

**Asian Development Bank Institute, Asian Development Bank
and Bond University**

***Strengthening Private Sector Participation
for Infrastructure in the Pacific Region***

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PPP Definitions & Modalities

Dr. Michael Regan

Associate Professor of Infrastructure

Mirvac School of Sustainable Development

mregan@bond.edu.au

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How do governments procure infrastructure assets and services?

Four main options:

1. In-house provision and management either directly or through GBEs/agencies
 2. Traditional procurement
 3. Private provision (BOT and PPP transactions)
 4. Hybrid measures – alliance contracting for both construction and management.
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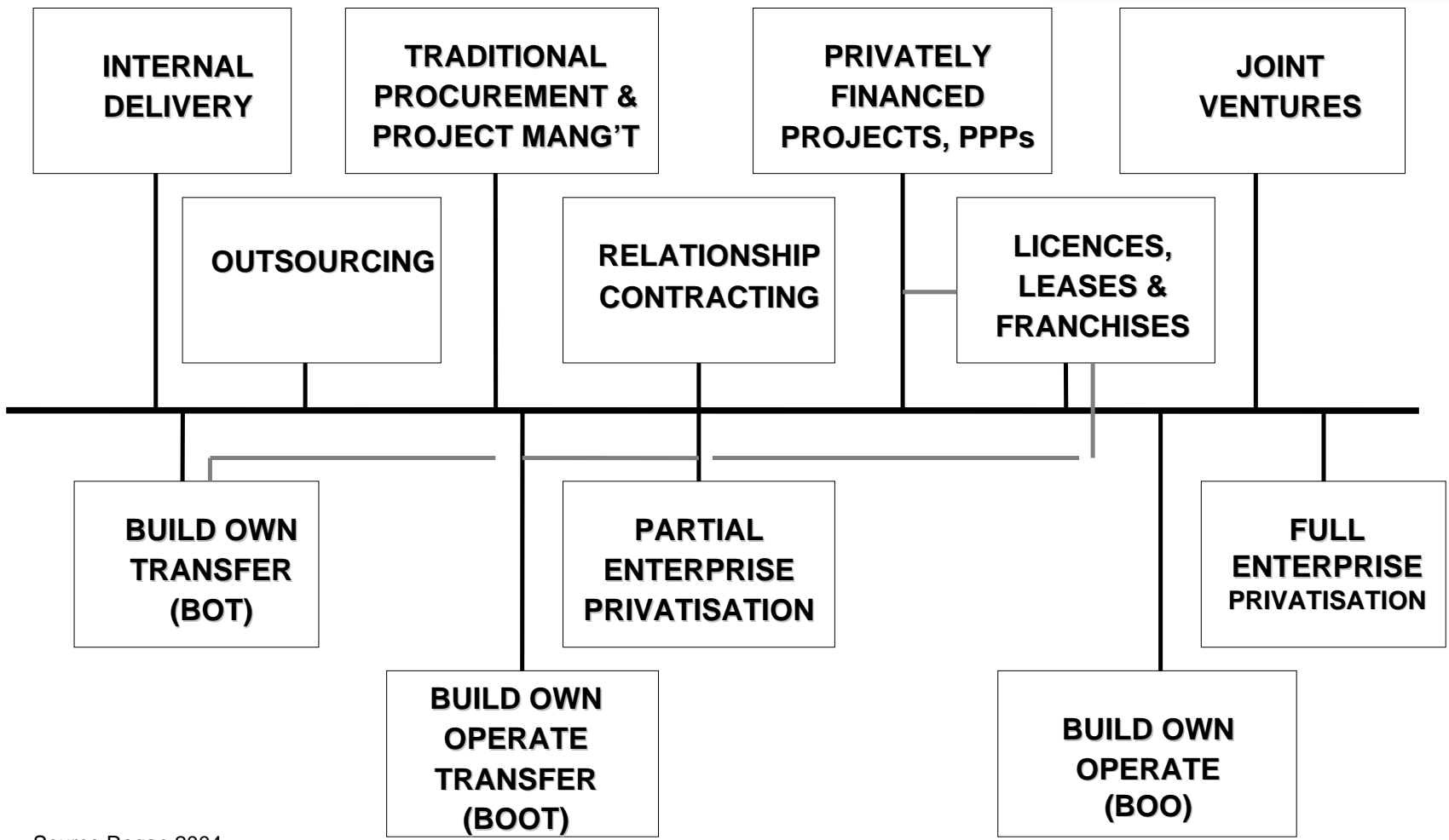
Infrastructure Procurement:

