Navigating the NZ environment to deliver NZ's first economic infrastructure PPP

Dr. Kevin Doherty
Director, Public Private Partnerships
NZ Transport Agency

Hugh Kettle
Partner
Bell Gully

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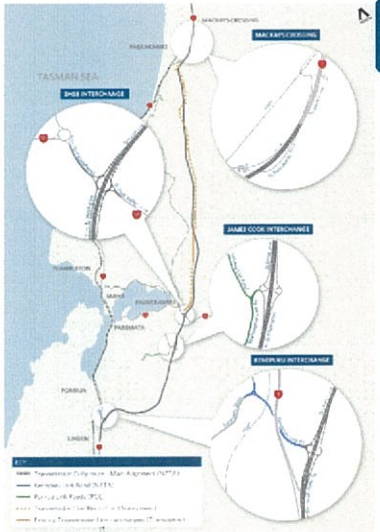
INTRODUCTION

This presentation will cover:

- Background to Transmission Gully PPP
- Regulatory framework
- Using the contract to drive delivery of the objectives.

Wellington Northern Corridor Road of National Significance

- Otaki to Levin
- Peka Peka to Otaki
- MacKays to Peka Peka
- Linden to MacKays (Transmission Gully)
- Ngauranga to Aotea Quay
- Terrace Tunnel duplication
- Basin Reserve Transport Improvements
- Airport to Mt Victoria Tunnel



Transmission Gully Project

Consented Design Outcomes

- Improved safety - 40% mid-block crash reduction
- Reduction in travel time
  - 10 mins from Kapiti to/from Wgtn
  - 15 mins Kapiti to Hutt Valley
  - 5-7 mins Porirua to Hutt Valley
- Reduced average travel time variability from 5-10 mins to less than 1 minute
- Improved seismic and storm resilience

Roads of national significance | 1 Transmission Gully

Project Features – 27km new motorway

Minimum Expressway Design Standard

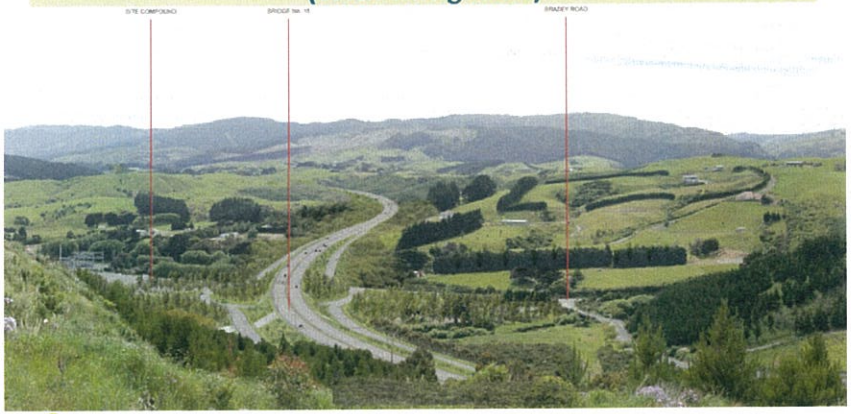
- Minimum two lanes in each direction with continuous separation
- To be gazetted as Motorway – no direct access
- Grade-separated interchanges
- Extensive landscape and visual (planting with native plants, shrubs and trees) and noise mitigation (earth mounds, noise walls etc) conditions.

Roads of national significance | 1 Transmission Gully

View North from Battle Hill (With Mitigation)

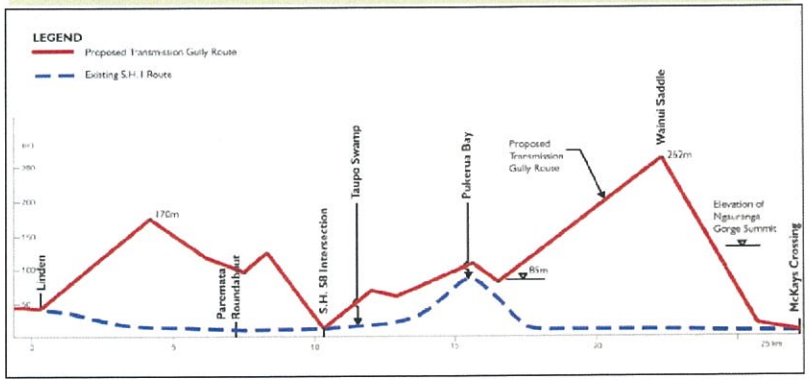
Roads of national significance | 1 Transmission Gully

View North at SH58 (With Mitigation)



View North in Belmont Regional Park (with Mitigation)

Longitudinal Profile



Opportunities for Innovation

- Very steep terrain
- Economies of scale (eg. 30 bridge structures)
- Large earthworks element
- Ecologically significant waterways (streams and Porirua Harbour (Pauatahanui Inlet) – erosion and sediment control innovation
- High landscape and visual values
- Comprehensive consent conditions (clever solutions)
- CAPEX/OPEX trade-offs
- Potential for impact minimisation on other infrastructure.

Procurement Process

- Market soundings in late 2012
- EOI request issued in late January 2013
- Excellent response nationally and internationally
- Two respondents taken through to RFP stage (May-October 2013)
- Preferred bidder expected to be appointed in February 2014.

Why the Transport Agency has included PPP within its procurement model portfolio

Better Value for Money :

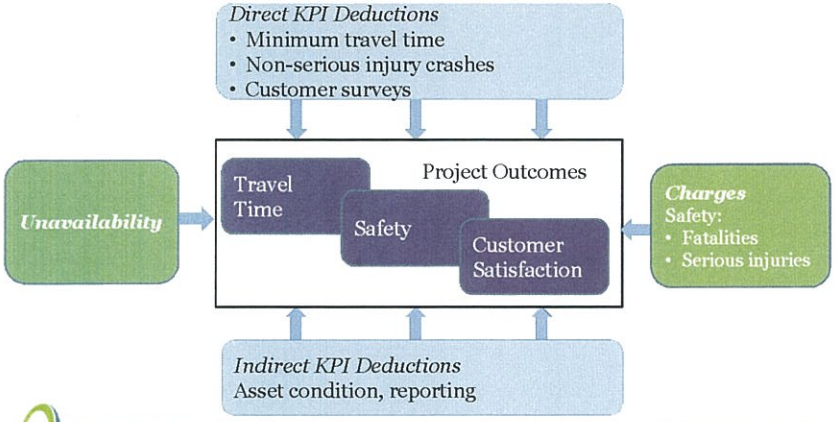
- For projects with particular characteristics (eg. scale, complexity, risk) PPP procurement will achieve better value for money. That is:
- The achievement of the same or better OUTCOMES at the same or lower cost than can be achieved by the Public Sector using any other procurement model.
- Under PPP procurement better value for money can be achieved through:
  - Innovation
  - Efficient risk allocation, management and mitigation
  - Next generation whole-of-life asset management
  - Commercially incentivised and accountability for OUTCOME performance.

Under PPP the Public Sector is directly Accountability for investment in Outcomes

OUTCOMES the Transport Agency is looking to achieve;

- Safer journeys;
- Reduced travel time;
- Improved travel time reliability;
- Satisfied Customers; and
- Enhanced Resilience

Commercial incentives for OUTCOME performance



NZ Environment Regulatory framework

No specific PPP enabling legislation, so potential projects need to be assessed:

- against general legislative framework; and
- against sector-specific legislation.

Regulatory framework considerations

- Relevant considerations for each Governmental Agency/asset class are as follows:
  - the procurement process and any mandatory requirements that apply to this;
  - the acquisition, consenting and leasing of the land required for the development of the infrastructure (including any required RMA designation process);
  - the ability to borrow (there is a deemed borrowing component associated with the entry into the prepaid facility lease forming part of the standard New Zealand PPP structure);
  - the core elements of the project agreement, being:
    - the D+C element – the ability to contract the construction of the infrastructure, with no payment due until completion; and
    - the O+M element – the ability to enter into a long term performance-based contract for the operations and maintenance of the infrastructure.

Relevant Legislation

- Land Transport Management Act:
  - Permissive and allows flexibility; but
  - Good checks and balances (both within legislation and between the NZTA and Ministry of Transport)
- Crown Entities Act
  - Regulates NZTA's ability to borrow
- Ministerial consents required:
  - Minister of Transport as to leasing of the road
  - Minister of Finance as to borrowing component.

Tax position

- Vital to achieve certainty for private sector
- Public ruling has been sought and consulted on for the Treasury's model form of PPP Project Agreement
- Public ruling will provide a 'benchmark' – contractors will still be required to obtain a private ruling for their own particular structure.

Overseas Investment Act

- Applies, in general terms, if 25%+ of the Contractor's equity is owned by overseas persons
- 'Sensitive Land' analysis – another trigger requiring an enhanced level of consent
- All Roads of National Significance are technically sensitive land (as they include non-urban land exceeding 5 ha).

Overseas Investment Act

- NZTA's view – OIO 'sensitive land' analysis not suitable in this context:
  - The land itself has gone through a detailed designation process
  - The interest in land to which the contractor is entitled is to enable the provision of a public service, and terminates when the project agreement terminates
- Project specific or class exemption to be sought from sensitive land elements.

