

# The Architecture of Decision-Making:

## Uncovering the dynamics that inhibit us getting the housing we all say we want

### Presentations

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# This SRA is all about:

- **Revealing** the deep structures inhibiting desired outcomes across scale from dwellings to towns and cities:
  - The architecture of decision-making
    - Resource holders
    - Critical actors
      - supply
      - demand
    - Regulatory agents
  - Path dependencies
  - Current/potential calculative logics and tools
- **Demonstrating** the interconnection between those deep structures with the struggle to establish desired outcomes:
  - Affordable, quality homes,
  - Places and spaces that help us be productive, thrive and support our communities, and
  - Infrastructure that is functional now and remains effective, financially and environmentally sustainable for future generations.
- **Using transformational methods** to encourage:
  - Decision-makers to optimize their operations and decisions within the existing landscape
  - Re-align decision-making nodes
  - Re-tooling of logics and tools to improve both system outcomes and node decisions

## The Problem

- Multiple stakeholders claim a desire for better homes, towns and cities – we persistently fail to deliver
- Failure to deliver characterized by three responses:
  - Denial
  - Hand-wringing – the system is broken
  - Silver bullets
- Costly under-, over- or misplaced interventions
  - Ineffective
  - Costly
  - Generate uncertainty
  - Unintended consequences
  - Gaming

# 8 Research Components/Projects focused on:

- **The logics, tools and influence of**
  - Resource holders
    - Finance
    - Landowners
  - Critical actors – supply
    - Those who transform land, capital and materials into homes and built environments
    - Developers, housing providers, construction industry, infrastructure providers, and supporting professional groups and services
  - Critical actors – demand
    - Those who exercise their influence on homes and built environments through their housing consumption and choices
    - Householders – owners and tenants
  - Regulating agents – formal, de jure agencies that impact on homes, towns and cities through their regulatory management for the public good of:
    - Financial risks
    - Health and well-being
    - Housing and built environment performance
    - Spatial planning
    - Infrastructure
- **Discovering decision-making architecture through lived experience**
  - Learning studies in Auckland, Christchurch, Kawerau, Western Bay of Plenty, and Tauranga
- **Integrated map and inventorying tools, logics and dependency pathways**
- **Adapting logics and tools pathways**
  - Charrettes
  - Summits
  - Nudging

# Working in a Challenging Environment

- **Research organisations**

- Auckland University of Technology
- University of Auckland
- BRANZ
- CRESA
- Katoa
- Massey University
- Otago University
- Public Policy & Research
- RIMU Auckland Council
- Victoria University
- University of Waikato
- WSM, Otago University

- **Disciplines**

- Architecture
- Building science
- Economics
- Engineering
- Geography
- Planning
- Psychology
- Sociology
- Urban design
- Māori studies and indigenous research

	Name	Org.	Skills
PI	Prof Larry Murphy	UoA	Property, finance, markets, geography
	Dr Kay Saville-Smith	CRESA	Housing, sociology, policy, community, building
	Prof Iain White	UW	Planning, spatial planning practice, governance
AI	Jenny Joynt	RIMU	Environment, housing, land use
	Craig Frederickson	RIMU	Administrative council data, land use
	Prof Errol Haarhoff	UA	Architecture, design, urban growth
	Prof Karen Witten	MU	Neighbourhoods, capacity building
	Dr Pip Wallace	UW	Law
	Dr Fleur Palmer	AUT	Māori housing, papakainga, design architecture
	Dr Bev James	PP&R	Housing, Māori development, community, policy
	Dr Alison Chang-Richards	UA	Christchurch rebuild, engineering
	Prof Howden-Chapman	WSM	Housing and health
	Dr Ralph Chapman	VU	Cities, infrastructure, environment
	Dr Fiona Cram	Katoa	Māori, psychology, youth, indigenous research methods

# Today – A taste focusing on:

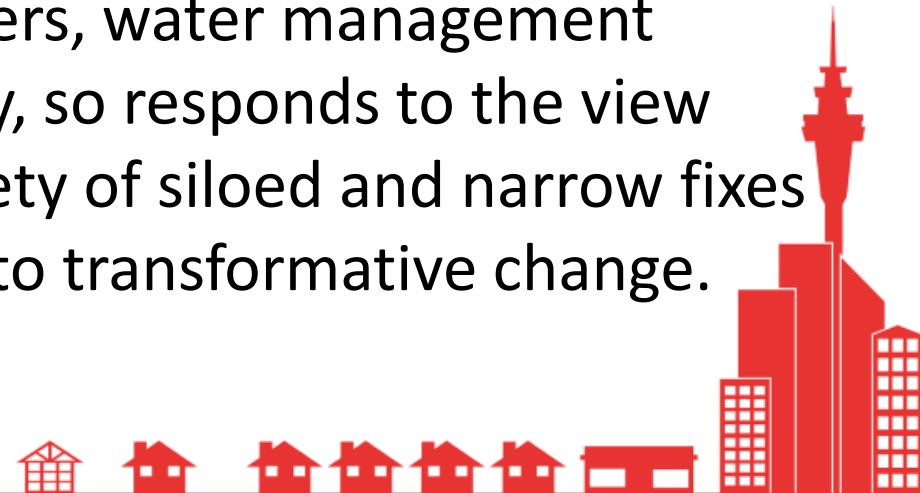
- **Programme framing** – nodes of decision and pathways as assemblages, regimes and practices
- **Digging into low cost housing delivery:**
  - A regulated, land-use planning focused intervention – SHAs
  - Following through Māori logics and initiatives in affordable housing investment
- **Digging into House Prices in a new way**
- **The assemblages and practices around district and land use planning**
- **Rethinking where we need to poke the stick:**
  - Some thoughts on re-directing our attention arising the research to date
  - A view from the housing sector dedicated to affordable, quality housing
- **What you won't hear about today is work on:**
  - The construction pipeline
  - Inertias in making our streets better, walkable and safe
  - Deep logics underpinning the resistance to construction alternatives such as factory-build and pre-fab
  - Potential to meet housing gaps through partitioning, accessory and laneway dwellings

# Problem and Context

BUILDING BETTER  
HOMES, TOWNS  
AND CITIES

Ko Ngāwā Kāinga hei  
whakamāhorahora

- **Decision making system is complex** – needs to influence the networks that ‘govern’ housing, e.g. land owners, developers, and planning authorities
- **Decision Making in housing is political** – negotiations over plans, zoning, infrastructure, design, development, etc
- Need an approach that can research this complex environment, and understand the forces of both **stability and change...**
- We draw on a ‘transitions’ perspective used to research change in complex governance environments **that have long held practices and processes** – e.g. post-carbon, sustainability, energy, disasters, water management
- It focuses on the **system** as the object of study, so responds to the view that much housing research focuses on a variety of siloed and narrow fixes (Murphy, 2014, 2015) that may not be suited to transformative change.



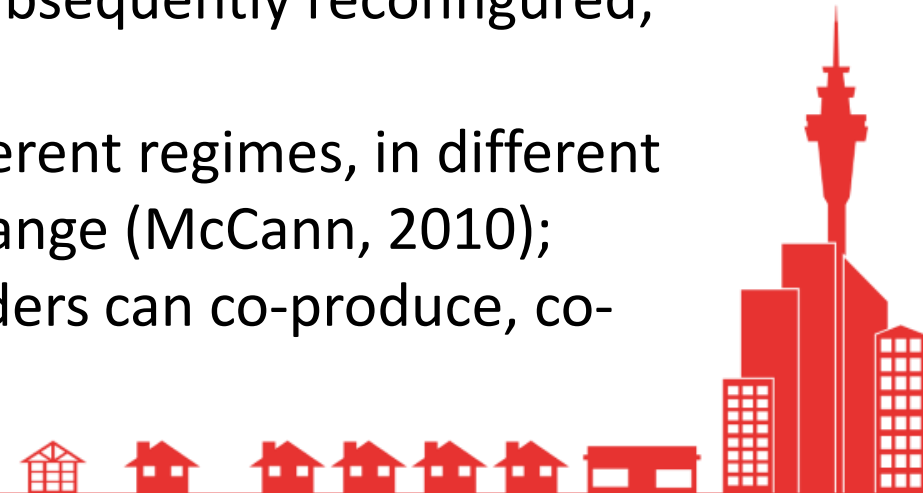
# The Benefits of Transitions Approaches

## What you study and how...

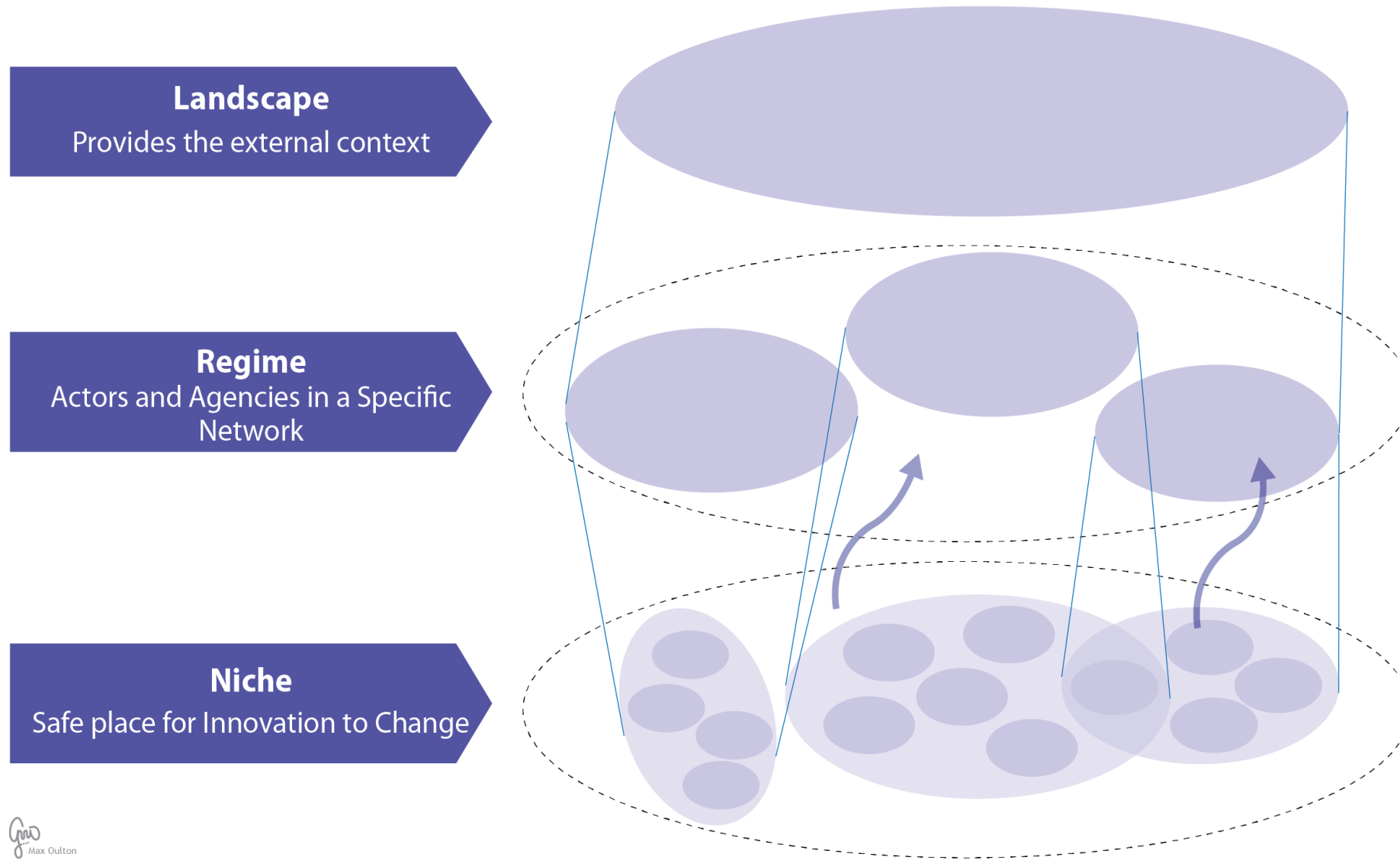
- (1) function as a *boundary object* (Leigh Star, 2010); so various knowledge domains, such as political science, geography, or engineering, can agree a common research frame;
- (2) as a *bridging concept*, to coordinate research between different disciplines and to practitioners & narrow the science-policy-practice gap (Davoudi et al., 2012);
- (3) to create an *epistemic object* (Miettinen, 2005); making a problem that may not have fixed qualities (such as the complex, constructed system of housing decisions) into an object of inquiry, so it can be subsequently reconfigured;

## What it can deliver...

- (4) To understand *variegated geographies*, how different regimes, in different areas, at different times, may accept or resist change (McCann, 2010);
- (5) To initiate *pathways* for change, where stakeholders can co-produce, co-ordinate and initiate the necessary steps.