- to achieve economic and social benefits
- to increase capital productivity

Infrastructure Challenges:

- identifying efficient procurement mechanisms
 - managing infrastructure on a lifecycle basis
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PROCUREMENT MODELS



Source Regan 2004

In-House Delivery (GBE or authority)

- GBEs are directly controlled by government
 - State appointed directors and senior executives
 - Enterprise performance low by market standards
 - Subject to political interventions (dividend streaming to meet budget deficits, CSOs and their reimbursement, equity for debt swaps)
 - Poor benchmarking (preservation of the status quo, output pricing not set by reference to costs of production, actual performance) ...
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STATE BUSINESS ENTERPRISES
Australia, 1999-00 to 2003-04
Government Business Enterprises

	1999-00	2000-01	2001-02	2002-03	2003-04	Average
Sector Returns						
Electricity	16.0	25.4	11.8	14.6	12.3	16.0
Water	-1.2	5.0	5.1	3.0	-2.9	1.8
Urban Transport	0.6	13.4	-3.0	16.9	-0.2	
Railways	5.5	-2.7	24.7	8.3	6.6	6.3
Ports	7.6	10.2	-0.2	18.1	28.5	12.8
Forestry	na	na	na	6.8	5.9	6.4
Australian Gov't	28.0	23.3	24.9	34.8	28.7	27.9
All Monitored GBE returns	4.2	11.2	8.2	8.2	4.2	7.2
Risk-free rate	6.5	5.8	5.9	5.4	5.6	5.9
S&P/ASX200 Index	14.0	5.4	-7.9	-5.9	16.7	4.5
Borrowing Costs	7.6	6.9	6.3	6.5	6.5	6.8

Source: PC Financial Performance of GBEs 2000-2004.

Note: Weighted averages for sample of GTEs. Queensland Rail sole railway GBE.

The limitations of in-house procurement are:

1. Incomplete performance benchmarking (project overruns, late delivery)
2. Failure to address lifecycle operation
3. Lack of innovation the major problems.

In comparative terms, most state in-house procurement methods are inefficient. The alternatives are:

1. Traditional procurement using Gateway
2. Greater use of private sector expertise and capital – BOT/BOOT & PPP models.



Traditional Procurement

The state acquires infrastructure by public tender using state procurement laws, policies and guidelines.

The state meets:

- The full cost of delivery
- Lifecycle repair & maintenance obligations
- Service delivery management.





Characteristics:

