

SOUTHERN CALIFORNIA



**ASSOCIATION of
GOVERNMENTS**

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JOINT MEETING OF THE

HIGH-SPEED RAIL & TRANSIT/TRANSPORTATION FINANCE SUBCOMMITTEE

Thursday, February 7, 2013

2:30 p.m. – 4:30 p.m.

**SCAG Los Angeles Office
818 West Seventh Street, 12th Floor
Los Angeles, CA 90017
Board Room
(213) 236-1800**

Videoconference Available

Orange County Office

**600 S. Main Street, Suite 906
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San Bernardino County Office

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Ventura County Office

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El Centro, CA 92243**

Riverside County Office

**3403 10th Street, Suite 805
Riverside, CA 92501**

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Ruby Moreno at (213) 236-1840 or via email moreno@scag.ca.gov

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The Regional Council is comprised of 84 elected officials representing 191 cities, six counties, six County Transportation Commissions and a Tribal Government representative within Southern California.

High-Speed Rail & Transit Subcommittee Member List

Los Angeles County: Hon. Mike Antonovich, **Vice Chair**
Hon. Frank Quintero
Hon. Gene Murabito
Hon. Bruce Barrows, Alternate
Hon. Steve Hofbauer, Alternate
Hon. Jess Talamantes, Alternate

Orange County: Hon. Leroy Mills

Riverside County: Hon. Karen Spiegel, **Chair**
Hon. Ron Roberts

Ex-Officio Members

Nancy Pfeffer, Gateway Cities

Michael A. Morris, FHWA

**Transportation Finance Subcommittee
Member List**

San Bernardino County: Hon. Gary Ovitt, **Chair**

Los Angeles County: Hon. Keith Hanks, **Vice Chair**
Hon. Bruce Barrows

Orange County: Hon. Brett Murdock

Ex-Officio Members

Lucy Dunn, President & CEO, Orange County Business Council

Denny Zane, Executive Director, Move LA

JOINT MEETING OF THE HIGH-SPEED RAIL & TRANSIT AND TRANSPORTATION FINANCE SUBCOMMITTEES

AGENDA

FEBRUARY 7, 2013

The High-Speed Rail & Transit and Transportation Finance Subcommittees may consider and act upon any of the items listed on the agenda regardless of whether they are listed as information or action items.

CALL TO ORDER & PLEDGE OF ALLEGIANCE

(Hon. Gary Ovitt, Chair, Transportation Finance Subcommittee)

PUBLIC COMMENT PERIOD – Members of the public desiring to speak on items on the agenda, or items not on the agenda, but within the purview of the Subcommittees, must fill out and present a speaker’s card to the Assistant prior to speaking. Comments will be limited to three (3) minutes. The Chair may limit the total time for all comments to twenty (20) minutes.

REVIEW AND PRIORITIZE AGENDA ITEMS

	<u>Time</u>	<u>Page No.</u>
<u>INFORMATION ITEMS</u>		
1. <u>Mileage-Fee Design Strategies to Reduce System Cost and Increase Public Acceptance</u> <i>(Paul Sorensen, RAND Corporation)</i>	Attachment 20 mins.	1
2. <u>Public Understanding and Acceptance of Funding Options</u> <i>(Richard Bernard, FM3 Research)</i>	15 mins.	
3. <u>Public-Private Partnerships (P3s) and Transit</u> <i>(Marv Hounjet, Plenary Group)</i>	Attachment 20 mins	28
4. <u>High Desert Corridor P3 Rail Component</u> <i>(Kern Jacobson, InfraConsult)</i>	Attachment 15 mins	68
5. <u>Options for Funding Rail Initiatives</u> <i>(Denny Zane, Move LA)</i>	10 mins.	
6. <u>Speaker Roundtable Discussion</u> <i>(Paul Sorensen, RAND Corporation; Richard Bernard, FM3 Research; Marv Hounjet, Plenary Group; Kern Jacobson, InfraConsult; Denny Zane, Move LA; Subcommittee Members & Invited Participants)</i>	30 mins.	