# The Multi-Level Model (Based on Geels, 2002)





Transitions research puts networks within a multi-level perspective (MLP). This distinguishes between three nested levels that interact and help contextualize, frame and inform analysis of change

### Landscape

Provides the external context

The broad social, political, technological, cultural, economic settings that provide the context that the regime operates within. Here, it encompasses those factors that structure the governance of the housing sector, shape the conduct of regulatory and planning activity, and define and produce the housing market. Change at this level occurs slowly and is related to factors such as population size, demographic trends, the nature of the economy, social values and behaviours, and wider technological trends.

### Regime

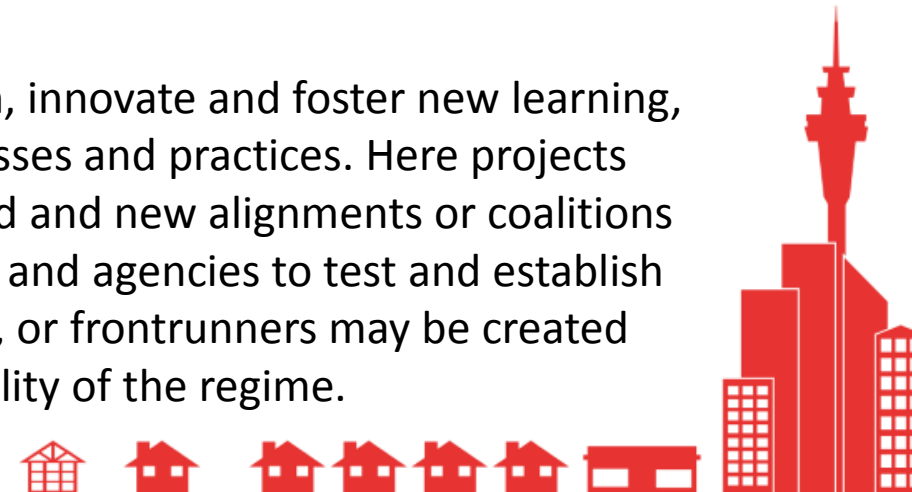
Actors and Agencies in a Specific Network

The level of active governance where networks of actors make decisions in ways that both shape, and are shaped by, dominant policies, rules, regulations, technologies and practices, to deliver housing decisions and outcomes. Change can be subject to inertia and long-held ways of doing and knowing.

### Niche

Safe place for Innovation to Change

The space at which actors envision, innovate and foster new learning, protected from mainstream processes and practices. Here projects and transitions can be co-produced and new alignments or coalitions made between networks of actors and agencies to test and establish change. Best practice, innovations, or frontrunners may be created and developed to disturb the stability of the regime.



## Landscape

Provides the external context

- Influence on the decisions of regimes
- Can set direction for change

Social values – e.g. Cultural expectation for housing  
Political Cultures – e.g. Roles of State, Market, Citizen  
Built Environment – e.g. Demographics, existing form  
Economic Development & Trends – e.g. Financialisation



## Landscape

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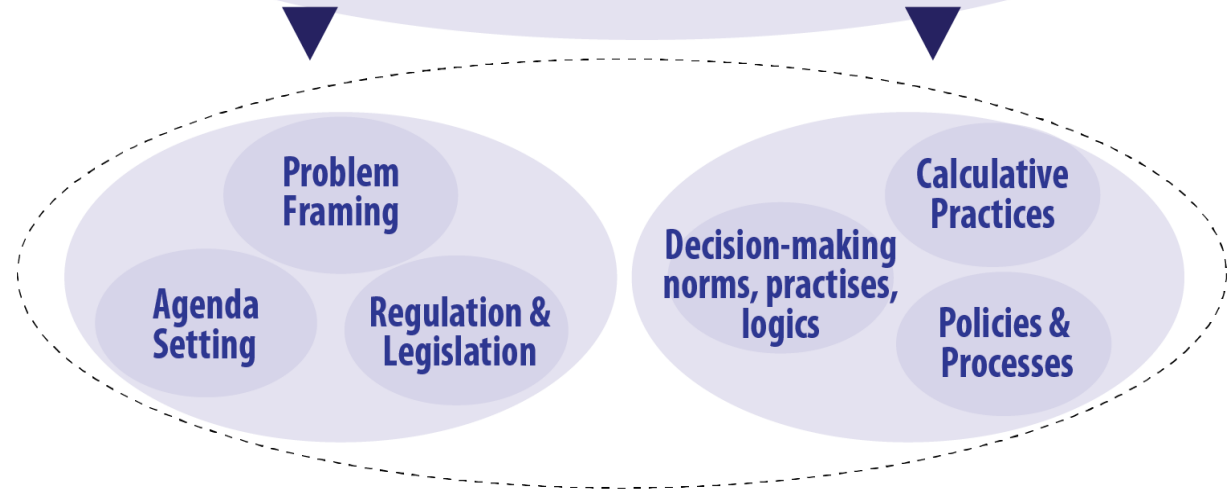
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## Regime

Defines Housing Policy Arena,  
Structures Interactions & Relations

- Provides stability for decision making
- Established rules, norms, practices

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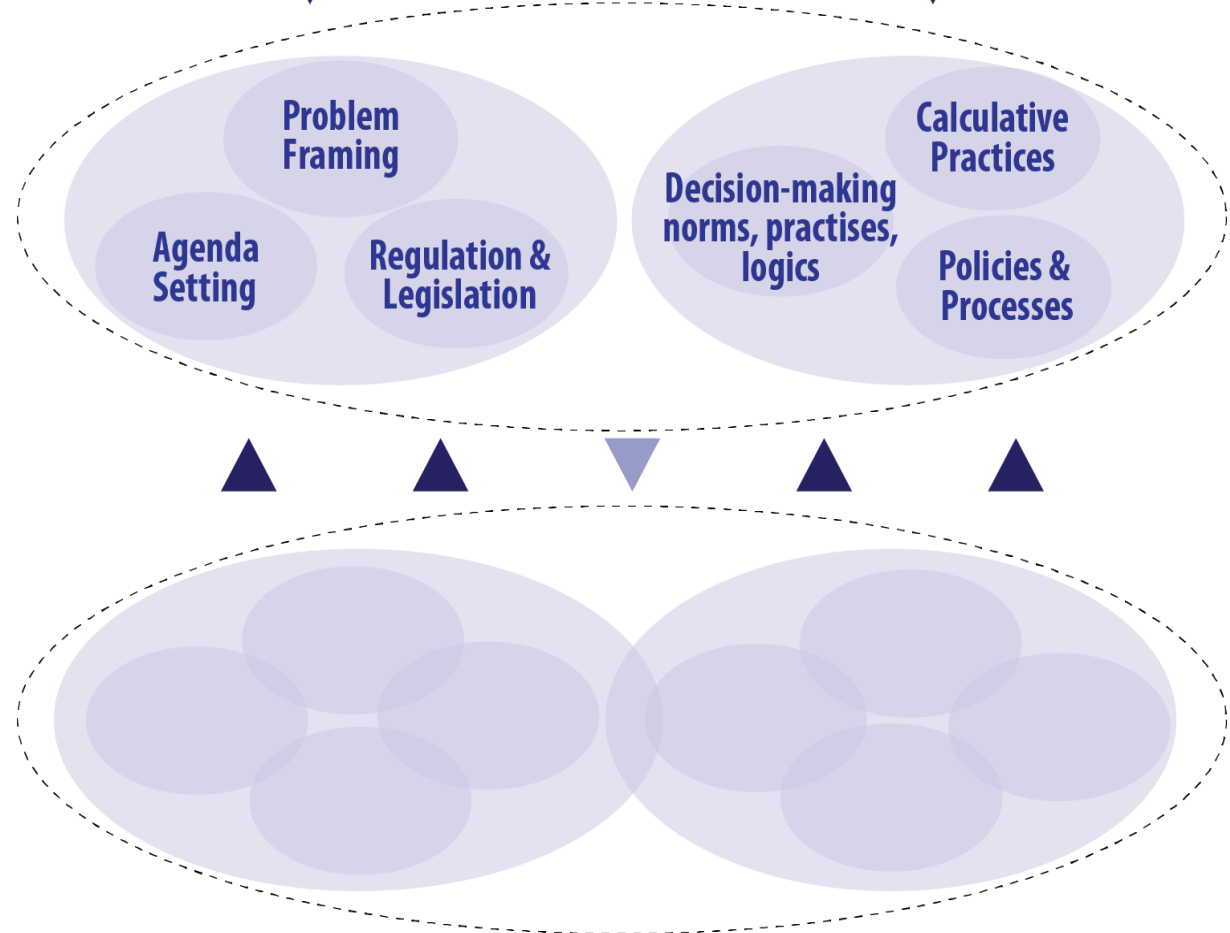
## Niche

Pathways to Change

- Space for innovation, learning, realignment
- Coproduction of new rules, norms, practices



Social values – e.g. Cultural expectation for housing  
Political Cultures – e.g. Roles of State, Market, Citizen  
Built Environment – e.g. Demographics, existing form  
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# Different decisions, logics, norms, design same policy and place...



Low density, low design quality, low living space  
Individual plots sold to buyers



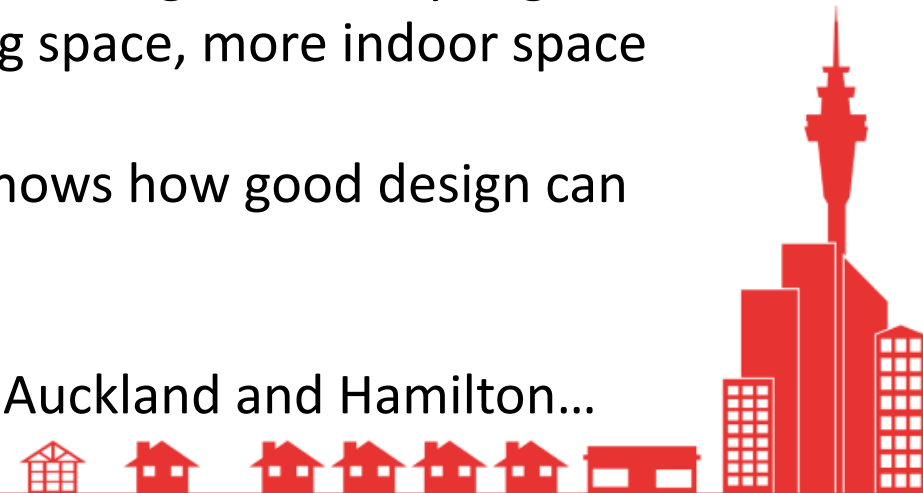


145 medium-density houses quickly sold

Similar plot size, similar time, higher density, higher design quality, more living space, more indoor space

Used a masterplanning shows how good design can equal good quantity

Difference isn't between Auckland and Hamilton...



# Low Cost Housing Delivery – Special Housing Areas

- **SHA** – The key government response to problems of housing unaffordability
- **The logic is:**
  - House prices are driven by under-supply
  - Under-supply is driven by land-use planning constraints and slow consenting
  - Developers can be incentivised to supply more houses through dismantling regulatory barrier
  - More supply will make dwellings more affordable
  - More supply activity will encourage economies of scale and increase building industry efficiency
- **SHAs** will deal with the National Housing Affordability Measure (HAM):
  - 66.6% of renter households below HAM
  - 81.4% of households if buying for the 1<sup>st</sup> time below HAM

Figure 1 Households and Unaffordable Rent

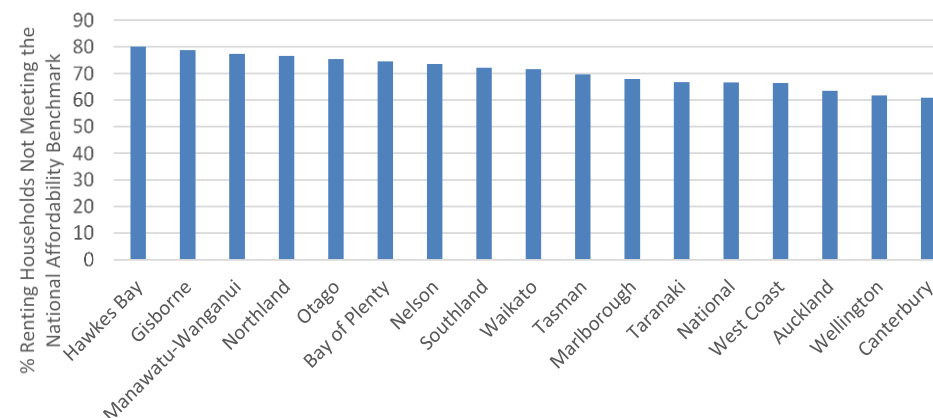
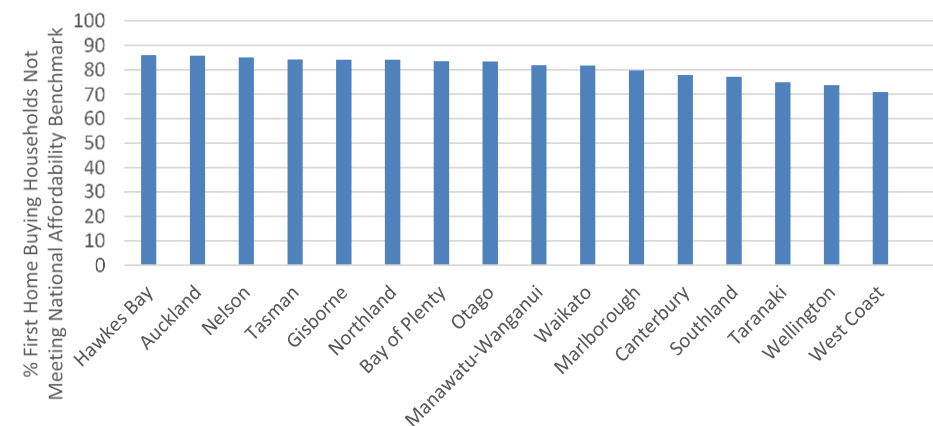


