

2014 National Lifelines Forum

SCIRT

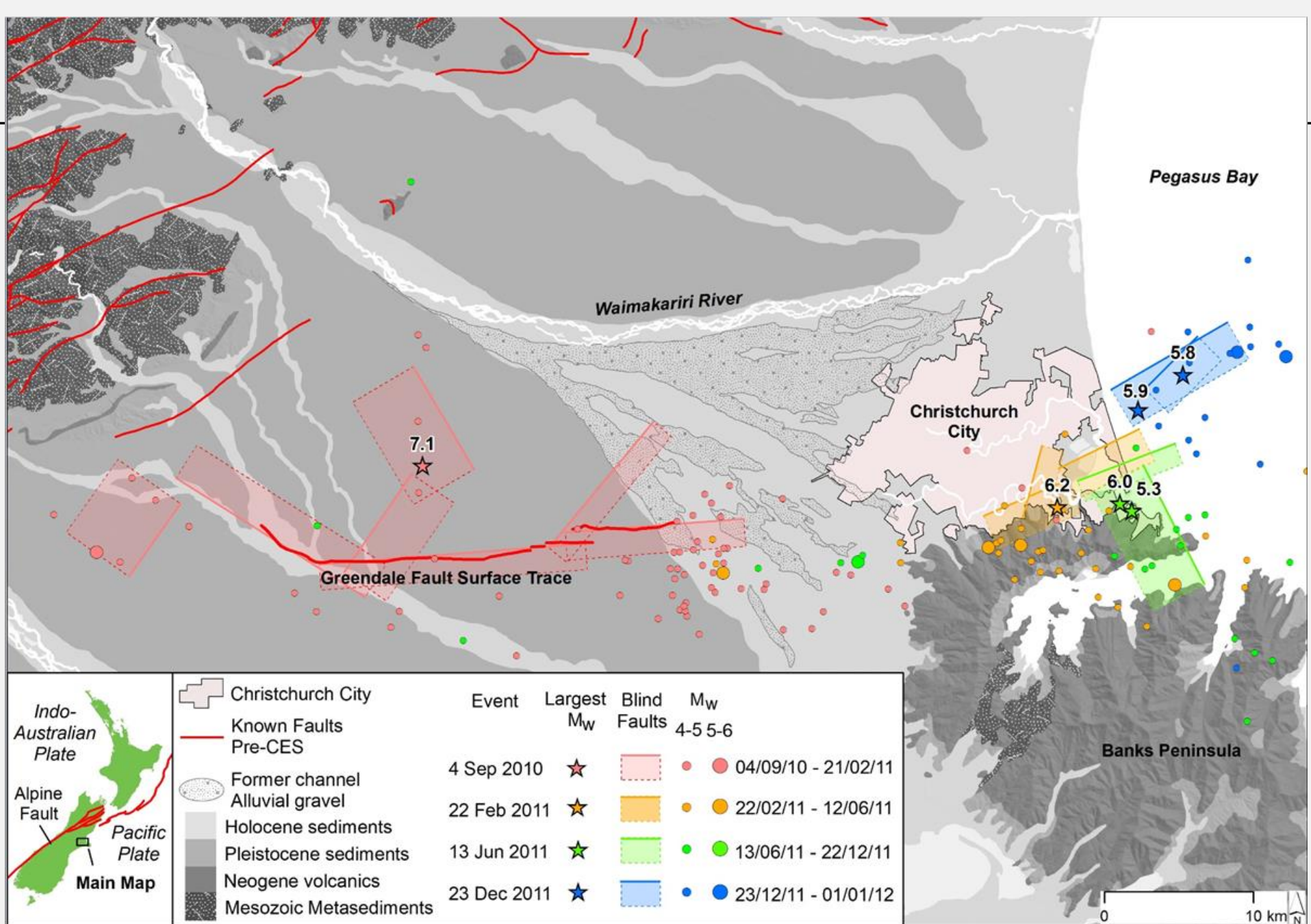
'Update and Learnings'

6 November 2014

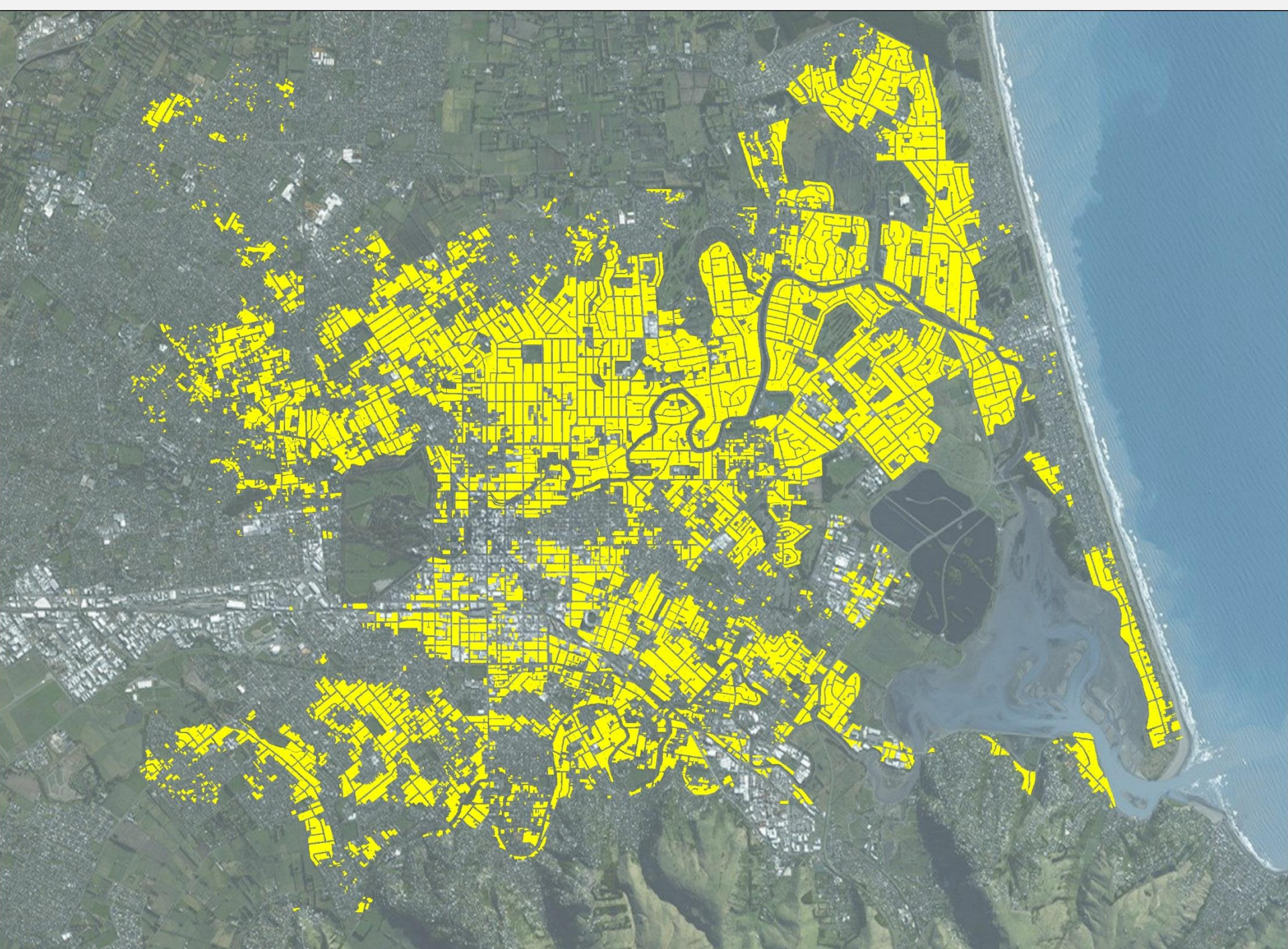


New Zealand Government





Hughes et al. (2015). The sinking city: Earthquakes increase flood hazard in Christchurch, New Zealand. *GSA Today*, March 2015.