JOINT MEETING OF THE HIGH-SPEED RAIL & TRANSIT AND TRANSPORTATION FINANCE SUBCOMMITTEES AGENDA FEBRUARY 7, 2013

CHAIRS' REPORTS

(Hon. Karen Spiegel, Chair, High-Speed Rail & Transit Subcommittee and Hon. Gary Ovitt, Chair, Transportation Finance Subcommittee)

STAFF REPORTS

(Annie Nam and Philip Law, SCAG Staff)

FUTURE AGENDA ITEMS

Any Subcommittee member or staff desiring to place items on a future agenda may make such a request.

ANNOUNCEMENTS

ADJOURNMENT

The next meeting of the High-Speed Rail & Transit Subcommittee will be held at the SCAG Los Angeles Office on February 15, 2013 from 10:00 am to 12:00 pm. The next meeting of the Transportation Finance Subcommittee meeting is tentatively scheduled to be held at the SCAG Los Angeles Office on March 1, 2013 from 10:00 am to 12:00 pm and will be confirmed at the February 7th meeting.





Transportation, Space, and Technology Program

***Mileage-Fee Design Strategies to Reduce System
Cost and Increase Public Acceptance***

**Southern California Association of Governments
Joint Meeting of the Transportation Finance
and Transit Subcommittees**

February 7, 2013

Paul Sorensen, RAND

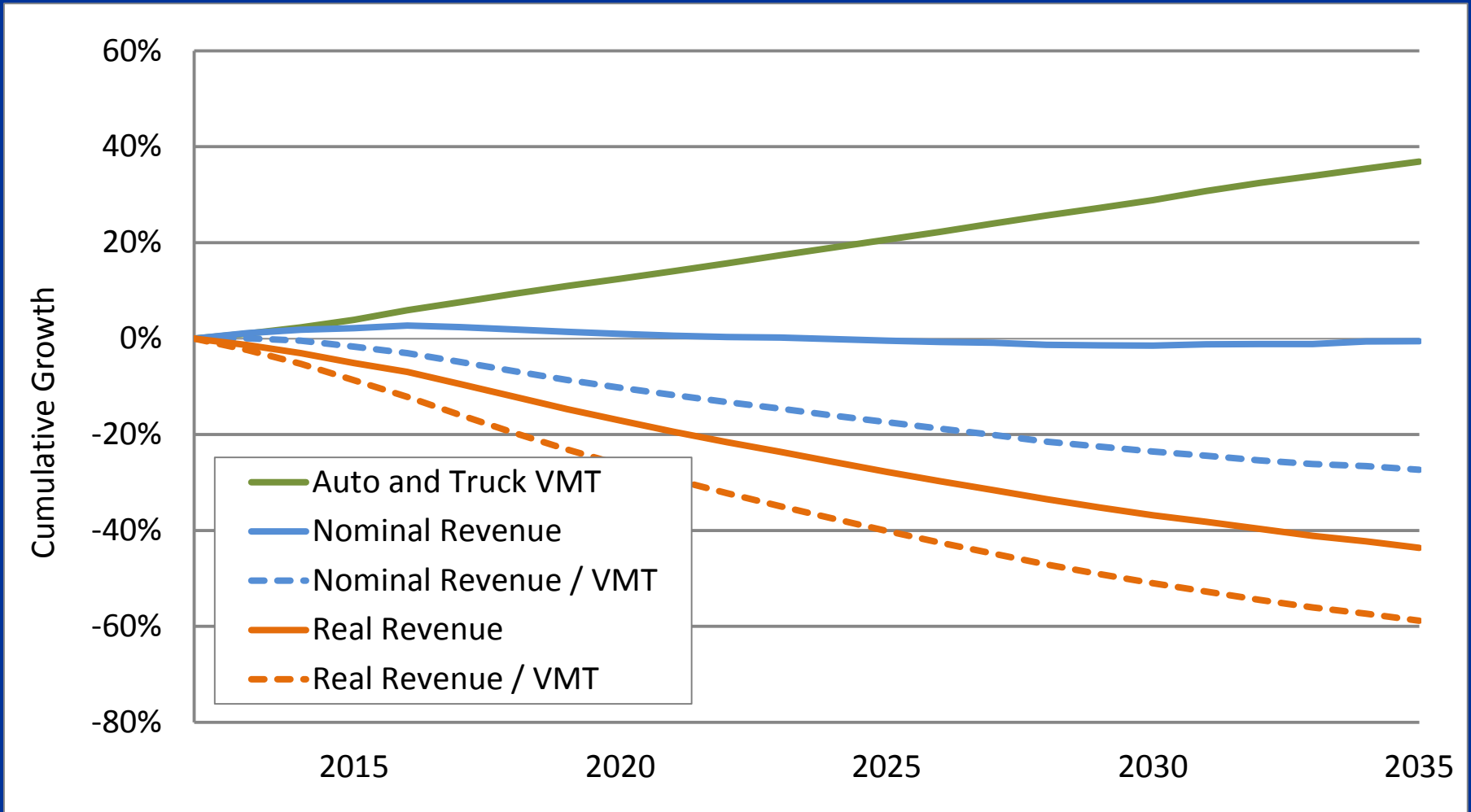
Today's Presentation

- **Motivations for Mileage Fees**
- **Implementation Mechanisms**
- **Core Challenges for Mileage Fees**
- **Promising Design and Transition Strategies**

Reliance on Fuel Taxes to Fund Highways Is Becoming Increasingly Problematic

- **Real fuel-tax revenue per mile of travel is increasingly undermined by:**
 - **Inflation**
 - **Fuel-economy improvements**
 - **Reluctance of elected officials to increase rates**
- **Likely to worsen in future years due to:**
 - **Much more stringent CAFE standards**
 - **Shift to alternative fuels**

Real Fuel-Tax Revenue per Mile of Travel Could Fall Precipitously



Calculations by author based on EIA AEO 2012 projections and current federal fuel tax rates

Mileage Fees Are Viewed by Many as a Promising Long-Term Replacement for Fuel Taxes

- **Mileage fees would provide more stable revenue**
 - **VMT projected to grow much faster than fuel consumption in coming decades**
- **Mileage-fee system could be structured to address additional policy objectives**
 - **Fairly distribute tax burden based on use**
 - **Accurately apportion revenue by jurisdiction**
 - **Reduce congestion, emissions, road wear**
 - **Provide value-added motorist services**
 - **Collect detailed (anonymous) travel data for improved planning and operations**

Fees Could Be Structured to Reduce Congestion, Emissions, and Road Wear

