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International Experience with Incorporating Funding and Financing into Long-Range Plans

January 11, 2010

TRB 89th Annual Meeting

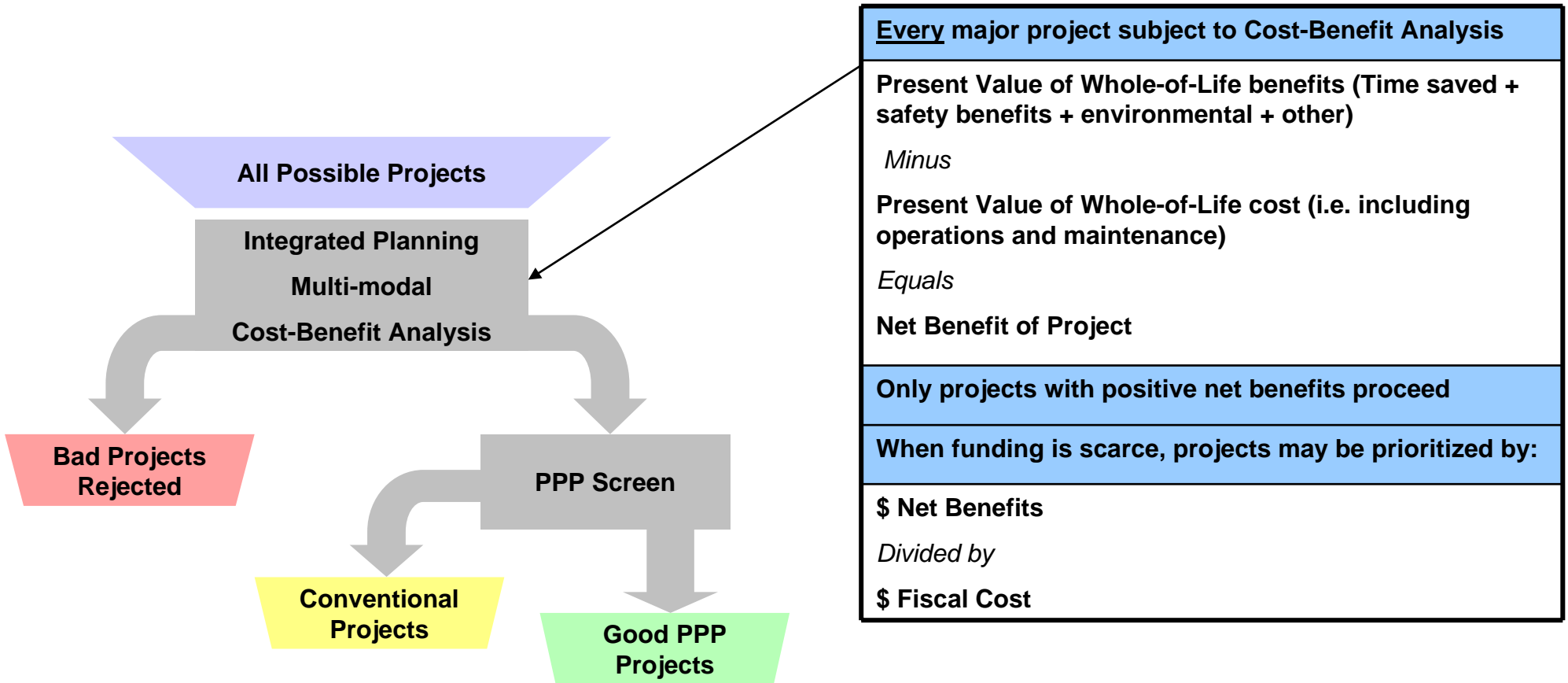
Agenda

- **Innovative Finance Contrast: US First Generation vs World Best Practice**
- **Synthesis of Best Practice from Overseas**
 - **Integrated, multi-modal, cost-benefit based approach**
 - **P3 Decision based on Value-for-Money (or cost-benefit) not financing need**
 - **Clear process for testing Value-for-Money**
- **Vast range of applications**
 - **Tolled Urban Highway Network, Sydney, Australia**
 - **Transit P3, Melbourne, Australia**
 - **Performance Based Highway Maintenance Contracts, New Zealand**
 - **High Speed Rail Infrastructure, the Netherlands**
- **Conclusion**

