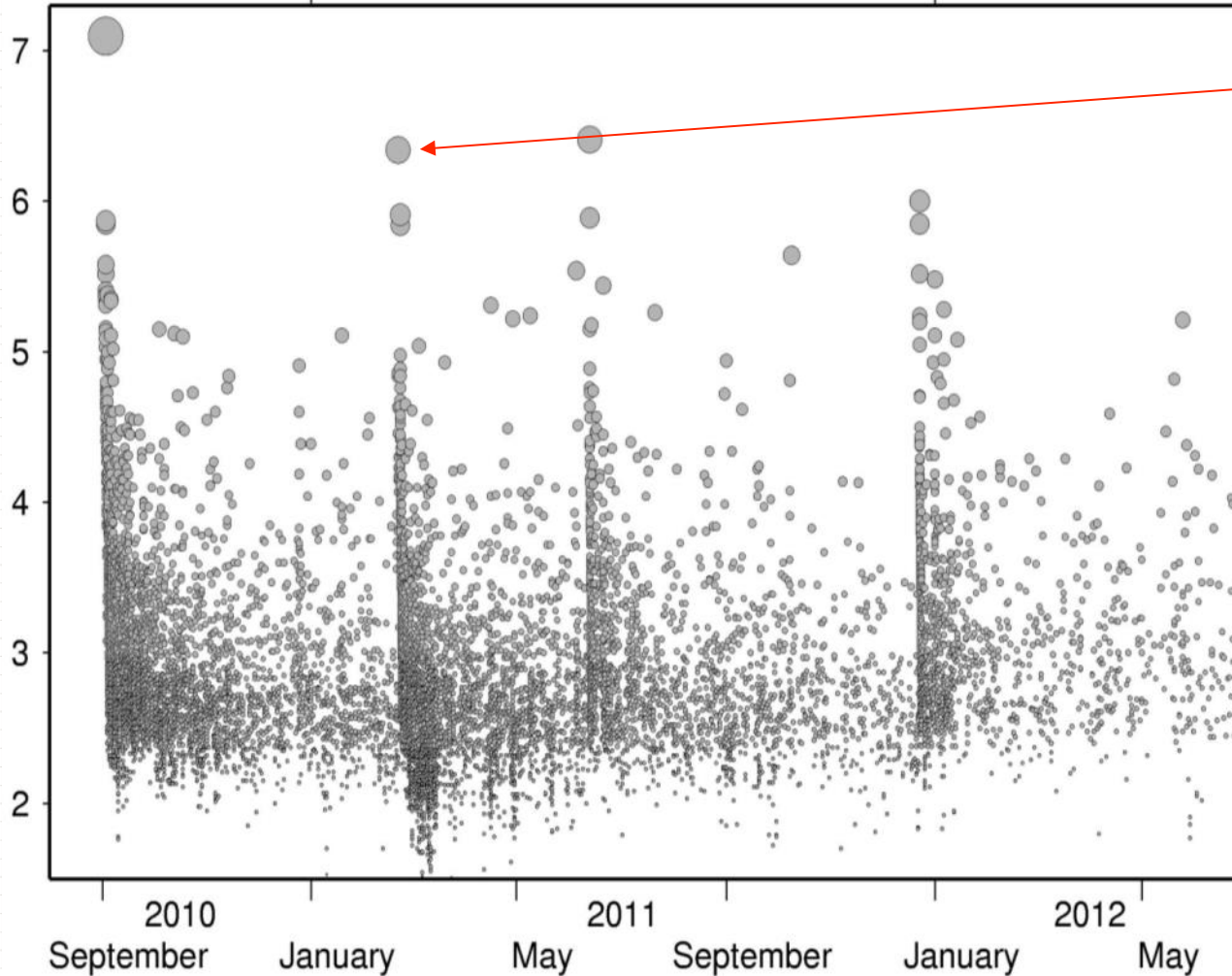




CANTERBURY EARTHQUAKE SEQUENCE



MAGNITUDE VS TIME (UP TO JUNE 2012)



22 Feb. 2011 was the most damaging quake but not the largest and was five months after the first one.

Source GNS



IMPACT ON HOMES AND COMMERCIAL PROPERTY

- Over 7,000 homes 'red-zoned', where land too badly damaged to build on
- 4,500 homes more vulnerable to liquefaction, another 6500 more vulnerable to a 1:100 year flood (city sank 0.5-1m) and 1000 vulnerable to both
- Thousands more lie in less badly damaged land
- Each major event caused more damage and the need for further assessments and the need to apportion costs for each event
- 1,354 commercial buildings demolished
 - 826 around the CBD
 - 528 in the suburbs
 - last cordons around CBD removed after 29 months



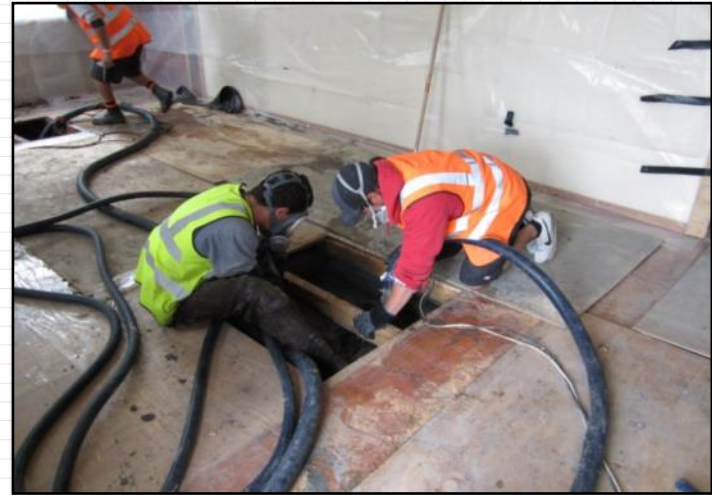
LIQUEFACTION RELATED DAMAGE

(Observed from the road)