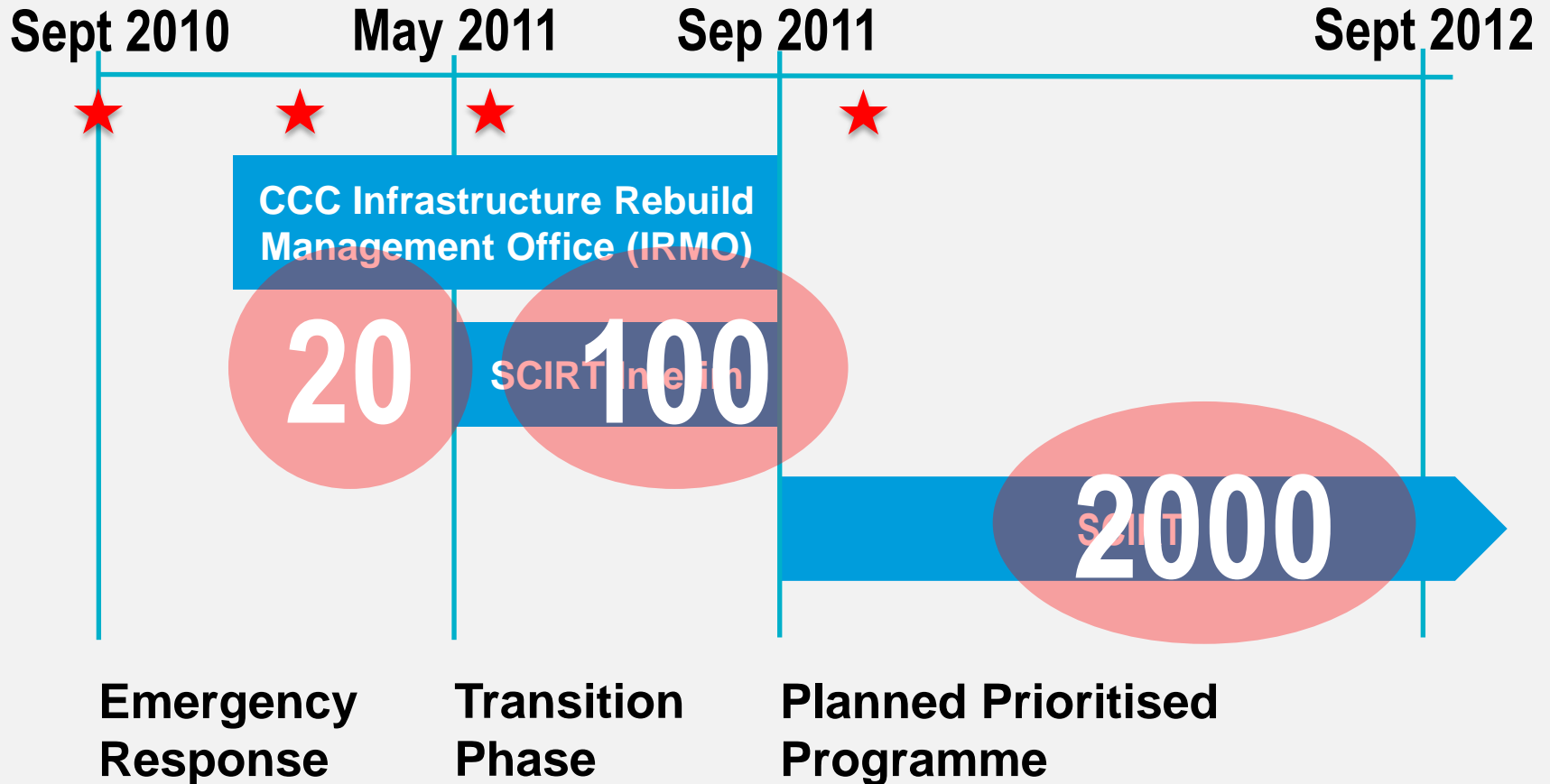
Damage

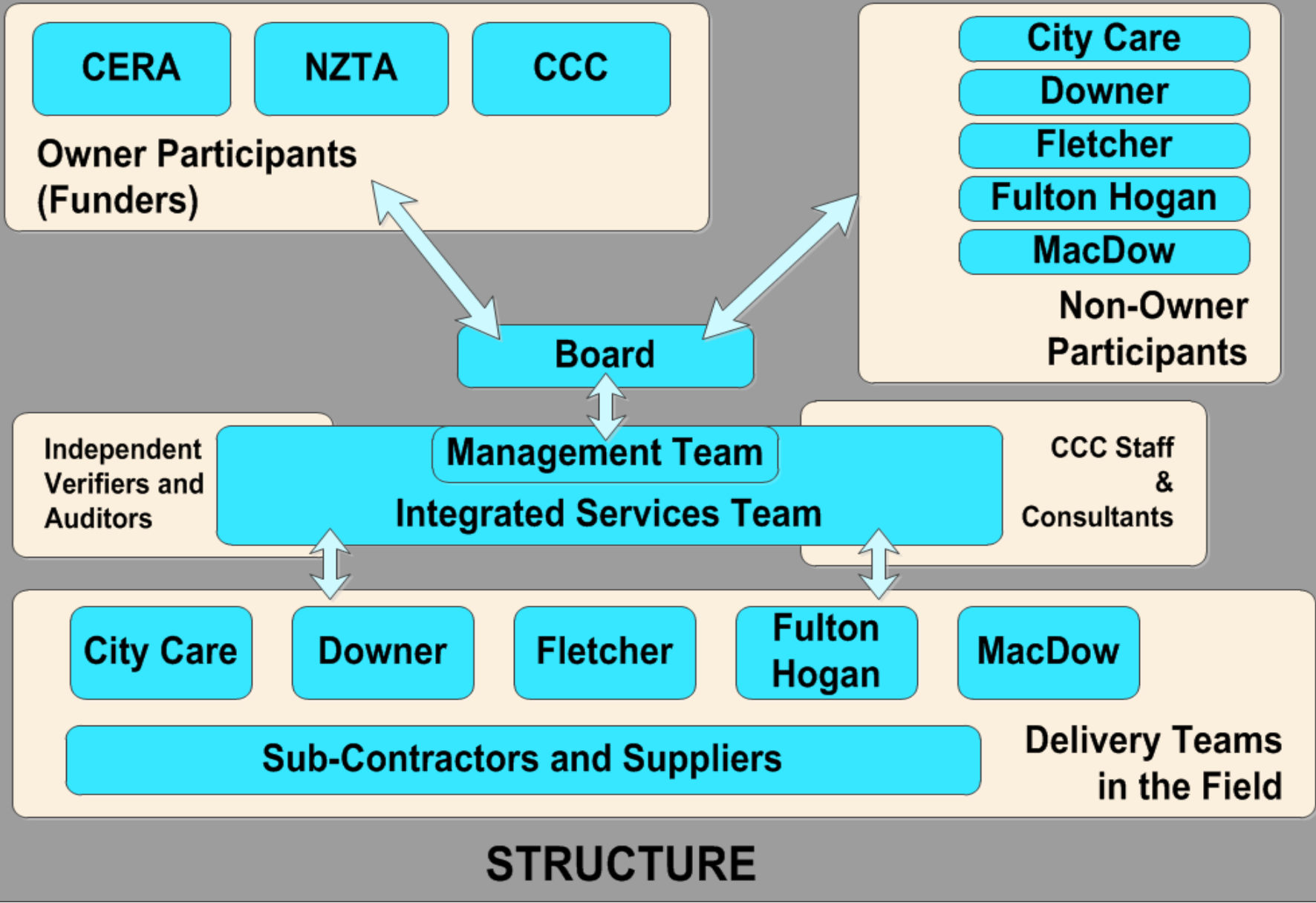


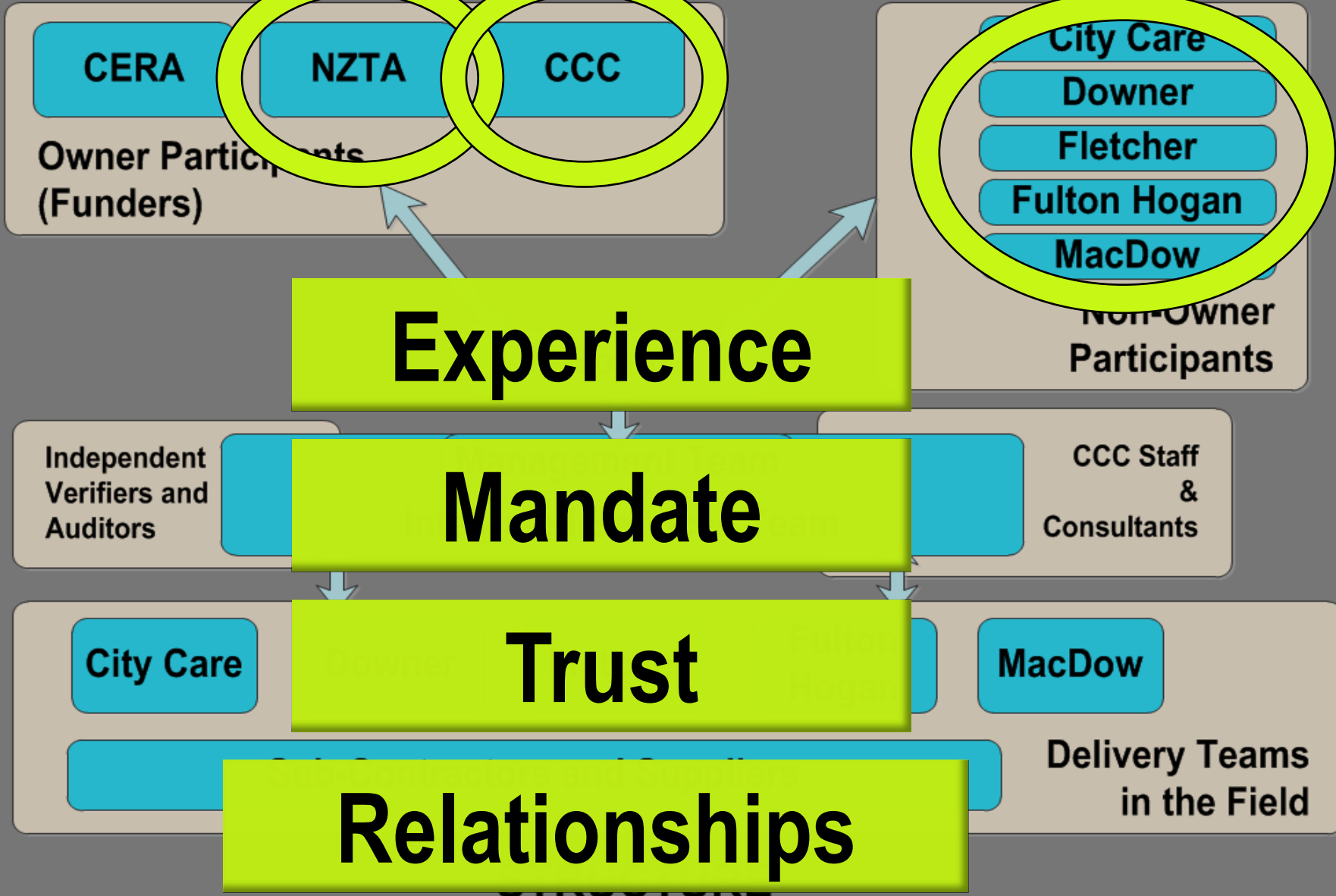
CHALLENGES – Getting Started

- Huge scale – biggest in NZ history
- Damage and scope unknown
- Urgent establishment
- Fast ramp up of throughput
- Delivering Value

Time Frames







**Fundamentals:
Multi-party
Public - Private
Collaborative
Relationship Agreement**

STRUCTURE

Client Objectives:

Lift industry – Safety and Performance

Demonstrate Value

Community Engagement

Asset Condition Aspects

Market Stability

CERA

NZTA

CCC

City Care

Downer

The Money:

Administration Allowances

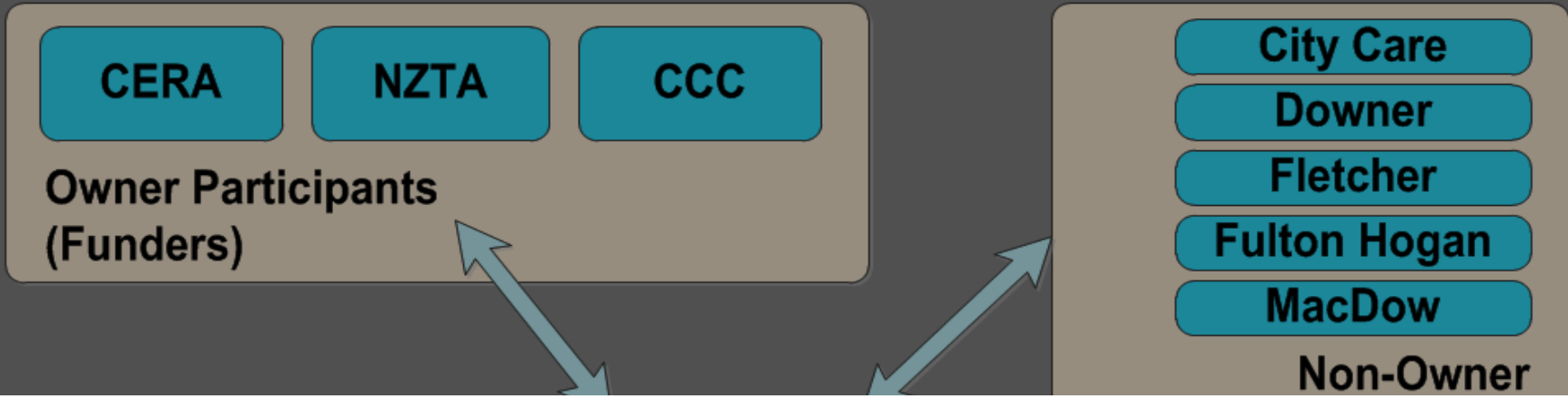
Costs Reimbursable

Projects Awarded on Results

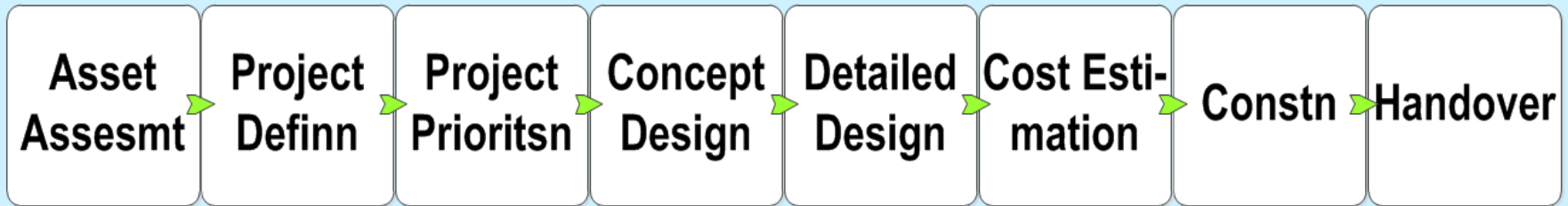
Margin on \sum Project Budgets

Pain/Gain on Actual Cost

STRUCTURE



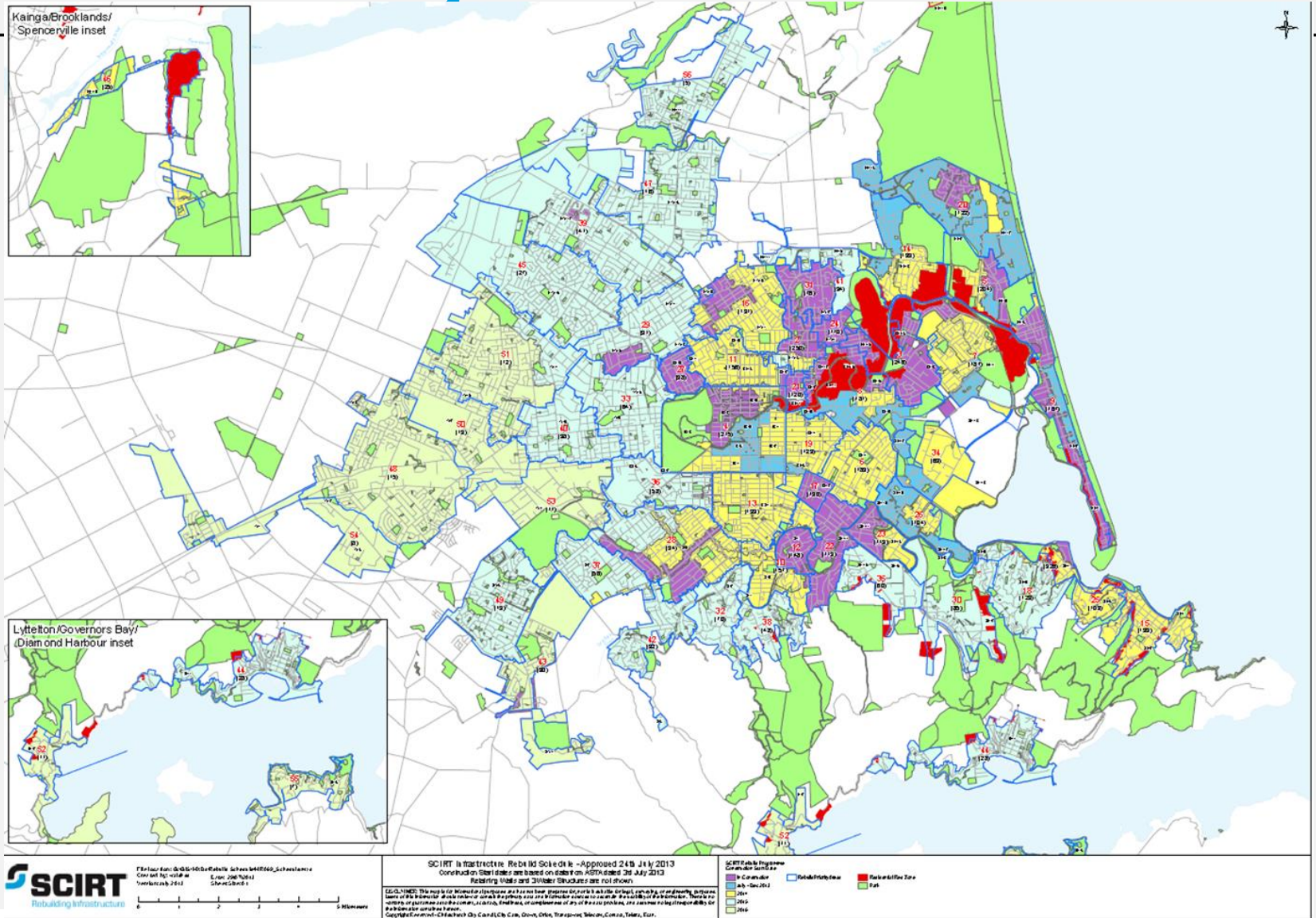
The SCIRT Production Line



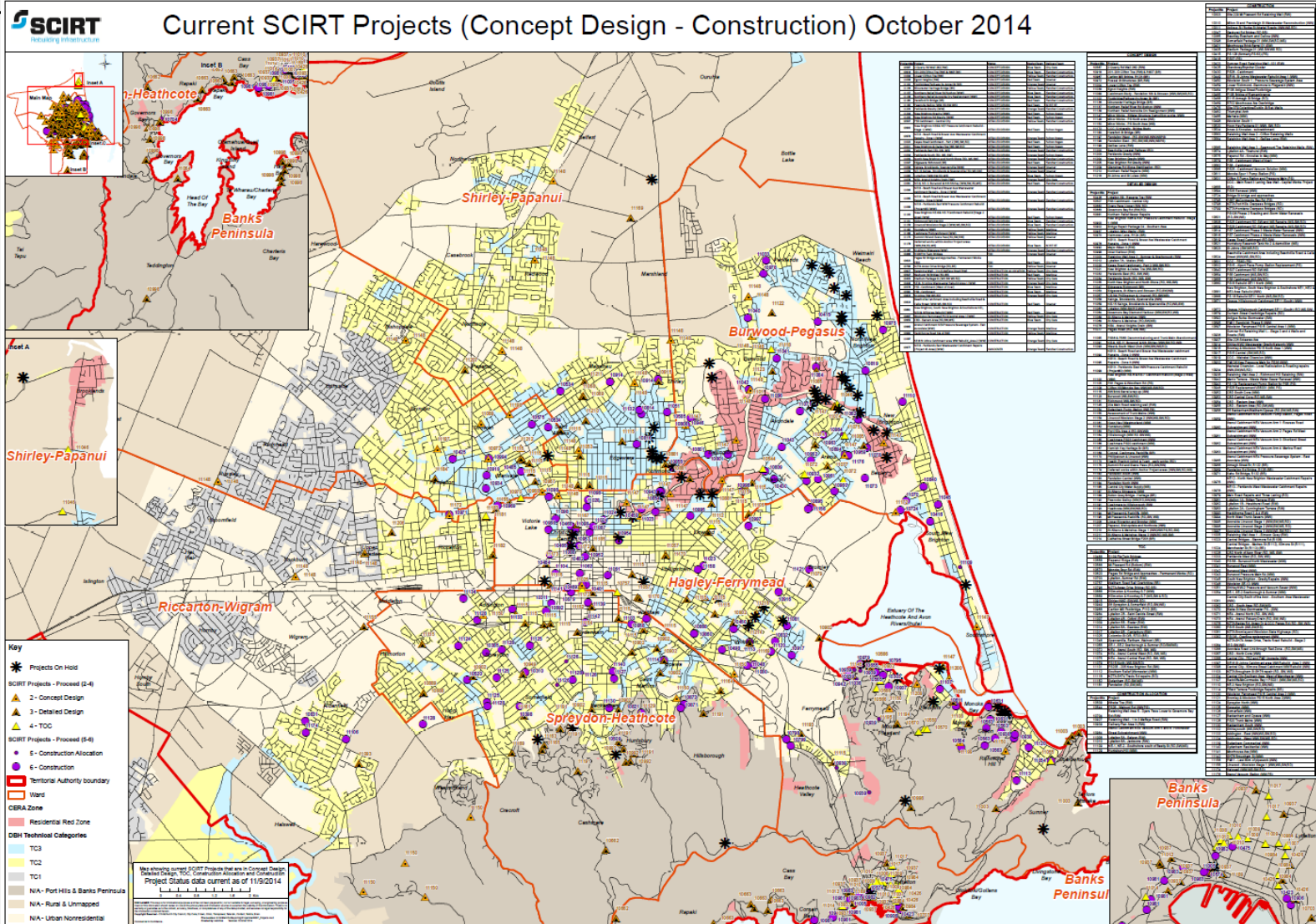
Delivery Teams in the Field

STRUCTURE

Status - Project Schedule

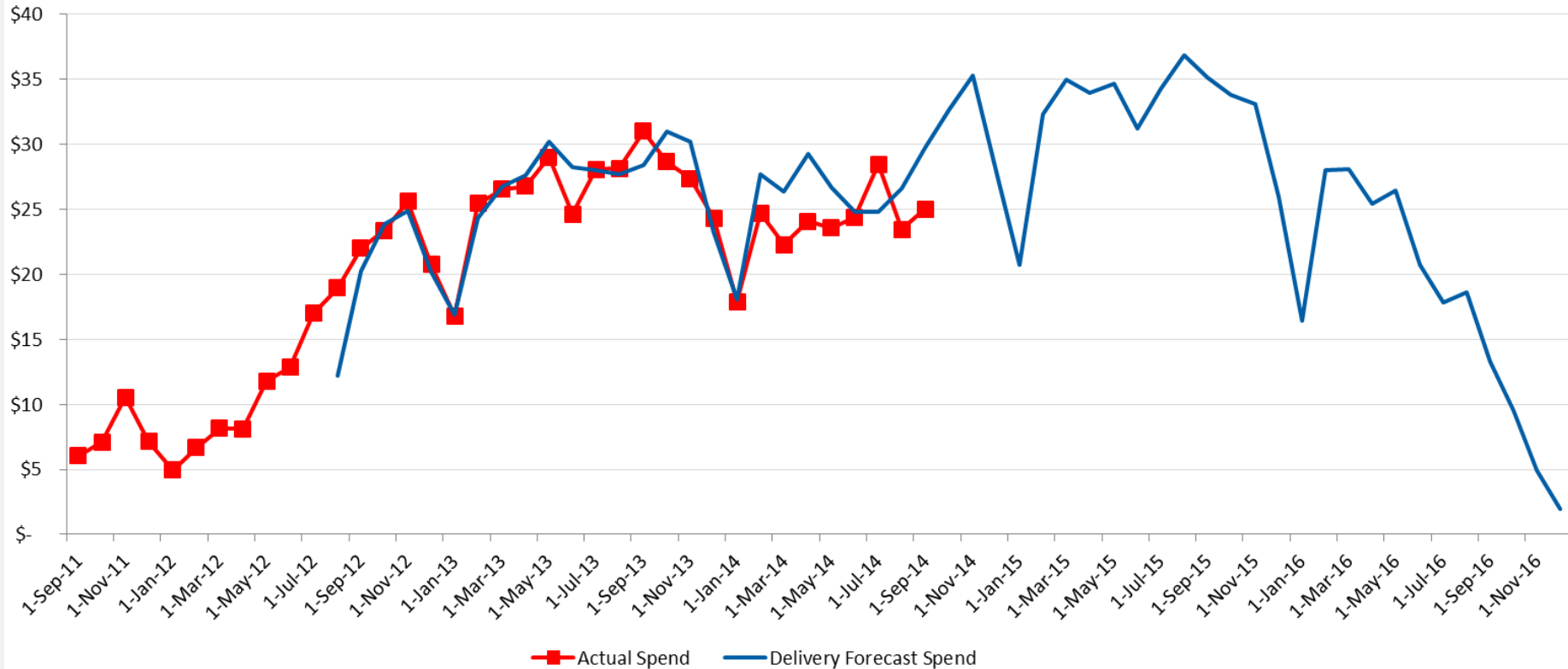


Current Projects

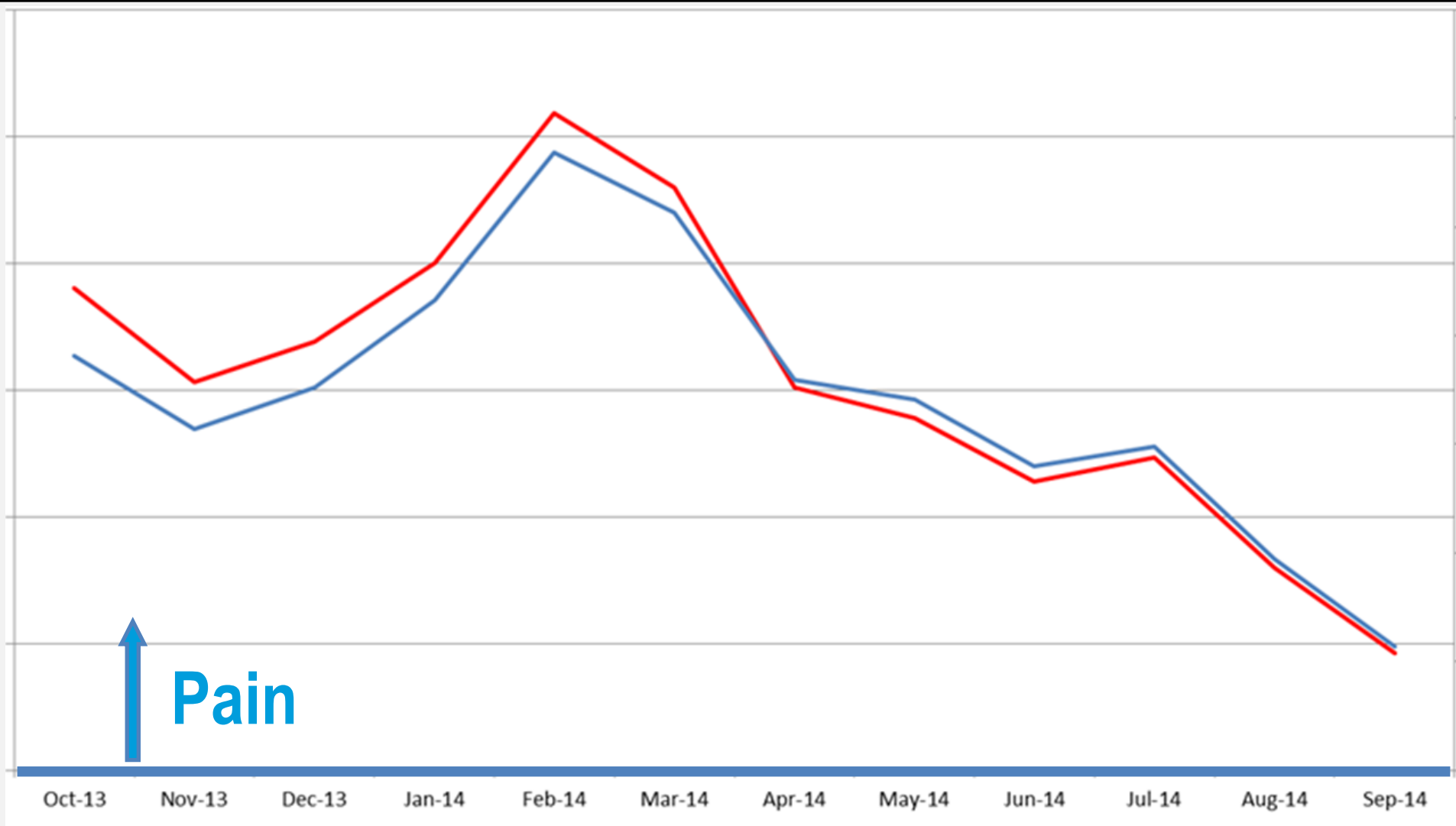


