



**Shake Intensity**

|        |             |        |         |
|--------|-------------|--------|---------|
|        |             |        |         |
| strong | very strong | severe | violent |



- 185 fatalities
- Approx 6,800 injuries, with 220 major trauma injuries





- 620 of the 830 CBD large buildings have been or will be demolished
- “Four avenues” cordoned off soon after the event and remains largely so today
- Heritage Buildings: over 1000, dating back to 1860.
- Approx half are destroyed or beyond repair.



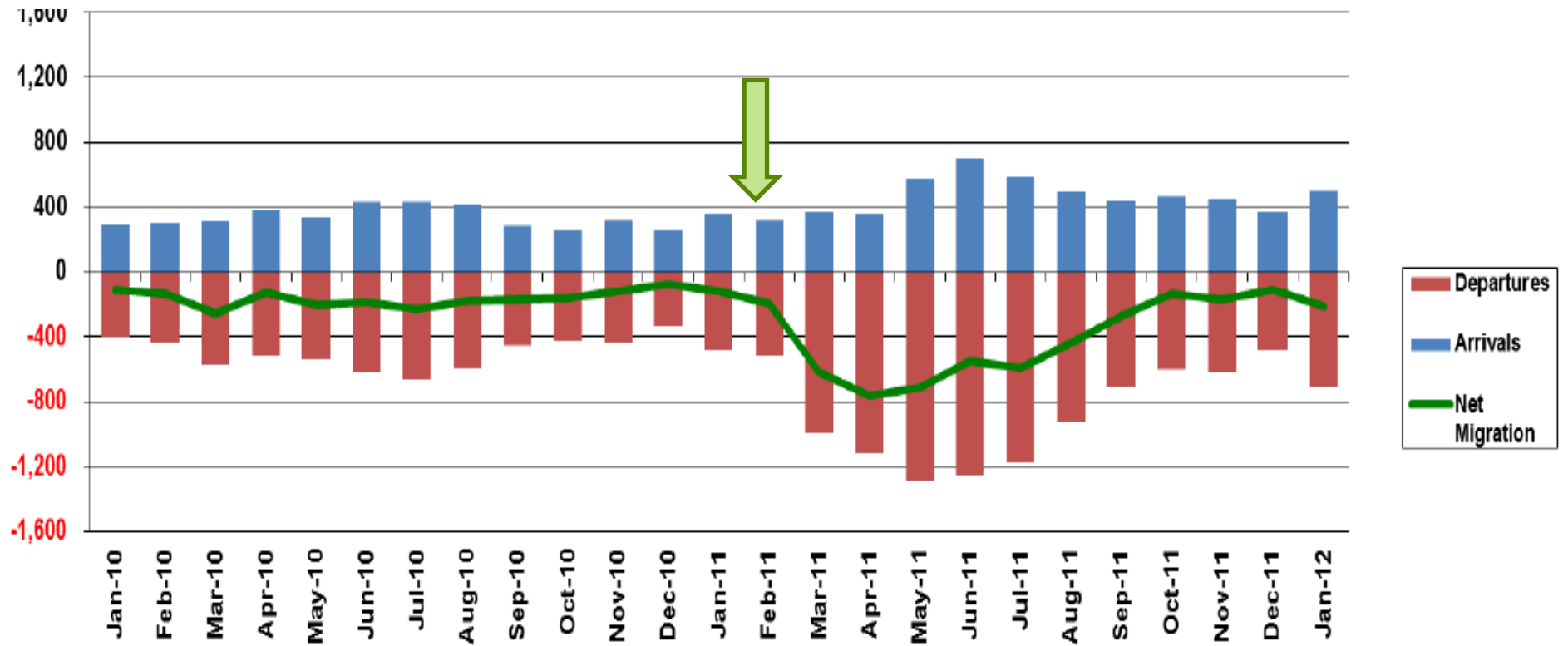
- More than 50,000 individual road surface defects and 600km of roads damaged
- 124 km water mains damaged
- 300km of sewer pipes damaged, 25,000 chemical toilets brought in
- 500,000 tonnes of liquefaction silt