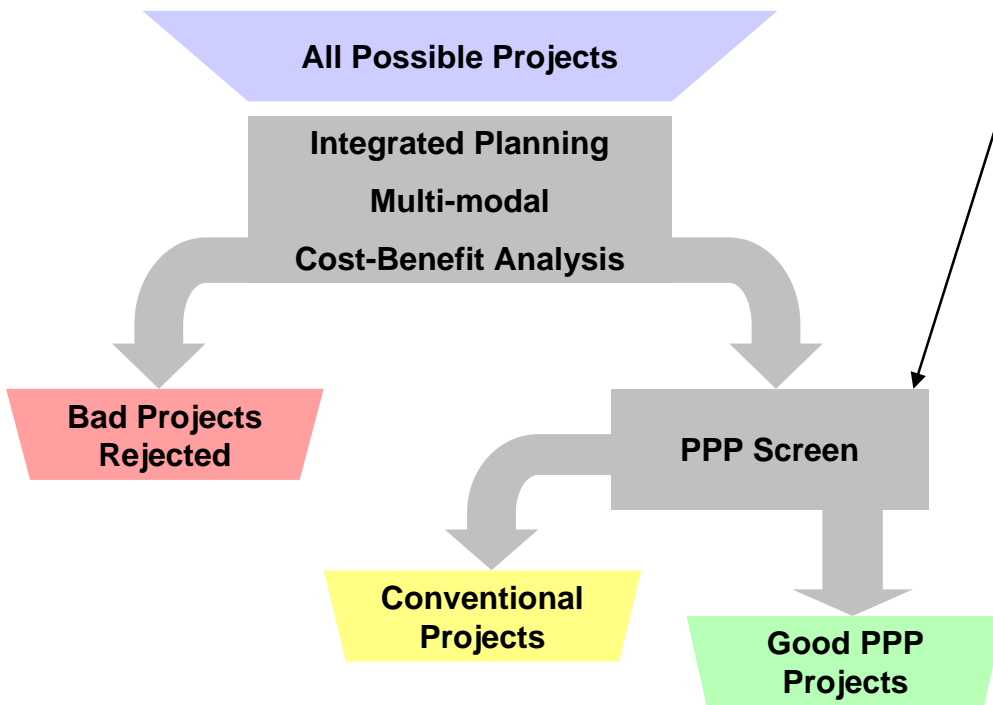
Innovative Finance Contrast: US vs World

US Approach – First Generation <i>Innovative Finance as Stop-Gap</i>	World Best Practice Approach <i>P3 as one tool in integrated approach to maximize mobilize benefits given limited fiscal resources</i>
<ul style="list-style-type: none">➤ Plug a fiscal gap through asset monetization➤ P3s for projects just below the cut-off for public funding➤ Finance decision linked to tolling ability	<ul style="list-style-type: none">➤ Prioritize projects by Net Benefits/\$ Fiscal Expenditure➤ Multimodal, strategic approach➤ P3s used to achieve<ul style="list-style-type: none">-Innovation-Cost reduction-Rapid completion-Risk reduction for public sector <p>As well as:</p> <ul style="list-style-type: none">-Additional revenue from tolling-Additional finance beyond budget borrowing limits ➤ Resources freed up for high priority non-P3 projects