Driving delivery of objectives

- TG as an alternative strategic link for Wellington region – improving network efficiency, resilience and route security
- More specifically:
  - Delivery of high and sustained safety
  - Reduction in travel time
  - Improved and sustained travel time reliability
  - High and sustained customer satisfaction.

Driving delivery of objectives

- Focus on both achievement and consistency of Outcome delivery
- Performance regime designed to incentivise delivery of objectives
  - Particular regimes relating to availability, travel time, safety and customer service
  - Carefully sculpted – ratcheted for consistent poor performance.

Driving delivery of objectives

- Performance regime is not the only tool
- Seismic risks of TG project
  - Area seismically active
  - Project procured against background of Canterbury quakes and recent Seddon quakes
- Challenge to reconcile risk of seismic damage with specific resiliency outcomes - how to achieve this?
- NZTA focussed on ensuring the infrastructure can be safely re-opened as quickly as possible.

Driving delivery of objectives

Solution at several levels

- Benefit of usual PPP structure
  - NZTA reviews but does not 'sign off' detailed design documents – ensures comfort with solution
  - No sign off – construction at contractor's own risk
- Specific approach developed for TG project:
  - Resiliency of structures and solution also measured following significant seismic events
    - Design testing forward-looking
    - Construction testing backward-looking
  - To receive relief under force majeure regime, the construction must meet specified resiliency levels
  - Failure to do so will result in significant financial abatement for the Contractor.

Driving delivery of objectives

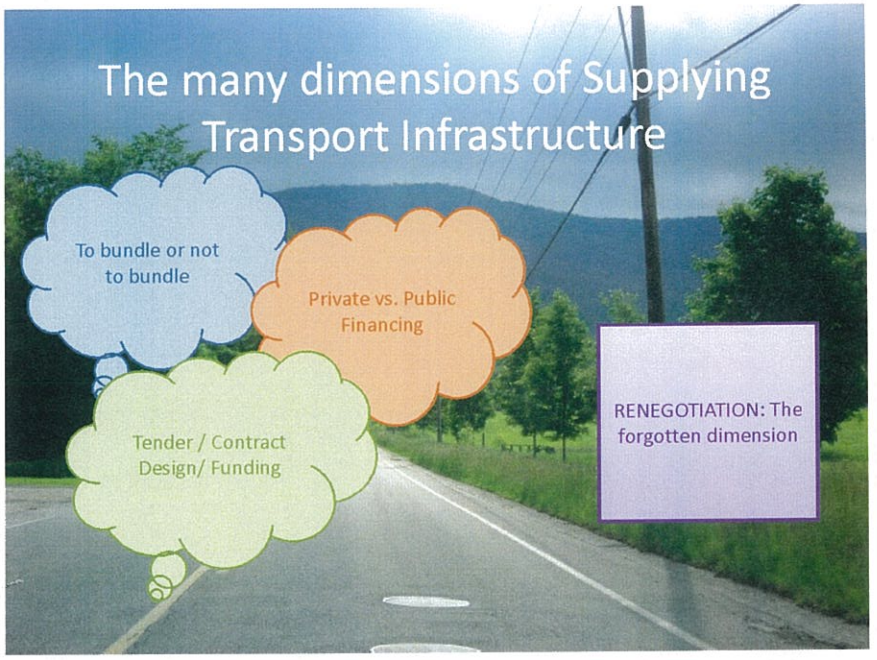
- Still in procurement – final regime needs to be agreed by multiple stakeholders
- Not a straightforward process - complex interaction between technical due diligence, design, insurance regime and contractual terms
- End result - Performance regime not the only way of incentivising delivery of outcomes – general contractual structure and terms also assist.

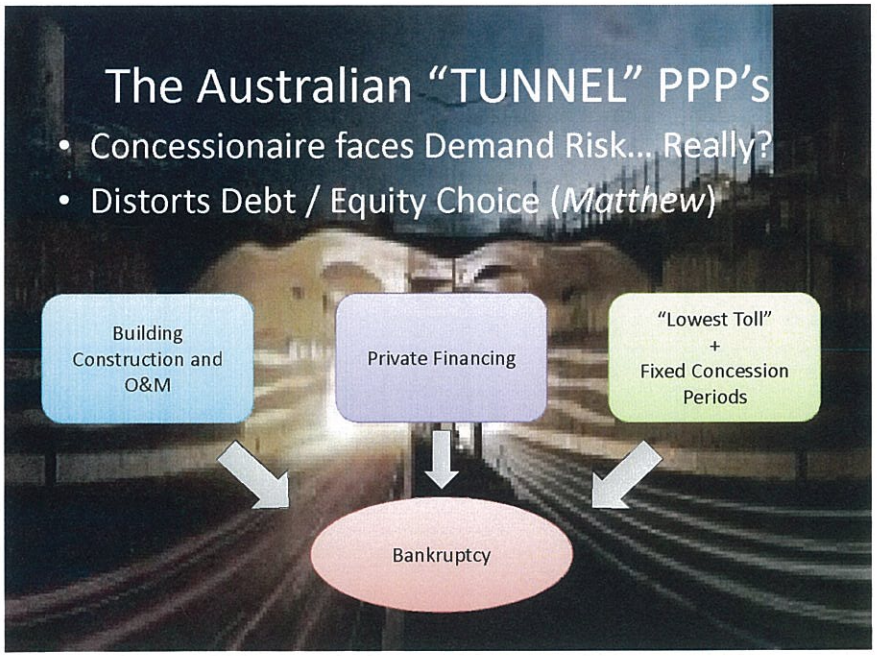
QUESTIONS?

Public-Private Partnerships for Transport Infrastructure

Flavio Menezes
Professor of Economics
The University of Queensland
http://ideas.repec.org/e/pme33.html

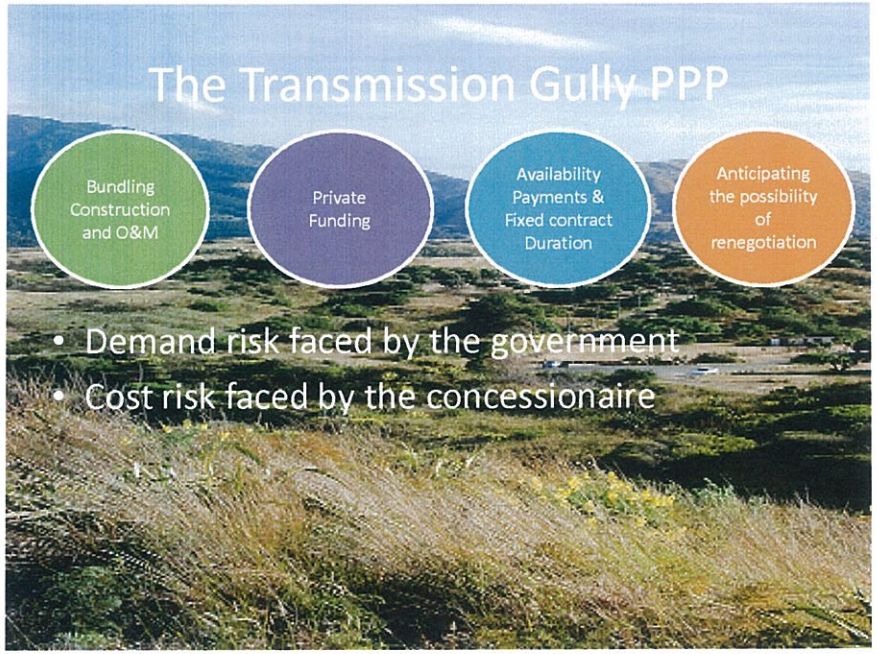
With Matthew Ryan (University of Auckland)





The Australian "TUNNEL" PPP's

- Equity Holders lose all, debt holders might also lose some
- "Tax payers gained" – A One-Off; no appetite for further privately financed projects
- In other Countries, Bankruptcy replaced by rationalised assets



The Transmission Gully PPP

Two key questions

- How these different dimensions interact in terms of likely outcomes?
- Is private better than public funding?

Thinking through what happens under default or renegotiation is crucial in answering these questions.