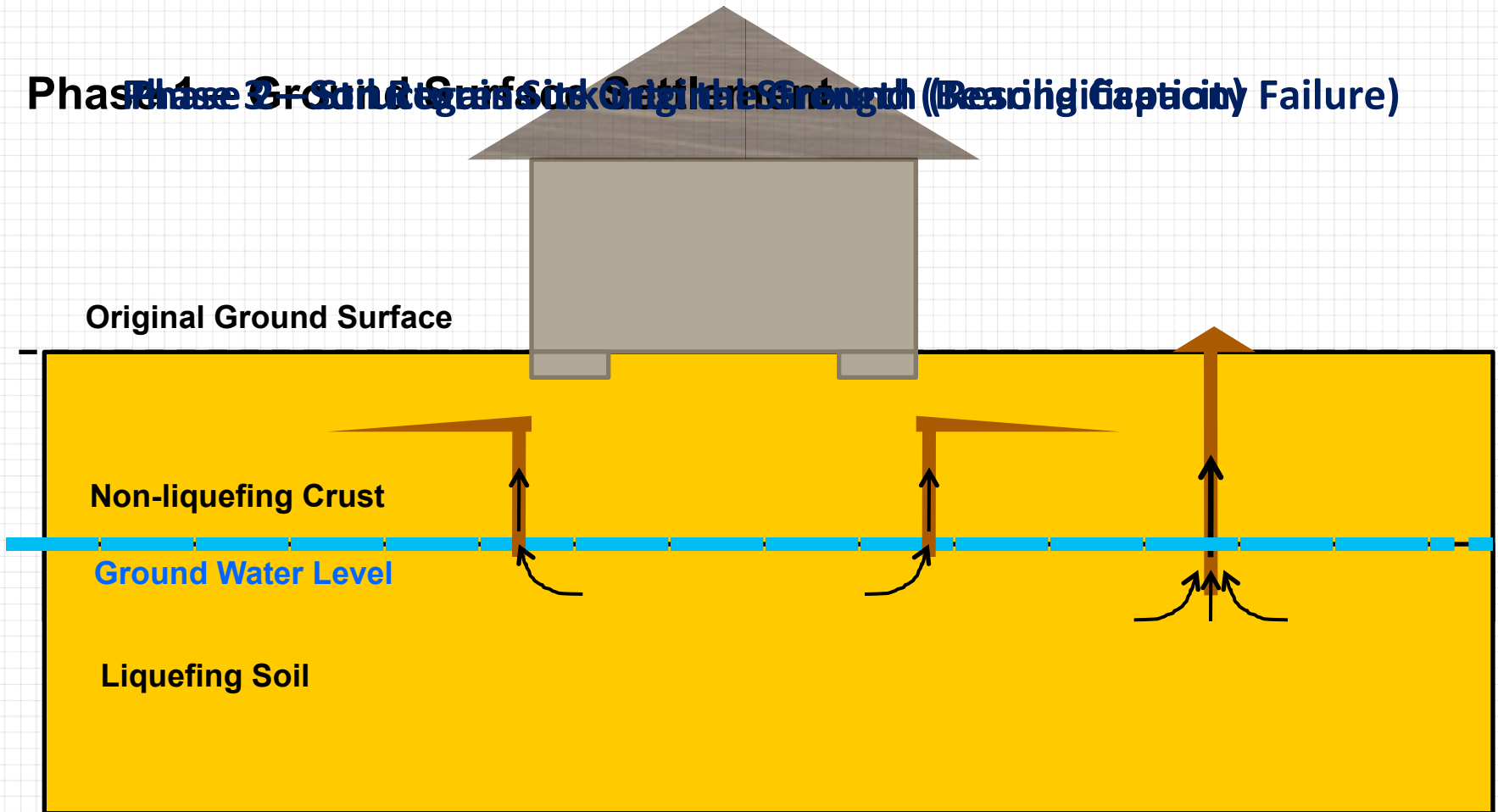
LIQUEFACTION RELATED DAMAGE

(Observed under houses when floor boards are lifted)



UNFORESEEN COMPLEXITIES

Phase 3 - Soil Strength (Research Capacity Failure)



Source: Tonkin & Taylor





COMPLEXITIES (1)

- Complexity of multiple large events in the same location and time.
- Depth of social/psychological impact (customers and staff).
- New roles for EQC and increased expectations of EQC.
- Contingent capability model that focused on front line and the impact of “just in time” scaling.
- Need to develop “standard” organisational infrastructure, negotiate significant commercial contracts, against a backdrop of significant claims volumes and multiple events.
- Assembling and training the (mainly private sector) workforce and coordinating service delivery with other agencies, while addressing these complexities.



COMPLEXITIES (2)

- Event sequence, apportionment
- Increased Flooding /Liquefaction Risk
- Multi-unit buildings
- Pre-existing housing stock quality
- Legislative interpretation
- Customer services capability
- Changed expectations of EQC
- Massive upscale then downscale



WHAT WORKED WELL

High levels of coverage

- Extremely high levels of insurance penetration in the residential insurance market
- Resources are available to rebuild Canterbury

Cost-sharing

- Substantial proportion of costs will be borne by private insurance industry rather than the Crown



THE CANTERBURY EARTHQUAKES 2010-2011

Date	Event	Location	Overall losses \$US m (original values)	Share of losses insured
11.3.2011	Earthquake, tsunami	Japan	210,000	19%
25-30.8.2005	Hurricane Katrina	USA	125,000	50%
23-31.10.2012	Hurricane Sandy	USA	68,500	43%
6-14.9.2008	Hurricane Ike	USA	38,000	49%
23-27.8.1992	Hurricane Andrew	USA	26,500	64%
22.2.2011	Earthquake	New Zealand	24,000	69%
1.8-15.11.2011	Floods	Thailand	43,000	37%
17.1.1994	Earthquake	USA: CA (Northridge)	44,000	35%
4.9.2010	Earthquake	New Zealand	10,000	74%
27.2.2010	Earthquake, tsunami	Chile	30,000	27%
13.6.2011	Earthquake	New Zealand	2,700	78%



WHAT WORKED WELL

Financing

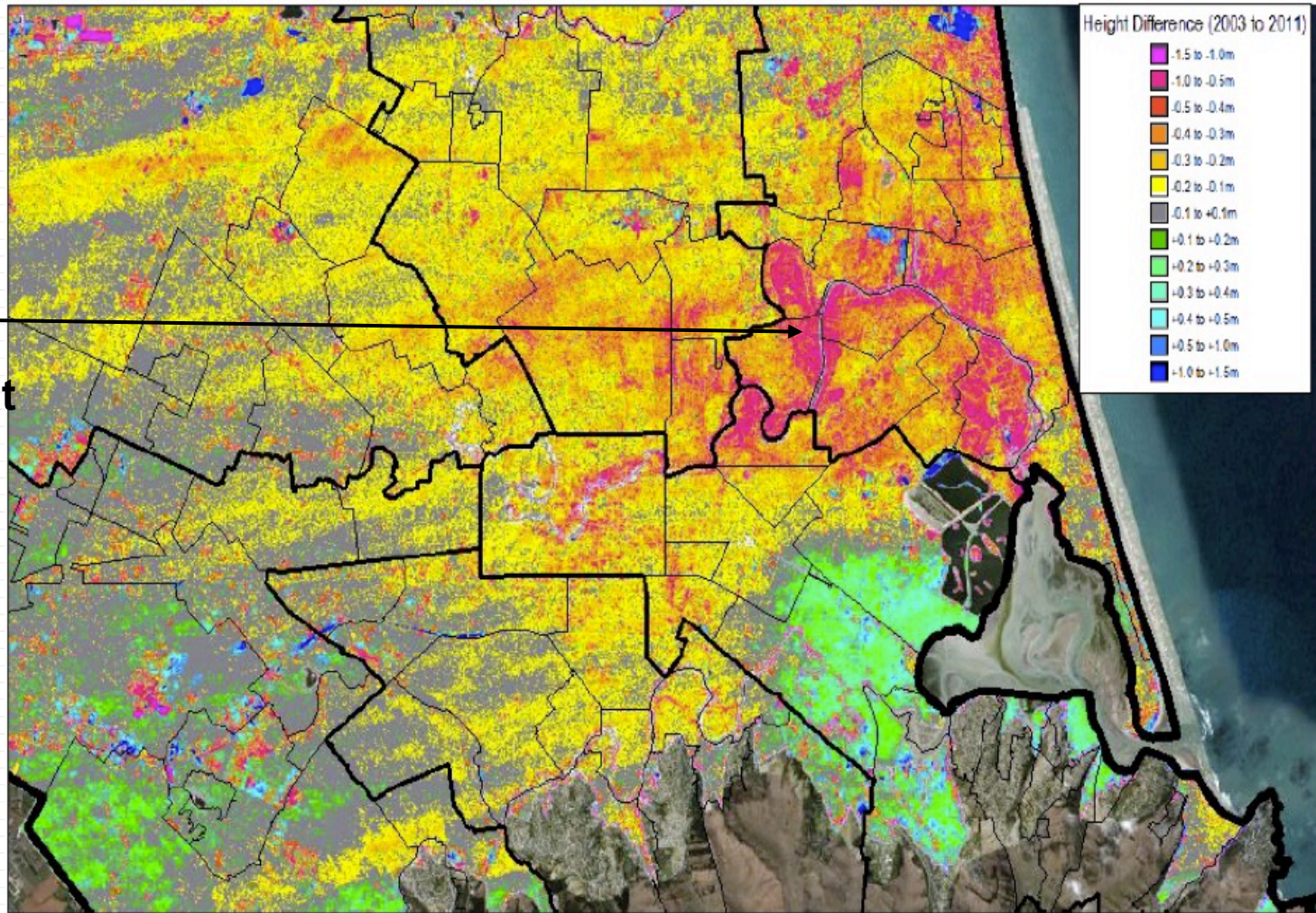
- EQC has established deep relationship with reinsurers based on broad information sharing
- NZ has continued to access reinsurance markets on the basis of these relationships

Research

- Response has taken advantage of substantial EQC investment in natural hazard research (e.g. GeoNet hazard monitoring system)



