

Workstreams, Projects, Opportunities The Road Ahead

Chris Kane
Secretariat Manager

Workstream recap

Procurement

Skills

Inputs

Technology

Research & Evidence

Initiatives update

Workstreams	Purpose	Progress
Skills	Ways to Improve Labour Productivity and Skills	<ul style="list-style-type: none">• Skills Strategy launched• Implementation Strategy being developed
Research	Research as a tool to Target and Improve Productivity	<ul style="list-style-type: none">• KPIs, targets and statistics• Research Action Plan implementation
Procurement	Changes to Procurement Processes to Improve Productivity and Quality	<ul style="list-style-type: none">• Auckland Procurement Forum• Canterbury Procurement Stocktake
Construction Systems	Ways to Improve on the Productivity on Construction and System	<ul style="list-style-type: none">• Segmentation of market/process mapping• Building Information Modelling

Skills Strategy

- Improving sector productivity and performance through improving skills and their utilisation
- Strategy published March 2012
- A first attempt at unified action in a large fractionated and sometimes unruly industry

Skills Implementation



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- Consultants (Third Bearing) gathering common threads from the strategy's responses
 - Two very clear themes:
 - Management skills are needed
 - Industry bodies have a LOT to do!
 - Very clear message that the Partnership is expected to provide leadership

Skills Summit

- Sector was brought together to begin the process of creating the skills strategy
 - In June 2011
 - Much has happened since
- Have pencilled in a follow-up summit for November 30th in Wellington
- Moving projects from “strategy-aligned” to “strategy driven” is our challenge

Skills Projects

- CERA – Construction Sector Workforce Plan
 - Based around skills + capability needed for Canterbury economic growth – needs client input
- Construction Safety Council – Industry-wide safety plan
 - Needs input on where real H&S issues are
- Evidence that the Skills Strategy is driving what's happening will probably first come from what stops

Evidence



Useful and relevant research

Lots of case studies

Research Action Workshops

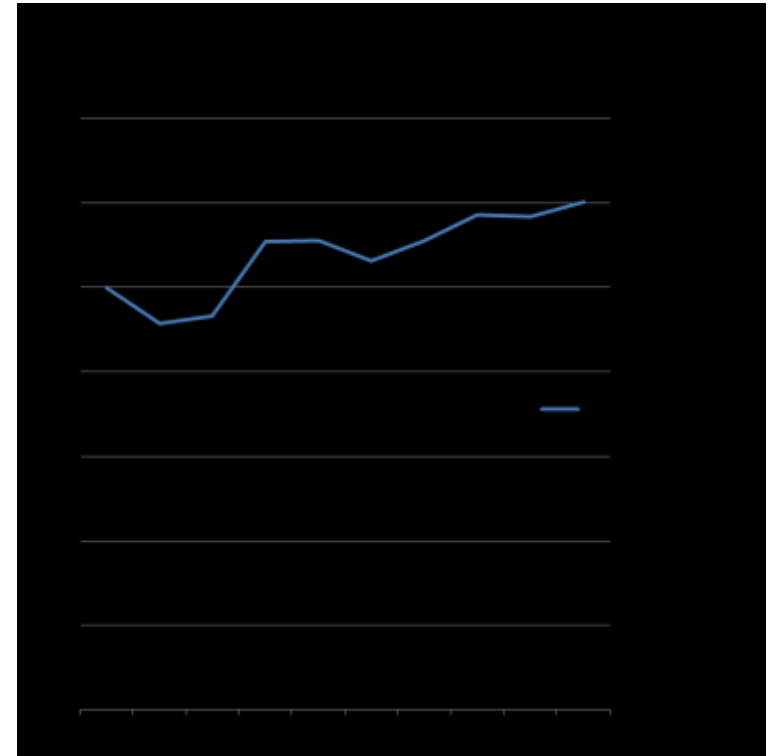
Presentations to government
with real data (Housing
Affordability)



Real Data

“What gets measured gets done”:

- 10 years construction cost data, all elemental costs recorded
- Productivity growth circa 3% year on year (taking out 2002)
- Hours to build
 - 2003: 976hrs
 - 2011: 743hrs
- Costs of Compliance
 - Blueprints / royalties: +1410%
 - Consents: +361%
- Time to build 200m² house:
 - Stonewood: 12-14 weeks
 - Industry norm: 18 weeks plus