Status of Construction Spend

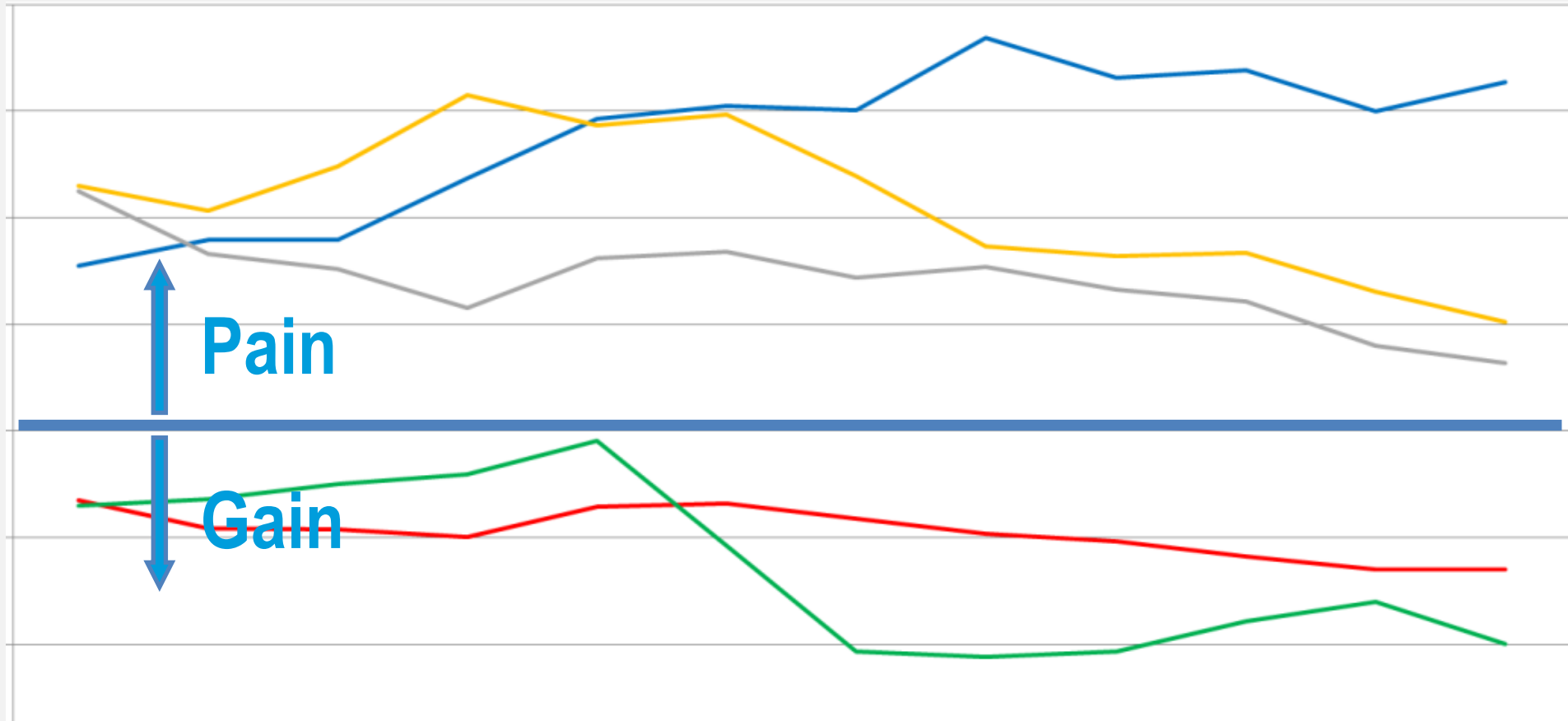
SCIRT Programme Only (excludes CCC BAU projects)



Pain / Gain in Total



Pain / Gain by Delivery Team



Key Performance Indicators

Key Result Areas

- **Safety – awareness, actions and utilities**
- **Value – productivity, quality and innovations**
- **Our Team – surveys and training**
- **Customer Satisfaction – surveys and planning**
- **Environment – culture, innovations, non-conformances and auditing**