1. State establishes the service need and commissions an input specification
 2. Competitive tender with selection criteria favouring lowest procurement cost
 3. Separation of design, procurement and management/operational phases
 4. Adversarial contractual process
 5. No lifecycle costing.
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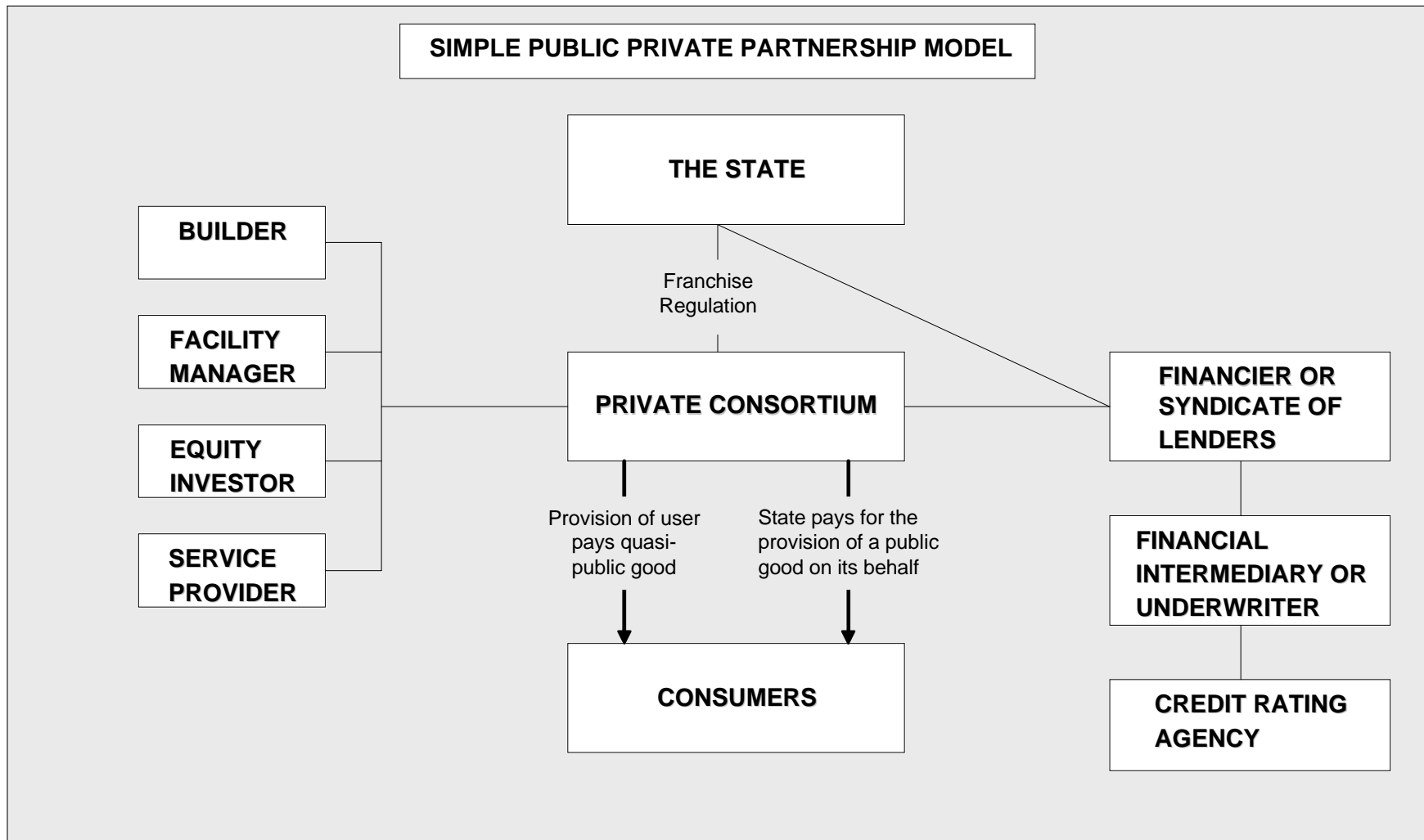
Private Provision (Output Specification Model)

- Line agency/department prepares an output specification to create scope for new technology, design & construction innovation
 - Integration of design & delivery phases
 - Create performance incentives (high marginal return on investment) & equitable abatement/incentive framework for project
 - Focus is on the service to be delivered against a range of quantitative and qualitative KPIs.
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What is a PPP?

A long-term contract whereby the state runs a competitive tender for the private sector to deliver a good or service to or on behalf of the state, over its lifecycle.

Private consortia bid for the project using private capital, delivery mechanisms and management expertise.