Figure 2 Households and Unaffordable 1st Home Buying



# Special Housing Areas Characteristics 1:

- **Key Focus** – Land supply
- **Enacted:**
  - Legislatively in 2013
  - With expectation that there would be an immediate response through a release of pent-up investment by:
    - Allowing land use change
    - Reducing councils planning and regulatory compliance requirements
  - Legislative powers restricted initially to 2013-2016
- **Targeted to** TAs determined in the legislation and typified as experiencing “significant housing supply and affordability issues”
  - No consideration of:
    - the nature of a council’s existing regulatory requirements
    - evidence of vacant land or land-banking
- **Implementation** by way of Housing Accord between councils and Minister with SHAs approved by Minister on recommendation of an eligible council



# Special Housing Areas Characteristics 2:

- **Key features:**
  - Centralises local and regional control
  - Private land owners/developers drive SHA proposals not the planning process
  - No public consultation is required in the legislation for the SHA or any subsequent consenting
  - Allows movement outside of existing 'rules' such as those relating to density
- **Affordability leverage:**
  - Primarily through:
    - Expectations of increased supply
    - Expectations that reduced compliance costs will flow into reduced house prices
  - No mandatory inclusionary requirement for:
    - Proportion of SHA housing to be offered as affordable housing on the market
    - Retention of any affordable housing offered on the market.

# Exploring SHA Outcomes:

- **Outcomes analysis:**
  - National data
  - WBOP sub-region – Tauranga City and Western Bay of Plenty District
- **Impacts analysis:**
  - WBOP sub-region – Tauranga City and Western Bay of Plenty District
  - Explores:
    - Stakeholder perspectives
    - Evaluates impacts on:
      - Probabilities of development
      - Cost-structures for developers
      - Settlement form and connectivity
      - Affordability
- **WBOP sub-region:**
  - Population 176,000 with significant internal migration and high growth - 65+ yrs key driver of demand
  - High performing economy but significant inequality and growing rental demand
  - Integrated settlement planning since 2000 with a 50 year timeline
  - Tauranga City known for permissive planning regime

# SHA Outcomes to date:

- **Nationally:**
  - 9 of 15 eligible councils have signed Accords
  - 213 SHAs established – a third towards the expected legislative sunset in 2016
  - Legislation extended to 2019
  - Around three-quarters of SHAs have affordability requirements for 10% of dwellings in a development
  - Identifying number of dwellings completed highly problematic – but appear to be relatively small
- **WBOP sub-region:**
  - Accords:
    - Tauranga - >1,000 dwelling lots in 2 years, smaller dwellings and lots with no affordability requirements
    - WBOP – 350-500 dwellings across two SHAs, affordability requirements revoked in 2017
  - Outcomes;
    - 11 SHAs in Tauranga and 1 SHA in WBOP
    - Building has commenced in one of the 12 SHAs
    - 6 SHAs (all in Tauranga) have consents for Stage 1 with 183 building consents issued
    - WBOP SHA has consent application lodged for Stage 1 development of around 38 lots.

# SHA Issues and Next Steps:

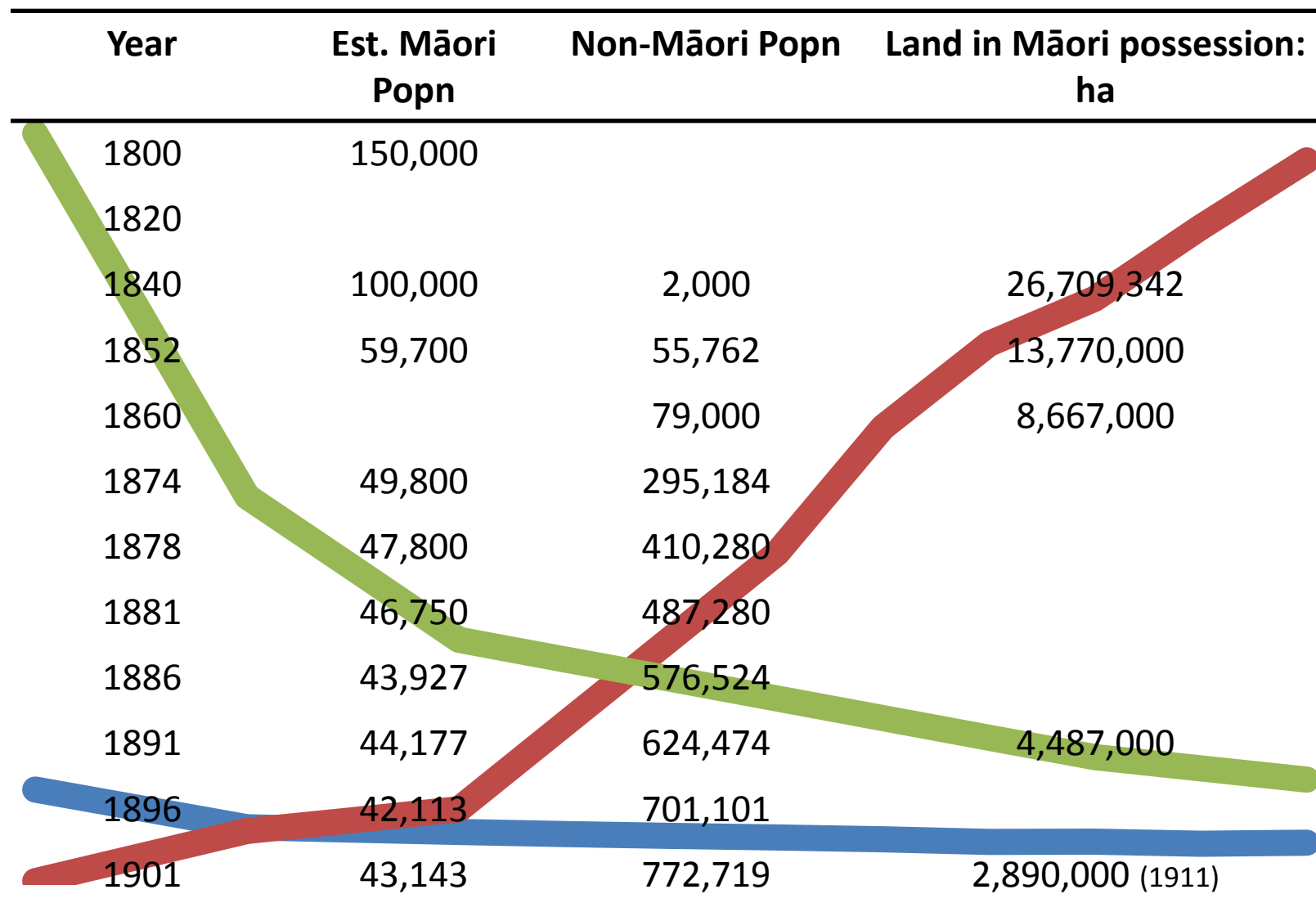
- **Issues**
  - Slow delivery of dwellings
    - Questions about the inhibitors:
      - Connects to RIMUs pipeline work
      - Key deficits appear to be finance, construction capacity
    - Questions around data collection and evidence-based policy model
  - Low developer interest – Evidence of :
    - Developers withdrawing from SHAs
    - In WBOP no developer interested in further SHAs despite not meeting Accord targets
  - No evidence of increased house price affordability
  - Other cost-drivers for households evident in SHAs – low connectivity associated with greenfield developments
  - May drive rather than mitigate land-banking
- **Next Steps – WBOP Case**
  - Key actor interviews – objectives, intentions, decision-making tools and logics
  - Particular focus on:
    - Pace of build
    - Affordability and liveability
    - Market segments and housing stress alleviation concerns

# Māori “space-based inquiry by design”

- Confirmed: Iwi building on returned urban land
- Pending: Māori-led consortium building on gifted urban land