A Simple Model

- Firms bid for a fixed payment so face cost-side risks
  - Superficial analysis might suggest it is efficient
- Different dimensions interact
  - Long-term contract (construction + 25 years)
  - Future costs will be highly uncertain
  - Concessionaire can seek bankruptcy protection from downside risk; the government cannot
- This impacts equity/debt choices and bidding for the tender

The Basic Idea

- n firms
- Firms bid for a one-off payment $(b_i, i = 1, \dots, n)$
  - Lowest bid wins
- Firm i's total cost:

$$c_i + m$$

Idiosyncratic, private information

Common but unknown at time of bidding

Financing

- Firm i uses K_i cash and $D_i = c_i - K_i$ to fund construction
  - Not cash constrained, so role of debt is strategic
- Financing for m (if any) only finalised after m is realised
  - Subject to risk-free rate (normalised to zero)
- Firms borrow D_i at rate r (endogenously determined to take into account risk of default)

Default and Renegotiation

- Lender triggers default if:

$$(1+r)D_i > b_i - m_i$$

- Government's places value V^* on replacing concessionaire
  - Costs of re-auctioning the contract, disruption to road users, financial and political costs, etc.
- Renegotiation occurs and the firm is bailed out if

$$V^* > m_i - b_i + (1+r)D_i > 0$$

Default and Renegotiation: Cont'd

- Government's payment when bail out occurs

$$\underbrace{m_i - b_i + (1+r)D_i}_{\text{Payment to lenders to clear firm's debt}} + \underbrace{\alpha}_{\text{Firm's bargaining power}}(\underbrace{V^* - m_i - b_i + (1+r)D_i}_{\text{Surplus to be split}})$$

Default and Renegotiation: Cont'd

- The concessionaire enters bankruptcy if:

$$V^* \leq m_i - b_i + (1+r)D_i$$

- Lenders (and others) can calculate the probability of default

$$1 - H(\underbrace{b_i - (1+r)D_i}_{\text{Distribution of the unknown maintenance cost}} | \underbrace{\theta}_{\text{Cost shift parameter}})$$

- In equilibrium, r is calculated so banks receive D_i in expectation! (*A finance neutrality result*)
- Firm chooses its debt level to maximise expected transfer from the government [Matthew]

Equilibrium Outcomes

- If $m_i = b_i - (1+r)D_i + V^*$, the firm receives V^* to remain solvent through renegotiation
- If $m_i = b_i - (1+r)D_i$, the firm just breaks even
- Renegotiation then occurs if

$$m_i \in (b_i - (1+r)D_i, b_i - (1+r)D_i + V^*)$$

Equilibrium Outcomes (Cont'd)

Expected transfer from the government:

$$\int_{b_i-(1+r)D_i}^{b_i-(1+r)D_i+V^*} [V^* - (1-\alpha)(b_i - (1+r)D_i + V^*]dH(m|\theta)$$

If $m_i \sim U[\underline{m}, \overline{m}]$, the expected transfer is:

$$\mathrm{T} = \int_{\overline{m}+V^*}^{\overline{m}} \frac{V^* - (1-\alpha)(\overline{m}-m)}{\overline{m}-\underline{m}} dm$$

Auction Theory: bids in the tender are reduced by T!

Conclusion: Efficiency of private financing

- Efficiency of the tender is preserved and the winning bidder is never replaced
  - The government bears some of the cost risk
  - Debt/Equity choice is distorted
  - But no efficiency loss in our model
- However, bundling + private financing can lead to other distortions
  - Cost-reducing effort affects transfers so incentives are distorted in unpredictable ways
  - Incentives may be distorted in either direction under private financing
    - If m is uniform, and effort during construction shortens the support (reduces the upper bound) so it become more dense everywhere, renegotiation transfers increase with effort which encourages more effort.
    - Conversely, if the m is uniform and effort lengthens the support (reduces the lower bound), then renegotiation weakens incentives for effort

Conclusion: Private versus Public Financing

- Whether financing is private or public, there will be states where bailouts are negotiated
  - Provided the expected transfer to the firm is independent of its type (i.e., construction cost), this transfer will be fully off-set by bid adjustments
  - With Uniform distribution of maintenance costs, the transfer is type-independent in the private financing case
  - With public financing it is less clear whether the transfer will be fully offset by the bid adjustment.
    - Does the government require a bond?
    - If transfers depend on types then efficiency of the tender mechanism is not guaranteed
- Comparison between public versus private funding is unclear for a number of reasons

Conclusion: Key takeaway messages

- Taken as given the efficiency of bundling construction and O&M
  - It is plausible but needs testing
  - The benefits of bundling must be considered jointly with the choice of financing
- The superiority of private over public financing is not clear:
  - The nature of renegotiation
  - Incentives to undertake cost reducing efforts
  - The role of debt (or bonds) in project financing
- Need a need for a consistent, informed economic approach
  - Contrast the transport sector with the energy sector
  - AER, AEMC = economic regulators versus NTC not an economic regulator

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WILL THEY FLY?

PPPs for Ultrafast Broadband in NZ

Bronwyn Howell,
General Manager
August 29 2013

New Zealand Institute for the Study of Competition and Regulation, Level 12 Rutherford House, 23 Lambton Quay, P O Box 600, Wellington, NEW ZEALAND
Tel +64 4 463 5562 • email iscr@vuw.ac.nz • http://www.iscr.org.nz

JOINT WORK

Prof Bert Sadowski, Technological University of Eindhoven
ST Lee Fellow at ISCR, 2012

Part of a series of longitudinal studies of PPPs for broadband infrastructure

- Netherlands comparators in Amsterdam, Eindhoven (municipal 'public' partners)

Initial paper 2012 – forthcoming in *Communications & Strategies*

Re-evaluation 12 months later

THE CONTEXT

2008 General Election

National Party promises to invest $1.5 billion via PPPs to build a nationwide Ultrafast Broadband Network (UFB) to 75% of New Zealand residences by 2018 (total cost $5 to $6 billion)

2009

Crown Fibre Holdings (CFH) established as Crown negotiating agent

2010

CFH begins tender process to find partners

THE TENDER TERMS

Demand uncertainty seen as the major issue

- Government policy leads the commercial case for private investment (at the scale anticipated in the policy)

Country divided into 28 regions

CFH will establish UFBCos with initial funding to begin network build

Partner builds network past each premise using UFBCo funds

Partner funds 'drop from kerb to premise' when customer opts to connect; buys share in UFBCo from CFH

- 'capital recycling' funds next tranche of fibre roll out
- UFB collects monthly connection revenues (CFH sets price)
- partner receives dividends on shares owned

BROADBAND IS JUST LIKE A ROAD?

An infrastructure allowing data to travel from A to B

Looks like a contract to build, operate and ultimately own a road

- Government bears investment risk until connections sold
- partner benefits from keeping build cost low
  - more premises passed => greater opportunity to sell connections
  - incentive to minimise 'drop costs'
- low incentives to underinvest in quality as partner is long-term owner

THE COMPETITIVE AND REGULATORY CONTEXT

Not simple

Open access regulation, structurally separate network for both fibre and copper networks

- network operator cannot have a retail arm
- how to manage demand response?

Extant infrastructure competition

- TelstraClear/Vodafone cable network
- 2007 => Labour-led minority government entered into undertaking with Telecom NZ to build (via its 'functionally separate' network arm Chorus) a nationwide Fibre to the Node' (FTTN) network (cost $1.5 billion)
- absolute cost advantage/threat of asset stranding for Chorus

THE TENDER PROCESS

Good response from electricity lines, gas reticulation network operators; municipal bodies

Chorus was only extant network operator to tender

- unbundling entrants would forfeit customers

CFH took 2-step process in letting tenders

- pre-emptorily let one contract to a Chorus rival (NorthPower) as per original tender documents
- 2nd tranche
  - standard tender agreements with Enable (Christchurch) and WEL (Central North Island)
  - bespoke nonstandard agreement with Chorus (70% of market)

THE CHORUS AGREEMENT

Interest-free CFH loans

Build targets, uptake targets agreed

Penalty interest repayment rates if build, uptake targets not met

Chorus

- carries demand risk not expected of other UFB partners
- faces 'double jeopardy' as it owns both legacy and frontier networks

REGULATORY RISK

Fibre, copper networks effective substitutes for most consumers at current point in time

Fibre uptake rate determined by relative prices for copper and fibre

- fibre prices agreed between CFH and UFB partners
- but no effective changes made to the regulatory regime for copper prices

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TELECOMMUNICATIONS COMMISSION REGULATES COPPER NETWORKS

Legislated price review in 2012 to set new copper prices

- replacing 'retail minus' prices of integrated Telecom with 'cost based' prices (internationally benchmarked) for separate Chorus

No requirement to take account of government fibre strategy.

"We have no statutory role in promoting or protecting fibre," says Gale. "Our task in this larger project is just to fix the price of copper-based services. Retail service providers will then compete on whatever network they find most profitable."

» http://computerworld.co.nz/news.nsf/news/new-wholesale-price-for-access-to-copper-network

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THE INEVITABLE OCCURRED

"Chorus yesterday dodged a bullet from regulators only to step into the path of a rumbling tank."
Tom Pullar-Strecker, Stuff, December 4 2012

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3 December 2012

- draft wholesale bitstream prices from 1 December 2014 announced
  - fall from $44.98 to $32.45 per month
- Chorus shares fell 20% amidst feverish trading

It could have been worse

- simultaneous announcement of revision of draft (re-averaged) LLU price
  - revised upwards from $23.52 from $19.75 as announced on May 4
  - Chorus shares fell 15% following May announcement, with similarly large trading volumes

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THE REACTION

"Prime Minister John Key has indicated the Government would change the law rather than see its ultra-fast broadband network compromised by a Commerce Commission decision .....because consumers could be discouraged from switching from copper to fibre"

» Radio New Zealand, 3.10pm , 4 December 2012

Moody's put Chorus' "Baa2" issuer and senior unsecured ratings on review for possible downgrades.

Decision if implemented is "inconsistent with a Baa2 profile ....the potential for a final adverse outcome on Chorus' credit profile is meaningful"

» Maurice O'Connell, Senior Analyst, Stuff 4 December 2012

THE POLITICAL RESPONSE

February 8 2013:

"I have decided to bring forward the wider regulatory framework review as regulatory certainly is an important factor in the ability of New Zealanders to have early access to high-quality communication services based on new technologies,"

» Communications and Information Technology Minister Amy Adams

Telecommunications Act s 157AA

Minister must review regulatory framework beginning no later than 30 September 2016

THE RE-REACTION

Chorus share price rises 9%

- but still 7% below December 2

Review document released August 7

- proposes changes to copper prices based upon the prices agreed by CFH with fibre partners
- appears to suggest that rapid network build is priority
  - but still some confusion about uptake vs availability

'PPP Renegotiation' with a 'twist'

- the PPP agreements stay intact
- all other industry arrangements must adjust so as to facilitate them

CONSEQUENCES

Government credibility severely damaged

- evidence of foreign capital flight from Chorus

Industry exasperated at yet another regulatory review

Unclear role going forward for the supposedly 'independent' regulator

WHAT CAN BE LEARNED?