- 16,000 homes declared too dangerous to occupy—representing the homes of 15-20% of the total population of the city
- Numerous schools damaged - 55% of secondary students sharing schools
- Substantial damage to churches and cathedrals

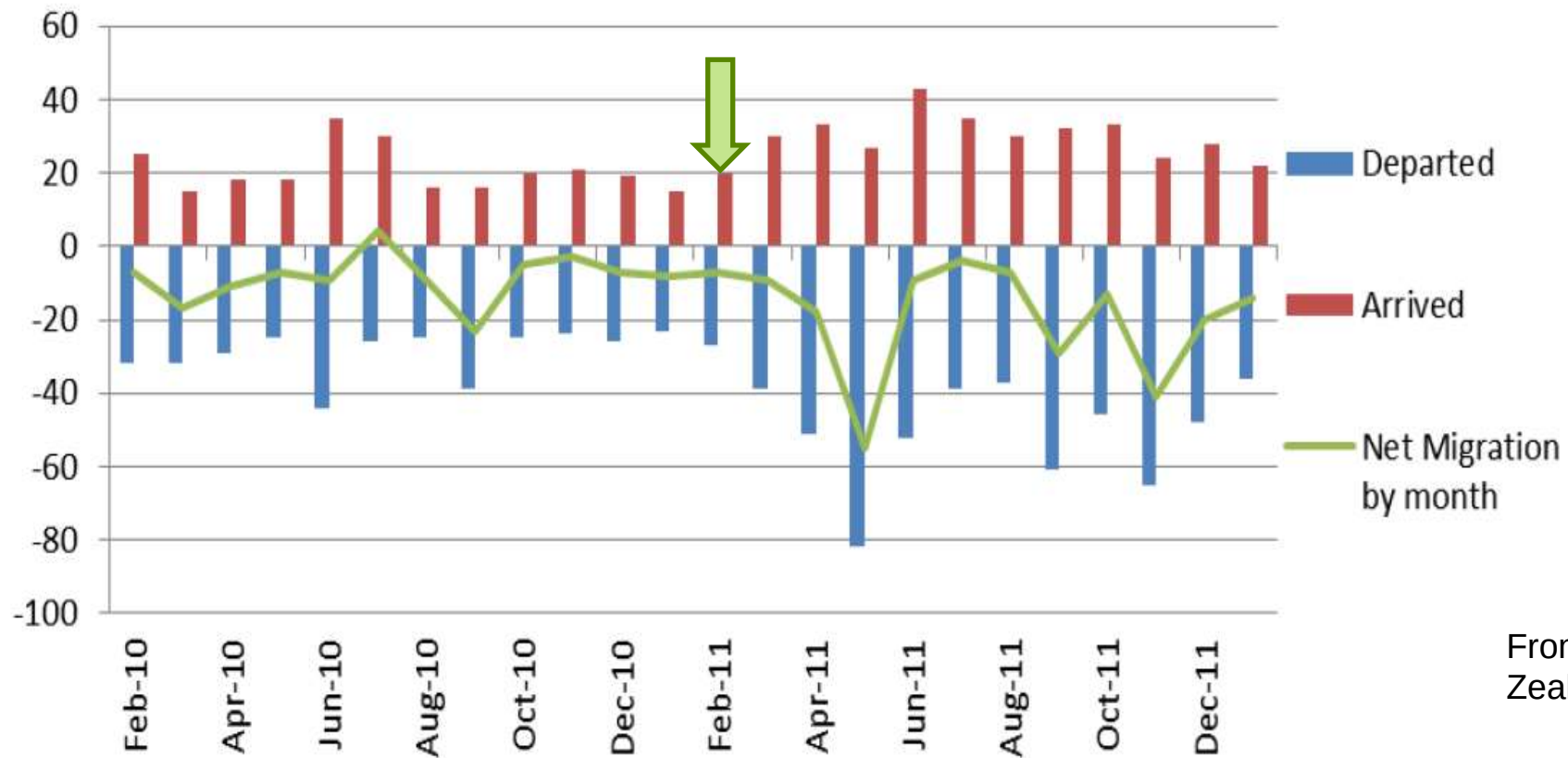


## Residents Movement in the Canterbury Region



From Statistics New Zealand

## Business Movement in the Canterbury Region



From Statistics New Zealand

But recovering



Can understanding the measures which are most effective in managing the recovery of a city, help in understanding how to design and manage our cities.

Can we identify the “killer apps” for healthy cities?



# What are the “Killer Apps” of Healthy Cities

Killer App No.1 – It’s the People Stupid

Stakeholder Engagement

Killer App No. 2 – Who’s the Boss

Institutional and Governance Arrangements

Killer App No. 3 - A Billion here a Billion there and soon...

Appropriate financial resources

Killer App No. 4 – Set aside the important for the vital

Focus on Critical Functions

Killer App No. 5 – The sum of the parts

Integrated Solutions

Killer App No. 6 – Go in with your eyes open.

Understand the Risks

Killer App No. 7 - Everybody has a plan....and then you get hit in the face

Plan really thoroughly by sharing the learnings

# Killer App No. 1 – It's the People Stupid!

## Stakeholder Engagement

Remember that first and foremost, above all, without doubt, absolutely and to eliminate any doubt .....  
these are human tragedies.

Therefore, you can't solve the problem, really solve the problem over the long term, without that perspective – so include them.

**He aha te mea nui o te ao?  
He tangata, he tangata, he  
tangata!**

**What is the most important thing in  
this world? It is people, it is people,  
it is people!**



# Killer App No. 1 – It's the People Stupid!

## Stakeholder Engagement

- “Share an Idea” process
- Website - 58,000 hits in 6 weeks – 5min 12secs
- A two-day Share an Idea Community Expo
- Total of 107 stakeholder meeting and ten larger public workshops
- Facebook and Twitter page, YouTube,
- E-newsletters sent weekly to 7000 people
- A total of 106,000 ideas were shared – that is one idea from every 2.2 residents
- What came out - Green City, Market City, City Life, Distinctive City, Transport Choice
- Incorporated into the city plan
- Has been continued with weekly CE updates, red zone workshops, Community Forum



# Killer App No. 1 – It's the People Stupid!

## Stakeholder Engagement

### Conclusion

- If you give people the opportunity they will participate
- Not only will they participate but they will provide useful information
- Respect their views and they will respect your process
- Persist with your process
- But they want to see you turn their ideas into action