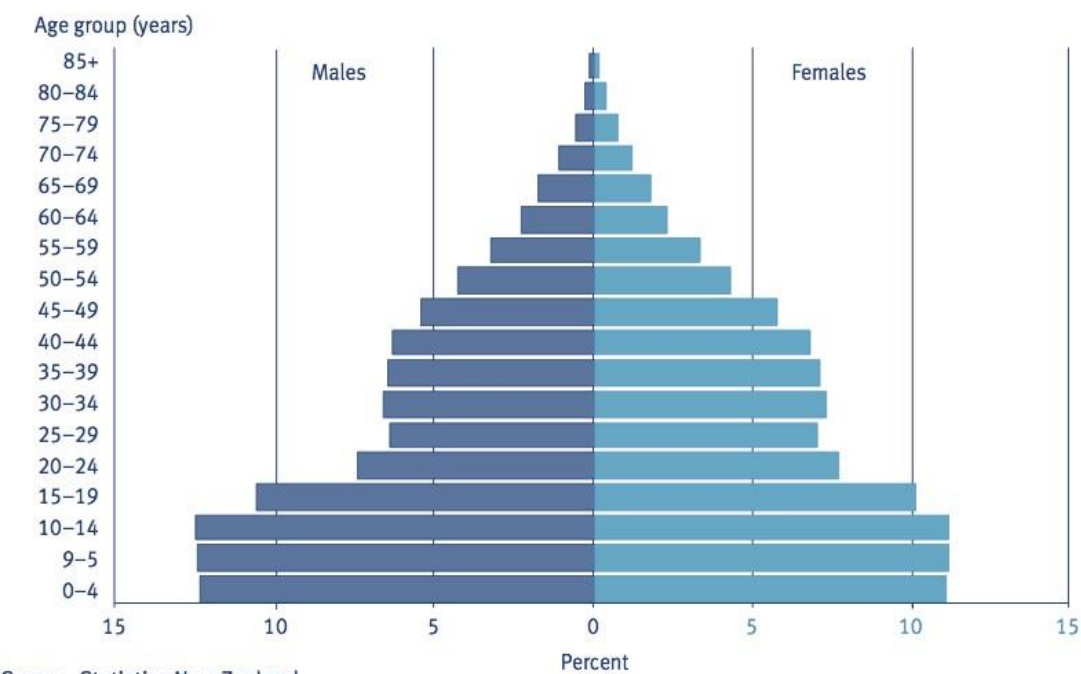


# People and Land



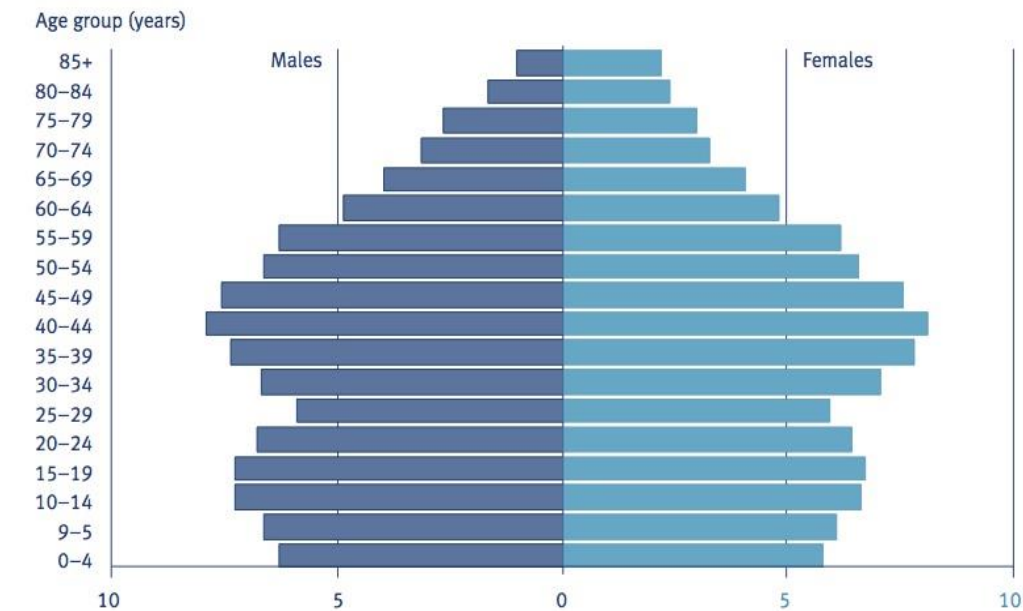
# Population Age Distribution

Figure 1: Age distribution of the Māori population, males and females, 2006



Source: Statistics New Zealand

Figure 2: Age distribution of the non-Māori population, males and females, 2006

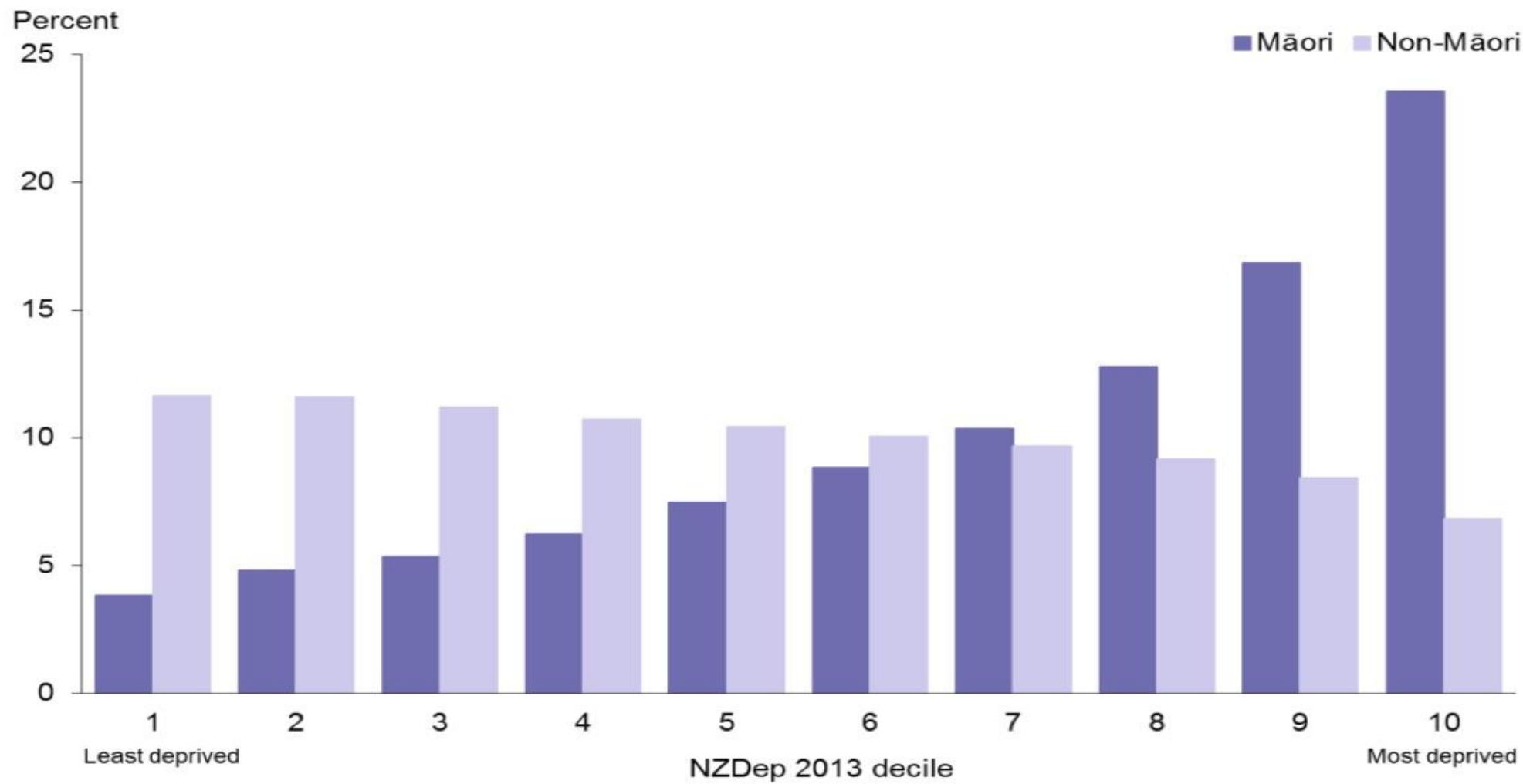


Source: Statistics New Zealand



# Participation in Society

**Figure 4: Neighbourhood deprivation distribution (NZDep 2013), Māori and non-Māori, 2013 [2]**

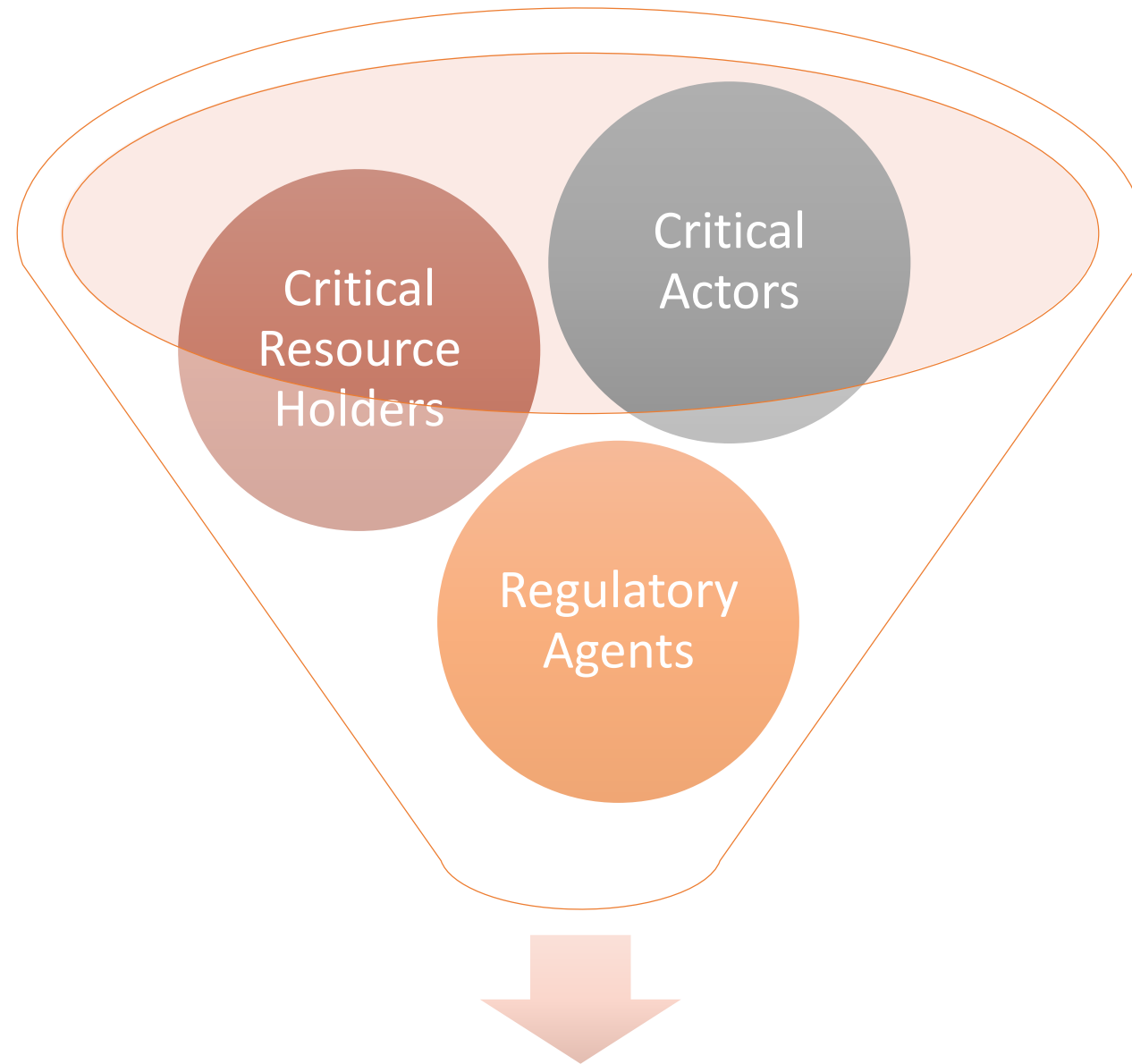




# Issues arising

- Offer of ex-Housing NZ homes
  - Income-related rent housing
  - Māori land and Public Works Act
- MDS emergency housing funding
- TPK Capital Investment Fund
- Opportunities for owner-occupation:
  - KiwiBank mortgages
  - Leveraging Kiwi Saver
  - Shared ownership





System-wide outcomes

# Closing Thoughts

- Iwi and Māori housing aspirations
- Importance of decision-making





# Calculative Logics, Development and Affordable Housing

- **Developers** produce dwellings but they also:
  - create and reproduce:
    - Land markets
    - Housing markets
- **Traditional narratives among some in policy, public and, often, in research:**
  - Portray developers as:
    - Involved in a COST+ industry
    - ‘Taking’ land prices as a cost
  - Assume that reducing planning, construction or other costs will reduce house prices
  - Assume land is a cost pre-determined and developers’ land price ‘takers’
- **An alternative narrative** is that developers’ decisions:
  - Both drive and reflect actual and ‘guesstimates’ around future house prices
  - Involve feasibility analysis and residual land valuation practices
  - Are land price generators rather than land price takers

# Developer Behaviour and Everyday Decision-making

- **UK, NZ, Australian research highlights:**
  - The relationship between house prices of already established dwellings and the price of new builds
  - New build house prices will not be reduced by ‘stripping out’ construction or development/consenting costs
  - Pricing reflects developers’:
    - Comparison with existing comparable and non-comparable local product
    - Estimates around price movement in those products
- **This is grounded in the use of residual valuation:**
  - Developers
  - Developers’ financiers

"We have a metric that has somewhere around 70 to 75 per cent of the median house price is where we typically pitch the price of one of our units."

*Glen Sowry, CEO, MetlifeCare Retirement Village*

# Standard Residual Valuation – A Land Pricing Model

<i>Residual to land value</i>		
<i>GDV</i>	– <i>Total costs</i>	= <i>Gross residual</i>
GDV: value of the completed development	All construction costs. Interest on construction, professional fees and developer's profit	Maximum bid for site includes acquisition costs, professional fees and finance of land purchase

- **Cost paid for land** - function of revenue estimated for the development
- **Revenue** is estimated on:
  - The basis of prevailing prices
  - Estimates of possible price shifts
- **Used by:**
  - **Developers** to determine an appropriate value for a site – buying when price equals or less than their valuation.
  - **Financiers** to estimate risk
  - **Valuers** to determine land value

# Standard Residual Valuation – A Land Pricing Model

- Can be turned into a cashflow model (see Atherton *et al*, 2008)

Cash flow development appraisal[13]										
Months	Period	Construction costs	Professional fees Construction	Professional fees sales/let	Income	Land cost (incl costs)	Net cash flow	Capital outstanding beginning	Interest at 3 per cent	Capital outstanding end
0	0					– €2,687,500	– €2,687,500			– €2,687,500
3	1	– €175,000	– €19,250				– €194,250	– €2,687,500	– €80,625	– €2,962,375
6	2	– €262,500	– €28,875				– €291,375	– €2,962,375	– €88,871	– €3,342,621
9	3	– €350,000	– €38,500				– €388,500	– €3,342,621	– €100,279	– €3,831,400
12	4	– €525,000	– €57,750				– €582,750	– €3,831,400	– €114,942	– €4,529,092
15	5	– €262,500	– €28,875				– €291,375	– €4,529,092	– €135,873	– €4,956,340
18	6	– €175,000	– €19,250				– €194,250	– €4,956,340	– €148,690	– €5,299,280
21	7						€0	– €5,299,280	– €158,978	– €5,458,258
24	8			– €197,308	€6,576,923		€6,379,615	– €5,458,258	– €163,748	€757,609
	Total	– €1,750,000	– €192,500	– €197,308	€6,576,923	– €2,687,500				
IRR Project									4.97 per cent	
IRR Project pa									21.43 per cent	
Total Profit at end of Development									€757,609	
NPV of profit at 4.0 per cent									€553,578	

# House Price and Production Implications

- **Lower costs for a given GDV (value of completed development)** – can lead to a HIGHER land bid NOT house price reduction, particularly where there is:
  - Competitive bidding
  - Widespread belief in house price increase
    - This is consistent with international study showing elasticity of housing supply linked to house price change not simply level of house prices
- **Feedback loops** (particularly through established valuation practices and legislative requirements) mean prevailing bidding adheres to the land market.
- **Those who dare** in their land bid may:
  - **win** if estimates are right and all the development elements (including finance) fall into place
  - **go bankrupt** if over-leveraged and estimates are wrong
    - building industry one of the few in which bankruptcy is associated with boom not simply bust
  - **land-bank** because of lack of working capital if estimates are wrong, assuming they are not over-leveraged
- **The most constrained or low risk (prudent?) developers:**
  - May be less 'bullish' in their estimates of GDV and struggle to acquire land
  - May struggle to attract finance if their GDV looks 'lowish'
  - GDV for CHPs is always low - discounted relative to the market because of targeted households – this tendency has increased because of the interpretation of charities legislation by the Charities Services



# The Next Steps - Building and Testing

- This framing is based on:
  - Review of international and domestic research to date
  - Some initial key person conversations
- Moving to multiple stakeholder and actor engagement
- Focusing on the following questions:
  - i) Does residual valuation methodology result in new production being dominated by high-end value output for each sub-market?
  - ii) Does the application of market valuation methods price-out affordable housing providers?
  - iii) Can valuation methods be modified to facilitate affordable housing provision?
  - iv) How would finance agents/the crown/valuers respond to revised methodology?