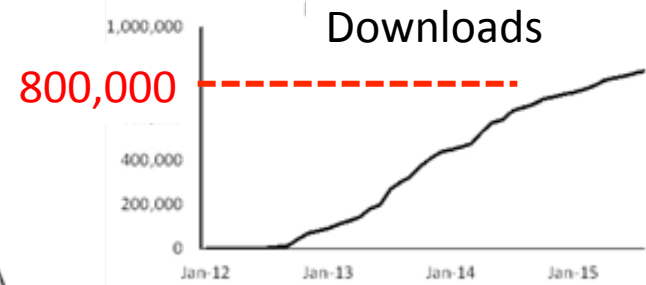
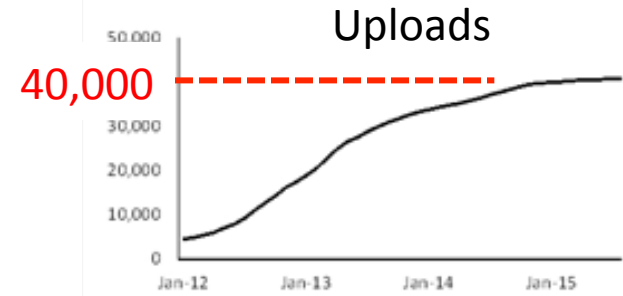
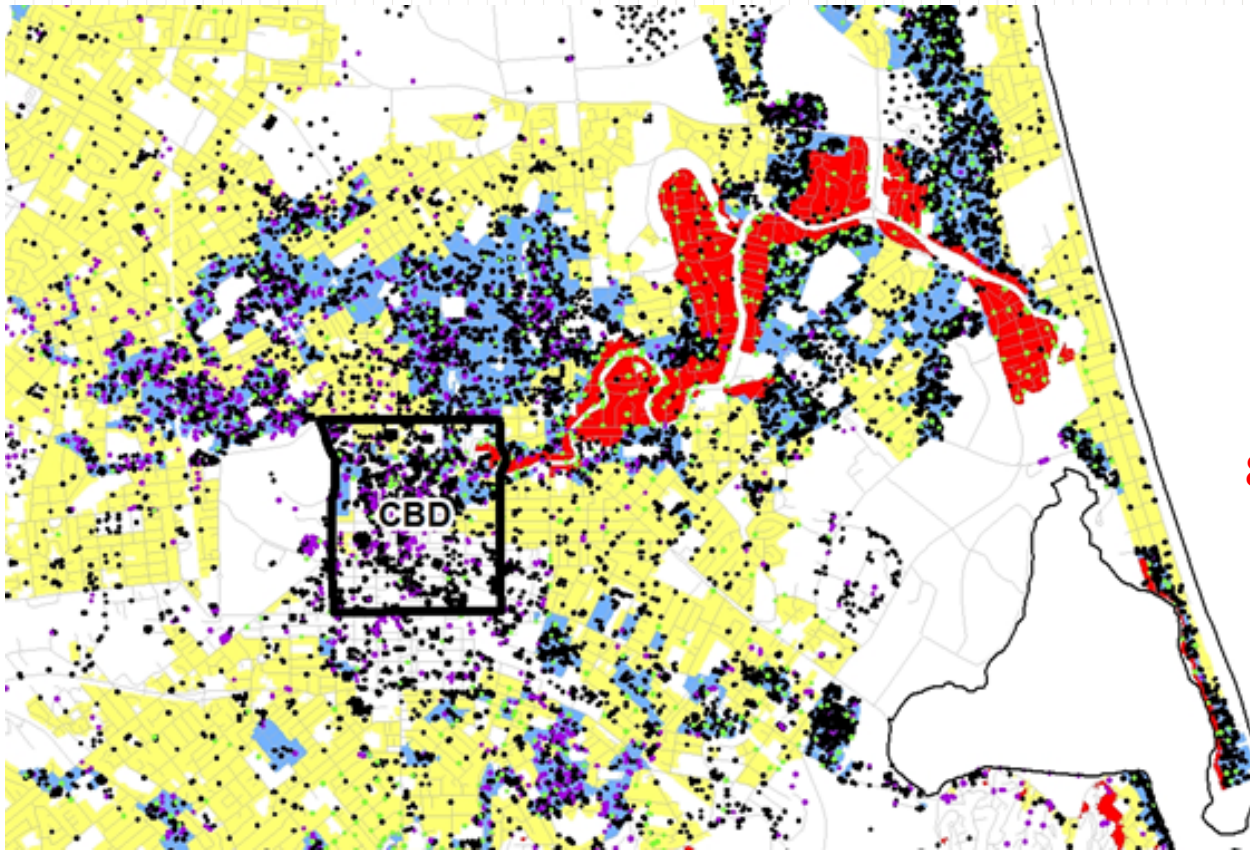
MOST OF THE CITY SUBSIDED



Pink shading areas that subsided 0.5-1.5m



GEOSPATIAL DATA SHARING



Christchurch MBIE Technical Category

TC2

TC3

CERA Residential Zone

Red Zone

• 20,000 CPT


• 4,000 Boreholes

• 1,000 Piezometers

as at 30 Sept 2015




ACCELERATED SCIENCE TO PRACTICE



EQC
EARTHQUAKE COMMISSION
Kaitiaki Takekōwhiri

Residential Ground Improvement

Findings from trials to manage liquefaction vulnerability



INSURER SETTLEMENTS AND OTHER COSTS

Insurance type	Total Claims	Contents etc	Total Minor Out of EQC Scope	Total Major	Paid to 31-3-16	Likely total cost
Domestic	140,000	48,000	65,000	25,000	\$8.2b	\$10.3b
Commercial	26,000				\$9.6b	\$10.4b
TOTAL	166,000				\$17.8b	\$20.7b

- Total cost over NZ\$40 billion (20% of GDP); so \$8 billion uninsured/new build costs
- Estimated completion of residential rebuild 2017
- Estimated completion of commercial rebuild 2023 plus?

Source: Insurance Council of New Zealand



EQC SETTLEMENTS

Estimated EQC Liability \$NZ11.5 billion

Claims (exposures) received

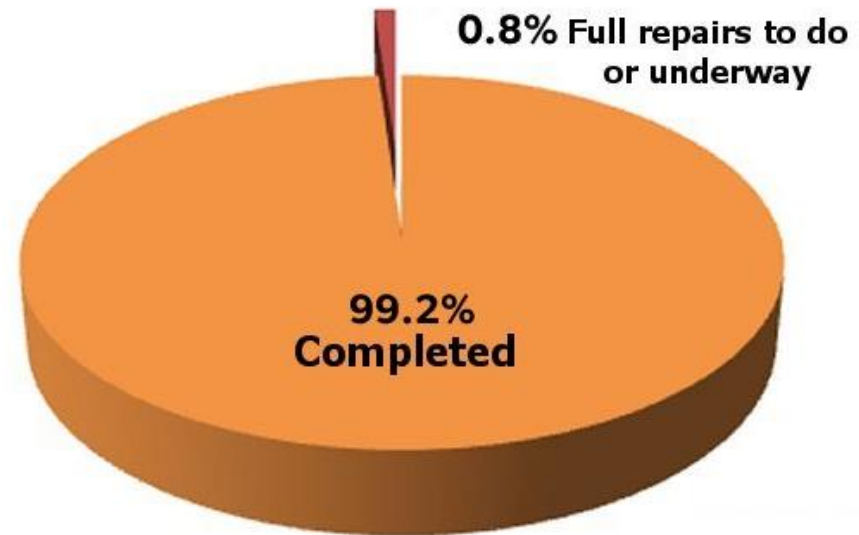
- Building claims	424,969
- Contents claims	187,274
- Land claims	154,438
Total claims	766,681