# Killer App No. 2 – Who's the Boss?

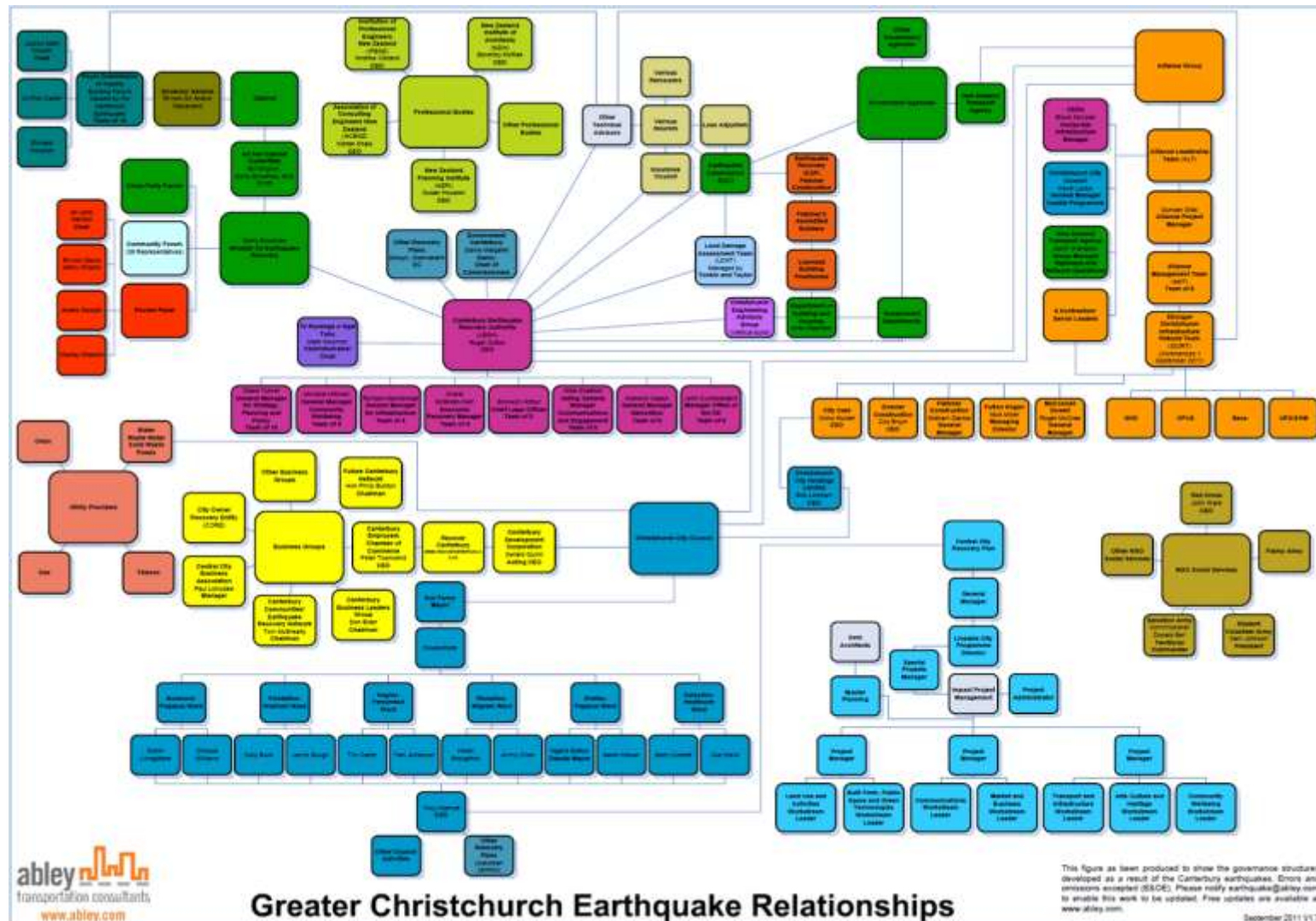
## Institutional and Governance Arrangements

### What?

- Appropriate policies (legislative backing – in Christchurch the CER Act)
- Appropriate institutional and coordination frameworks
- Clear roles and resource allocations to those roles to ensure that they can be delivered on
- Participation of all major groups
- Structure to facilitate alliances beyond the city
- Strong personal leadership and vision