The process involves:

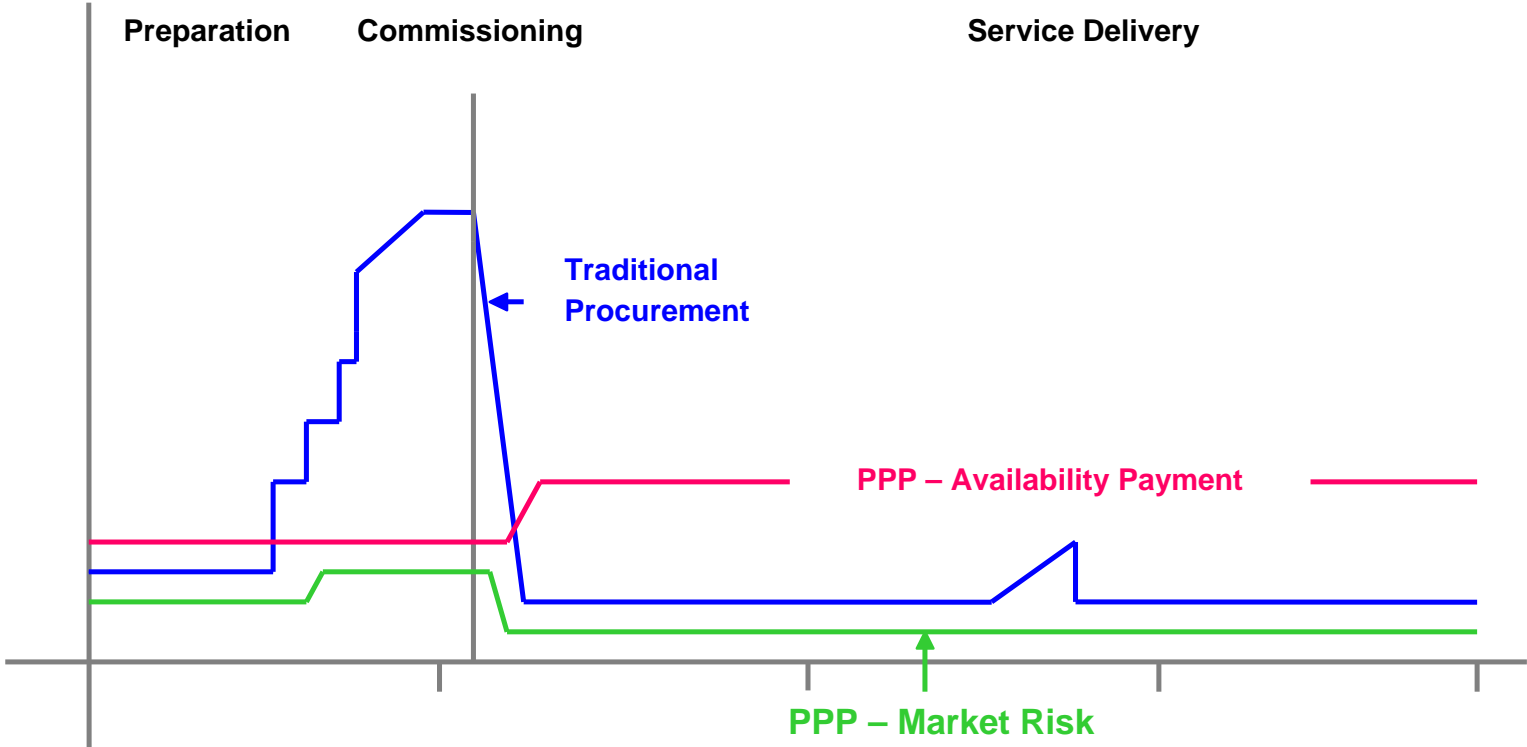
1. An output specification
 2. A competitive tender (& bid evaluation criteria)
 3. Private sector finance
 4. A state payment stream
 5. Service provision over the life of the project
 6. A regulatory (or contract management regime).
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PPP Configurations

- State payment for service delivery
- Shadow tolls – partial market (revenue) risk
- State supported projects – cash, revenue guarantees, “soft” debt, tenure or term
- Franchisee accepts market (revenue) risk under user-pays arrangements.

How are these options measured?

PPP & TRADITIONAL PROCUREMENT Net Present Value of Payment Streams





Private Provision (Input Specification Models)

Characteristics:

- Stand-alone or networked assets (water recycling, energy generation)
 - Private capital and management
 - Finite tenure concession or franchise
 - BOT and BOOT transaction models
 - Widely used for delivery of homogeneous services (energy, water, toll road).
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Hybrid Methods

- Outsourcing (asset provision and/or asset management)
- Structured finance arrangements
- Alliance contracting ...