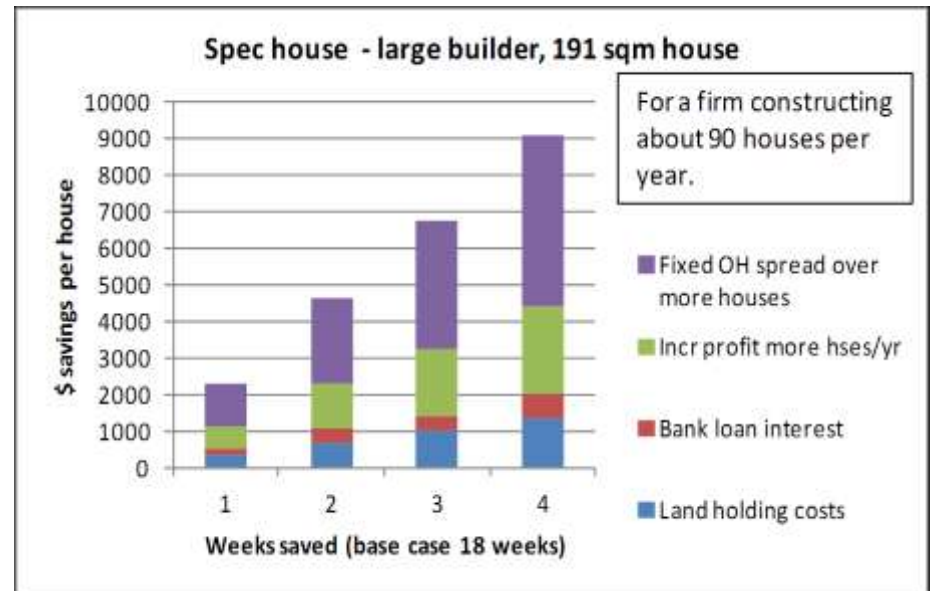
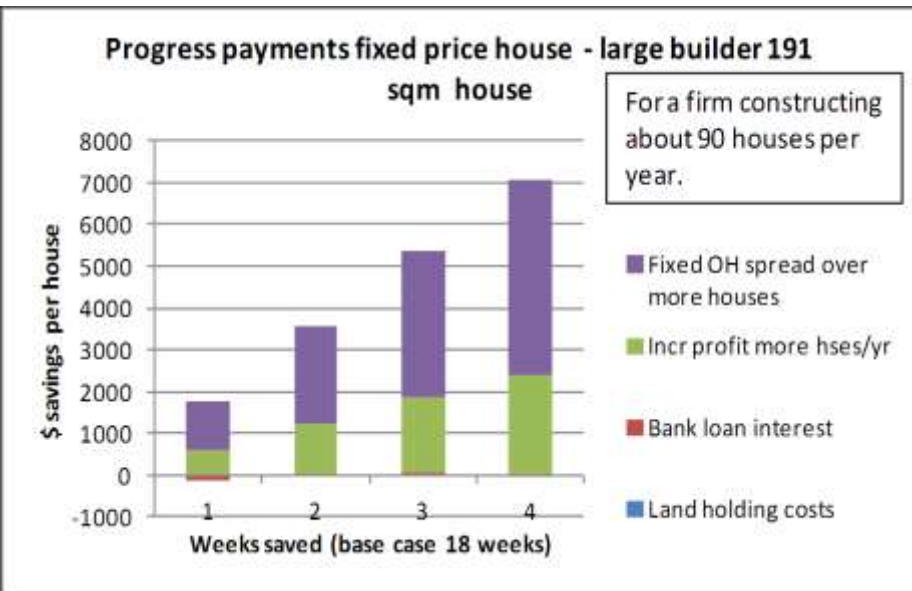
Opportunities for policy change

Stonewood's data on house inspections

- 16 separate inspections for 2 storey house
- Worst case is 3 weeks of lost production – work can't occur with inspections taking place
- Great variability in booking inspections – hard for scheduling
- Self inspection implications? Council liability vs contractor liability,

Targeting messages

Lifting Residential construction productivity is worth a lot: By taking 4 weeks out of a typical 18 week build period a large builder could save \$7,000 - \$9,000 per house:

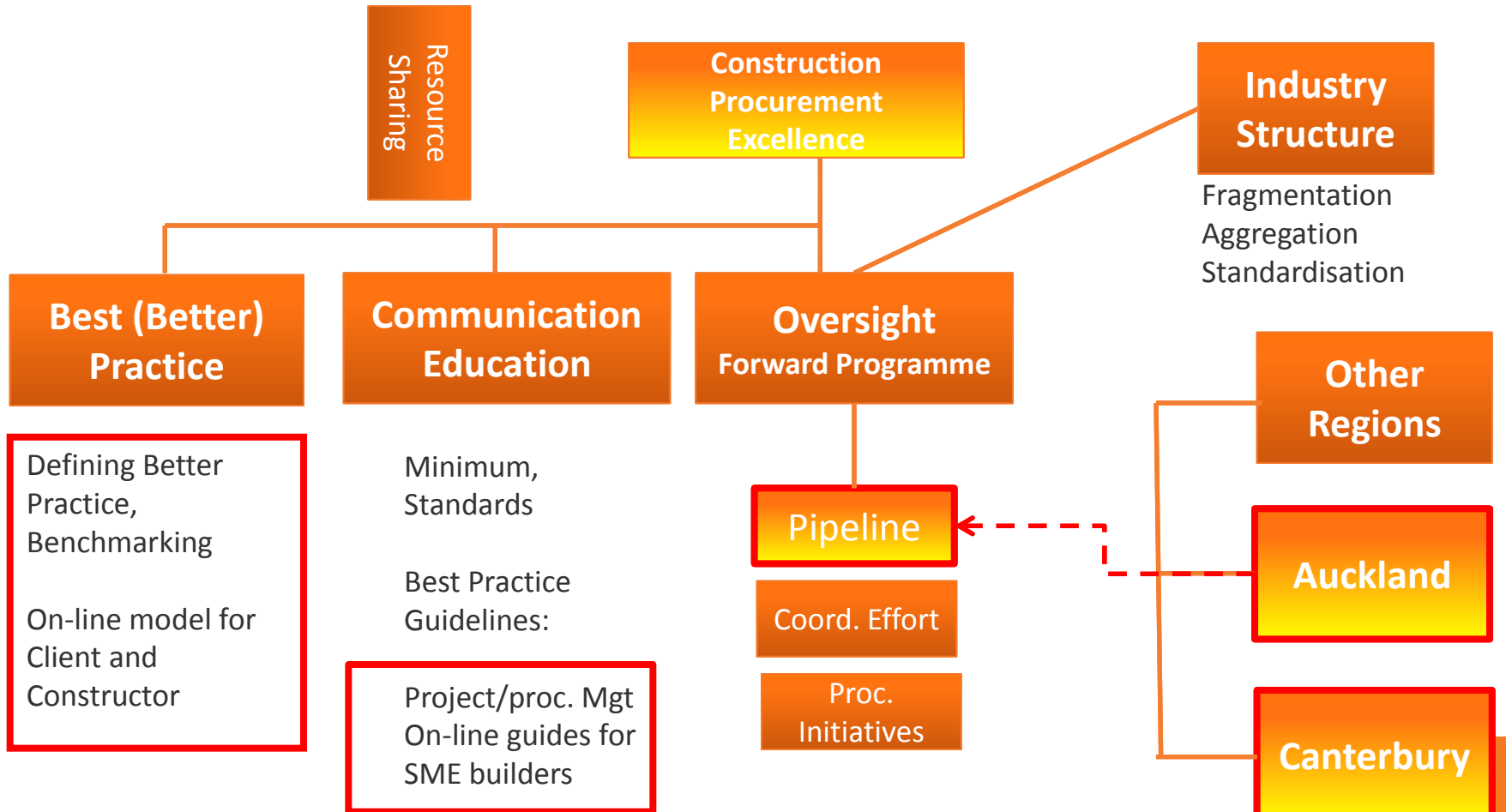


Source: Ian Page, BRANZ

Research topics

- Value stream mapping and segmentation (industry processes)
- Learning from Canterbury rebuild (resourcing & trends)
- Canterbury: how is it changing supply & demand for building products
- Tracking productivity improvement over time
- Drivers of innovation in the sector
- Volume builder productivity
- Barriers to increased standardisation
- Use of technology – learning from other industry sectors
- Regulation & its impact on productivity

Procurement



Procurement

- In the midst of major engagements with both government and the sector on procurement
- Many Public Sector entities still focus on lowest price and still struggle to understand life-cycle costs
 - Working with former ED Procurement team on changing this
- Auckland Procurement Forum established and proceeding well
 - Auckland Council in leadership role
 - Next industry event 16 November
- Preliminary Canterbury Procurement Forum
 - CERA leading first session – different drivers to Auckland
 - First meeting November 1st

A model for Centre of Construction Procurement Excellence

Client perspectives, requirements and expertise eg: business case and expenditure control requirements, specific requirements from a construction national infrastructure plan, etc

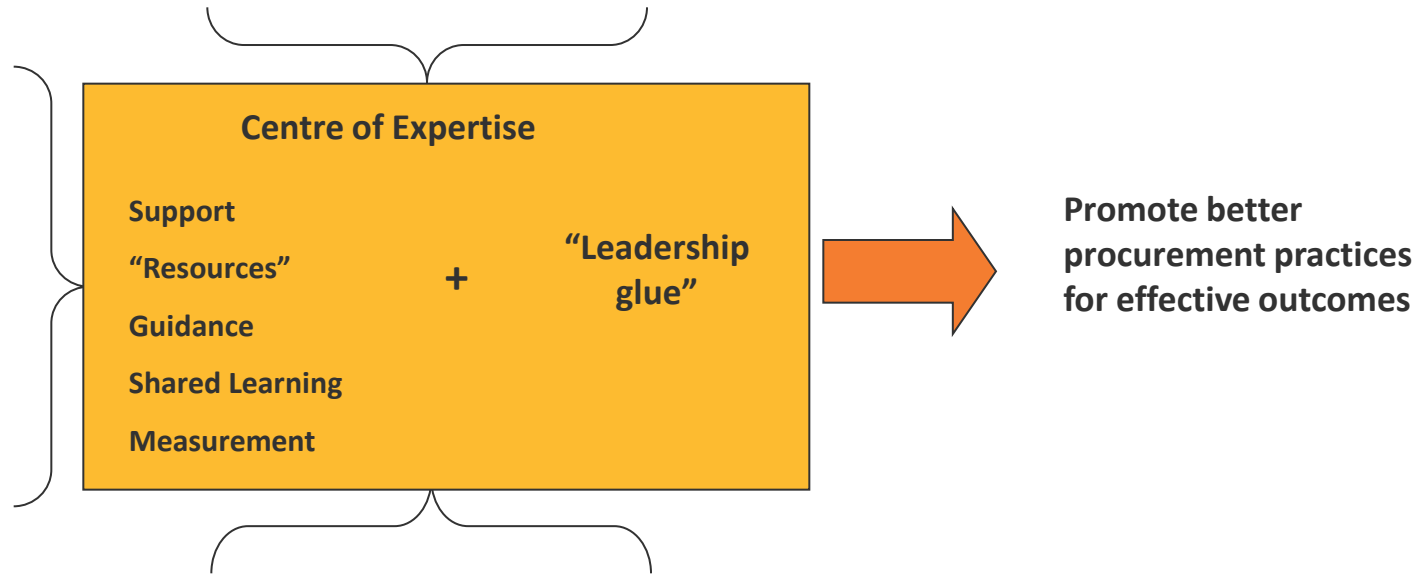
Other relevant perspectives:

International norms and standards

Standards

Legislative requirements

Other constructions services (eg insurance / finance)



Supplier perspectives, requirements and expertise: eg Professional standards / expectations, awareness of wider construction activity,

Construction Systems



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- What we build, how we build it, and with what materials, techniques and technology, conforming to what rules and statutes
 - Role is to leverage on latest knowledge, and turning it into action

3 Key Projects:

- National “Pipeline” Project
- Building Information Modelling (BIM) → GeoBuild
- Segmental Process Mapping



Three components to the strategy:

National Online Building Consent System – led by Building and Housing



**Ministry of Business,
Innovation & Employment**

Acceleration of the use of Building Information Modelling (BIM) – joint Building and Housing / Productivity Partnership



An enhanced national and local Geospatial Information Strategy (GIS) – led by LINZ



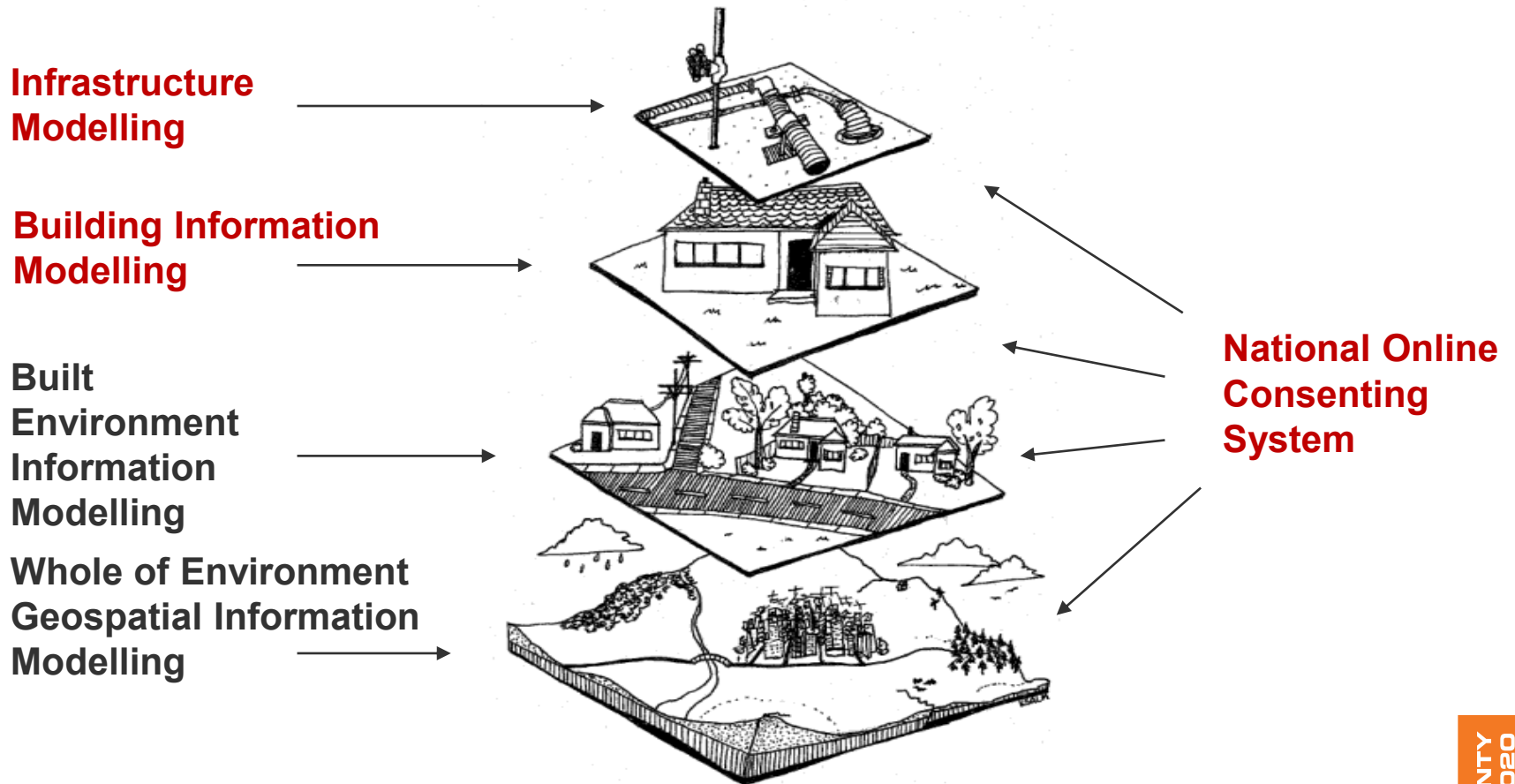
The GeoBuild™ Strategy

A national information exchange “framework” that digitises building, geographical and environmental data and information which is available online to users