## Killer App No. 2 – Who's the Boss? Institutional and Governance Arrangements

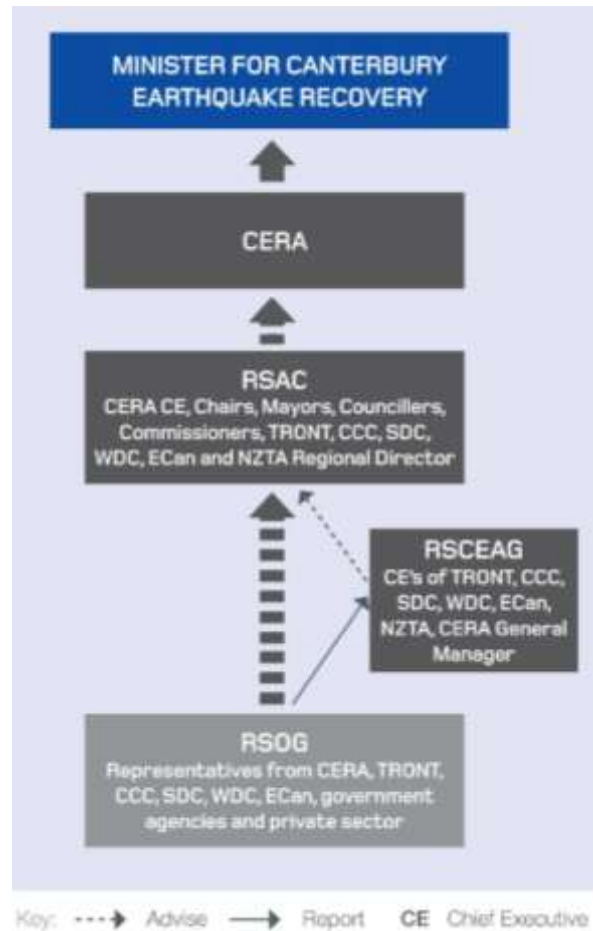
# December 2011



# Killer App No. 2 – Who's the Boss?

## Institutional and Governance Arrangements

May 2012



### ISSUE

### RESPONSIBILITY

Governance  
Council decision making  
Recovery strategy, policy, planning

CERA / Christchurch City Council  
Christchurch City Council  
CERA

Communicating with elected  
representatives  
MP Liaison

Organisation responsible  
Minister Gerry Brownlee  
Christchurch City Council, Waimakariri  
District Council, Selwyn District Council

Council elected members

Infrastructure coordination and planning  
Services provision and management

CERA  
Christchurch City Council

Earthquake prone building policy  
Demolitions  
Heritage buildings  
Resource consents

Christchurch City Council  
CERA  
Christchurch City Council  
Christchurch City Council

Economic Recovery

CERA

Welfare  
Insurance issues

CERA  
EQC / Insurance Council / Companies

Land remediation  
Land zoning

EQC  
CERA

## Killer App No. 2 – Who's the Boss?

### Institutional and Governance Arrangements

Appointed, endorsed and visionary leaders are an important success factor



Gerry Brownlee



Bob Parker



Roger Sutton

# Killer App No. 2 – Who's the Boss?

## Institutional and Governance Arrangements

### Conclusion

- Keep it simple
- Have a single lead institution
- Let everybody know what the arrangements are
- Strong individual leadership is critical

# Killer App No. 3 - A Billion here a Billion there and soon...

Appropriate financial resources

A plan without resources is just a dream

Those resources are invariably financial measures, or translate into financial measures

Current estimates are for total recovery of Christchurch

New Zealand GDP in 2011 was NZ\$204B

Private development to provide approximately NZ\$20B

# Killer App No. 3 - A Billion here a Billion there and soon...

## Appropriate financial resources

Key question is of course, how to generate those funds

### Funding

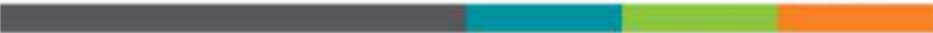
- Council or government debt
- Infrastructure Bonds
- Public Private Partnerships
- All forms of debt
- Allow time payment
- Intergenerational equity
- But...
- Where does the money come from to repay the debt?