Characteristics:

- Non-adversarial contracting arrangements
 - Contractor pre-selection based on qualitative factors (expertise, track record)
 - Sharing of risk (pain or gain) (incentive)
 - Long-term articulated contracts
 - Shared innovation and technology
 - Construction and/or management contracts ...
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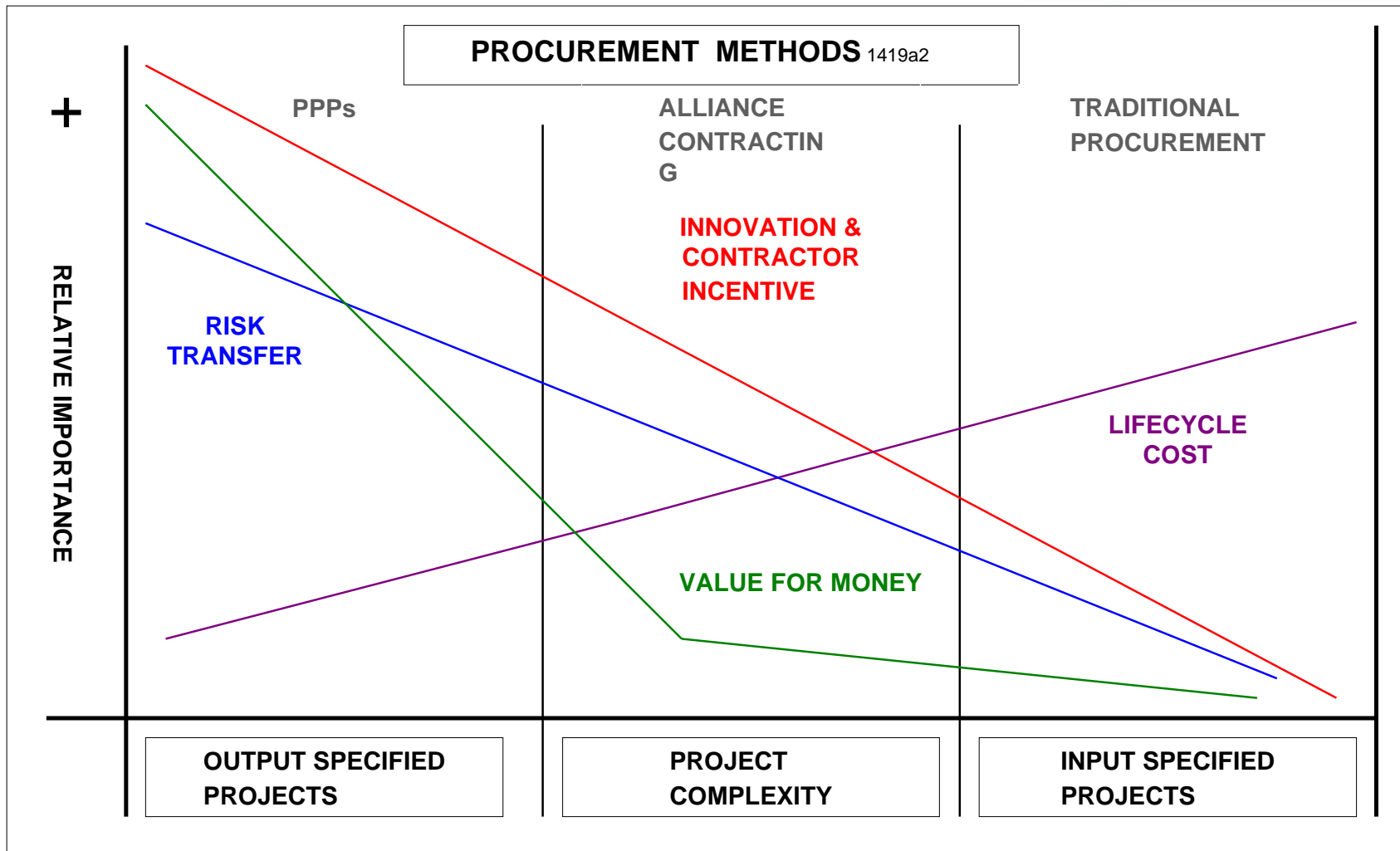
Factors to be considered when selecting the appropriate infrastructure delivery mechanism:

1. Size of the project (transaction costs)
 2. Nature of the service – core or non-core
 3. Complexity
 4. Risk allocation
 5. Depth of the bid market (and availability of capital).
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What are the points of difference between these methods?