House repairs completed in
Canterbury Home Repair
Programme 68,218

Total payments by EQC to date \$NZ9.2B

Data as at 20 June 2016

68,583 homes in the Canterbury Home Repair Programme



NOT SO EASY

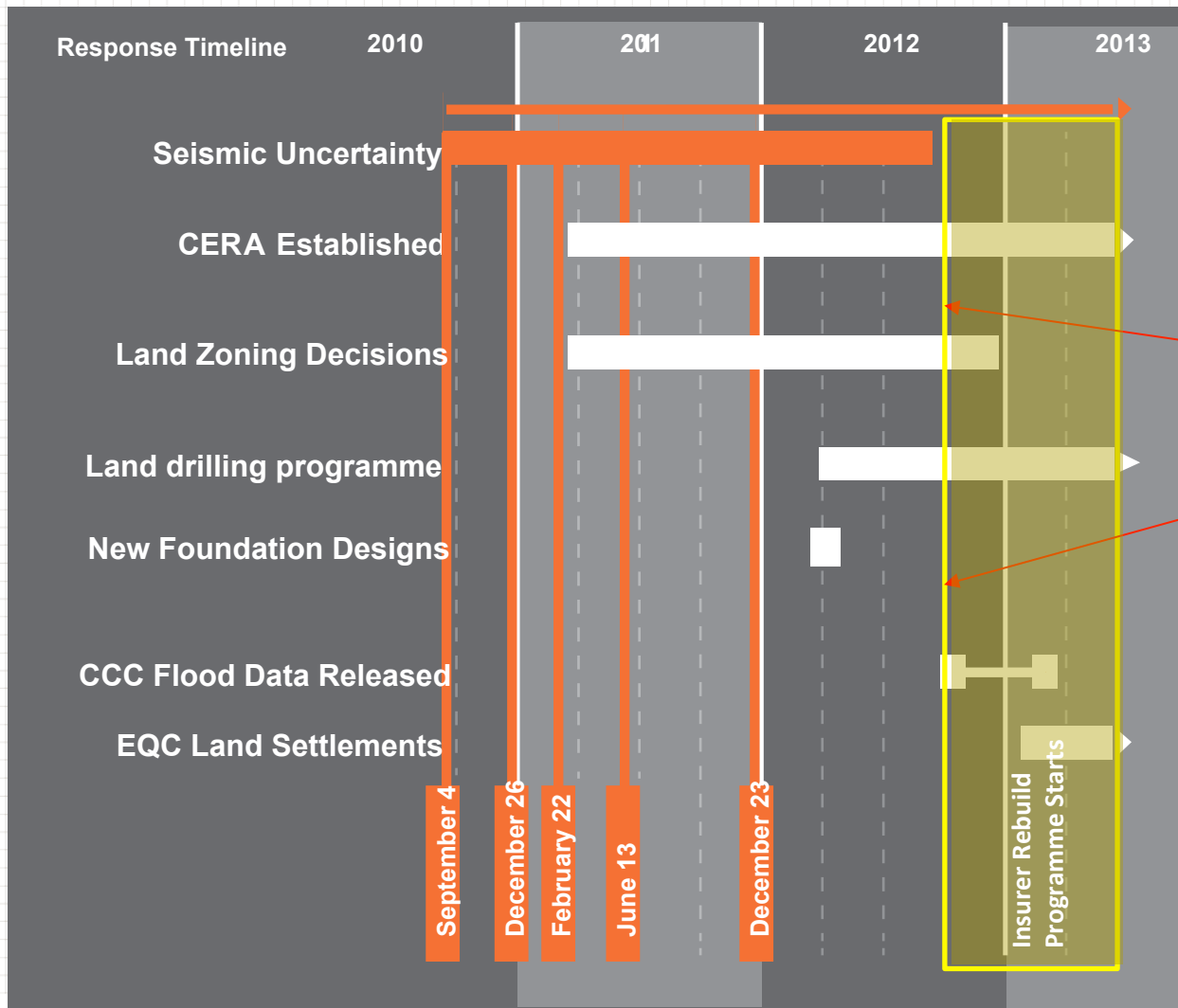
Service Delivery to Customers

Model has not performed as expected

- Unanticipated complexity
 - Differences in terms and conditions
 - Differences in assessment approaches
 - Requirement to 'apportion' costs across multiple events
- Duplication of roles in claims handling
 - Potential for inefficiency
 - Confusion for claimants
- Mixed views on performance



TIMEFRAME TO RESOLVE LAND ISSUES



Insurer rebuild programme starts almost 2 years after first event



RESIDENTIAL 'RED ZONE'



RESIDENTIAL 'RED ZONE'



SOCIAL ISSUES AND DELAYS

Stressors

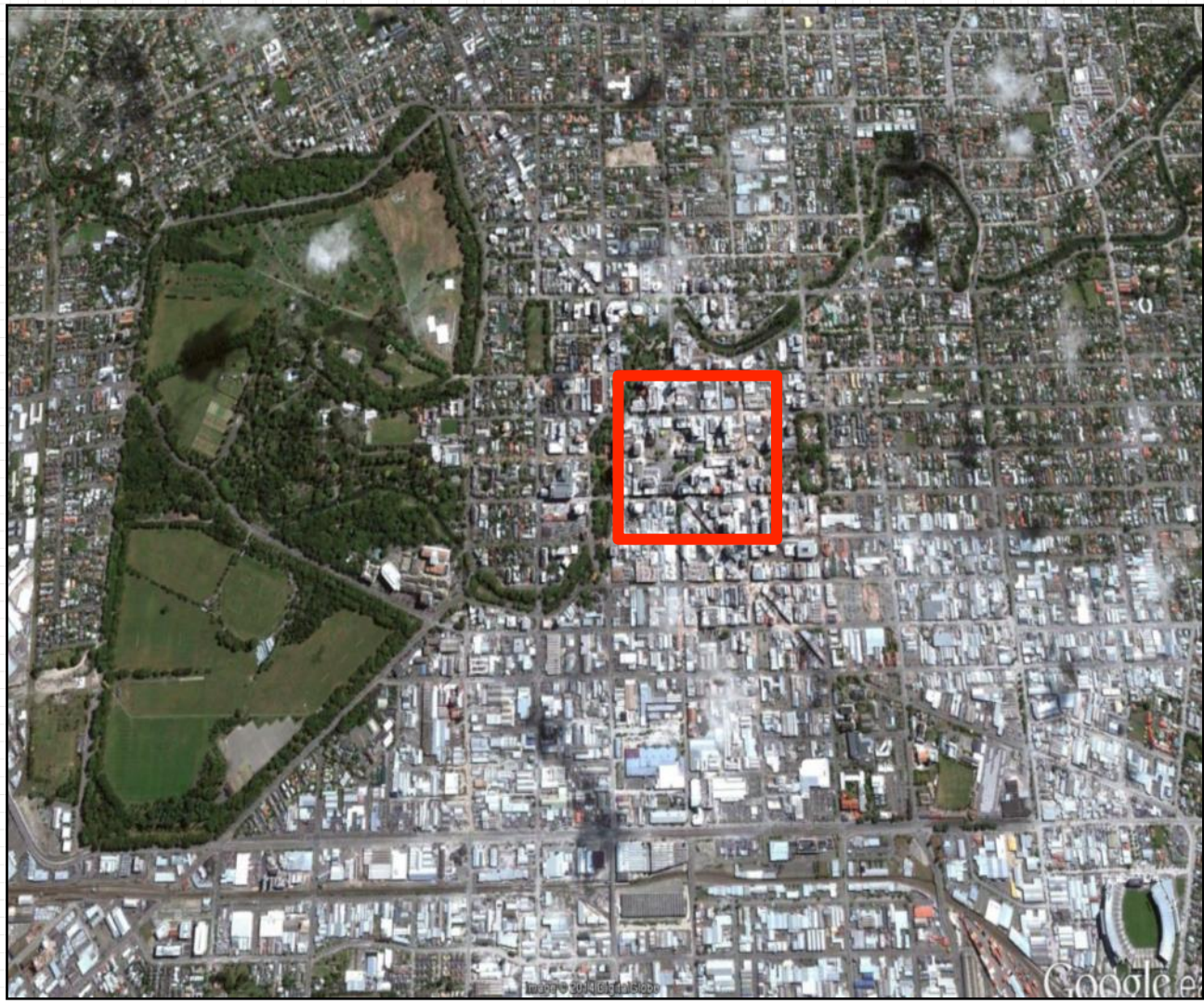
- multiple quakes and uncertainty of recovery timeframe a huge stress factor coupled with totally unrealistic expectations

Difficulties facing homeowners

- the challenge of understanding insurance processes, including policy terms and terminology.
- lack confidence in advice received from insurers and EQC because of perceptions about the industry or differing expectations of entitlement.
- difficulty reconciling advice from multiple agencies and self-appointed experts.
- lack of clarity in claim settlement timeframes, and timeframes for the repair or rebuild of their houses.
- uncertainty about the alignment between offer and policy.
- not knowing who to talk to, in order to receive impartial advice.