Uncertainty created by inadequate attention to

- policy objective clarity in UFB investment in the first place
- necessary legislative, regulatory changes to accommodate the fibre investment

Exacerbated by

- not intervening/making objectives clear immediately it became evident there was a problem

Regulatory/legislative risk is large and significant

Partners are expected to act in 'good faith' before and during the partnership

But so must the government partner

HAVE THE NZ FIBRE BROADBAND PPPs CRASHED DURING TAKE-OFF?

OR MERELY HAD THEIR WINGS CLIPPED?

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TAKING THE PULSE:

NZ's Primary Health Care PPPs and Investment in Human Capital Infrastructure

Diana Tam

Research Assistant

29 August 2013

New Zealand Institute for the Study of Competition and Regulation, Level 12 Rutherford House, 23 Lambton Quay, P O Box 600, Wellington, NEW ZEALAND

Tel +64 4 463 5562 • email iscr@vuw.ac.nz • http://www.iscr.org.nz

Public-Private Partnerships

Why they're useful in the health context

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PPPs: a primer

- Partnership between state and private party.
- Why engage in a PPP?
  - Building the appropriate infrastructure for long-lived investments
  - Incentives to innovate and create
  - *C.f.* standard contract (*e.g.* Pies)
- Two particular areas of focus
  a. Level of remuneration
  b. Contract structure (risk allocation)

- PPP thinking in the soft infrastructure context is unusual, but can help create better contracts.

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PPPs in the Health Sector

- NZ government has traditionally funded health care
  - Healthy people = healthy capital stock
- Health can't be bought...but health care can be.
- But it's difficult to contract in the traditional sense.
  - It's an information good
  - It's an experience good
  - It has a high human capital component
- So health care matters, but you will see little third party investment. The quality is hard to measure, but we can use proxies.

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CASE 1: Antenatal Care

Thinking about PPPs and level of remuneration

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What was the change?

- Legislative changes in the 90's
  - **Nurses Amendment Act 1990:** Midwife, GP or specialist obstetrician to be chosen by the pregnant woman.
  - **Concept of Lead Maternity Carer introduced in 1996:** Midwives granted greater professional autonomy.
- Fragmenting of care, with price component set at midwife levels – pricing out of GPs.

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What was the effect?

- Research shows that the number of GPs providing antenatal care progressively declined over the mid-1990's.
  - *Future practice of graduates of the New Zealand Diploma of Obstetrics and Gynaecology or Certificate in Women's* Health Miller, Robert, Wilson (2008) The New Zealand Medical Journal
- Lower costs in the short-term, but what happens to long-term investment by GPs?

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Through the PPP Lens

GPs that have postgraduate obstetric training, *i.e.* have built human capital	**Returns of practicing antenatal care lower relative to other areas.** **The postgraduate study is both an asset and a sunk cost** (cannot be recovered). The GP is likely to abandon that asset.
GPs that haven't	**Less incentive to undertake postgraduate obstetric training**

- **What this means overall:** a rise in midwives and a fall in GPs providing antenatal care. SO WHAT?

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Through the PPP Lens

- The risk for GPs:
  - When GPs embark on their training *(i.e.* make a long-term career investment), they believe that the government will continue to remunerate at that rate
  - Wariness in future contracting with the government
- The new level is insufficient to cover the costs of high level human capital (*i.e. doctors*)
  - Needed in high risk / complicated pregnancies
  - Fewer GPs trained in obstetrics OR
  - Trained human capital, but no experience!

What was the change?

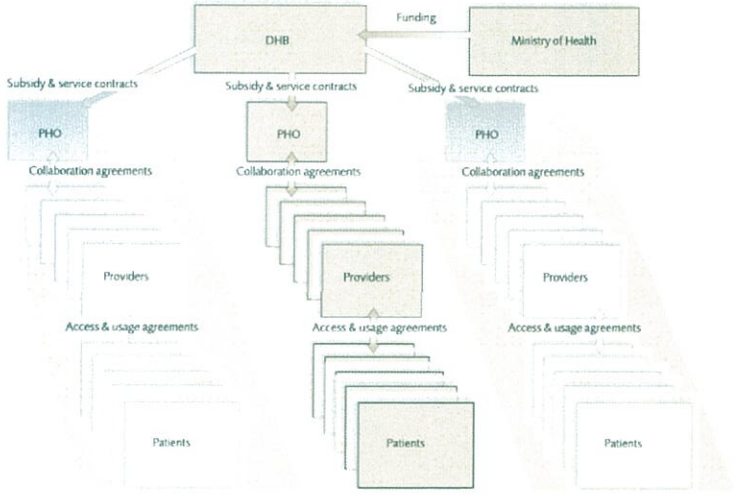
1938: Introduction of fee-for-service (FFS) part-payments to PHC providers. → Providers paid per service, *i.e.* GPs paid per consultation.

In both cases, GPs retain the ability to charge co-payments to patients – to recover costs not covered in the government contract.

2001: Switch to capitation part-payments. → Providers paid per patient, *i.e.* GPs paid per patient on roll, regardless of an individual patient's number of visits.

CASE 2: Primary Health Care

Thinking about PPPs and risk allocation in contracting



Bronwyn Howell *A Risky Business: moving New Zealand towards a managed care health system* (2006) ISCR

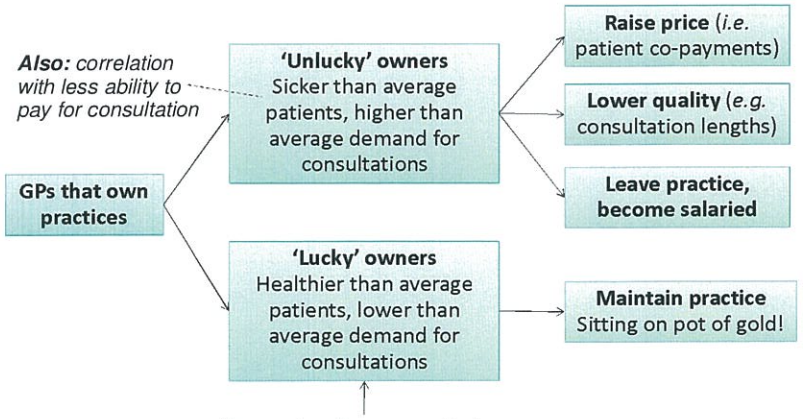
What is the (likely) effect?

The change in remuneration for GPs is likely to have a similar effect as in the antenatal case

Through the PPP Lens

- Two elements of risk allocation
  - Demand fluctuation: difficult for anybody to control.
  - Government share of costs: best controlled by government!
- Key difference between FFS and capitation payments
  - FFS payments are made retrospectively
  - Capitation payments are made prospectively, on the basis of *expected* workload
  - This creates uncertainty

Juggling Incentives



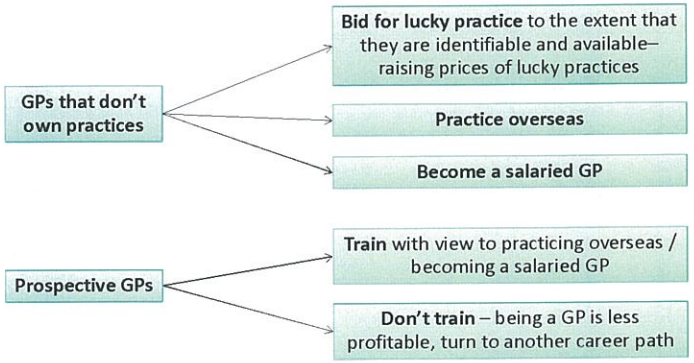
Shedding some light

- Suppose that an 'unlucky' practice closed. Other practices are not required to take the left-out patients onto their books
- Self-employment has "in the past been the main-stay of general practice in New Zealand"
  - Pande, M. & Stenson, A. (2008). GP Workforce: Emerging trends. New Zealand Family Physician, 35:407.
- When GPs are paid on salary, they have less of an incentive to work extra hours and to develop their human capital

Some figures

- 2008 RNZCGP Membership Survey Workforce Series 8, November 2009
  - Between 2005 and 2008, around 30% of self-employed GPs chose other work arrangements
  - % of self-employed GPs fell from 56% (2005) to 39% (2008)
  - Average hours/wk fell from 48 (2005) to 42.1 (2008)
- A Profile of New Zealand General Practices in 2007 RNZCGP Occasional Paper 9
  - Some GPs reported a rise in compliance costs without an accompanying rise in come.
  - Many self-employed GPs reported working longer hours compared to salaried GPs.

Juggling Incentives



- **What this means overall:** less people investing in a career as a GP, less human capital, less soft infrastructure for health industry.

A Need to Revisit the Contract?