### Revenue options:

- Increase rates – but limited opportunity
- Fuel and other national taxes
- Parking Charges
- Tax Increment Finance (TIF)
- Asset Sales
- User charges

} Partial funding contribution



# Killer App No. 3 - A Billion here a Billion there and soon...

Appropriate financial resources

## What the investment sector needs



# Killer App No. 3 - A Billion here a Billion there and soon...

Appropriate financial resources

## Conclusion

- Dollars are critical
- Both public and private sector are key players
- Make sure you create both the clarity and the incentives for the private sector to participate



# Killer App No. 4 – Set Aside the Important for the Vital

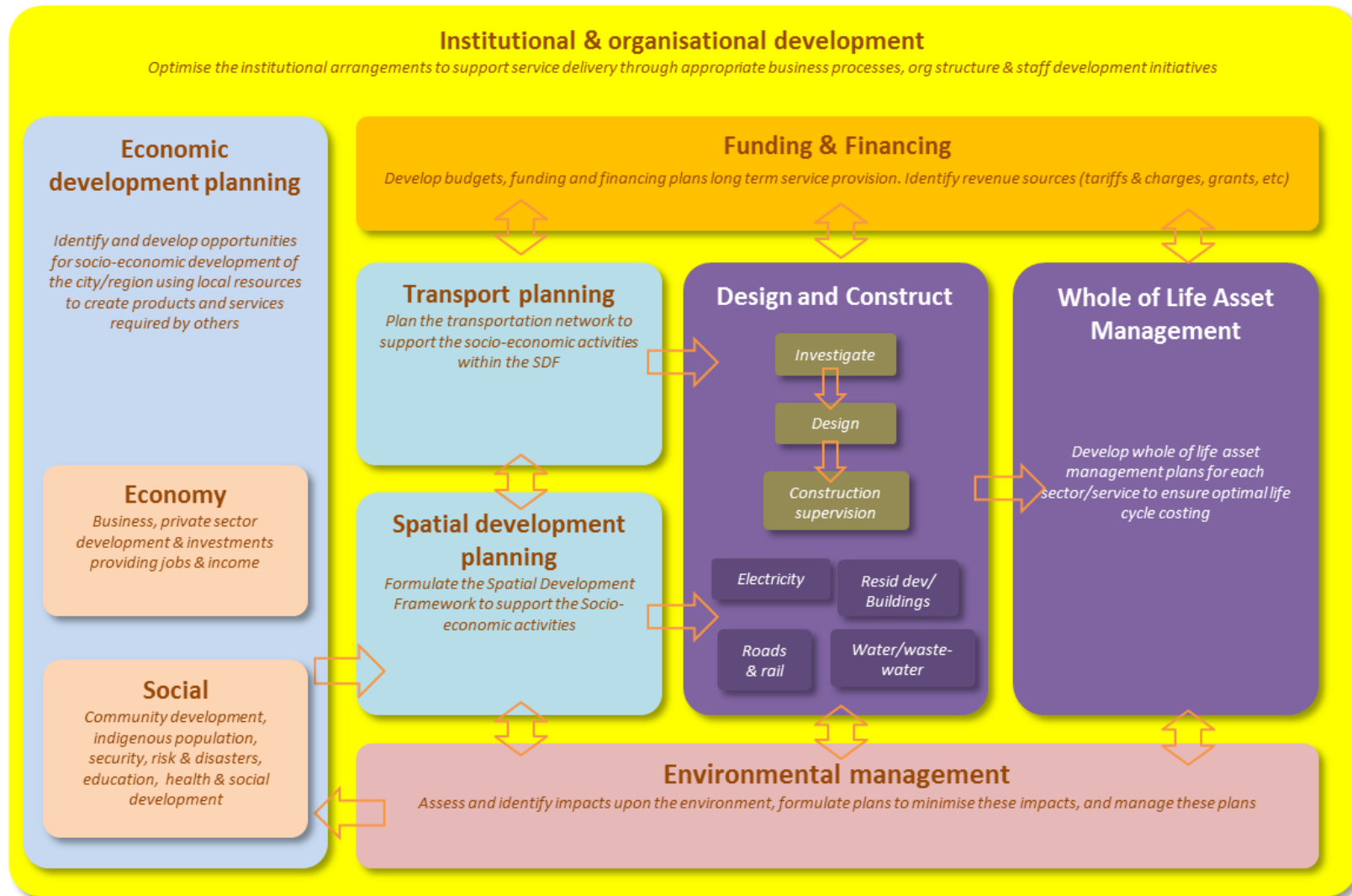
## Focus on Critical Functions

Obvious, of course, but easy to oversimplify what is needed

- Recognise that the focus is functional restoration, the physical restoration merely facilitates that
- What is critical changes depending on the phase of the disaster
- Different groups see different things as “critical” – businesses vs families vs politicians
- The more time passes, the more complex the solution seems to become.
- Recognising the extreme psychological trauma people have endured, restoring routines becomes a critical factor – education in particular

