

Submission to: **the New Zealand Infrastructure Commission Te Waihanga**

## **Comments on the May 2021 Strategy Consultation Document**

I was concerned about missing your 24 June deadline so have drafted this brief submission. I had many other comments but ran out of time. Hopefully these are of use.

### **My background**

I have 30 years background delivering major/mega project in NZ/Australia and the northern hemisphere. I have worked as a consultant and in Australia, led major project client organisations, managed a “tier 1” construction company as well as been heavily involved in academia. My PhD was focused on the economics involved with project delivery approaches.

### **1<sup>st</sup> comment**

The document raises a large number of very important issues. Many are interrelated and interconnected. Many have been known about for a long time with little progress made. A strong recommendation is that the Infrastructure Commission adopt a revolution not evolution approach to any recommendations. A normal incremental bureaucratic approach to these challenges will fail and there will be another report in five years looking at the same issues against a worsening situation!

### **2<sup>nd</sup> comment**

Taking a systems-based approach to these issues will require more courage but yield much greater benefits. A balance between “best for locals/vs best for NZ overall” needs to be found. A lack of courage in these matters will not serve NZ well. We need to draw from inspirational from courageous NZers such as Hillary and Blake etc.

Example of a systems-based approach; a dramatic improvement to urban sprawl, housing/accommodation availability, affordability and built form performance, energy efficiency/carbon emissions reduction, urban transport access and city liveability could be made with a comprehensive mandated approach.

Select specific inner urban precincts, mandate large scale multiple medium density building (5-6 level) with European style urban realm, mandate only large scale modular/componentised/semi standardised design which enables significant costs savings through industrialised scale manufacture of a standard set of components that could be utilised to generate a wide variety of building shapes and formats (like IKEA does). This approach will lead to dramatic productivity improvement as well as increased skills and much better industry safety performance

Insist on high quality dwelling and urban realm design. Very high environmental standard mandated, high levels of energy/water efficiency is possible in such carefully design precincts. Careful planning could result in high quality mixed use (residential/retail/commercial) precincts which reduced commuting demands

Govt to commit to fund a significant number of units (50,000 over say 5 years) to enable the private sector to invest and recoup investments required to achieve scale and cost reductions.

Housing mix/stock could be some public housing rental, some lower cost affordable housing. Some private sector rental, some private sector market level housing. The mix will work if it is carefully designed and supported. Govt to fund the precinct maintenance and management to ensure the precincts remain attractive places to live, work and visit.

Support with good public transport and ideally locate near good existing transport. Encourage low carbon transport options to take the benefit of the higher housing density and inner urban locations.

This would lead to improvements in:

Housing supply	tick
Housing affordability	tick
Housing quality	tick
Urban densification	tick
Transport	tick
Environmental efficiency/carbon goal	tick
Productivity	tick
Skill building	tick
Innovation	tick

### **3<sup>rd</sup> comment**

Commit current and future Governments to a long-term Project Pipeline for all public sector authorities.

Follow this up by concerted construction industry cultural and structural change. Change contract terms, rebalance risk allocation, force a client led fairer/better contracting model if they want govt funding.

Use pipeline as a pre-qualifier to force a change in the industry labour model away from the current multi-level contracted out model, force skill development, apprenticeships, training with staff, give companies certainty to invest in skill development.

Need to move away from leaving everything to market economics and the market to solve- it hasn't. The market has driven the NZ construction industry into a hyper short term transaction efficiency model which has a low skilled contracted out low investment contracting model more focused on staying solvent during industry peaks and troughs rather than growing capability. Use the pipeline to change the industry model from the top down.

Insist on used of -BIM/modular/CADCAM to enable increased productivity/innovation/skill growth and alleviate current unskilled/semi-skilled worker shortage.

Support Pipeline with MoW type - centre of excellence, assist numerous small authorities- maybe act as their deliverer- it must be cost competitive, maybe centre of excellence has a base level of funding but should be cost recovery wherever possible to ensure good terms for small authorities

At the high end, NZ is far too reliant on international contractors who come in and out of NZ on their terms- this is not serving NZ well. If NZ has any intentions of a major infrastructure delivery agenda with capable reasonable industry partners -use the pipeline to give certainty for major companies to invest and build capability.

Increase the current low level of capability in collaborative forms of contracting which have the Client maintaining significant risks.

Use the pipeline to take an NZ wide approach to Government project construction insurance. Could be funded and underwritten by an ACC type levee- overall this would be significantly cheaper than the current international insurance market

This would lead to improvements in:

Industry capability	tick
Industry resilience	tick
Productivity	tick
Workforce development	tick
Skill development	tick
Technology uptake	tick
Performance/outcomes improvement	tick

#### 4<sup>th</sup> comment

Radically address the current time and cost to permit projects. Ensure NZ wide outcomes take precedence over hyper local outcomes. It is crazy that major projects take so long and cost so much to get going. It is crazy that NZ is now increasing the amount of coal being burned due to difficulties in getting major renewable energy projects consented.

██████████ - PhD (Melb), BE hons (Auck), NZCE

Chief Executive – City Rail Link Ltd

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