- Risk transfer
- Optimal alignment of incentive (and marginal return on investment)
- Value for money evaluation
- Focus on outputs
- Lifecycle costing (certainty)
- Quantitative and qualitative performance
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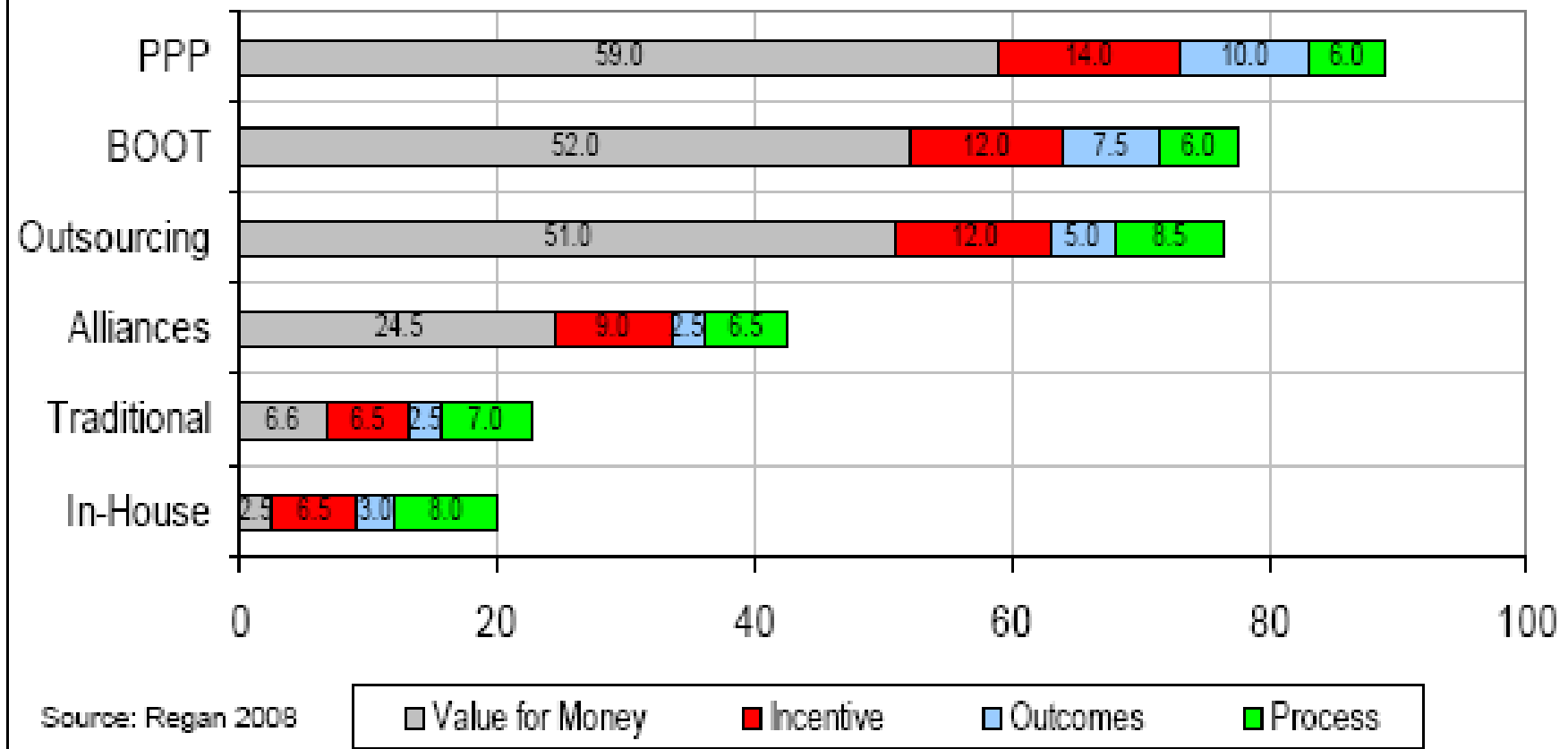