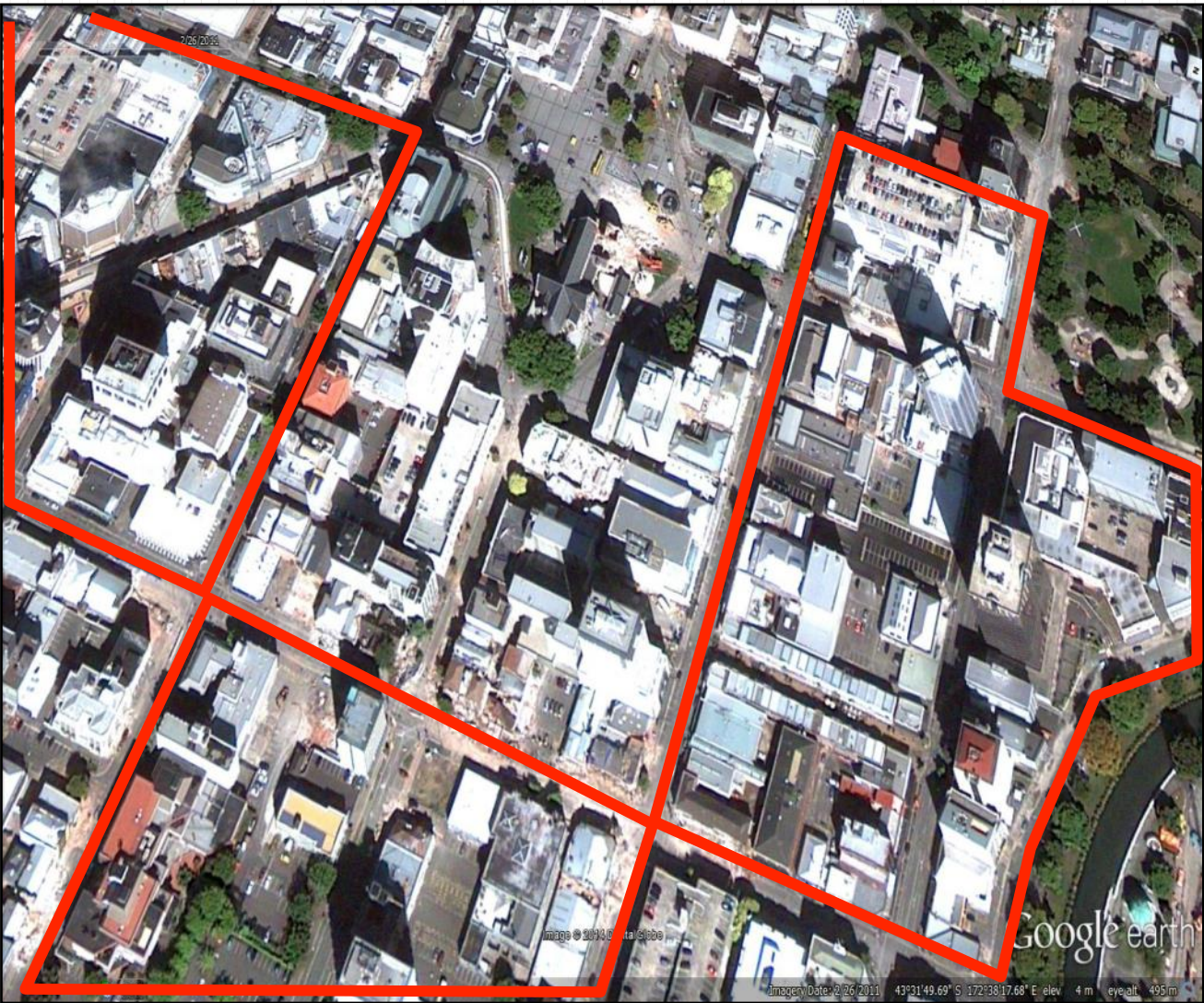
IMPACT ON CENTRAL BUSINESS DISTRICT



IMPACT ON CENTRAL BUSINESS DISTRICT



IMPACT ON CENTRAL BUSINESS DISTRICT



IMPACT ON CENTRAL BUSINESS DISTRICT



COMMERCIAL REBUILD ISSUES





J. Ingham, University of Auckland

COMMERCIAL REBUILD ISSUES AND DELAY

Demolitions

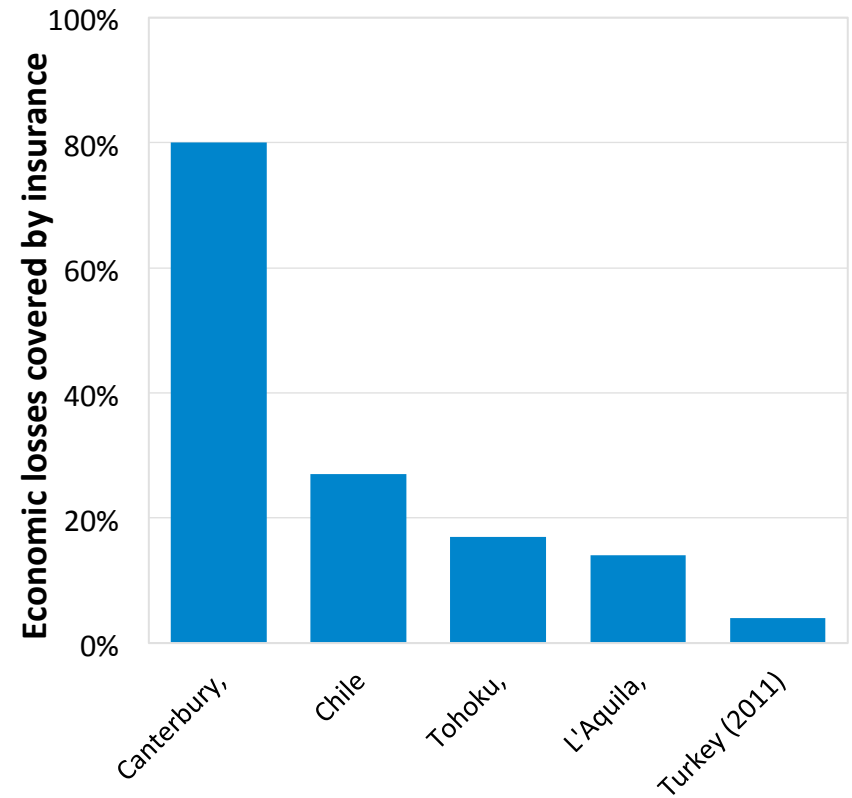
- ordered where neighbouring buildings unsafe.
- demolitions ordered without any referral to insurer or owner to verify impact on policy cover.
- Government's 'land designation zones' led to:
 - compulsory acquisitions and demolition of repairable buildings
 - potential veto of a consent to build after engineering design work completed at considerable cost.
- impact of decisions go beyond owner or insurer- mortgage lender, tenants and businesses dependent on building occupancy. Tenants' fit-out might exceed value of the building!

Building quality

- buildings not up to appropriate structural standards for the seismic demand faced.
 - non-structural seismic restraints poorly installed make buildings uninhabitable, loss of rents, profits, and cost of repairs, relocation costs.