# Consumer Cultures and House Prices

- **Critical questions:**

- Have rising house prices become embedded in New Zealand's housing culture?
- Are consumers complicit in a culture of house price rises?
- What are the dynamics of and societal implications of consumer interests in rising house prices?

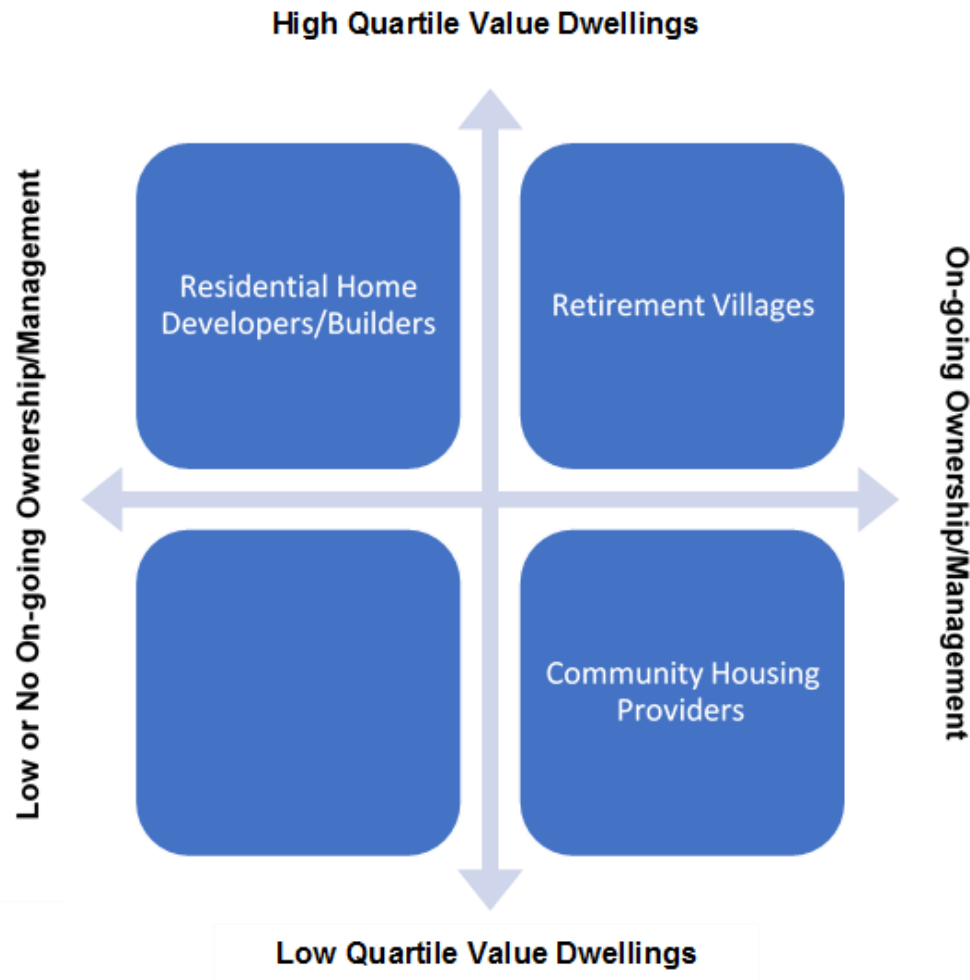
- **Three activities to date:**

- Understanding structural position and logics of housing production
- Understanding the messaging around the purchase and retention of land – the dynamics of land-banking
- Understanding the expectations of those buying houses for the first time

# Structural Position and Logics in New Building

- **Builders and developers:**
  - Typically dwelling suppliers
  - Their consumers are:
    - Owner occupiers
    - Owner operators:
      - Landlords
      - Property investors
      - CHPs
      - Retirement villages
  - Dwellings are commissioned or speculative
- **Owner operators have a dual position:**
  - As consumers of the products generated by the building industry
  - As commissioners of production
- **Structural position and logics can be understood by reference to two parameters**
  - The targeting of low or high cost housing supply
  - On-going engagement and management of the stock supplied

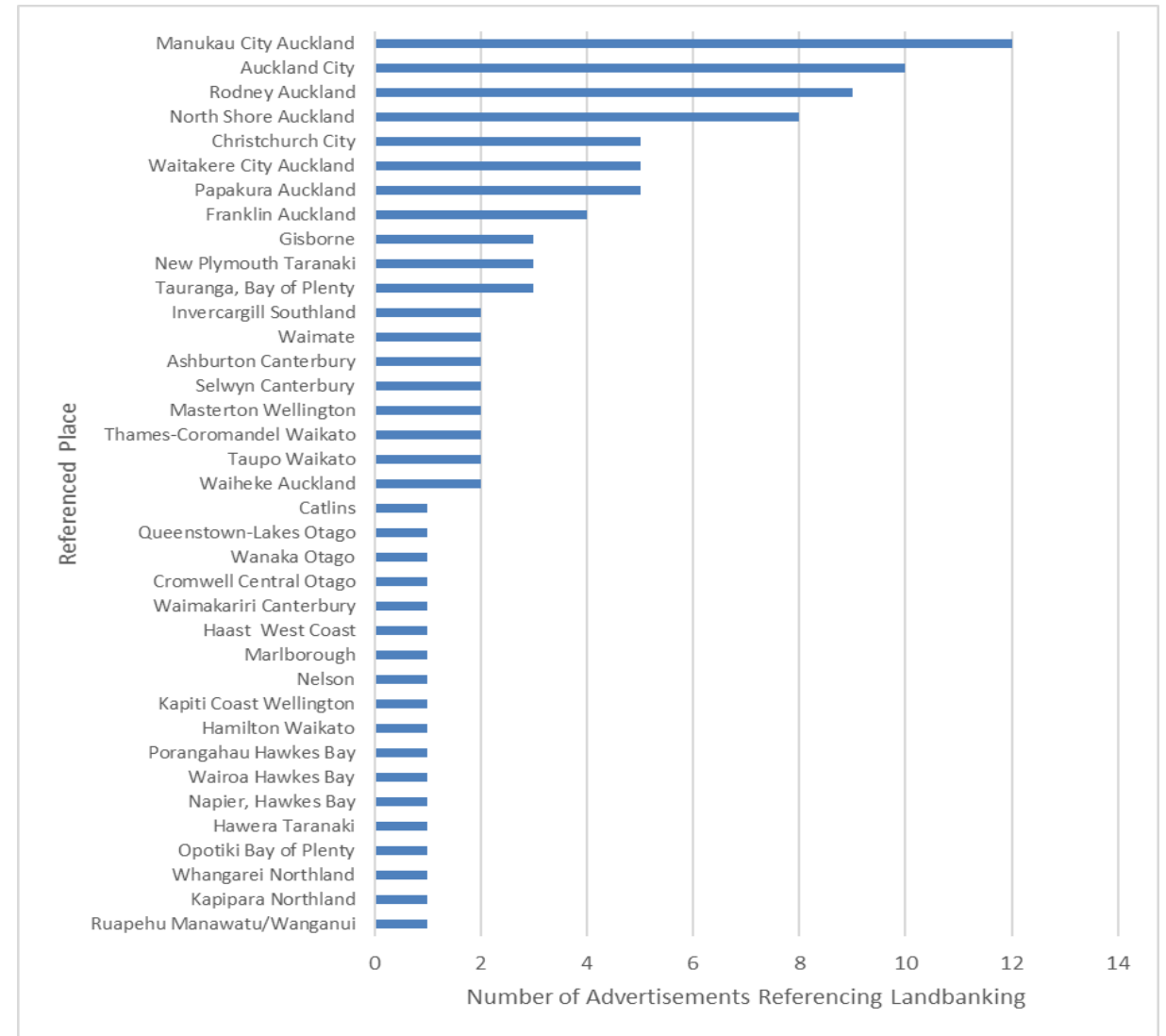
# Logics of Structural Position and the Current Landscape



- Developer/builders repositioned out of dwellings in low quartile value with reductions in the demand
- Few actors combining interest in producing new builds, a long-term commitment to that stock and the residents who live in it.
- Regulatory framework for residential build performance struggles where:
  - developer/builders must take a short-term, transactional approach
  - consumer sovereignty is weak
  - heated house pricing decouples price from performance
  - margins are uncertain and demand is cyclical, and
  - other statutory mechanisms used to facilitate avoidance of liabilities and accountabilities.
- Some key outcomes:
  - Problems of quality and non-compliance (leaky building syndrome (LBS), issues of compliance exposed by LBS and re-build)
  - Misalignment between housing need and supply, only exacerbated by aggregate under-supply
  - Vulnerabilities in the building industry to rogue players and bankruptcy
  - Opportunities to smooth building cycle missed.

# Land-Banking, Land Bankers and House Prices

- Land-banking/under-utilized land:
  - often cited as barrier to supply
  - who, what, why and extent are highly contested
- Explored through analysis of advertisements on Trade Me
  - 101 residential property adverts referencing land-banking
- Geographically widespread but concentrated in Auckland



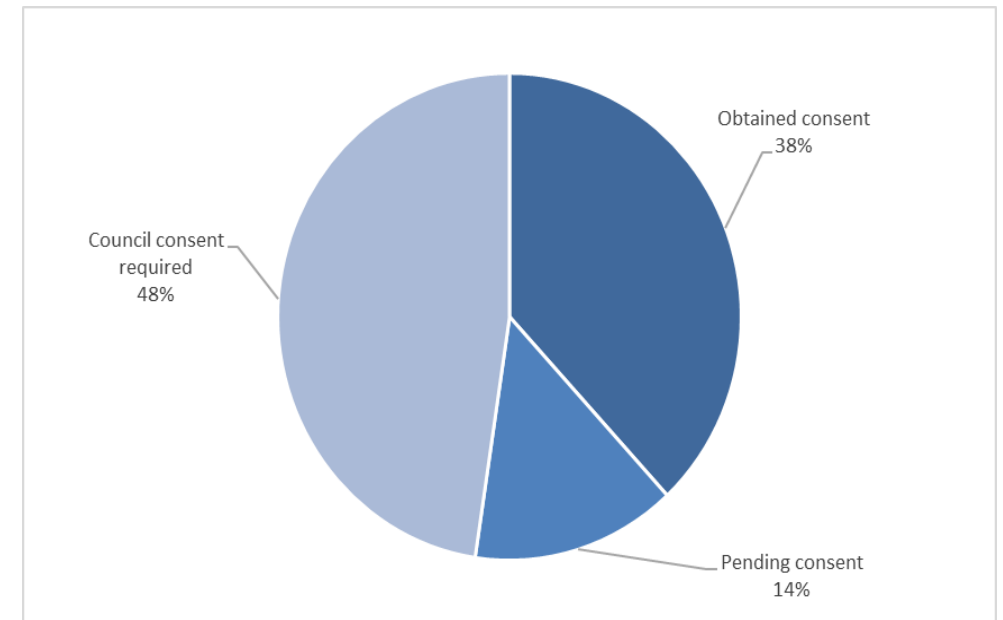
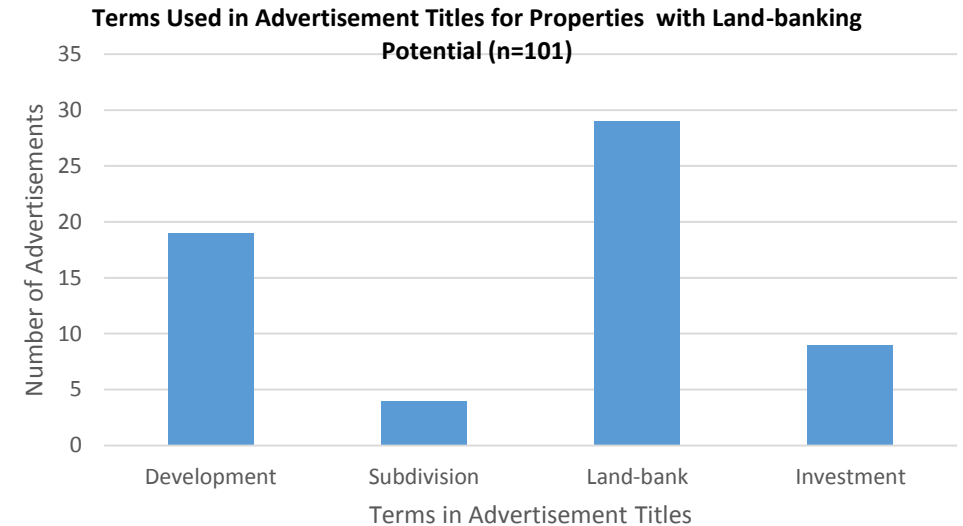
- **Sellers appear:**
  - often to be land-bankers themselves seeking value up-lift from consenting
  - 16% reference potential for value up-lift: planning changes, future urban designations, adjacent to a SHA (infrastructure access benefits)
- **Targeted buyers** – anyone can be investor or developer and land-banking good for nesters
- **Case for purchase:**
  - Buy now or you will be locked out
  - Reap future benefits from passive investment
  - Development hard work is done – design and consent
  - Lifestyle that pays for itself
- **Un-utilized land - not simply pent up, frustrated desire to develop**
  - predicated on the idea of land and house price inexorably rising