- To reduce congestion:
 - Per-mile fees could be increased for travel in congested travel corridors during peak hours
- To reduce emissions:
 - Per-mile fees could be increased for vehicles that emit more local air pollutants or greenhouse gases
- To reduce road wear (mainly for trucks):
 - Per-mile fees could be increased for heavier axle loads and for travel on local roads with lower engineering standards

In-Vehicle Metering Equipment Could Provide Many Value-Added Services

- Idea: provide driver with financial savings, greater convenience, better information about travel options, improved safety...
- Examples:
 - Pay-as-you-drive insurance
 - Automated parking payment
 - Navigation assistance based on current traffic
 - Downstream traffic incident alerts
- How would Steve Jobs design a mileage-fee system?

Today's Presentation

- Motivations for Mileage Fees
- **Implementation Mechanisms**
- Core Challenges for Mileage Fees
- Promising Design and Transition Strategies

The Design of a Mileage-Fee System Must Address (at Least) Four Functional Components

- Metering road use
- Collecting payment
- Preventing evasion
- Protecting privacy



Options for Metering Road Use

- **Periodic odometer inspections**
- **Simple on-board unit (OBU) connected to OBD II port**
- **OBU with addition of cellular communications**
- **OBU with addition of GPS**
- **Smart phone**

Options for Collecting Payment

- **Payment with vehicle registration**
- **Pay at the pump**
- **Automated data transmission and billing**
- **Pre-paid debit cards**

Options for Preventing Evasion

- **Odometer inspections / redundancy checks**
- **Metering equipment inspections**
- **Default fuel tax payment**
- **Fuel consumption redundancy checks**
- **Roadside LPR/DSRC checks**
- **Device “heartbeat” signals**
- **Device “distress” signals**

Options for Protecting Privacy

- On-board data aggregation / fee computation
- Anonymous proxy fee computation
- Trusted third party
- Prepaid debit cards
- Anonymous user accounts
- Data encryption (element of many of the above)

The Choice Among Implementation Options Involves Important Tradeoffs

- Ability to pursue additional policy goals beyond revenue collection
- Burden on users (relative to fuel taxes)
- Difficulty of enforcement
- Privacy concerns
- Cost of implementing and operating system

Today's Presentation

- Motivations for Mileage Fees
- Implementation Mechanisms
- **Core Challenges for Mileage Fees**
- Promising Design and Transition Strategies