- "Survey reinforces findings of previous reports that the GP workforce is stressed and diminishing...and increasingly affected by GPs working fewer hours and getting involved in other activities..."
  - 2008 RNZCGP Membership Survey
- What would have happened under the FFS contract?
  - Consultation fee is partly paid by patient, partly paid by government: GP fully remunerated
  - FFS system not without its flaws, but *does* provide incentives for long term investment by GPs...

A Possible Alternative Contract

- 50% capitation, 50% funding based on other factors
  - *E.g.* The more experienced a GP, the higher the fee
- FFS payments for delivery of certain services
  - *E.g.* Immunisation
- Better allocation of GPs
  - More qualified GPs working with neediest people, rather than sitting on golden eggs ('lucky' practices).
- An ACC-style fund instead of patient co-payments
- In short, a contract which rewards GPs for effort and experience; factors they control.

Final Comment

- When thinking about how to fund health care, we need to consider the long-term: investment, human capital, supply into the future
- Looking at the health care contract between government and providers *from a PPP-perspective* enables us to take that long-term perspective
- Creating a system that isn't just viable today, but also into the future

Thank you

And all the best!

ISCR NEW ZEALAND INSTITUTE FOR THE STUDY OF COMPETITION AND REGULATION

Public Law Challenges to Successful Public-Private Partnerships

Edward Willis

29 August 2013

www.webbhenderson.com

webb henderson

OVERVIEW

Public law is relevant

Public law is different

Accountability is relevant in theory

Accountability is relevant in practice

OVERVIEW

Public law is relevant

Public law is different

Accountability is relevant in theory

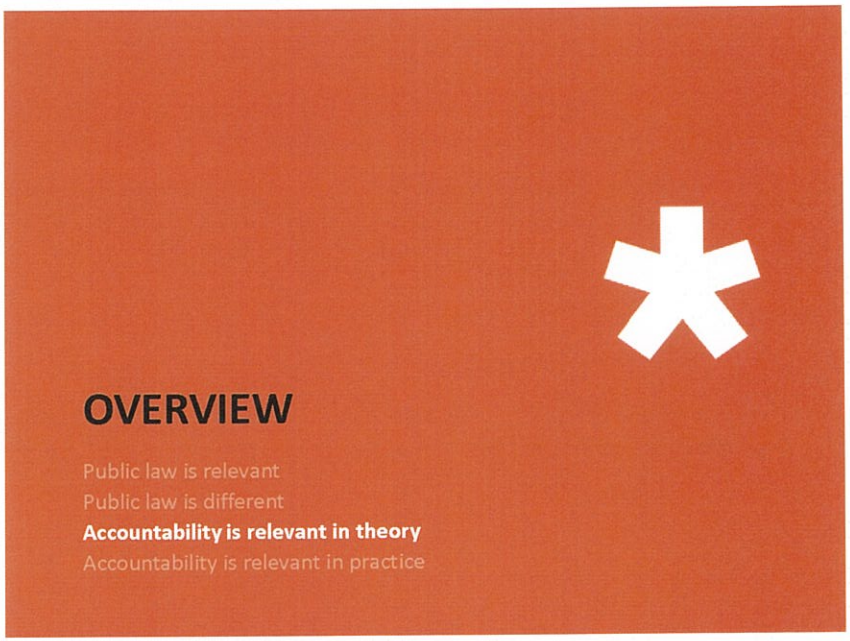
Accountability is relevant in practice

Contrasting definitions of PPPs (1)

> PPPs ... refer to long-term contracts for the delivery of a service, where the provision of the service requires the construction of a facility or asset, or the enhancement of an existing facility....

Contrasting definitions of PPPs (2)

... any mutually beneficial commercial procurement relationship between public and private sector parties that involves a collaborative approach to achieving public sector outcomes.



Accountability mechanisms (1)

- statutory principles
- judicial review
- company law
- Audit Office scrutiny

Accountability mechanisms (2)

- ministerial responsibility
- parliamentary disclosure
- the Official Information Act
- the Ombudsman's jurisdiction
- Parliamentary select committees

Accountability mechanisms (3)

- contractual accountability mechanisms

OVERVIEW

Public law is relevant
Public law is different
Accountability is relevant in theory
Accountability is relevant in practice

THANK YOU

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NZ TRANSPORT AGENCY
WAKA KOTAHI

Transmission Gully PPP: An approach to incentivising outcomes on highways PPPs in NZ

ISCR Conference
PPP: Building infrastructure for the future
August 2013

Shane Avers, Transmission Gully PPP Commercial and Financial Workstream Lead

New Zealand Government

NZ Transport Agency – purpose and priorities

- Purpose:

  "Creating transport solutions for a thriving New Zealand"

- Priority #1:

  "Putting customers at the heart of our business"

Transmission Gully

4-lane motorway please …

Key features of TG PPP

- Greenfield highway project
- Finance, design, construct, maintain and operate
- Availability PPP
- Outcomes focus
- Whole-of-life procurement
- Minimum constraints

Roads of national significance | Transmission Gully

Key features of TG PPP

- Availability model:
  - Volume risk stays with public sector
- Transport Agency is Buying Outcomes
- Transport Agency will Pay for Outcomes
- No road, no outcomes, no payment

NZ TRANSPORT AGENCY WAKA KOTAHI
New Zealand Government

Roads of national significance | Transmission Gully

TG PPP Outcomes

1. High and sustained safety, continuous safety improvements
2. Reduced travel time
3. Improved and sustained travel time reliability
4. High and sustained customer satisfaction

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New Zealand Government

Roads of national significance | Transmission Gully

TG PPP Performance Regime

- Incentive structure
- Contractualised
- Linked to Payment Mechanism
- Reflects and supports TG PPP Outcomes

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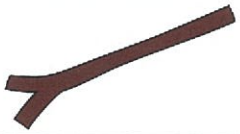
New Zealand Government

Performance Regime

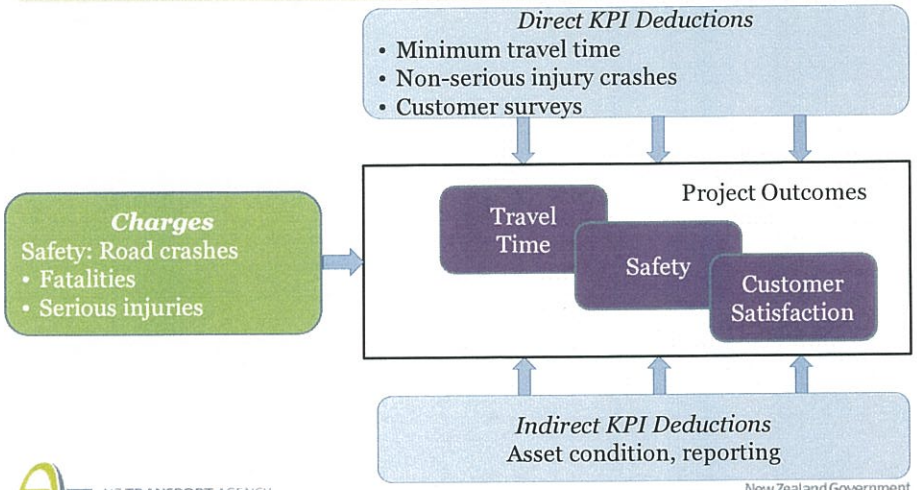
Deductions (Unavailability + KPIs)

Charges (Safety)



Service Failure Points (non-financial)

Performance regime supports the TG outcomes



Unavailability & KPI Deductions

Unitary Charge

Deductions

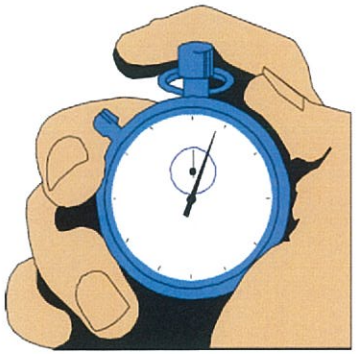
KPI Deductions

- KPIs to be used to gauge the Contractor's performance:

Travel time	Incident response
Crash under TMP control	Public surveys
Crashes causing non-serious injury	Public complaints
Reporting - accuracy	ITS (availability of data feed to TOC)
Reporting - timeliness	Weigh station availability
Asset condition	Weigh pit availability
Ramp performance	Weigh in motion data availability
Environmental consent	O&M requirements

- Thresholds have been set for each KPI
- Failure to meet M&O requirements results in Service Failure Points

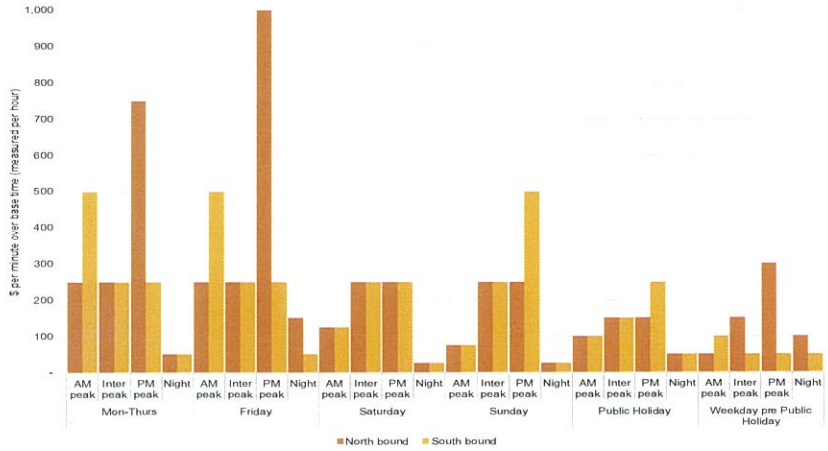
Travel Time KPI



Travel time

- Customers value reliability
- Travel time measured for every hour of every day
- Travel time KPI deductions set at economic value of customers' time
- Deductions vary by time of day, type of day