*Landbank or Invest and watch this Future Urban Zoned property gain value.*

*Let your kids run free, and your imagination run wild by creating your very own Grand Design, developing the land into smaller lots or simply purchase and landbank for future generations.*

**Options would be**

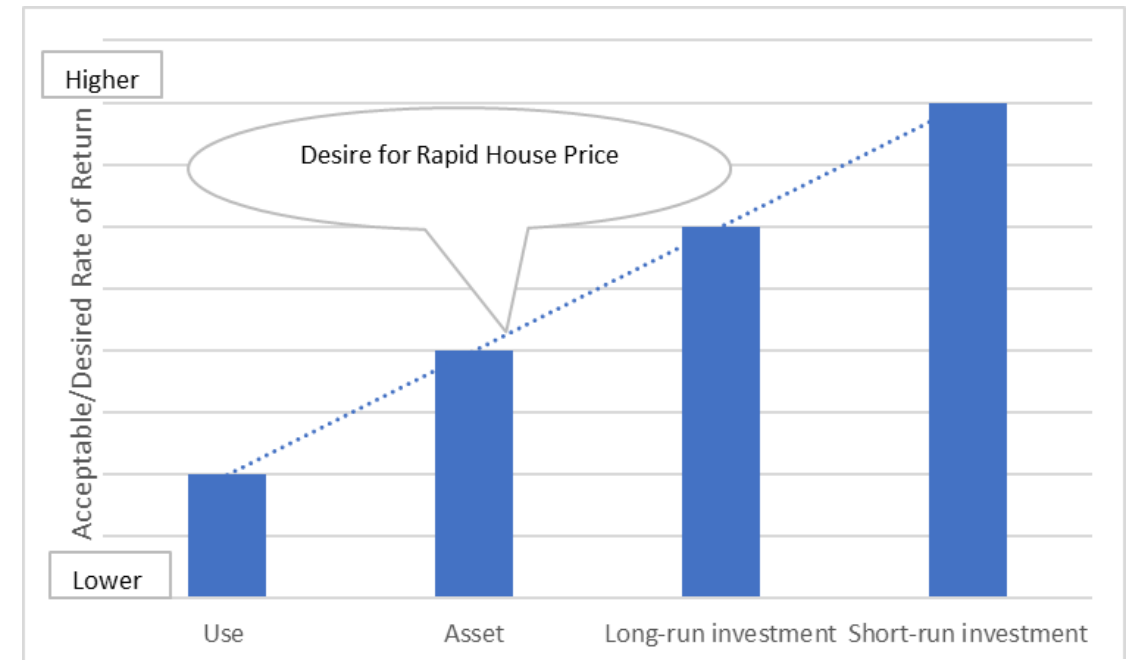
- to buy between family and add access from Franklin St so section has dual access and if wanted sub-divide.
- get a temporary power board connected & use to power caravan or put 20ft/40ft container(s) on site & use as accommodation, storage ,workshop
- build kit set house/cottage/holiday home
- add transportable home
- buy and hold (landbank)
- build family home
- build holiday home and rent out in when not in use.
- Use as campsite until ready to develop



# Changing Expectations of 1<sup>st</sup> Home Buyers

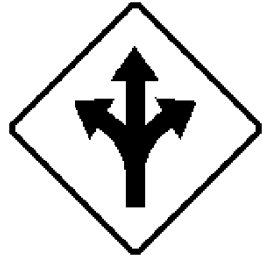
- **Telephone survey of 946 1<sup>st</sup> home buying for owner occupation:**
  - Bought in the 1960s – 407 participants
  - Bought in the 1980s – 400 participants
  - Bought 2003 on – 139 participants
- **Engages with** idea of a big shift:
  - Use value
  - Asset value
  - Long-run investment
  - Short-run investment
- **Explores logics** associated with shifts in the meaning of home

- **Data collected**
  - 1<sup>st</sup> home location, size
  - 1<sup>st</sup> home price, mortgage, lender, guarantors, new/existing build
  - Attitude to use, asset, investment
  - Housing history, household formation and characteristics
  - Use of equity
  - Rental/Home ownership





# Disrupting a Stable Planning Regime



## Political Directions:

- Agenda setting
- Problem framing
- Direction for change



## Decision Support Tools:

- Reveal Calculative Practices
- Impact upon decisions
- Fit for purpose



## Decisions norms, practices, logics

- Reveal governance network
- Understand decision logics, norms, rules, etc
- Reveal interdependencies and inertias

## Landscape

Provides the external context

- Influence on the decisions of regimes
- Can set direction for change

## Regime

Defines Housing Policy Arena,  
Structures Interactions & Relations

- Provides stability for decision making
- Established rules, norms, practices

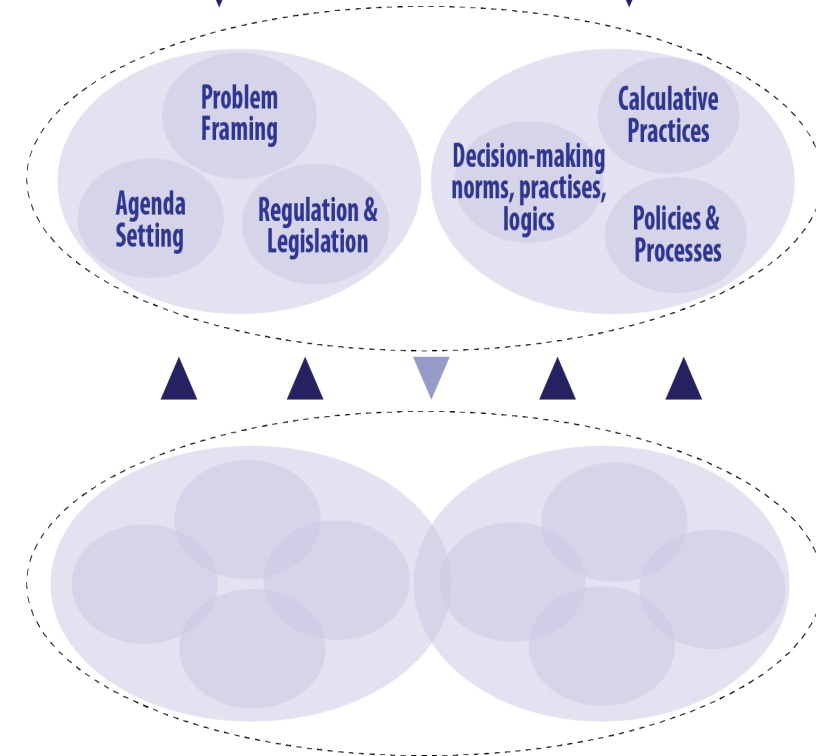
## Niche

Pathways to Change

- Space for innovation, learning, realignment
- Coproduction of new rules, norms, practices



Social values – e.g. Cultural expectation for housing  
Political Cultures – e.g. Roles of State, Market, Citizen  
Built Environment – e.g. Demographics, existing form  
Economic Development & Trends – e.g. Financialisation

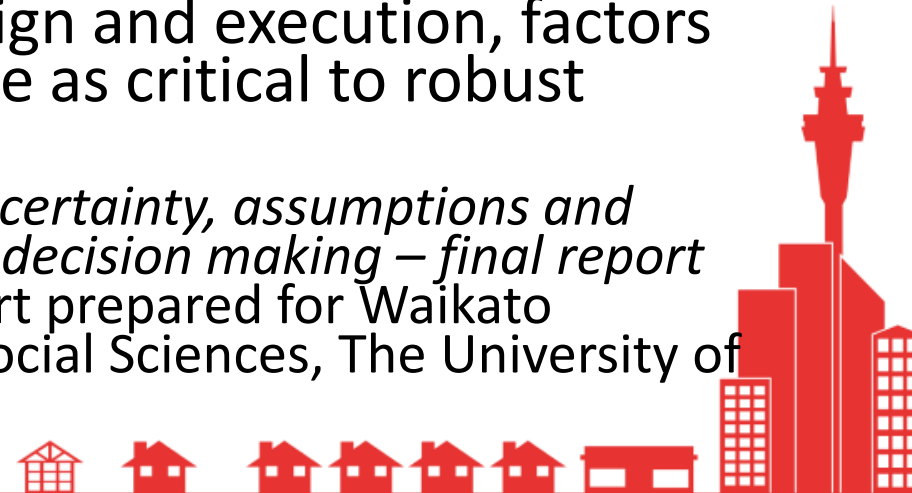




WHY?

# Analysis of decision support tools

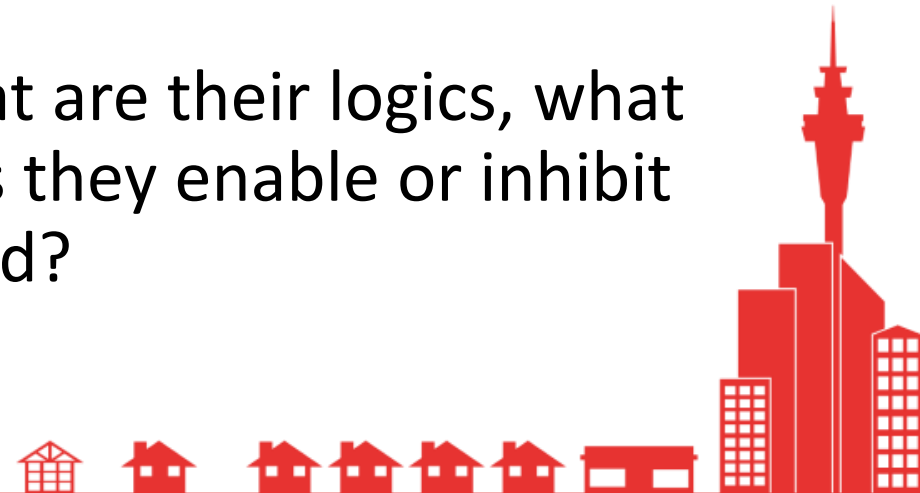
- A broad range of decision support tools are used to support planning decisions about housing quality and quantity
- Some such as AEE and s 32 reports are required by statute, others are applied via expert preference to support or found an evidential basis for expert opinion
- The purpose of the initial review is to inventorise DST commonly used and examine strengths and weakness.
- Then key DSTs will be selected for detailed analysis, linking to the Next Generation Information SRA
- In particular the analysis will assess the reliability of DST, and the rigour adopted in relation to design and execution, factors which have been identified elsewhere as critical to robust environmental decision-making.
  - Wallace PJ. (2017). *Managing model uncertainty, assumptions and limitations in Waikato Regional Council decision making – final report from legal decisions review*. Client report prepared for Waikato Regional Council., Faculty of Arts and Social Sciences, The University of Waikato, Hamilton 33 pp.



## WHY?

# Analysis of decision support tools

- Review hypothesis proposes that decisions about housing are currently made relying upon a broad range of DST, with varied approaches to design and execution and a lack of uniformity in evaluative techniques.
- The hypothesis is that varied quality/rigour in DST leads to varied quality of evidence base and subsequent decisions about housing.
- Reveal calculative practices – what are their logics, what are they designed to deliver, does they enable or inhibit change, how may they be retooled?