GeoBuild™ is not an IT project, it is a strategy for technology solutions or activities affecting the whole environment to be standards based, open, interoperable and reusable across organisations.

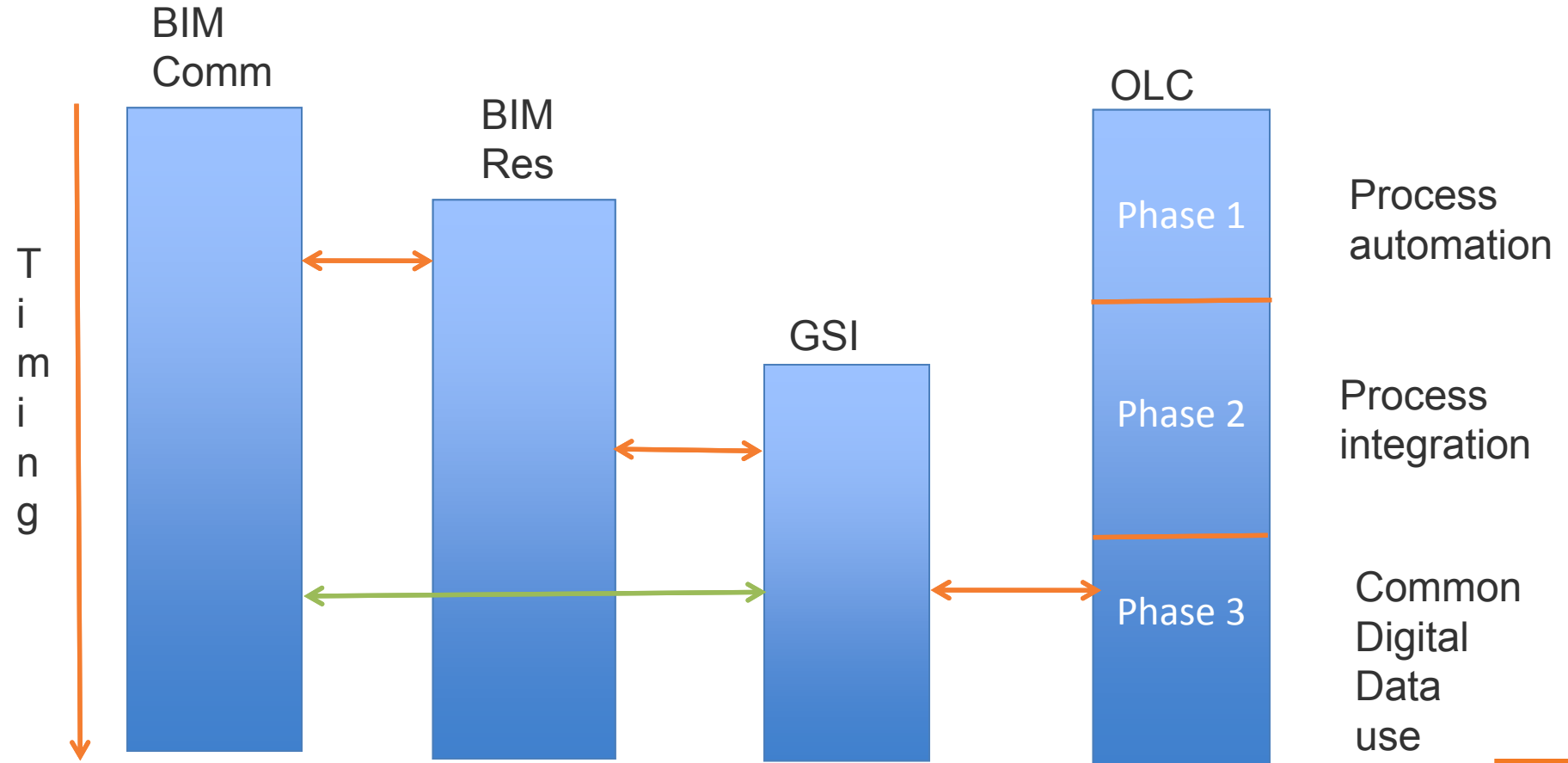
The long game



BIM Acceleration

- Why?
 - 4-7% Productivity increase for BIM projects
- How?
 - Wider industry awareness, government procurement
- Needs?
 - Skills, advice
 - Training