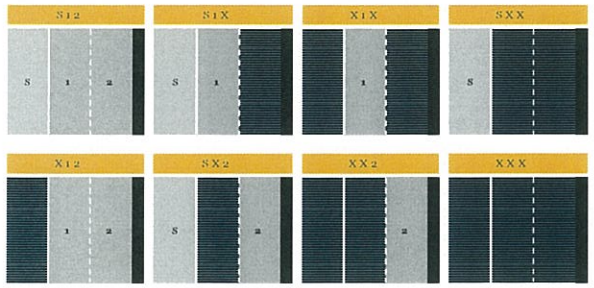
Travel time factors



Relief from travel time deductions

- Whenever there is unavailability relief there is travel time relief
- Relief for poor visibility events where speed limit needs to reduced for safety reasons
- Relief for wider network events (e.g. traffic is backed up due to an incident on a link road)
- Tolerance for reduced speed at night to encourage night time maintenance

Unavailability Deductions



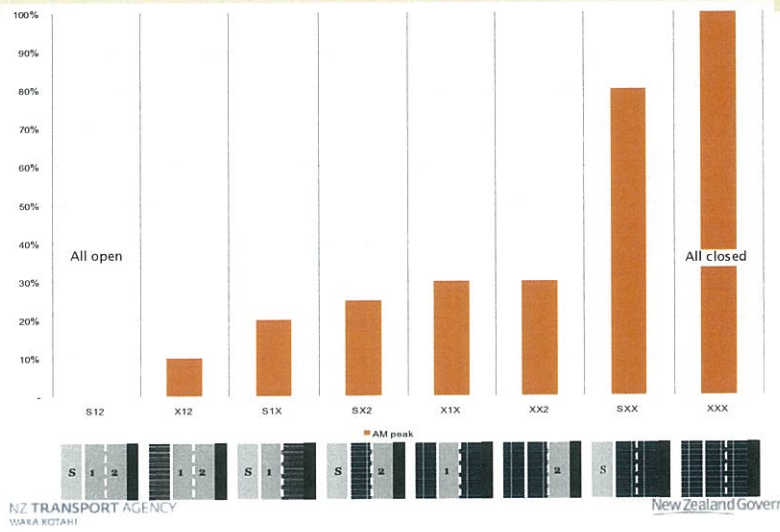
Unavailability

- Unavailability deductions from the Unitary Charge:
  - Contractor being paid, in part, to make the road available
  - No road, no payment
- Availability means:
  - Lane or Ramp is fully open for the continuous flow of vehicles
  - Shoulder is able to be used for the continuous flow of vehicles and is not subject to traffic management measures

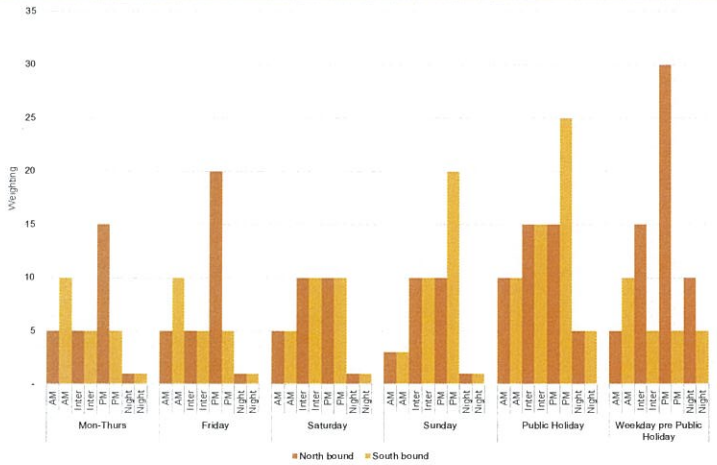
Unavailability

- Lane and shoulder deductions are a function of:
  - The **combination of lanes and shoulders** unavailable
  - **Where** on TG the unavailability occurs
  - **How long** (time) the unavailability lasts
  - **What length** of lane and shoulder is unavailable
  - What **day of the week** the unavailability occurs
  - What **time of day** the unavailability occurs
- Ramp deductions are a function of which ramp(s) are unavailable, when and for how long

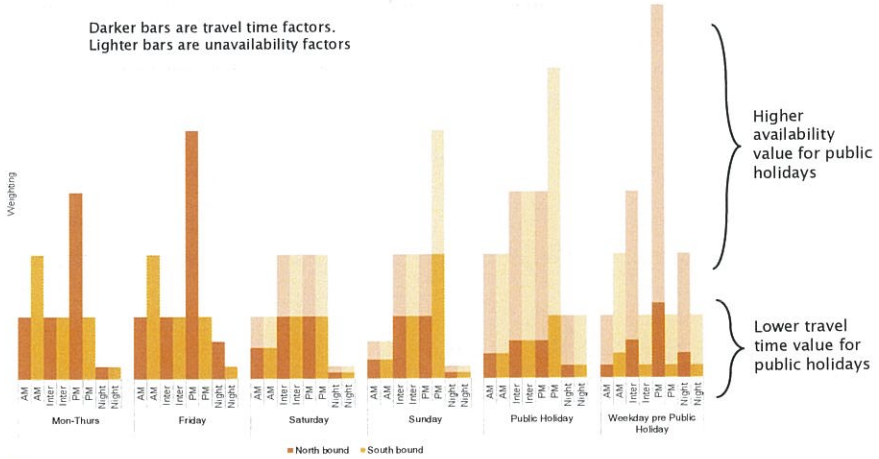
Lane and ramp combinations



Time of day and day of the week

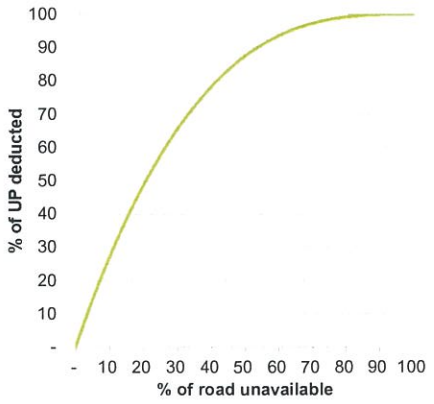


Travel time factors vs. unavailability factors



Incentivising full availability

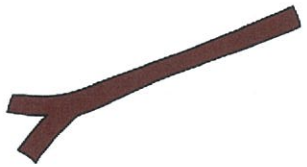
- Relationship between percentage of unavailability and deductions is non-linear
- Reflects the decreasing marginal value of the road if it becomes increasingly unavailable



Relief from unavailability deductions

1. "Mandatory" closure – at direction of an 'appropriate authority'
   - Partial relief for closure due to a crash
   - Relief for closure requiring external specialised personnel/equipment (e.g. a hazardous chemical spill)
   - No relief for closure due to environmental hazard
2. Requested closure:
   - Contractor can request unavailability relief from the NZTA
3. Relief for wider network events (e.g. tail back onto TG)

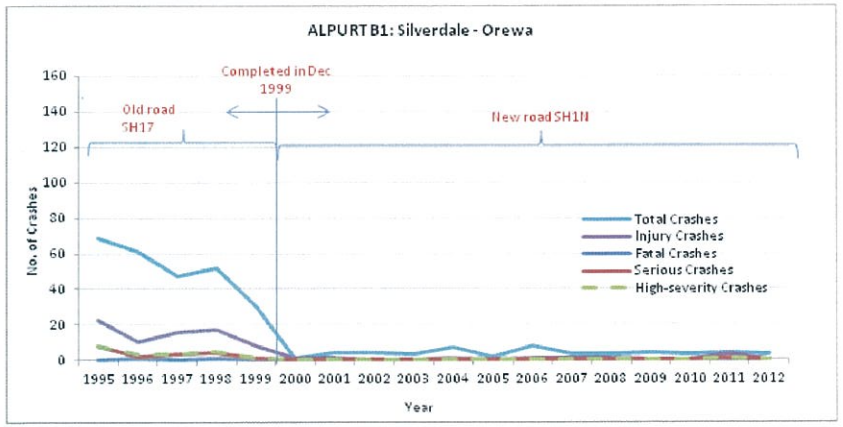
Charges



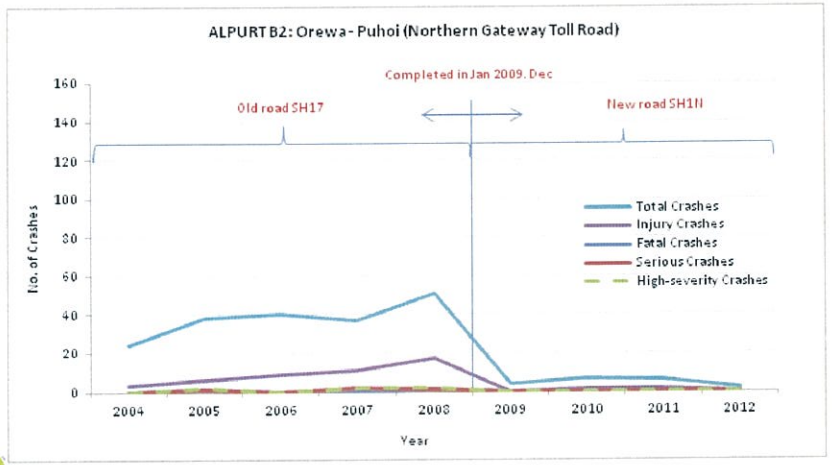
Charges

- Safe System principles:
  - Crashes will happen, but people need not die on our roads
  - Safe System designers are responsible for minimising risk of deaths and serious injuries
  - Safe System designers should create a forgiving road