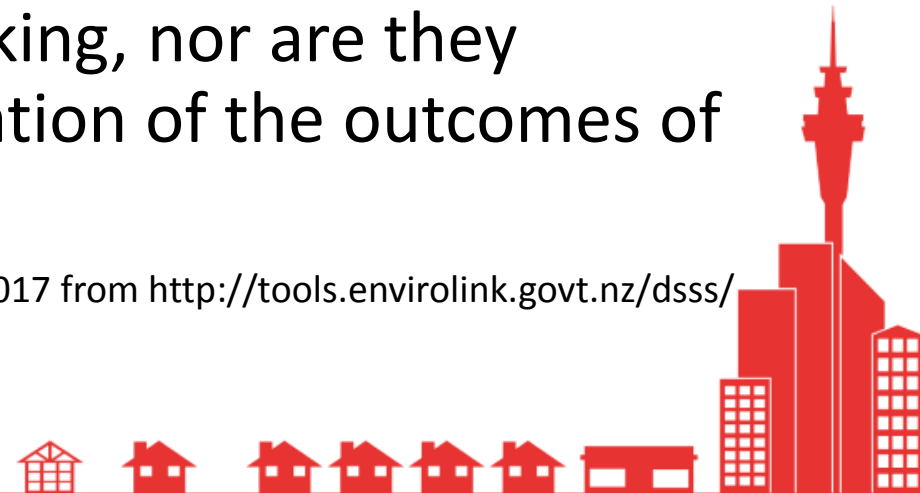


Step 1  
Define Decision  
Support Tool

# Analysis of decision support tools

A method or framework that can be used to assist with analysis/assessment of information required for the decision-making process (e.g. to assess the significance of effects of a development proposal in deciding whether it should be approved) or to assist with the decision-making process itself (adapted from Envirolink 2012). Decision support tools are not methods used solely to collect information to inform decision-making, nor are they methods to assist with implementation of the outcomes of decisions.

Envirolink. 2012: Decision support systems directory. Retrieved 2017 from <http://tools.envirolink.govt.nz/dsss/>



Step 2  
Inventorise DST

# Analysis of decision support tools

- Literature review conducted to identify DST used in planning decisions relevant to housing quality and quantity of New Zealand.
- 30 key DST identified and inventorised:
  - **Description Descriptor Advantages Disadvantages**



Step 2  
Inventorise DST

- Agent Based Modelling
- Consultative methods of assessing effects
- Cost-benefit analysis
- Cost-effectiveness analysis
- Deliberative valuation/collaborative processes for assessing effects
- Design codes
- Design guides
- Economic impact assessment Method One: Input-output (IO) modelling

- Economic impact assessment Method Two: Computable general equilibrium
- Geographic Information Systems Health Impact Assessment
- Impact Assessment
- Indicators
- Integrated assessment models
- Issues mapping
- Logic mapping
- Mediated modelling
- Multi criterion analysis

- Optimisation modelling
- Ranking matrices
- Revealed preference methods
- Risk assessment
- Scenario planning
- Section 32 evaluation
- Simulation models
- Spatial-based analysis
- Stated preference methods
- Systems dynamics
- Transport Impact Assessment
- Virtual reality tools

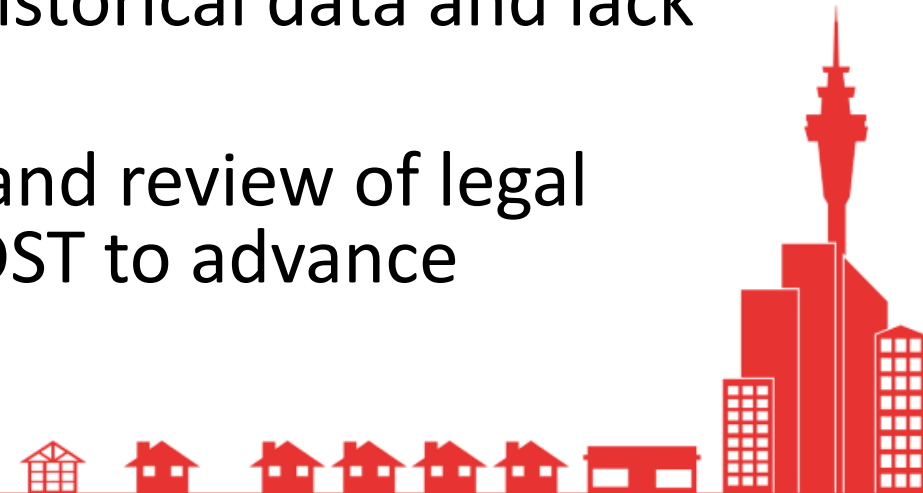




Step 3  
Analysis

# Analysis of decision support tools

- Next we will open up the ‘black box’ of tools – which are the most critical, how do they align with quality and quantity, what are the calculative practices, etc?
- Early findings demonstrate the importance of robust predictive mechanisms, good quality data and rigorous evaluative techniques.
- Early findings demonstrate problems with techniques dependent upon historical data and lack of adaptive capacity
- In development: case studies and review of legal decisions relating to housing DST to advance analysis.



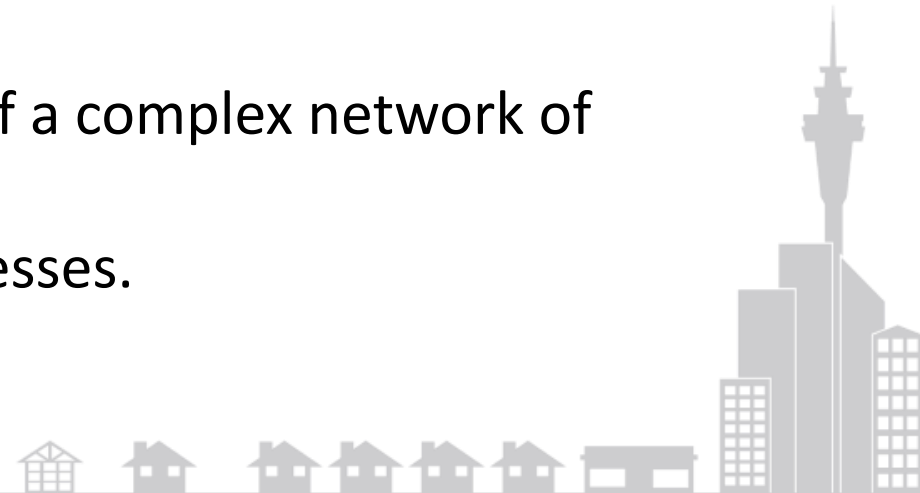
# Decision-making in the New Zealand housing sector: analysis of a complex governance network

## Research question:

Why, despite apparent political support to address New Zealand's housing supply problems, does the planning system continue to deliver an insufficient number of affordable houses in liveable communities?

## Particular focus on:

1. decision-making processes within the context of a complex network of actors, and;
2. the 'hidden' politics within those decision processes.