Timing Drives Actions

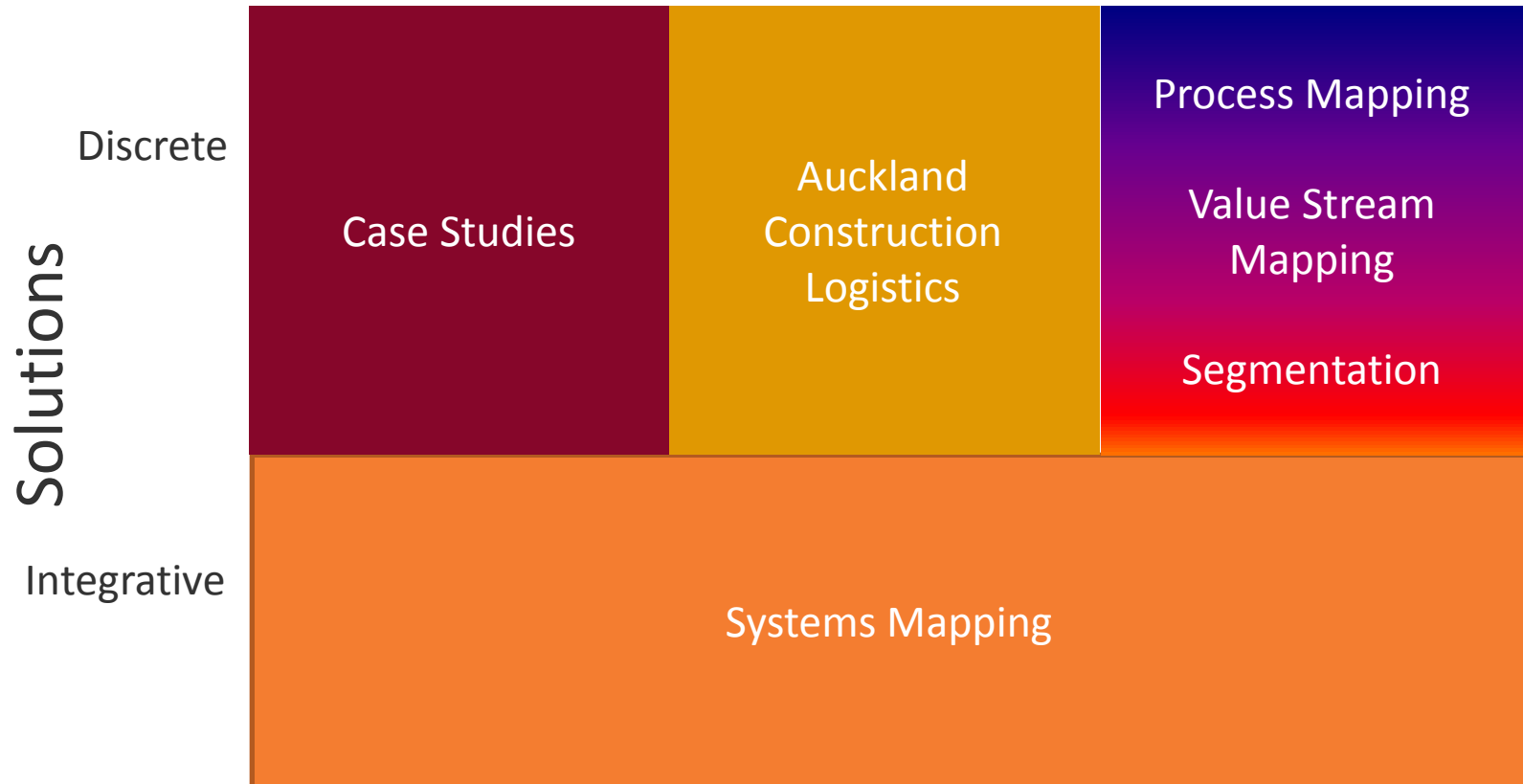


Interoperability of data underpins GeoBuild optimisation

National Technical Standards Committee

- Pan-industry & government committee
- Aim: to recommend and codify standards to promote interoperability in the use of digital data for the built environment
- Members: Jasmex, Mainzeal, Auckland Council, MBIE, BECA, LINZ, Auckland University, Productivity Partnership
- First project: Information exchange standards
 - Due December 2012, to underpin MBIE's online consenting initiative