Best Practice: Integrated, Multi-Modal, Cost-Benefit Based

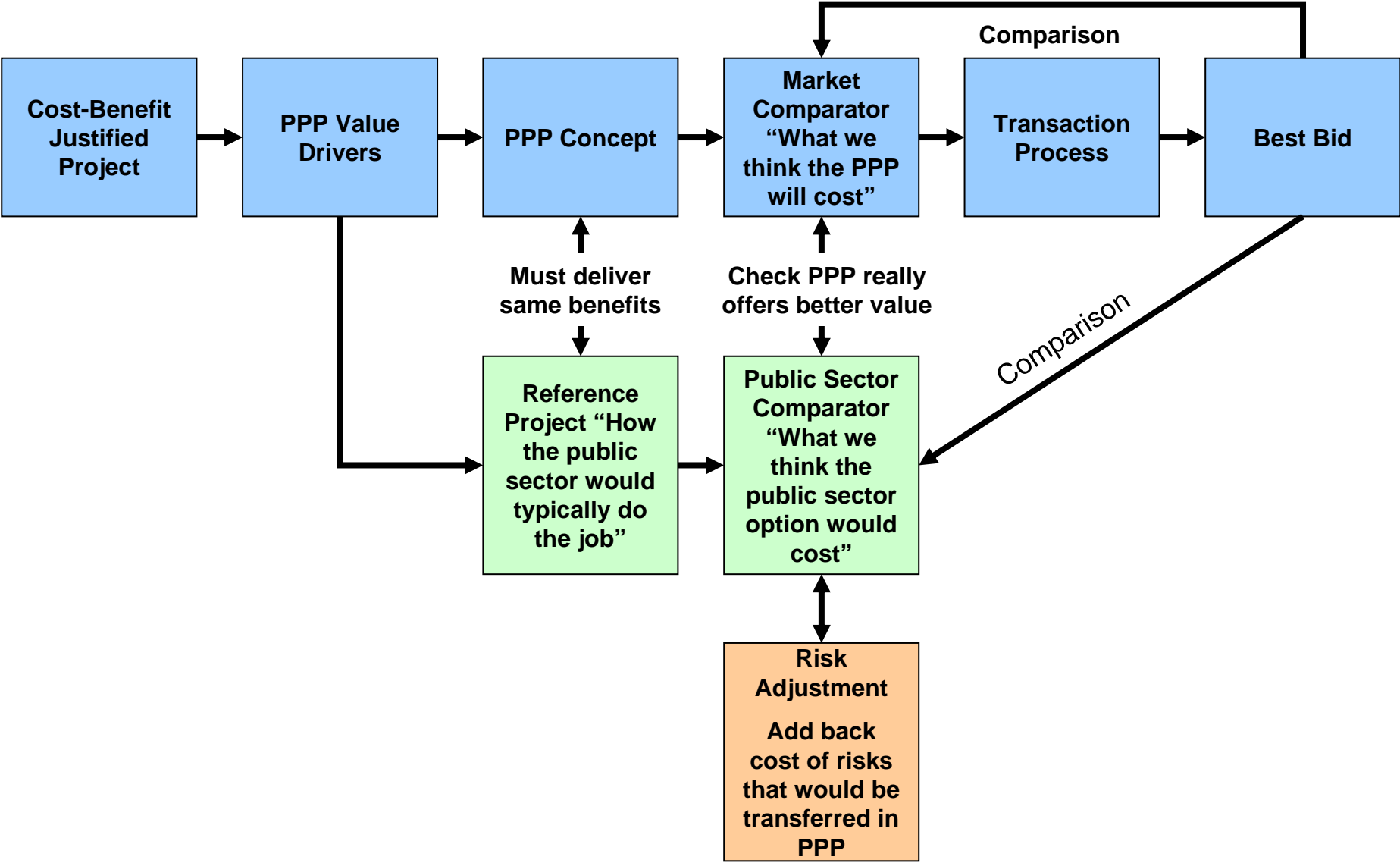


Best Practice: P3 Decision Based on Value-for-Money



PPP Value Drivers	Examples
Whole-of-life costing	Design and construction integrated Maintenance vs Capital Costs optimized
Risk Transfer	Tunneling risk New tolling technology risk
Innovation	New technologies
Maximize Asset Utilization	Additional on-ramps Managed lanes
Mobilize Additional Resources	Tolls and private finance allow more cost-benefit justified projects to be built
Value Subtractors	Examples
Small Projects	Small bridges, road extensions
High Interface Risks	Technologies that must talk to each other
Need for Future Flexibility	Services may be changed or replaced

Value for Money Validation



Tolled Urban Highway Network, Sydney, Australia



	Start Year	Ending Year	Period (years)	Cost (\$AU m)	Length (km)
M4	1992	2010	18	\$246	46
M5	1992	2023	31	\$380	26
M2	1997	2042	45	\$644	21
ED	1999	2048	49	\$700	6
M5E	2001	2011	10	\$794	8.5
CCT	2005	2035	30	\$680	2.1
M7	2005	2037	31	\$1,540	40
LCT	2007	2037	30	\$1,142	3.6
Total				\$6,126	153.2

Castalia is now advising on how to make them work as an integrated network

P3 for Cost Strategy and Service Improvement in Transit, Melbourne's Trains and Trams

- Melbourne's trains and trams are operated under two franchise agreements
- Contracts recently successfully rebid

Trains (Connex)

- Patronage increased by **24.6%** (April 2005 to March 2007)
- Fare box increased **30.4%** (April 2005 to March 2007)
- Farebox evasion down by **29%** (April 2005 to March 2007)

Trams (Yarra Trams)

- **Safety has improved:** From April 2005 to March 2007 collisions down by 24%, Falls on Trams by 26%
- **Number of cancelled services has dropped by 60%**
- **Fare evasion down by 42.78%** from Dec 2004 to June 2006



Source: Department of Infrastructure, *Refranchising Melbourne's metropolitan train and tram networks*, www.abp.unimelb.edu.au/gamut/pdf/value-assesment.pdf

P3 Tram (Light Rail) in Front of P3 Station, Melbourne, Australia



Performance-based maintenance contracts, New Zealand

- **The 10,000 km national network is managed through 25 sub networks known as Network Management Areas (NMAs)**
- **Performance Specified Maintenance Contracts used on much of the network. 10 year contract to single supplier who is responsible for all service provision on the sub network**
- **Cost reductions of 10% to 30%**
- **Greater accountability in keeping assets at specified service levels**



Availability Payment for Infrastructure : HSL- Zuid High Speed Rail Project (Netherlands)

- **High speed lines began operating commercially in September 2009**
- **New route runs for 62 miles from Amsterdam to Belgium border**
- **Can carry trains up to 185 miles per hour**
- **Infraspeed is responsible for the design, construction, financing and maintenance**
- **Cost around \$10.6 billion**
- **PPP covers construction and 25 year maintenance**
- **Performance based availability payments cover building and maintenance**

Source: <http://www.hslzuid.com>



Conclusion

- **P3 best seen as one part of an overall strategy to achieve maximum mobility benefits given limited fiscal resources**
- **Projects should be selected for P3 based on Value-for-Money from P3, not just financing considerations**
- **P3 decision need not be linked to tolling decision**
- **P3 offers as much benefit in Transit, High Speed Rail Infrastructure, Road Maintenance, as highways**

More questions or comments? Please contact me at:

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