Safe system

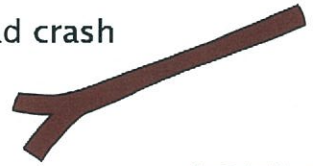


Safe system



Charges

- Charges apply to deaths and serious injuries
- **Charge event**: road crash results in a fatality and/or serious injury
  - Occupant(s) of the vehicle(s) and person(s) struck by the vehicle(s)
- One charge per vehicle per road **crash**



Service Failure Points (SFPs)

Service Failure Points (SFPs)

- Non-financial penalties for consistent under-performance
- Service Failure Points given per dollar abatements
- Increasing non-financial consequences:
  - Level 1: More detailed and frequent reporting
  - Level 2: Contractor to develop and implement a rectification plan
  - Level 3: Step-in rights
  - Level 4: Termination rights

Thank You

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Optimal Tender Design for PPPs in New Zealand

Jason Wozniak

29 August 2013

Introduction

- Focus on the technical aspects of PPPs
- Output Specifications
- Key issues and opportunities
- An approach

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Technical Overview

Why do a PPP?

PPP Advantages - Technical

- More scope for 'buildability' and 'lean construction'
- Focus on outputs and service delivery – design innovation
- Optimum design outcomes to manage risks inc trade-offs
- Value outcome (by risk management)

PPP Disadvantages - Technical

- Significant effort required to develop documentation
- Difficult (expensive) to make changes
- Rigid processes (a disadvantage to some stakeholders)

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Technical Overview

Risks transferred to the Private Sector

- Design & planning risk
- Programme risk
- Construction risk
- Ground risk
- Decant risk (sometimes)
- FM services risk
- Maintenance risk (Whole of Life)
- Availability risk
- ICT risk

These risks can be better managed by the private sector

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Output Specification

- The Output Specification is the most important document in a PPP
- The Output Specification is the basis through which the Client and its Stakeholders define the services and outputs that it requires for:
  - Construction
  - Operations
- The Output Specification should aim to detail what needs to be achieved not how it is to be achieved.

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Tender Design Issues

Clients

•Must gain assurances that the solutions will deliver the required Outcomes

•Assess and score the submitted designs (architectural, engineering etc)

•Cross checks with pricing, whole of life allowances and the consortiums approach to construction and delivering to programme

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Tender Design Issues

Private Sector

•Wants to demonstrate they have the best value solution. The Contractor, FM and Financiers are all pricing based on the design. Needs to be accurate.

•Must have all consortium parties agree the trade-offs and solutions. Capital cost vs Whole of Life costs

•Must ensure they have captured all the requirements to meet the services

•Minimise bid costs. These are expensive to bid

•Assumptions, previous projects & disclaimers don't count!

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A balanced approach

What does the solution look like:

- Clearly defined bid back requirements that address functionality. Remember the designs are assessed by appropriately experienced professionals
- Align bid back requirements to assessment criteria
- Standard / Reference examples of design elements when appropriate. Saves repeated drafting
- Solutions not repeats of the Output Specifications – particularly in the engineering services
- Flexibility in the process when appropriate

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A balanced approach

A summary:

- Using standard industry terms such as “Concept Design” are not appropriate for all elements
- Scale to suit the size of the project
- It’s a risk management exercise for everyone!
- Demonstrate functionality
- Ultimate reliance on the Output Specifications

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Questions

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Default and Renegotiation in PPP Auctions

Flávio Menezes and Matthew Ryan

UQ/Auckland

29 August 2013

PPPs for Transport Infrastructure

- We consider Public-Private Partnerships (PPPs) for transport projects in which the private partner is paid through user charges (toll revenue).
  - Motivated by Australian experience

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  - They have not borne it lightly!

PPPs for Transport Infrastructure

- Several complex forces are at play:

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- We build a simple model to help understand the interplay of these forces in transport PPPs

PPPs for Transport Infrastructure

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     - (Alleged) costs of higher interest payments
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     - (Alleged?) benefits of risk transfer and timely completion of the "project"
       What are the implications of private debt in the post-construction phase?

PPP's and Risk

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    - Why is it better that the private partner bear such risk? *("Risk transfer is not an advantage in itself..." [NIU, 2009])*
- It is also important to consider the *feasibility* of risk transfer, not just the desirability:
  - Upside risks are easily transferred to the private partner; downside risks less so.

Menezes/Ryan (UQ/Auckland) PPP Auctions 29 August 2013 5 / 14

PPP's and Risk

"When the project [...] results in losses, the private sector will ultimately withdraw, leading to termination of the project unless the public sector steps in and increases the payment to the private partner or reclaims the responsibility to finish the project" (Alexandersson and Hultén, International Journal of Transport Economics, 2009)

PPP's and Risk

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- This in turn affects bidding.
  - In extreme cases, one worries about the Spulber Effect or so-called "Abnormally Low Tenders".
  - Our framework emphasises that the problem is far more general, and appears in less extreme forms.

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  - Future demand is uncertain (but commonly assessed by all parties).
- There is a set of potential bidders
  - Each has private information on its construction costs (which are not uncertain).
- Firms bid the toll rate they will charge; lowest bidder wins.

Elements of the Model

- A contract to finance, build and operate/maintain a road for a fixed concession period.
  - Private partner collects toll revenue during the life of the concession.
  - Future demand is uncertain (but commonly assessed by all parties).
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  - Might alternatively take the form of an increase in the allowed toll rate, a longer concession period, a change to transport policy, etc.

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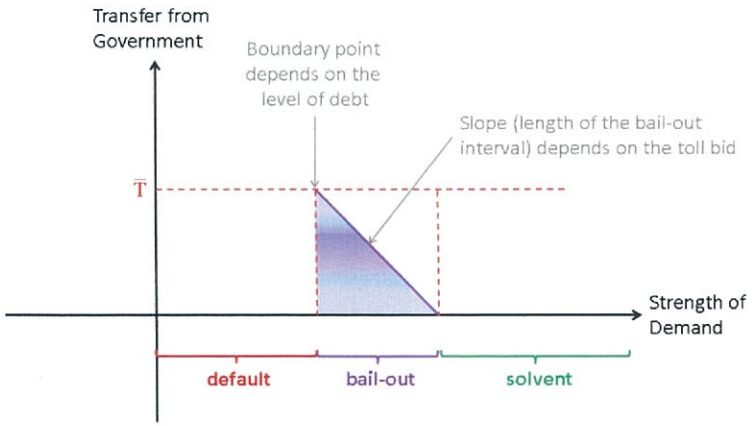
  - How might debt limits or other measures be used to manage this problem (if it is perceived to be a problem)?

Bidding, Debt and Renegotiation



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  - Role for debt limits or LPVR auction format?

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Public Private Partnerships – an advisor's view

ISCR Conference
29 August 2013
Adrian Wimmers

Agenda

Defining PPP

Why does New Zealand use PPPs?

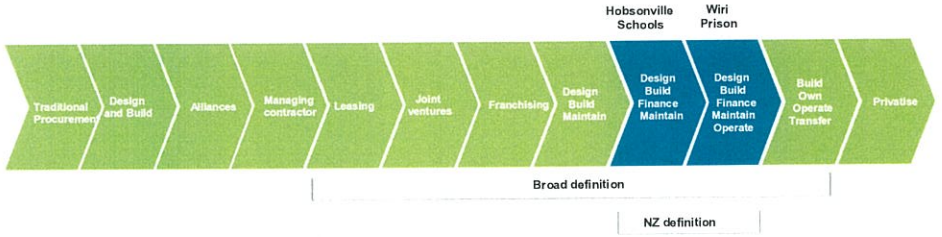
Which projects suit the PPP approach?

A financial/commercial view on why PPPs work

Have we learnt from PPP failures?

Defining PPP

- Public Private Partnership (PPP) from 1992 in the United Kingdom
- PPP now taken as a global generic term for partnering deals related to 'infrastructure' with a private finance component
- NZ Treasury definition is narrower



Defining PPP

Traditional procurement characteristics

The case for PPPs largely exists because of comfort with the deficiencies in the status quo:

- Government budgeting cycles drive a 1 to 3 year view of the world vs the 30+ year life of most government infrastructure
- Government accounting and budgeting separates capital and operating costs for specific projects into separate buckets
- Many agencies have a default procurement approach
- Single view of asset design driven by value management of construction costs, excluding operating costs
- Fragmented contracts for design, construction, operations, maintenance
- Limited analysis of whole-of-life risks
- Limited risk transfer to, or trust of, private sector contractors
- Competition usually based on construction at cheapest price
- Payment is not linked to performance
- Costly variations to specification are common through construction period – contributes to optimism bias
- Deferred maintenance is seen as a legitimate cost saving technique
- Government's record of long term asset maintenance has not been good, coupled with specific issues such as weather tightness issues in new schools
- There is a lack of performance measurement and management through asset lives

Defining characteristics of PPPs

PPPs have six key characteristics:

1. Service rather than asset focus
2. Long term contractual relationship between government and provider
3. Service defined in Output Specifications – what not how
4. Risk allocated to party best placed to manage
5. Payment based on actual day-to-day service delivery
6. Alternative bidder solutions are competed, then selected on a whole-of-life, risk adjusted economic cost basis (i.e. value for money)

PPP takes a systems approach (negative feedback loop) to projects

What is a PPP?