CERA

NZTA

CCC

City Care

Downer

OV
(F) **\$ Summary:**

Cost Achieved > \sum Budgets

Pain \rightarrow Collaboration

Cost Escalation Contained

Awards range 15% - 25%

Sub-Contractors and Suppliers

**Delivery Teams
in the Field**

STRUCTURE

Earned Value Analysis

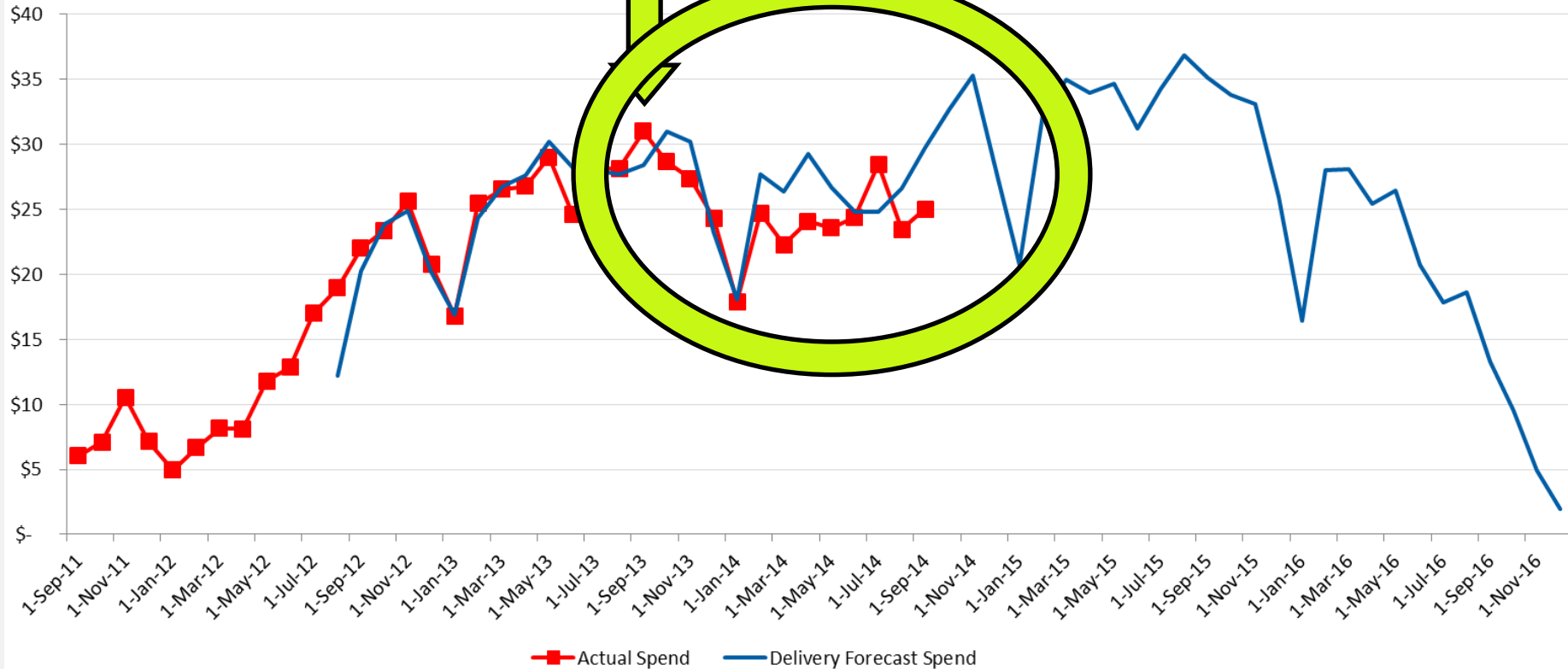
- Individual projects
- Independent valuations – time, costs, forecasts time and cost
- Factual view
- Summed for whole programme
- International review - confirmation