1619	In-House Production	Traditional Procurement	BOOT	Alliance Contracts	PPPs	Structured & Project
Focus	Asset	Asset	Service	Asset	Service	Asset
Specification	Input	Input	Input	Collaborative	Output	Input
Risk Transfer	Lowest tender	Low	High	Medium	High	Low
Scope for Innovation	Lowest tender	Low	Medium	High	High	Low
New technology	Low	Low	High	High	High	Low
Project Management	Internalised	Internalised	Externalised	Externalised	Externalised	Internalised
Lifecycle Costing	Low	Low	High	Low	High	Low
VfM	Lowest tender	Lowest tender	Lowest tender	Optimal price	VfM	Lowest tender
User Benefits	Minimal	Minimal	Minimal	Maximised	Maximised	Minimal
Asset Management	Conservative	Conservative	Incentivised	n.a.	Incentivised	n.a.
Marginal return on investment	Lowest tender	Low	High	Low	High	Low
Documentation	Low	Medium	High	Medium	High	Medium

SOURCE *Regan 2007*

Procurement Effectiveness Index, Nominal Values 1685



Procurement cost savings



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PPP Procurement Cost Savings

15%	a	BTCE 1996, Australia
8-14%	b	Hodge 2000 (worldwide survey)
17%	c	HM Treasury 1998, United Kingdom
17%		Anderson-Enterprise LSE 1999, United Kingdom
19.70%		HM Treasury 2002-03, United Kingdom
10%	c	Allen (House of Commons) 2003, United Kingdom
9%	d	Fitzgerald 2004, Australia
11%		Allen Consulting 2007, Australia

SOURCE

Compiled Michael Regan from original reports 2006

NOTES

a Comparison of PPP/PFI outcomes against the PSC

b,c Contracting out only

d All procurement

e Buildings only

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SURVEY OF PROCUREMENT OUTCOMES ^a
On Budget
On Time
**User
Benefits ^b**

Traditional Procurement	<i>e</i>	25%	34%	27%
	<i>d</i>	27%	30%	35%
	<i>f</i>	55%	63%	55%
Gateway Programs	<i>d</i>	69%	73%	65%
Alliance Contracting	<i>e</i>	77%	78%	<i>Refer notes</i>
PFI (UK)	<i>f</i>	78%	76%	n.a.
PPP (Australia)	<i>g</i>	79%	82%	74%
UK Defence Contracts	<i>h</i>	17% (14%)	8% (24%)	Met requirements

SOURCE
MR 2008
NOTES
a Sources as noted. Sample sizes vary. Parenthesis denotes average overruns for sample
b Qualitative assessment from independent NAO 2004, 2006 reports. Defect reporting.
d 2000-01 results: NAO 2001 Modernising Construction. Delivered on or under time and price.
e 1999 results: NAO 2005 Improving Services Through Construction Part B
f 2004 results: NAO 2005 Improving Services Through Construction Part A
g Fitzgerald 2005; Audit Office Reports Victoria & NSW 2004-08; IPA 2007
h NAO 2004, 2006 MOD Defence Contracts



Conclusion

As a method of infrastructure procurement, PPPs offer:

- Value for money
- Risk transfer
- Incentivised management
- Certainty (lifecycle costing)
- Improvements to the science of procurement
- Lessons learnt are improving the model
- Innovation and new technology ...



The evidence suggests that project procurement involving private sector participation for lifecycle operation is the most effective form of procurement (PPPs, BOOTs and outsourcing). The marginal return on investment (incentive) is central to improved procurement and asset management performance.