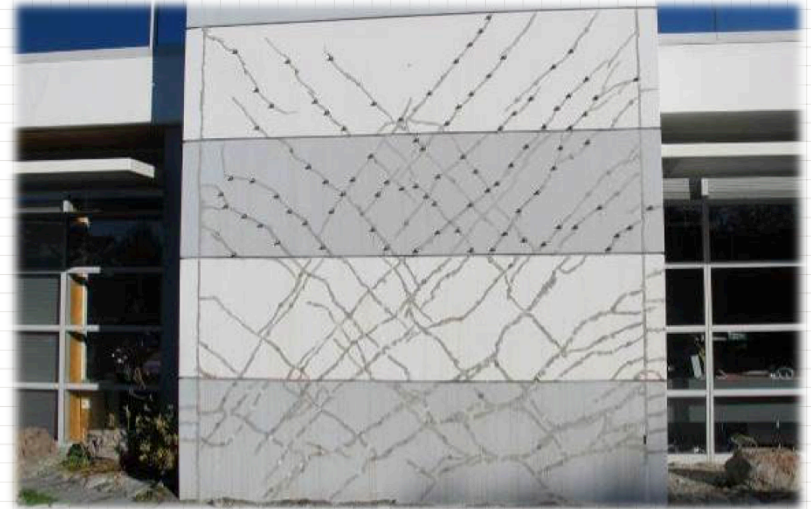
- High insurance penetration
 - *Recovery in hands of insurance/owners*
- Reinstatement policies
 - *“to condition as ...when new”*
- Typically underinsured for reinstatement.
 - *“Uneconomic to repair”*
- Cash settlements
 - *Preferred by owners and insurers*
 - *Faster and more flexible*



(Data source: SwissRe 2012)



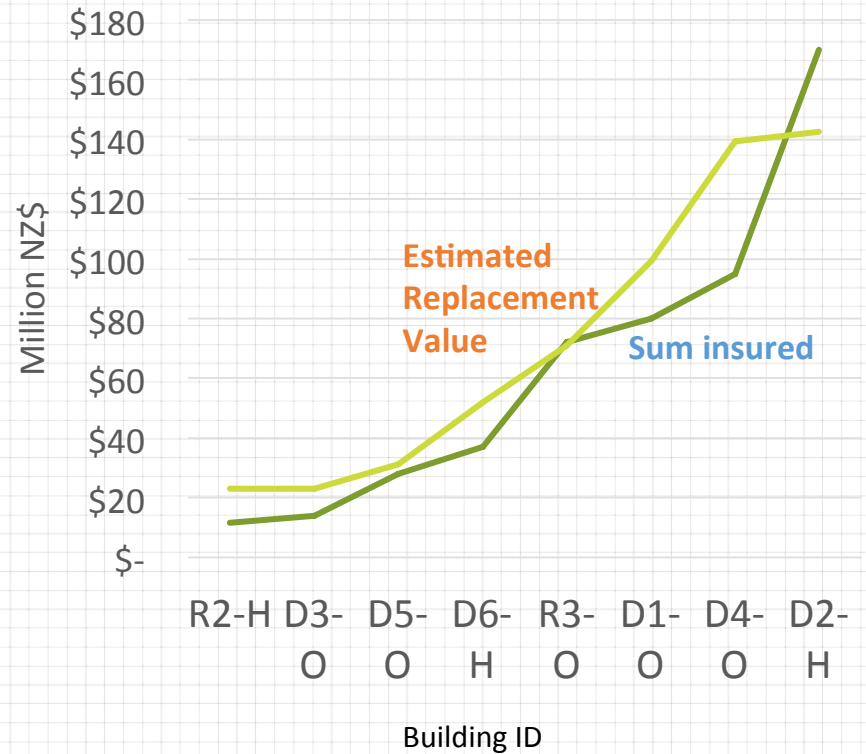
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- **A concrete wall repaired with epoxy, while structurally sound, is it ‘new’ ?**
- **How to address reinforcement experiencing strain hardening?**



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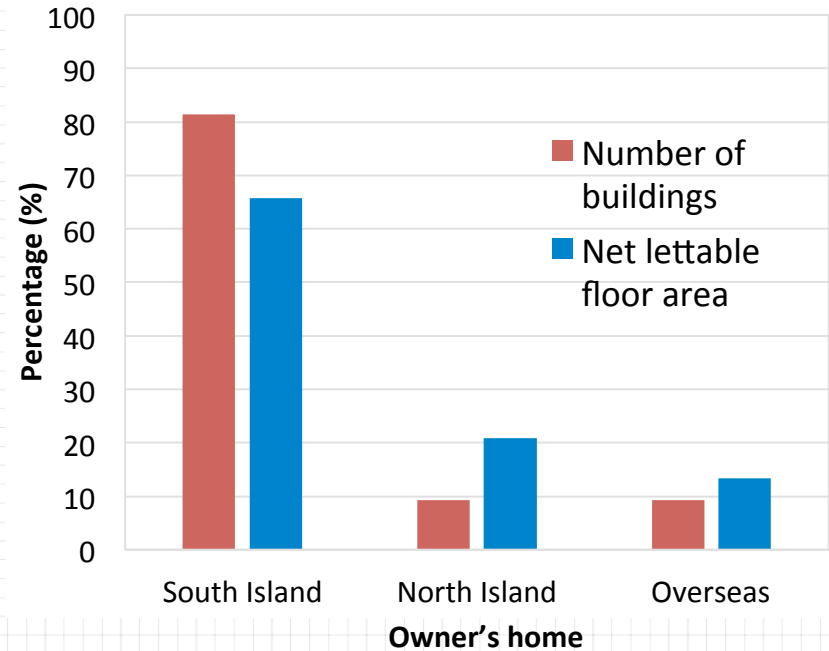
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Owner profile for Christchurch before Feb 2011



(Data source: Ernst and Young 2012)



'RECOVERY' IS NOT ABOUT FIRST RESPONDERS

First days/weeks – temporary, emergency authority focused on:

- saving lives, ensure safety by assessing damage and assessing access to buildings
- protecting property, maintaining order
- temporary restoration of critical utilities

Months/years - recovery requires focus on:

- compulsory acquisition and demolition of property.
- infrastructure repair – 00s of kms of storm, waste and fresh water pipes, over 1.5 million sq m of roads, 00s of bridges/culverts and retaining-walls – **availability of utilities impacts rebuilds and repairs; locating underground damage and loss of gradient were key problems.**
- ensuring sufficient resources are available - **impacts pace of recovery and cost (surge inflation).**
- co-ordination of public housing, health, benefit assistance - **impacts ability to engage with claimants, resolve claims and re-housing so repairs can be carried out.**
- new rules/guidelines for rebuilding plus building consents and inspections - **impacts cost and timing of rebuild.**



SUPPORT THE VULNERABLE

- Establish guidelines (“vulnerability index”) to prioritise claimants and identify needs.
 - age
 - chronic physical or mental health issues in household
 - disability issues
 - young children and other dependents in household
 - financial hardship
- Be flexible around types of vulnerability and open to changing circumstances.
- Use social workers, train some claims managers to manage those with psycho-social issues and triage difficult claims.
- Engage with community organisations who can help explain things to the insured and bridge the trust gap.
- Keep customers updated regularly on claims progress (monthly).
- Use facilitators.



SUPPORT PEOPLE TO NAVIGATE THE CLAIMS PROCESS

Complexity – many people:

- will find the claims process complicated and will have other issues to deal with in their lives.
- will need help to understand their policies, rights and obligations, what comes next and what to ask their insurer.