- **Long-term output/outcome based contract**
  - for delivering a specified asset condition and service
  - with appropriate incentives for performance over the life of the contract
  - capital costs paid over the lifetime of the contract
- **Public sector involvement**
  - Specify the contractual framework and procurement approach
  - Specify the services in scope and service standards (i.e. 'what" services are to be delivered and to "what" specification)
  - Specify how the private sector partner (PSP) will be paid, or not paid based on their performance
  - Manage the contract

What is a PPP?

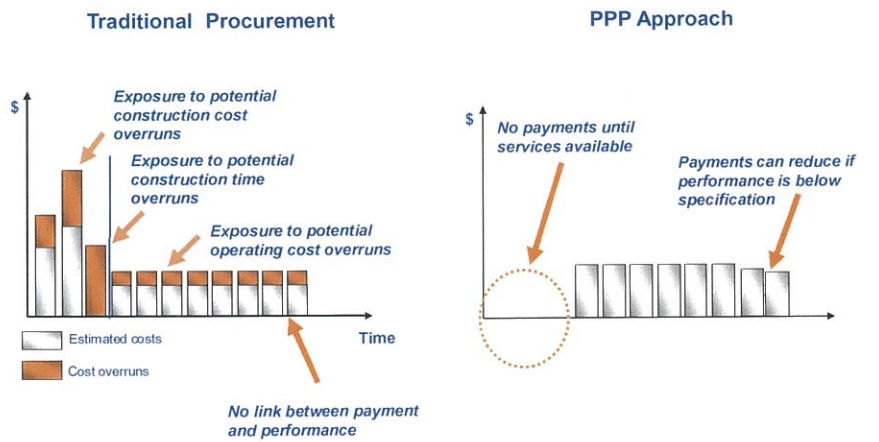
- **Private sector involvement**
  - establishes a consortium for the design, build and maintenance of infrastructure projects . . . and they take responsibility for performance
  - decides what is the most effective mechanism for delivering the specified outputs (i.e. "how" services are delivered)
  - finances the construction and delivery of the project
- **Private sector financing (both equity and debt)**
  - underpins business responsibility to deliver under contracts
  - improve scrutiny of contractors' ability to deliver contracts
  - provides certainty of financing through committed funding structures
  - uses $ payment structure to incentivise desired behaviours

Payment principles

Typical PPP Payment Mechanisms are built around the following principles:

- the services must have commenced
- the services must be available
- there should be a single Unitary Charge
- where performance falls below specification, payment deductions result
- the payment mechanism should be truly output based, so no availability = no payment
- the deductions should be calibrated based on the relative importance of the underperformance (e.g. operating theatres unavailable = high deduction, stores cupboard unavailable = low deduction)
- the deductions should incentivise the PSP to fix the problem (e.g. ratchets)

Risk profiling and cash flows



Why does New Zealand use PPPs?

New Zealand rationale for considering PPPs

- Improved whole-of-life asset management for public assets
- Potential for integrated service and asset design
- Opportunities for innovation
- Opportunities for risk transfer
- Catalyst for change
- Greater procurement discipline

Which projects suit the PPP approach?

Project characteristics – PPP suitability

- PPP likely to provide value for money if:
  - Long term contract is possible (eg 25 to 30yrs)
  - Service outputs are measurable (can abate service payments for non-performance)
  - Service requirements are relatively stable over long periods
  - Innovation is possible (and desired)
  - Whole of life costing is possible (taking into account upfront design & construction with delivery of service over term)
  - Market appetite exists
  - Ability to transfer risk
  - Bundling of contracts is possible – government enters into single contract with preferred bidder (and bidder subcontracts to builder, maintenance provider etc)
  - Non-core services involved
  - Complementary commercial development (3rd party revenues).
- Examples include schools, hospitals, prisons, defence equipment and training, headquarters, roads and bridges

A financial/commercial view on why PPPs work

Cost savings under PPP

There are several sources for innovation and cost savings asserted under PPP

1. Project development undertaken pre-market

   = greater specification certainty, fewer variations

2. Competition and evaluation based on best quality within the affordability threshold

   = tender process that competes whole-of-life solutions rather than cheapest construction cost

3. Competition focus on whole-of-life asset costing and management

   = ability to make capex vs opex trade-offs

Most reviews are by professional services firms or Government auditors. More academic research into the truth of these assertions would be welcome (eg University of Melbourne)

PPPs enable risk transfer

•A core PPP principle is that risk is transferred to the party best able to manage and mitigate that risk

•As the PSP designs and constructs the asset(s), they are best placed to manage their performance and whole-of-life costs (eg maintenance and lifecycle capex)

•The contract negotiations formalise the allocation of risk

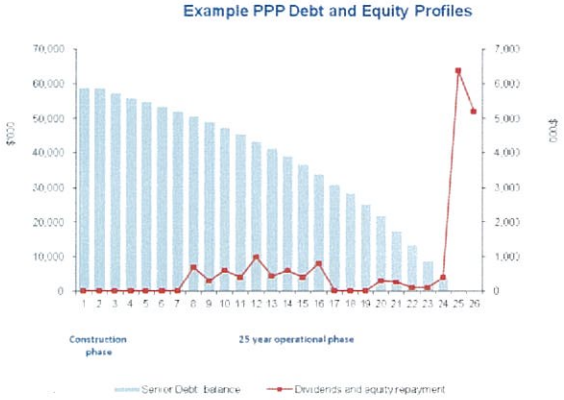
The role of finance in a PPP

- Debt finance allows the conversion to a pay for performance model
- Due diligence by banks during bid phase is a key value add – it's their money at risk
- Equity investment allows risks to be shared across the consortium and means the Partner has 'skin in the game' throughout the contract term
- The upside on debt is (mostly) limited to payment of interest, so strong alignment of interest with Government during operational phase

Note that (incremental) cost of debt is just one cost input amongst the total costs. PPPs will only proceed if the total cost under PPP is not more than the total cost of the Traditional Procurement alternative.

Financial incentives for performance

•Typical equity return profile creates a clear financial incentive for sustained high performance



Have we learnt from PPP failures?

Reasons for PPP 'failures'

1. **Business case failures**
   - Many projects should not have selected the PPP procurement route (eg UK IT projects)
   - New Zealand's Better Business Case framework is designed to avoid such failure
2. **Excessive risk transfer (particularly demand risk) driven by balance sheet treatment**
   - Several projects have failed because the private sector took on risks they could not manage
   - Some of these have cost taxpayers, many have not (eg Australian toll road PPPs)
   - New Zealand PPPs have not sought to pass demand risk and are all "on balance sheet". Value for (same) money is the key driver
3. **Lack of flexibility in being able to reduce Unitary Charge (eg NHS Trust PFIs)**
   - Inability to 'defer maintenance' is actually a design feature of PPPs
   - The apparent ease with which maintenance can be deferred in non-PPP assets carries an economic cost in the long term

Reasons for PPP 'failures' (cont'd)

4. **High costs for small changes**
   - Early contracts were poor in this regard
   - NZ Schools PPP contract allows a degree of expected caretaker works and minor modifications to occur without triggering Change mechanisms under the contract
5. **Gaming public sector budgeting/accounting processes**
   - Many reported failures arose due to attempts to game government funding rules (eg Unitary Charge sculpting, access to funding only if PPP-able)
   - NZ Treasury PPP Unit supervision limits this risk

The New Zealand PPP framework has been designed to avoid these sources of project failure and is based on lessons learnt in other jurisdictions.

Glossary

- **Output specification =** a statement of what is required by the user (in output terms, without specifying the solution) ie "what function do we need the asset to perform?" NOT "how do we want this asset to be constructed?"
- **Project Agreement (PA)** = the contract between the public and private sectors which sets out the contractual requirements for the project.
- **Private Sector Partner (PSP)** = the private sector entity created to deliver the project (typically a partnership between equity providers and the construction contractor).
- **Service specification** = schedules to the PA that set out the required outputs that the PSP is required to achieve, including KPIs.
- **Payment mechanism (paymech)** = a schedule to the PA that defines:
  - when and how much the PSP is paid when all KPIs are met; and
  - When and how much is deducted from that payment when they fail to meet KPIs
- **Unitary charge** = a single monthly (or quarterly) charge for the Precinct payable by the public sector to the PSP. This incorporates:
  - All capital costs incurred
  - All on going maintenance costs (lifecycle, hard and soft FM)
  - Costs of additional (non maintenance) services provided by the PSP
  - Associated finance costs

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Contact details:

Adrian Wimmers
Partner
Head of Infrastructure and Projects Group

+64 (4) 816 4681
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