Handover

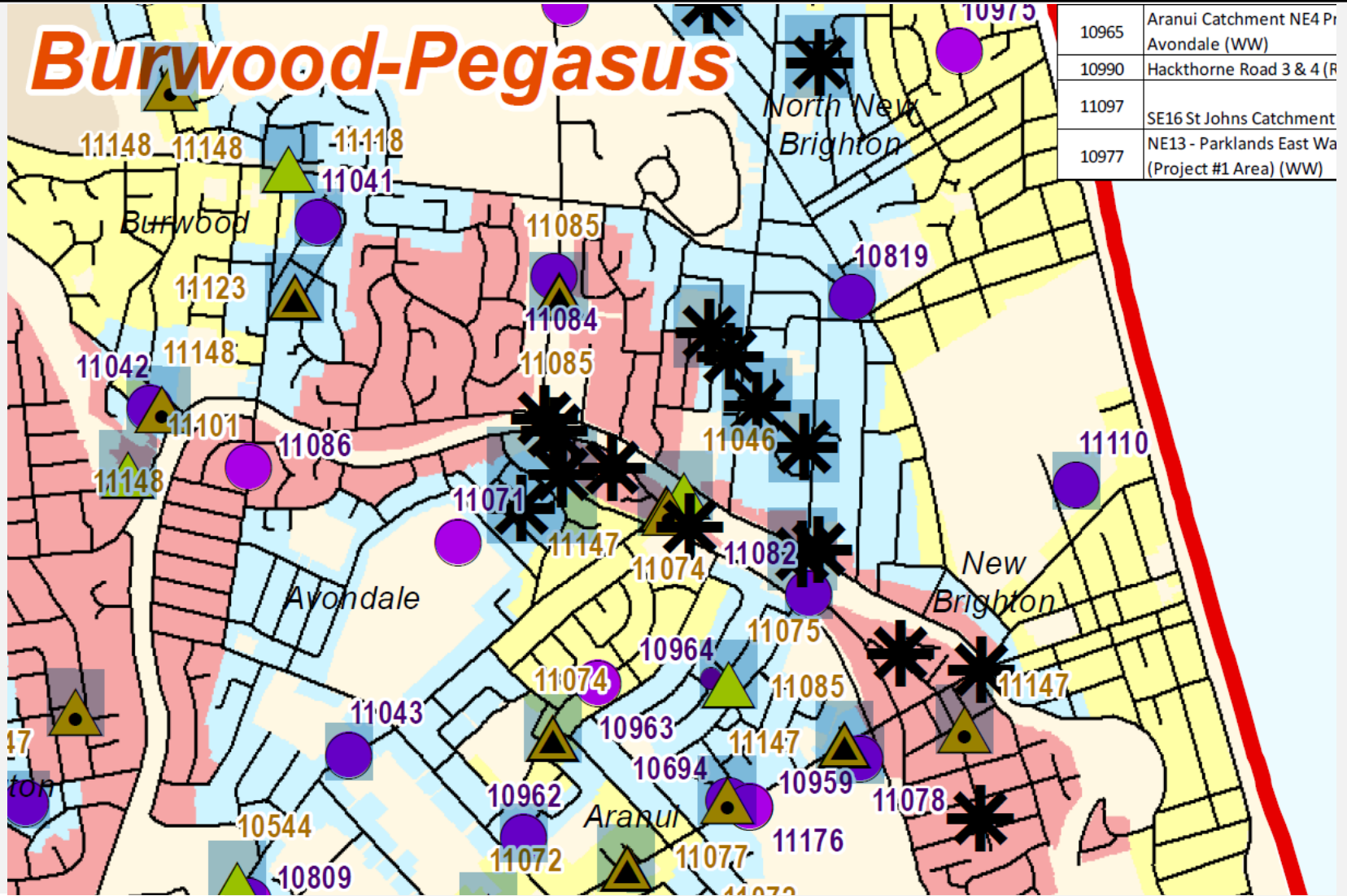
- A challenge
- Small projects
- Asset data – physical and cost
- Parallel streams
- Production line - backward loops
- Cost verification

Status of Construction Spend

SCIRT Programme only (excludes CCC BAU projects)



Projects on Hold



Impacts of Projects on Hold

- Production Line
- Logistical sequencing
- Resources balancing
- Uncertainty
- Loss of sub-contractors