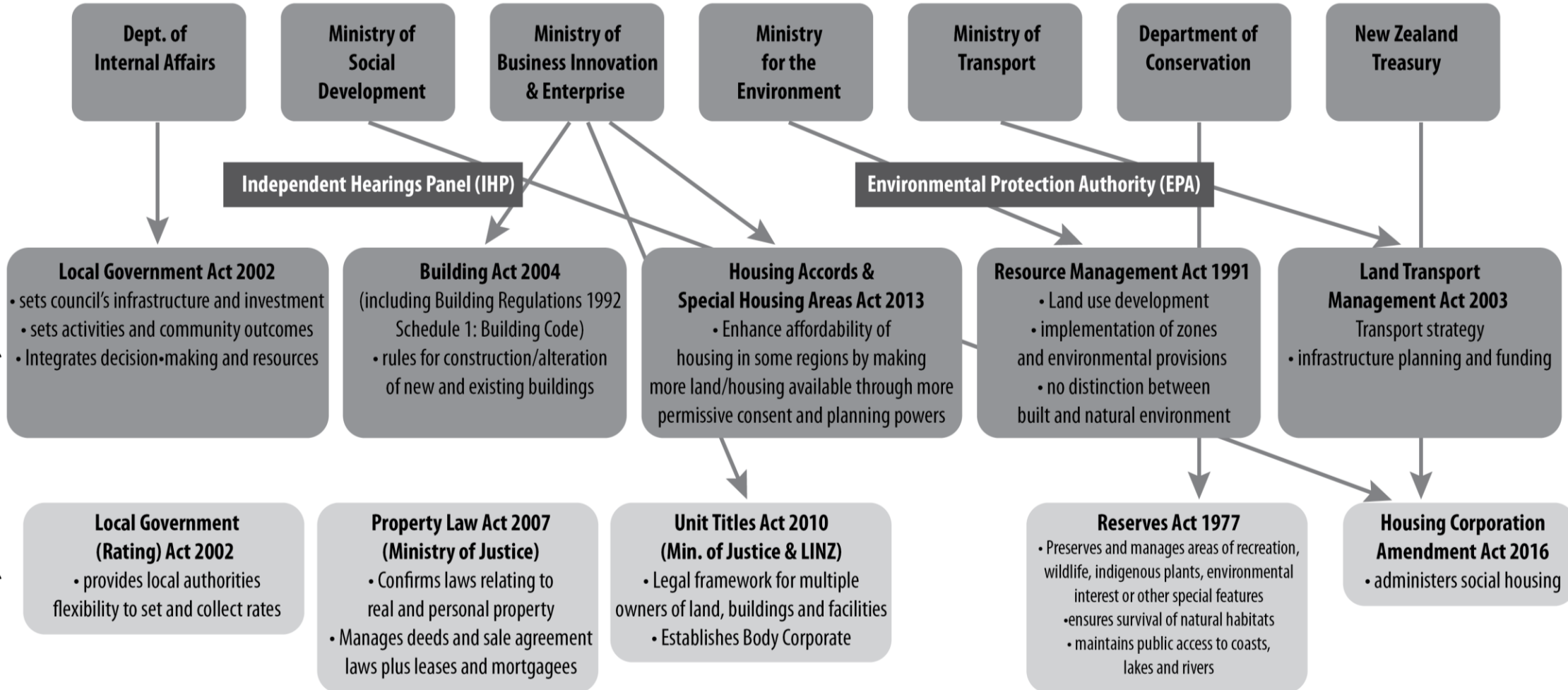


# Mapping the regulatory framework

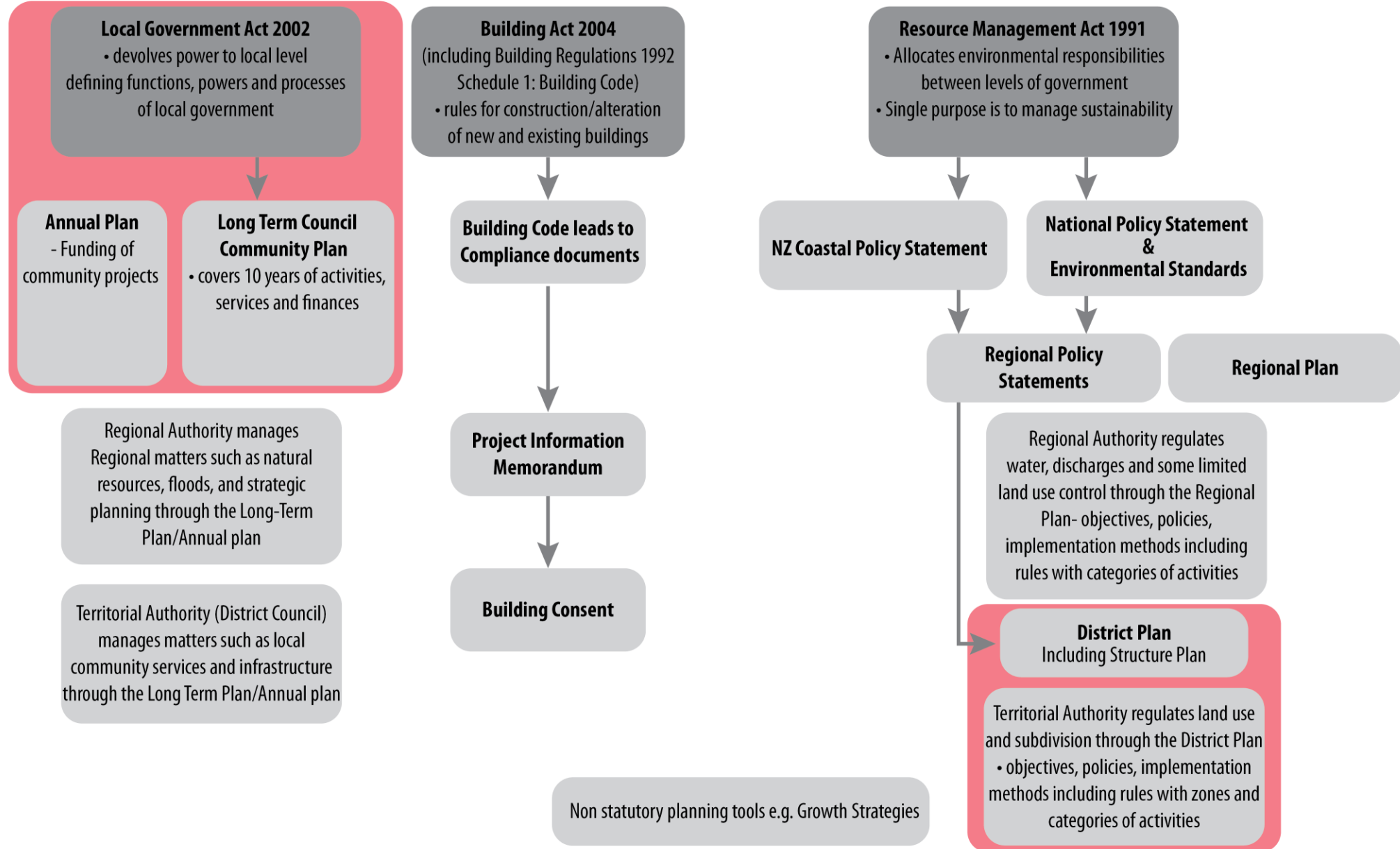
Government

Key Acts

Secondary Acts



## National, Regional (11 RCs), District and City levels (67 TAs)



# Network governance

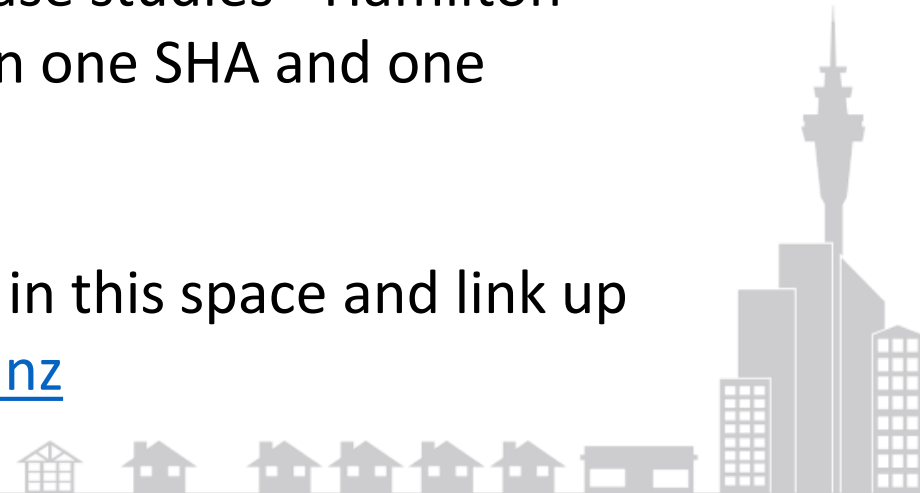
Useful framework to identify i) the complex system of actors involved in housing decision-making and ii) the interdependencies between them.

Will allow an analysis of the dynamics of this network governance system in practice in two New Zealand cities.

## Case studies

Preliminary stages have identified two potential case studies - Hamilton City Council and Auckland City Council, focusing on one SHA and one aspect of the Auckland Unitary Plan.

Keen to make connections with other researchers in this space and link up with other field work – [fjd5@students.waikato.ac.nz](mailto:fjd5@students.waikato.ac.nz)







# What is it and why do it?

What is Problem Framing? ‘... the process by which people develop a particular conceptualization of an issue or reorient their thinking about an issue’ (Chong and Druckman 2007, p.104).

Framing has been used as an approach in climate change (Bosomworth 2015; Fuenfgeld and McEvoy 2014) and affordable housing (Goetz 2008; Jensen 2012) as a means to understand how messages/information about the political nature of the problem influence decision-making practice.

Therefore, establishing the existence and diversity of problem frames is important for understanding the ways in which a problem is defined, its influence on the public agenda and public opinion and in ‘determining the nature of policy alternatives and policy outcomes’ (Goetz 2008).



## Landscape

Provides the external context

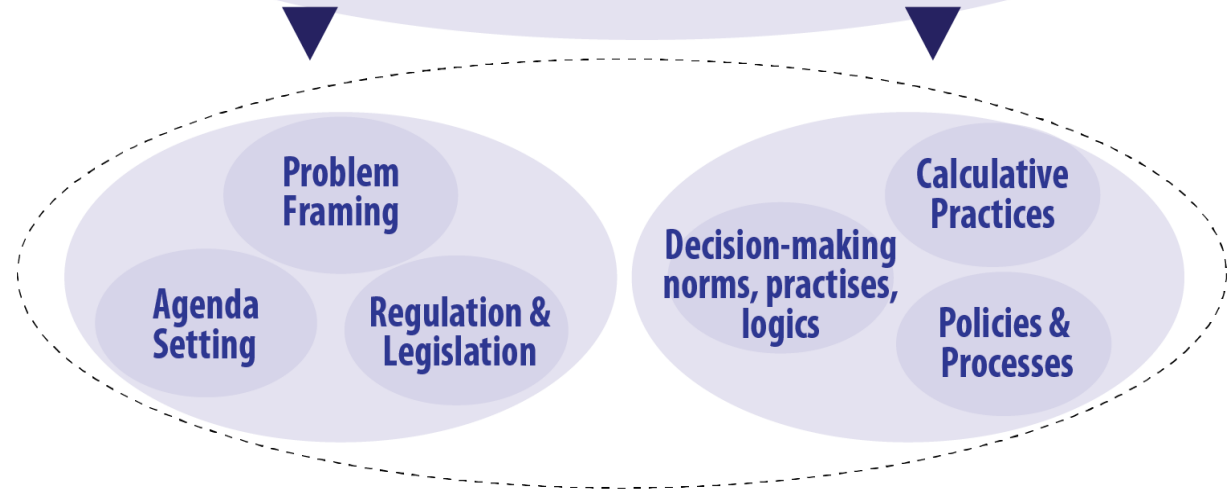
- Influence on the decisions of regimes
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Built Environment – e.g. Demographics, existing form  
Economic Development & Trends – e.g. Financialisation



# Problem Framing - Methodology

What is Critical Discourse Analysis? It is a policy research tool that is designed to help us understand holistically the complexity of policy problems. One focus is to make clear how dominant 'frames' influence decisions, and hence outcomes.

Theoretically, it assumes that the housing problems that are the focus of the BBHTC Challenge are influenced by the values, beliefs and modes of thought that have become institutionalised or 'locked-in' to our planning system.

Data collection began in June 2017

The first phase of data collection – desk research.

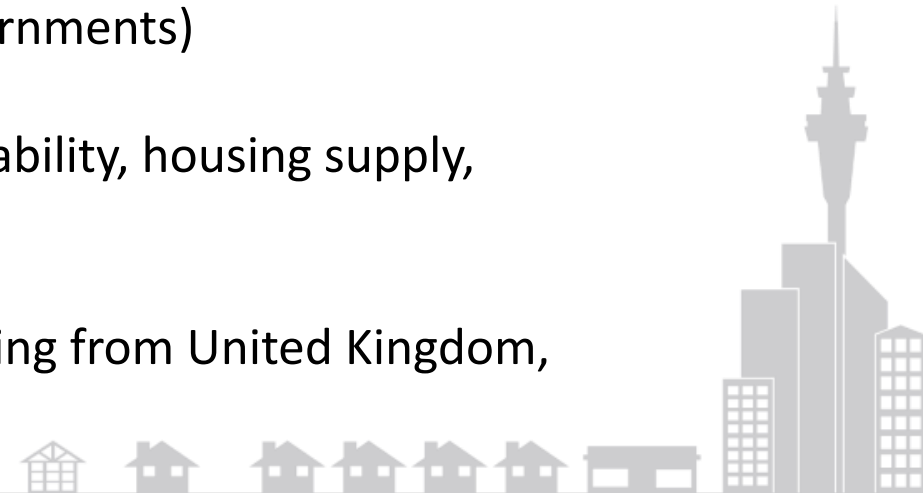
18 Ministerial speeches from 2013-2017 (National-led governments)

Housing reports and Media articles

Google and Google Scholar word searches – housing affordability, housing supply, housing quality, and social housing

Auckland and Wellington – no rural housing searches

Scholarly articles using Critical Discourse Analysis and Housing from United Kingdom, United States, and Australia



# Problem Framing – Ministerial Speeches

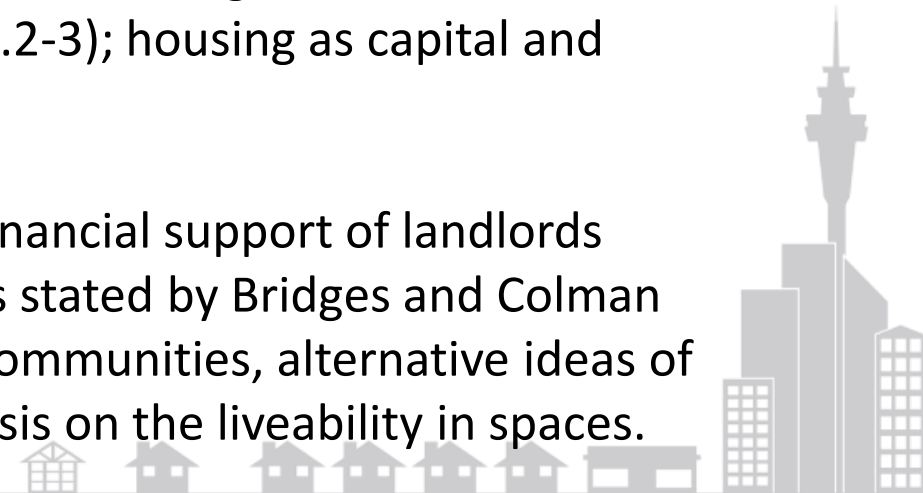
Ministerial Speeches	Year
Bill English	2013
Nick Smith	2013
Tariana Turia	May 2014
Nick Smith	May 2014
Paula Bennett	May 2014
Budget	2014
Bill English – Housing Affordability	29 Sep 2015
Paula Bennett	May 2015
Nick Smith	May 2015
Budget	2015
Paula Bennett	May 2016
Te Ururoa Flavell	May 2016
Paula Bennett	May 2016
Simon Bridges, Jonathan Coleman	May 2016
Nick Smith - Budget	May 2016
Te Ururoa Flavell – Budget	2017
Amy Adams – Budget	2017
Steven Joyce – Budget	2017



# Problem Framing – Preliminary Findings

Diverse problem frames are informed by our broader landscape of network governance.

- 1) Regulatory frame – land supply, housing supply, ‘red tape,’ housing affordability and social housing. This frame explores the highly politicised relationship of the politics and power of land allocation and housing policies to support urban development agendas (Murphy 2016, p.2530)
- 2) Immigration and burgeoning population frame – housing demand, location of houses, especially in densely populated cities, such as Auckland and Wellington.
- 3) The ‘financialisation’ of housing frame - ‘financialisation of housing demand’ and ‘under-regulated private rental market’ (Gallent et.al. 2017, pp.2-3); housing as capital and investment opportunity; housing for building wealth.
- 4) Housing quality frame - warmer, drier homes through financial support of landlords (insulation, curtains, ventilation, and mould removal) as stated by Bridges and Colman (May 2016 Budget Speech); overlaps with sustainable communities, alternative ideas of dense housing with open shared spaces with an emphasis on the liveability in spaces.





# Problem Framing – Where to from here?

Next steps include”

- 1) Continuing the analysis – initial stages but much more information to glean from a deeper exploration of speeches, media articles and reports
- 2) How will the elections play out and what effect will that have on the housing issue?
- 3) Develop relevant material for research publications to extend the scholarship on housing and framing in New Zealand
- 4) Great to build relationships which lead to achieving outcomes of sustainability, liveability and quality of housing! Very happy to connect to researchers in the area of framing and/or discourse analysis! I can be reached at [gauri.nandedkar@waikato.ac.nz](mailto:gauri.nandedkar@waikato.ac.nz)



# ‘Poking the Stick’ to See if it Moves

- **Regulation and Perversity**
  - Over-preoccupation with land-use planning using a weak evidence base
  - Neglect of regulatory settings that can have perverse effects:
- **Production and pipelines** caught up in a vicious cycle of blame
- **Institutional landscape** changed in a 1990s experiment and impoverished
- **Other sector policy and trends** – market deregulation and smaller government, actuarial individualism, and asset-based welfare

# Linkages and Opportunities?

- How can we add-value?
  - To your research?
  - By drawing on your research?
    - What case studies can we complement?
    - Where can we link with your research?
    - Can we time data collection/outputs to link with your schedules?
- Who should we be speaking to – academics, decision makers, and actors:
  - To explore these dynamics?
  - To generate reflective discussion?
  - To promote change?