Segmental Process Mapping

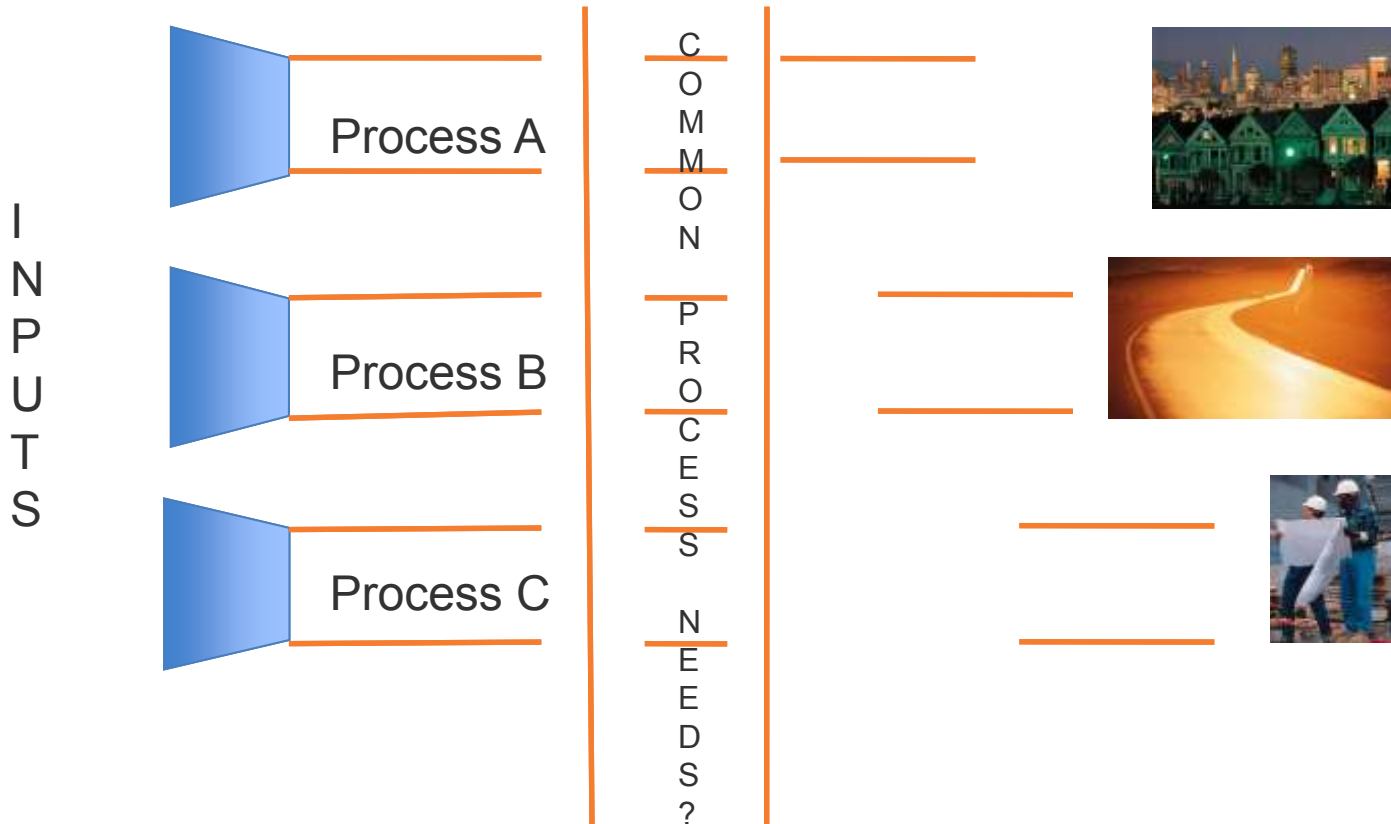


Segmental Process Mapping

- Segmentation maybe:-
- i) Common Process
 - ii) Common Design
 - iii) Common Customer
 - iv) Common construction methodology