# Killer App No. 5 – The Sum of the Parts

## Integrated solutions

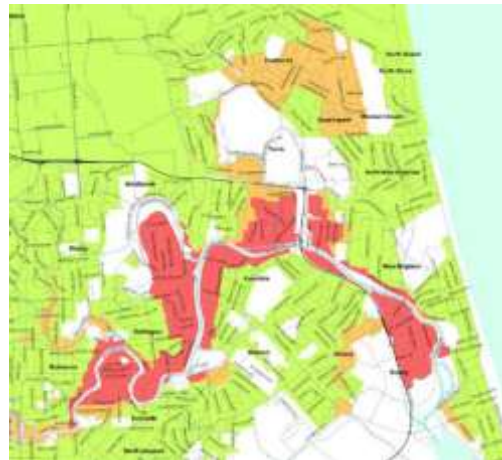


# Killer App No. 6 – Go in with your Eyes Open

## Understand the Risks

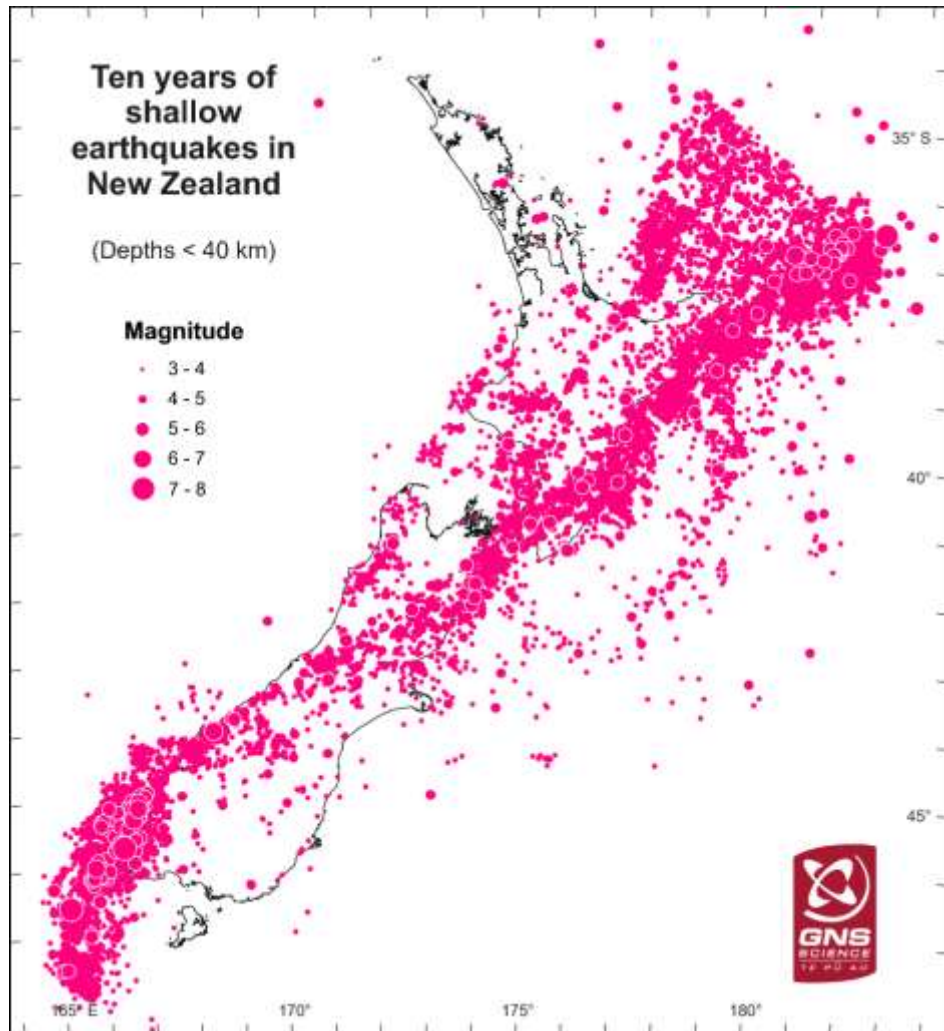
Unless cities have a clear understanding of the risks they face, planning for meaningful disaster risk reduction may be ineffective.