Loss of trust

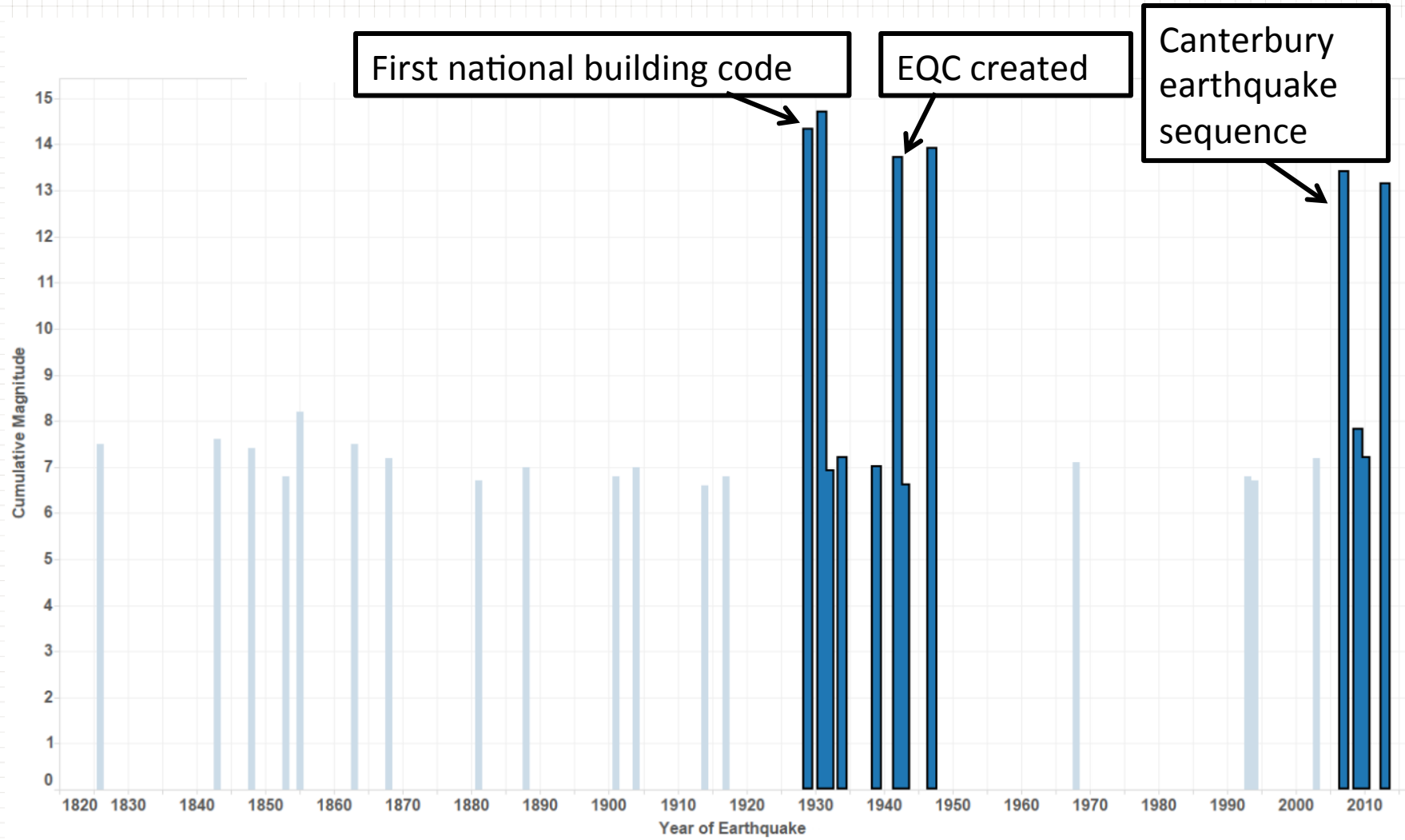
- accept from the outset there will be a loss of trust and confidence in settlement offers due to uneven knowledge, incomplete information and potentially misinformation from claims farmers, self-appointed experts and the media.

Help establish independent advisory service

- establish and fund a trusted, independent, free advisory, not advocacy service.
- include government as a funder and have community represented on governance
- independence critical to avoid welfare stigma or perceived bias.
- staff with technical, legal and facilitation experts, but flexible to 'bolt on' additional services as needed.
- design the service to empower people and support those who need more support.
- let it be driven by the needs of the property owner.
- enable it to reach out to the community.



HOW TO MANAGE THE RISK POSED BY RARE EVENTS?



TALKING POINTS FOR LONG-TERM PLANNING

Scenario test what may happen over a 5-10 year recovery period

- Plan well beyond the first weeks, identify the range of challenges to understand what may need to be coordinated, what needs to be co-ordinated and what legislative powers may be needed to do the job.
- How will Federal, provincial, and municipal responsibilities be harmonised and coordinated with the private sector and citizens?
- System may produce surprising outcomes or reveal incompatibilities in data sharing tools and operational or policy requirements
- Understand how each organisation will scale up resources to respond and how they may need support to do that.
- Review and refresh every 3-5 years.



RISK PERCEPTIONS

PRE EVENT



- It won't happen
- It won't affect me
- It won't be bad
- There's nothing I can do...

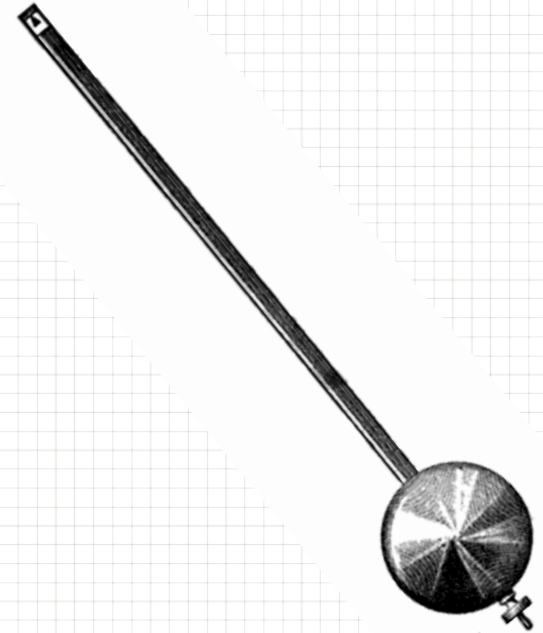
So why are you worrying me with this?



RISK PERCEPTIONS

AFTER

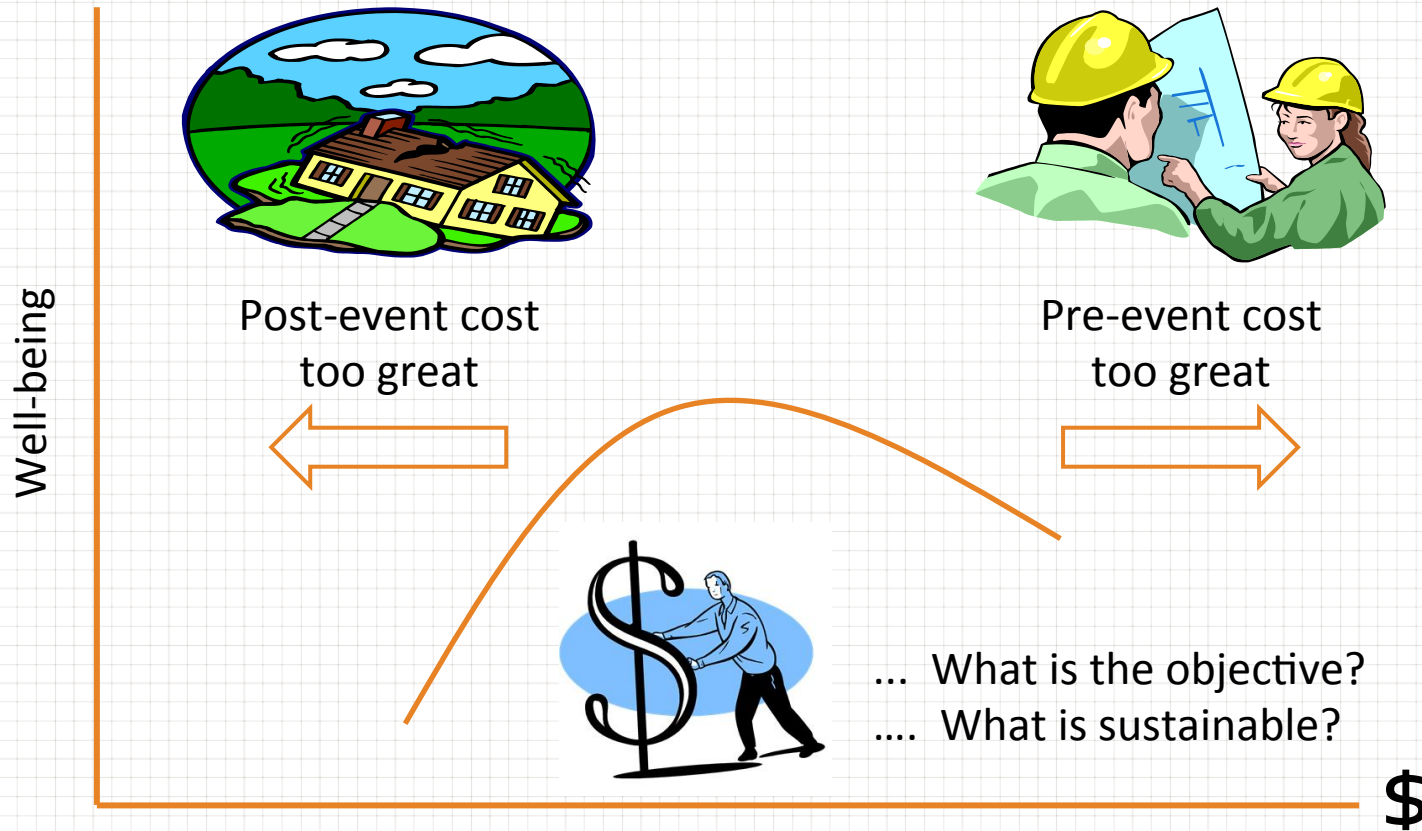
- Psychological scarring
- Over-estimation of repeat disaster
- Risk appetite switches – from high to low
- Risk over-priced