Causes

- **Pressure Waste Water**
- **Residential Red Zone**
- **Money**

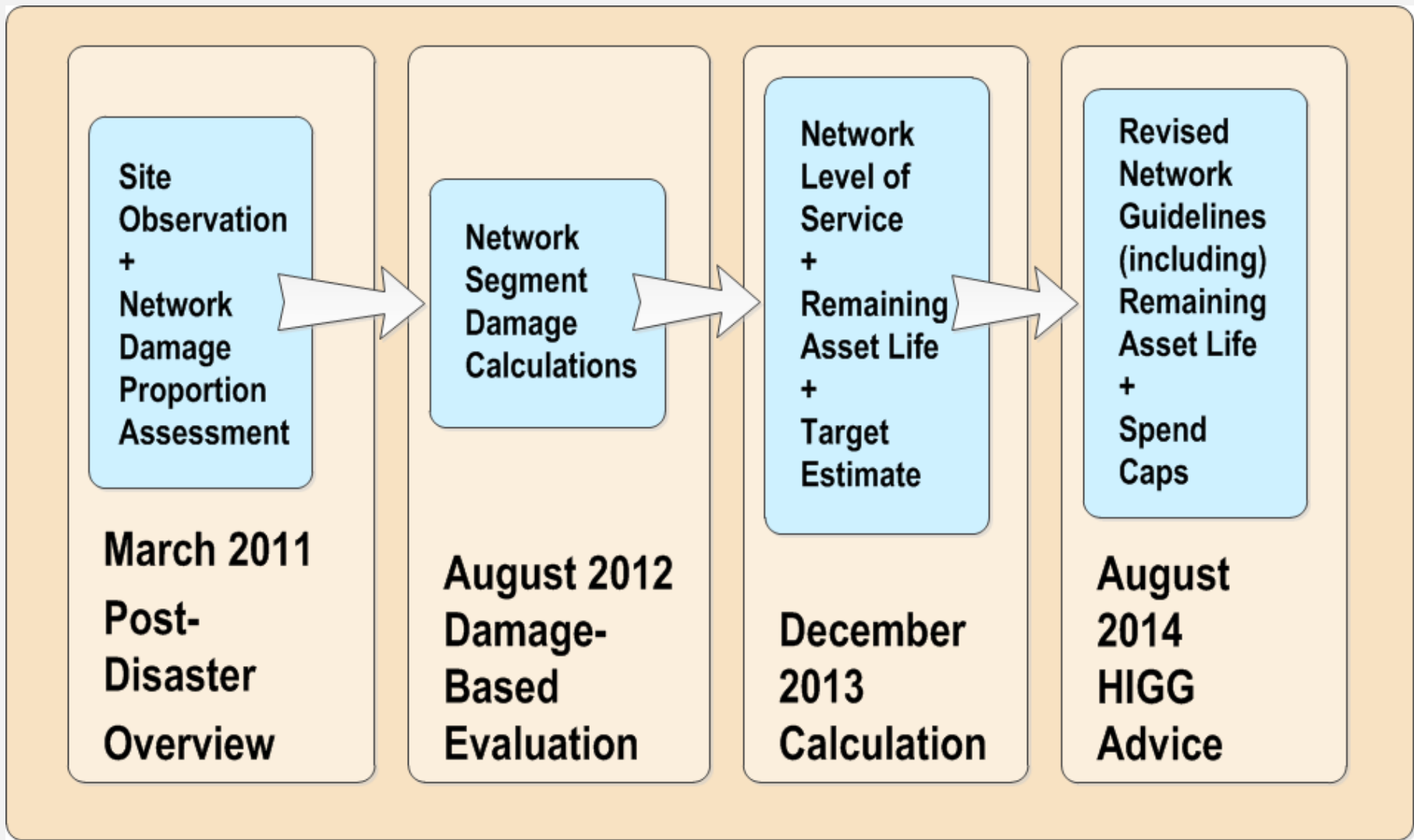
Cost Share Agreement

$$\text{\$A} + \text{\$B} < \text{\$X} + \text{\$Y}$$

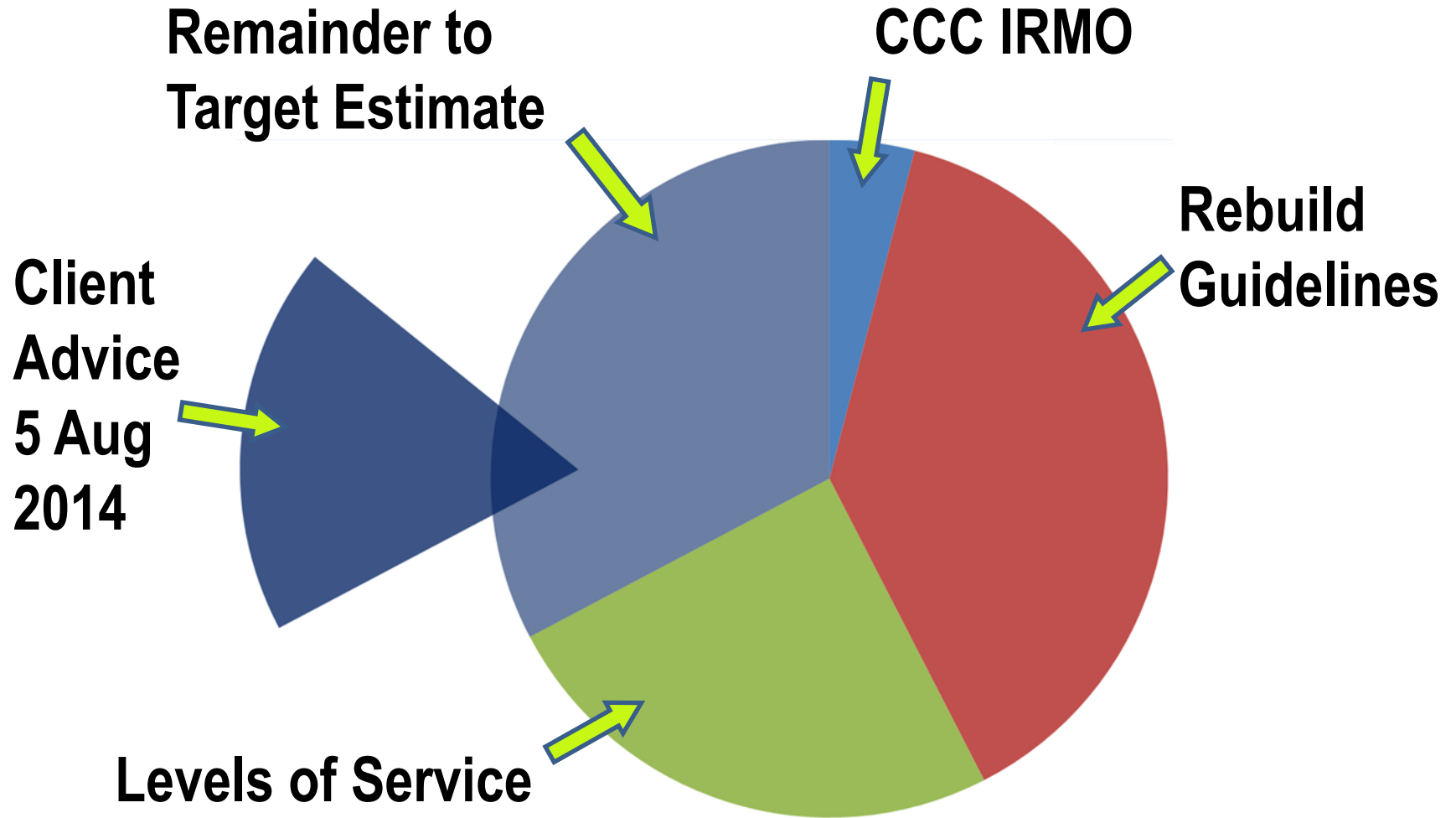
Client Actions

- **Optimisation Study**
- **Advice of 5 August 2014**
 - **General situation + uncertainties**
 - **Spending Caps**
 - **Amended Guidelines**
 - **Review and approval process**

Evolution of Scope



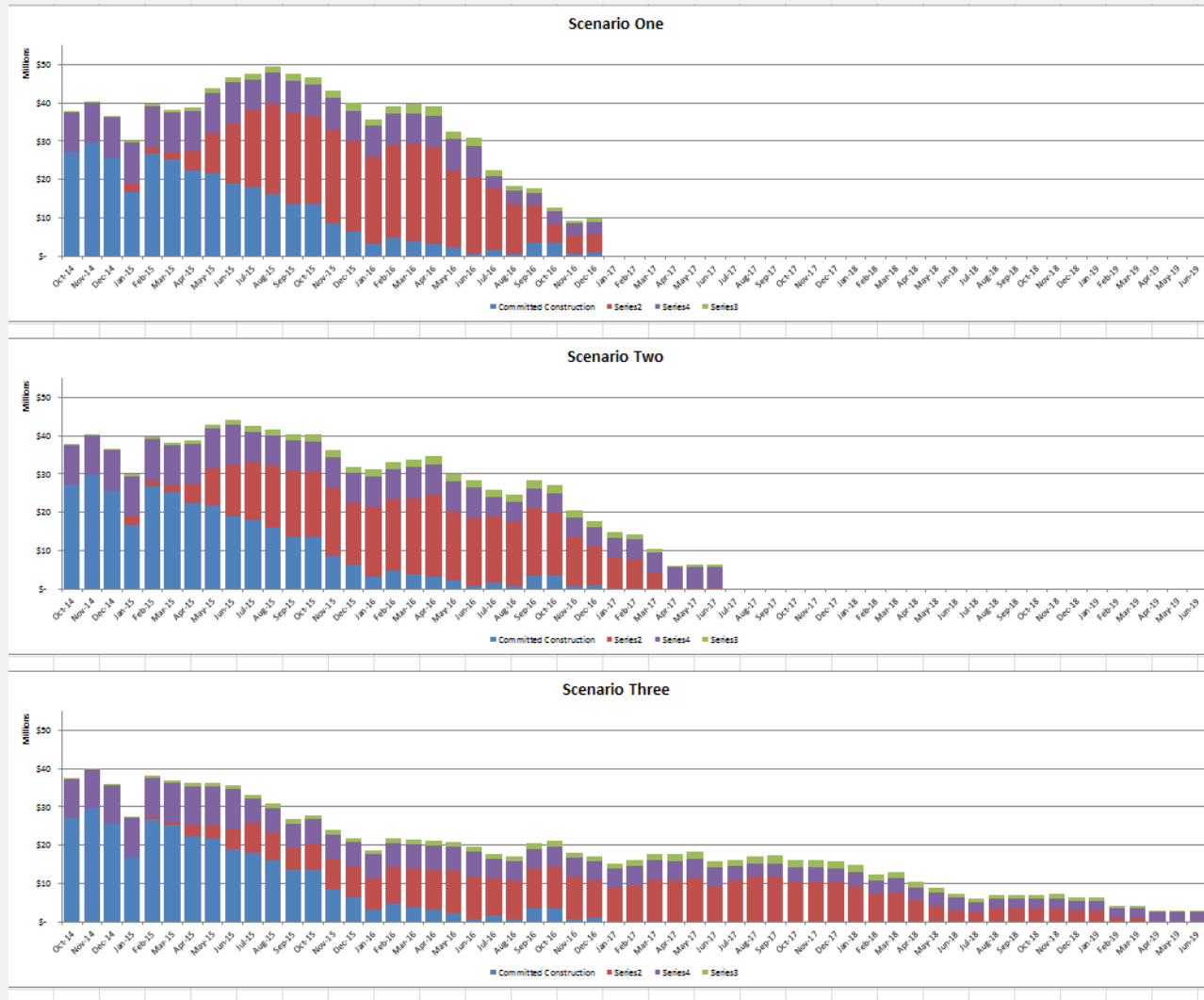
Scope



SCIRT Response

- Programme Review
- Modify reporting

Programme Review - Options



Parallel Client Review

- **Budget Creation Process**
- **Rates allowances**
- **External Consultants**
- **Major importance**

Client Review - Findings

- **Budgets – industry best practice**
- **Rates – entirely appropriate**
- **All round confidence in project budgets set**