- Hazard assessment: Map the nature, locale, intensity and probability of hazards
- Vulnerability assessment: Determine the degree of vulnerability and exposure to the hazard
- Capacity assessment: Identify the capacities and resources available
- Very important – articulate this to the stakeholders in detail and in a form they can understand



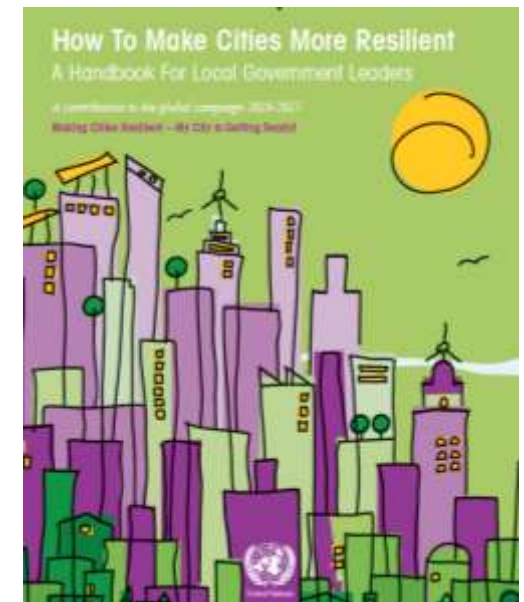
# Killer App No. 7 - Everybody has a plan....and then you get hit in the face

Apply the learnings



- Christchurch did have a plan
- The opportunity exists to update that now having been through the current experience

BUT the real opportunity lies in us all learning from the experiences of Christchurch



## So, back to the question I asked at the start.....

What can we learn from a city that has experienced a disaster that may help us understand how to better create and maintain our own Healthy Cities?

- The stakeholders are critical to the long term success – you know you need to do it, just do it
- Strong, visionary leaders are vital, when accompanied by appropriate administrative processes and measures
- Dollars make things happen, and you can't do it without the private sector, so create appropriate incentives
- Focus on restoring (maintaining) critical functions, the infrastructure is just a vehicle for that
- The solution lies in integration of activities and infrastructure types
- Learn from your own mistakes, and from those of others
- Create a plan which is comprehensive but easy to understand and implement

# If we do this what do we get?

## **A Legacy of Leadership**

- Strengthened trust in and legitimacy of decision makers
- Active citizen participation

## **A Legacy of Social Gains**

- An understanding of what a community values
- Full array of social, economic and physical assets which respond to the values

## **An Economic Legacy**

- Assurance for investors of acceptable levels of return, leading to increased investment
- Increased tax base, business opportunities, economic growth and employment as economically more attractive, better-governed cities attract more investment.

## **A Functional Legacy**

- An integrated, functioning city

They trust us to have the vision..... on their behalf





**Leading. Vibrant. Global.**



**Healthy Cities and Disaster Resilience –  
the Link**

Matt Coetzee

[Matt.coetzee@aurecongroup.com](mailto:Matt.coetzee@aurecongroup.com)

+61 437 686 651