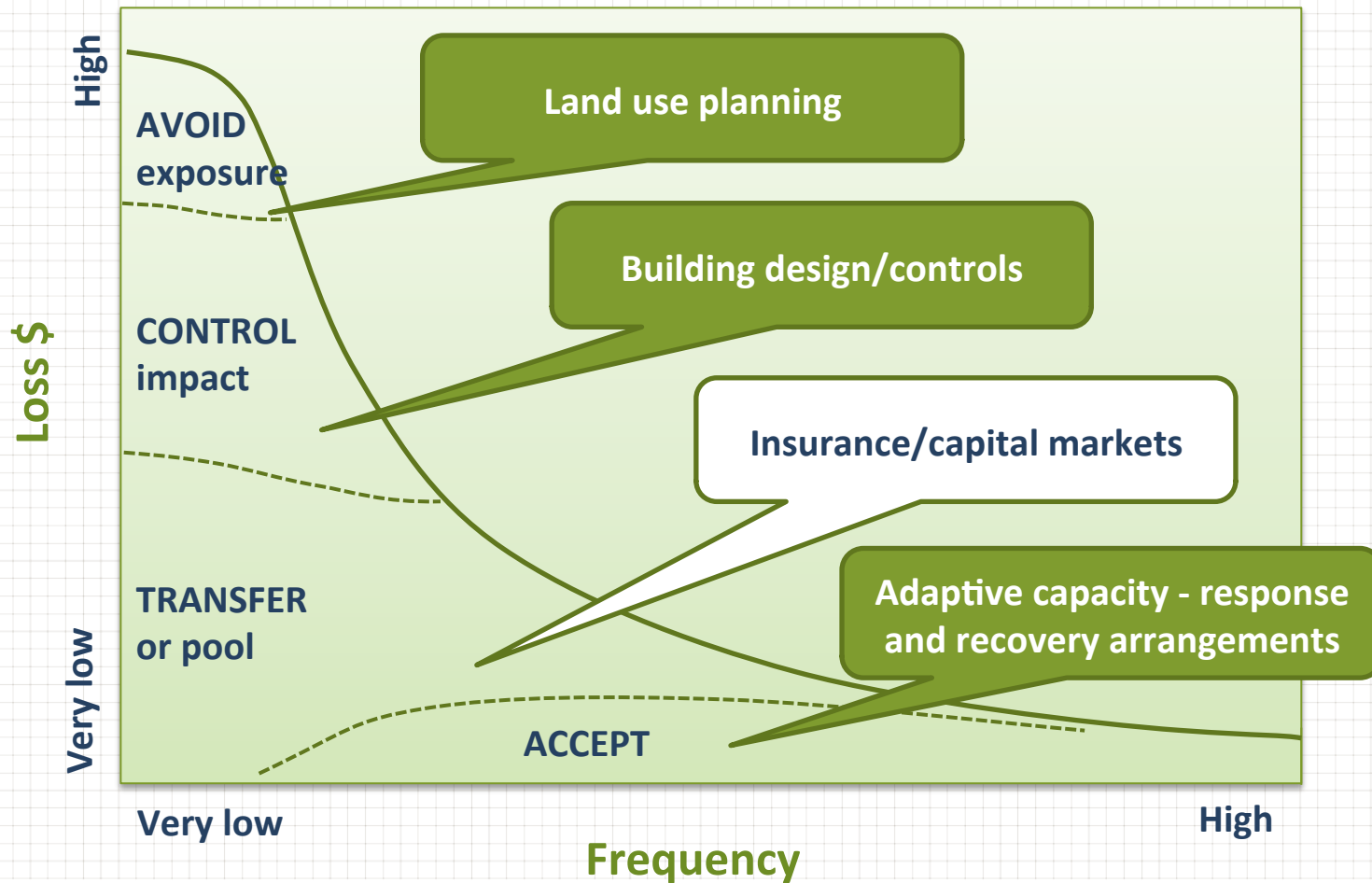
How could this be allowed to happen?



WHEN WOULD YOU LIKE TO PAY?

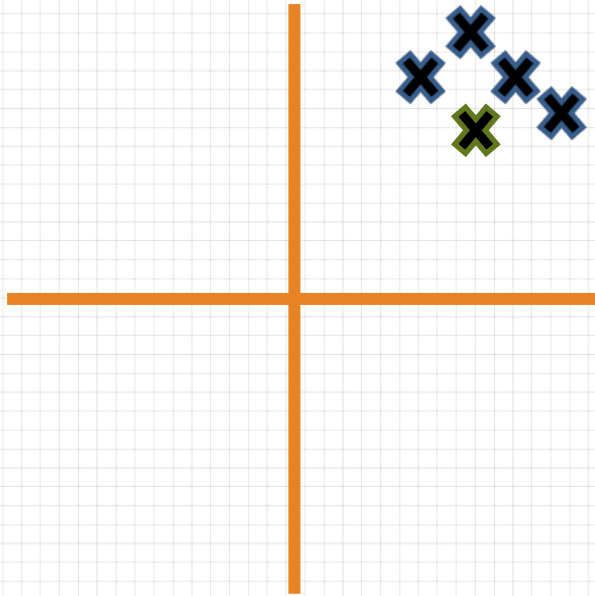


A MORE HOLISTIC VIEW OF RISK

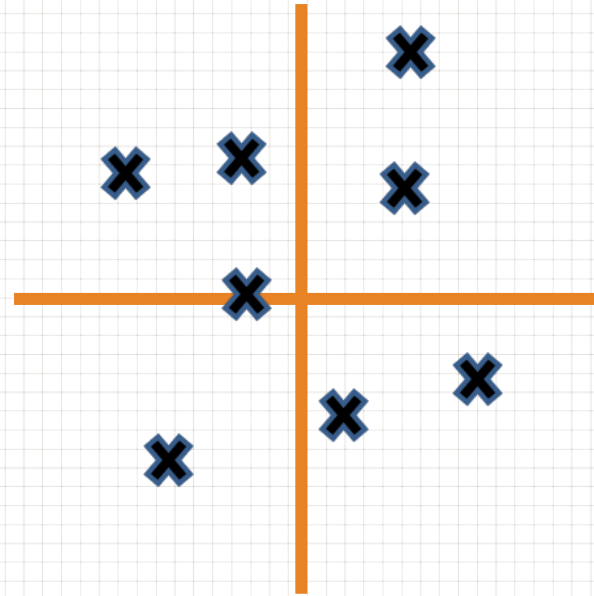


ROUGHLY RIGHT? OR PRECISELY WRONG?

“Narrow Perspective”



Diverse Perspectives



THANK YOU



www.eqc.govt.nz



www.icnz.org.nz