External Recognition

- **Community surveys - ✓✓**
- **International interest**
- **Awards – local, national, international**
- **ICE – Brunel Medal**

Brunel International Lecture

Collectively we are stronger

Engineers generating collaborative solutions to strengthen community resilience post-disaster

Presented by

Duncan Gibb BE FICE FIPENZ

Executive General Manager, SCIRT



Brunel International Lecture

Collaboration

**Commercial
agreement**

**Planned
transition**

Structure

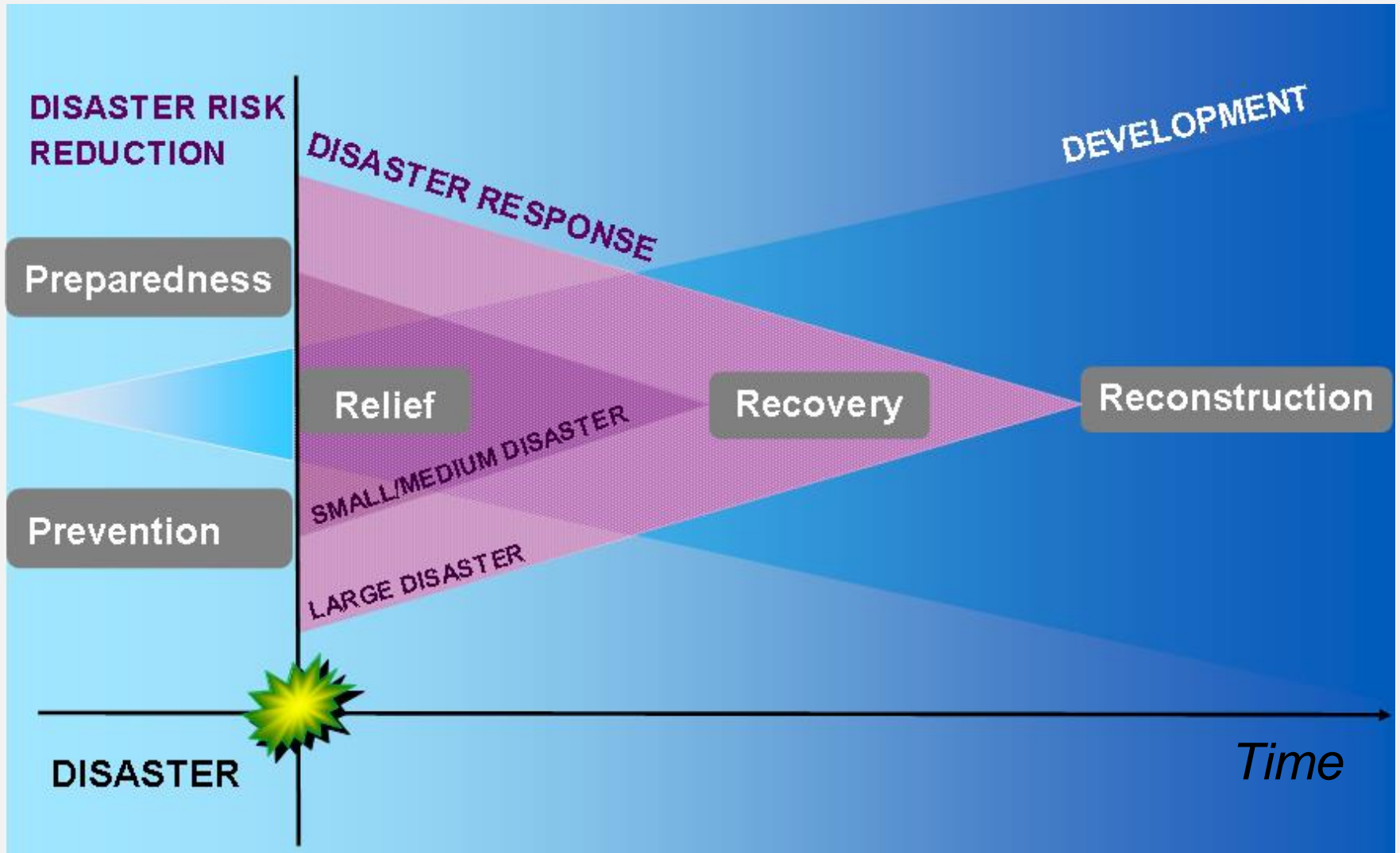
**Programme
management**

**Intentional
development**

Recovery



Disaster Management Pattern



Transpose Learnings

**Model
documentation**

Implementation plan

**Systems and
procedures**

Culture

Leadership

Governance



Learning Legacy

Key Learnings

- Overview of rebuild in context
- Business systems
- Tools
- Innovations
- Academic studies
- Framework for action

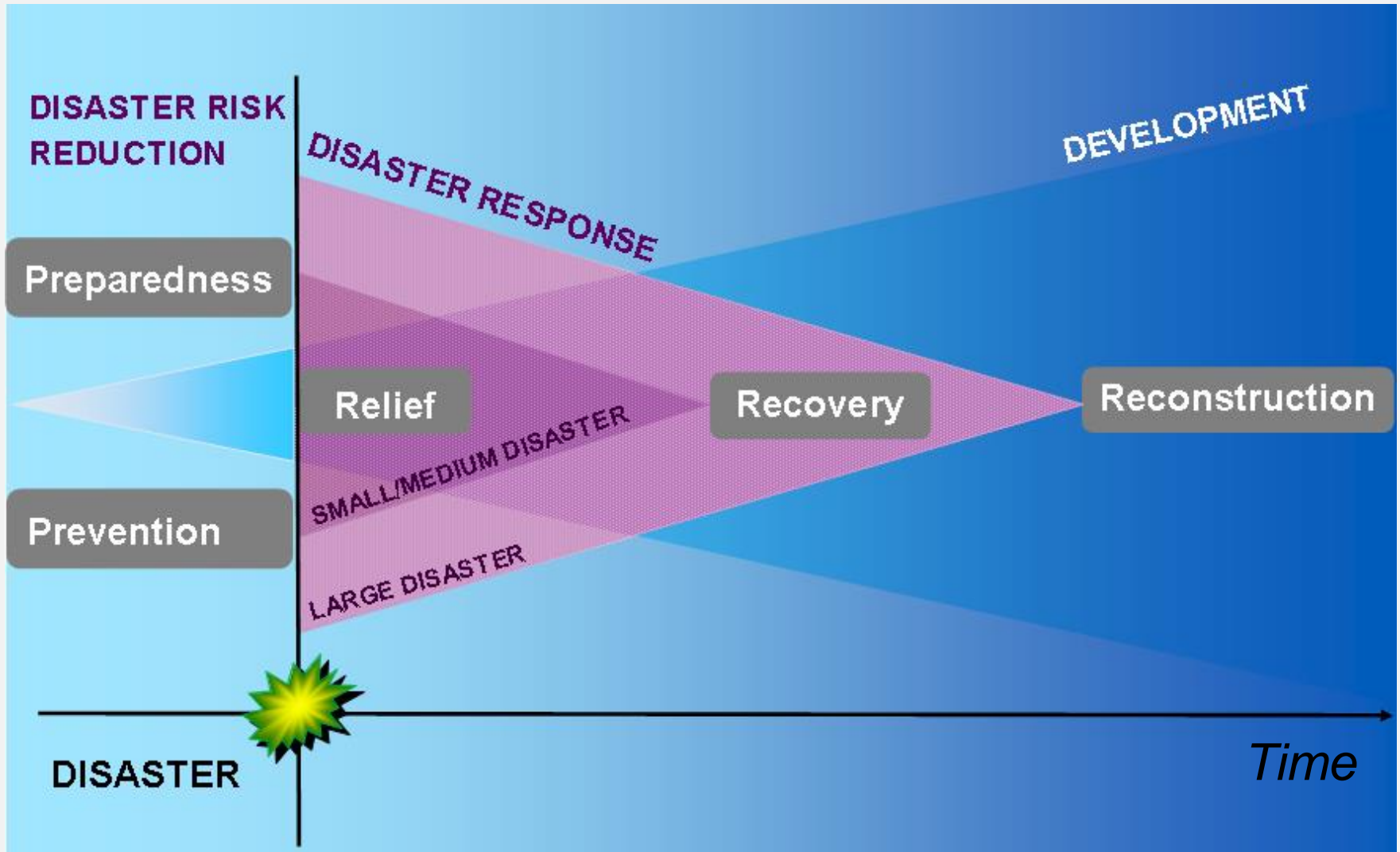
Learning Legacy Process

- Capture
- Formats
- Quake Centre role
- CEISMIC – Quake Studies
- Web

Learning Legacy Overview

- **Process - ✓✓**
- **200 articles / items**
- **Challenges – time, commitment**
- **Audience analysis**
- **Growing interest from others**
- **Why not combine?**

Why Capture Learnings?



2014 National Lifelines Forum

SCIRT

'Update and Learnings'

Questions ?



New Zealand Government