Strict application of the 20:80 rule to avoid distracting detail

Must validate Productivity improvement opportunity, and quantify it



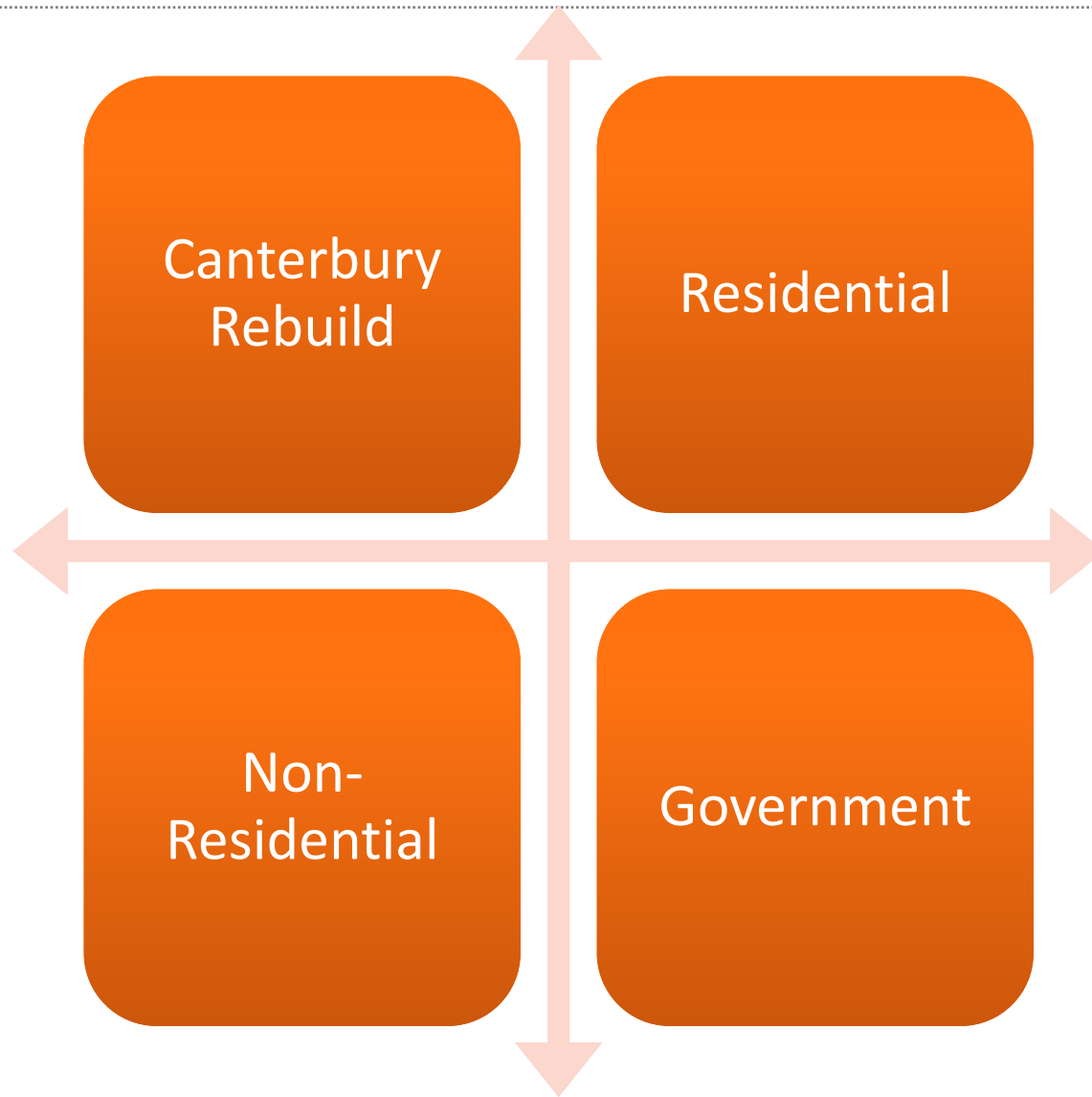
Value Stream Mapping

- The technique is relatively new to the construction industry.
- Expectation is that a whole series of productivity projects will arise through this
- Each project or group of projects may be separately resourced, and will involve industry representatives
- First cab off the rank = new home small builders

Value Stream Mapping

- The recommended segments to proceed with are:-
 - New Homes – Group Builders
 - New Homes – Small Builders
 - Central Government, Education
 - Private, Retail Buildings
 - Private, Office Buildings
 - Private, Industrial Buildings
 - Prefab/Modular
- These represent 60% of the forecast Life Cycle cost of construction in NZ

Areas of the sector that going forward we'll focus on:



Delivery

Market facing theme development

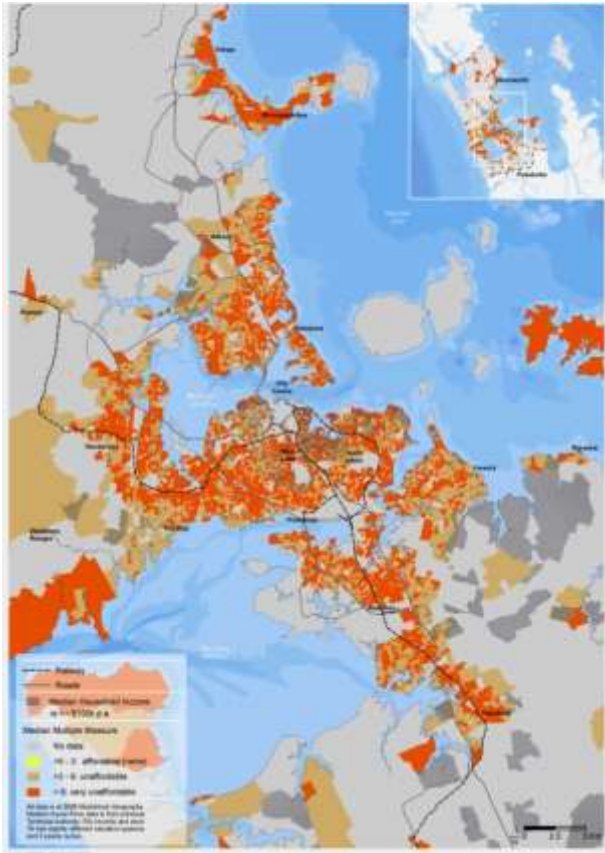
Industry engages in theme development
& identifies projects

Interested partners scope, deliver &
invest in projects

Targets for Discussion

- A great way to identify areas of common interest, and build consensus
- Targets as presented are “pragmatic”, in a form that will mean something outside of government
- Targets are not policy, graven in stone, finalised – they are for engagement
- Process of refinement ongoing

Government is paying attention



**Independent Taskforce
on Workplace Health and Safety**



Housing
affordability inquiry



**Canterbury Earthquakes
Royal Commission**
Te Komihana Rūwhenua o Waitaha

Where to next?

Government gets the challenge and strongly supports the partnership approach

Government will drive and lead some projects – but it needs industry to make them workable

What will industry drive and lead?