Interest in Mileage Fees Is Increasing in the United States and Abroad

- **International experience:**
 - Implemented weight-distance truck tolls in Europe
 - Implemented mileage fees for diesel-fueled passenger cars and trucks in New Zealand
 - Extensive planning for km fees in the Netherlands
- **U.S. efforts:**
 - Trials: Oregon, Puget Sound, Minnesota, University of Iowa
 - Additional studies and initiatives: Colorado, Texas, Nevada, Washington, New York (truck focus), New York City, and I-95 Corridor Coalition

Recent Experience with Mileage Fees Has Yielded Valuable Lessons

- **User fees keyed to travel distance work**
 - **Raise considerable revenue**
 - **Influence travel choices and vehicle purchase decisions**
- **Mileage fees will be challenging to implement**
 - **Many technical details to be worked out**
 - **Two fundamental concerns:**
 - **Low public acceptance**
 - **High administrative cost**

Public Knowledge of and Support for Mileage Fees Are Low

- Privacy appears to be the main concern (despite multiple methods for protecting privacy)
- Other concerns
 - Low trust in government
 - Concern for increased tax burden
 - Fear of unknown
- A silver lining:
 - University of Iowa trials have shown that support increases considerably as drivers become familiar with mileage fees

MBUF Will Be Expensive to Collect Relative to Fuel Taxes

- **Fuel tax collection: ~ 1% of revenue**
- **Mileage-fee collection: ~ 5% - 10% of revenue**
- **Cost ultimately depends on such factors as:**
 - **Technology choice and future innovation**
 - **Number of users (economies of scale)**
 - **Total revenue collection**
- **Increased collection cost will be more than offset by growth in mileage-fee revenue vs. fuel taxes within the next decade or so**

Today's Presentation

- Motivations for Mileage Fees
- Implementation Mechanisms
- Core Challenges for Mileage Fees
- **Promising Design and Transition Strategies**

System Cost and Public Acceptance Concerns Have Stimulated Significant Innovation

- **Early mileage-fee studies and trials focused mainly issues related to technical viability**
- **More recent efforts focused on system design and transition strategies aimed at:**
 - **Reducing cost / boosting revenue**
 - **Building support / defusing opposition**
- **Path-breaking innovators: Oregon, Minnesota, NYC**

Strategies to Improve Cost Efficiency and Enhance Public Acceptance (1 of 3)

- **Conduct trials and educational outreach**
- **Include elected officials in trials**
- **Engage stakeholders**
- **Enroll privacy watchdogs**
- **Begin with a simple odometer system**

Strategies to Improve Cost Efficiency and Enhance Public Acceptance (2 of 3)

- **Provide drivers with a choice of technologies**
- **Make mileage fees a smartphone app**
- **Support value-added services**
- **Integrate with ITS investments**
- **Encourage vendor competition**

Strategies to Improve Cost Efficiency and Enhance Public Acceptance (3 of 3)

- **Begin with voluntary adoption**
- **Begin with alternative-fuel vehicles**
- **Provide a fixed-fee option**
- **Convert other funding to per-mile fees**
- **Develop a multi-jurisdictional system**

Logic for Strategies

Strategy	Increase Revenue	Decrease Cost	Increase Support	Defuse Opposition
Conduct trials and educational outreach		X	X	X
Include elected officials in trials			X	X
Engage stakeholders			X	X
Enroll privacy watchdogs				X
Begin with a simple odometer system		X		X
Provide drivers with technical choices			X	X
Make mileage fees a smartphone app		X		X
Support value-added features	X		X	
Integrate with ITS investments		X	X	
Encourage vendor competition		X	X	
Begin with voluntary adoption				X
Begin with alternative-fuel vehicles			X	X
Provide a fixed-fee option				X
Convert other funding to per-mile fees	X			
Develop a multi-jurisdictional system	X			

MILEAGE-BASED USER FEES FOR TRANSPORTATION FUNDING

A Primer for State and Local Decisionmakers

Paul Sorensen | Liisa Ecola | Martin Wachs



Why Mileage Fees, and Why Now?

Promising Strategies

Innovation in Action

*For a free PDF download
of RAND's recent primer
on mileage fees, please visit:*

<http://www.rand.org/pubs/tools/TL104.html>



Transportation, Space, and Technology Program



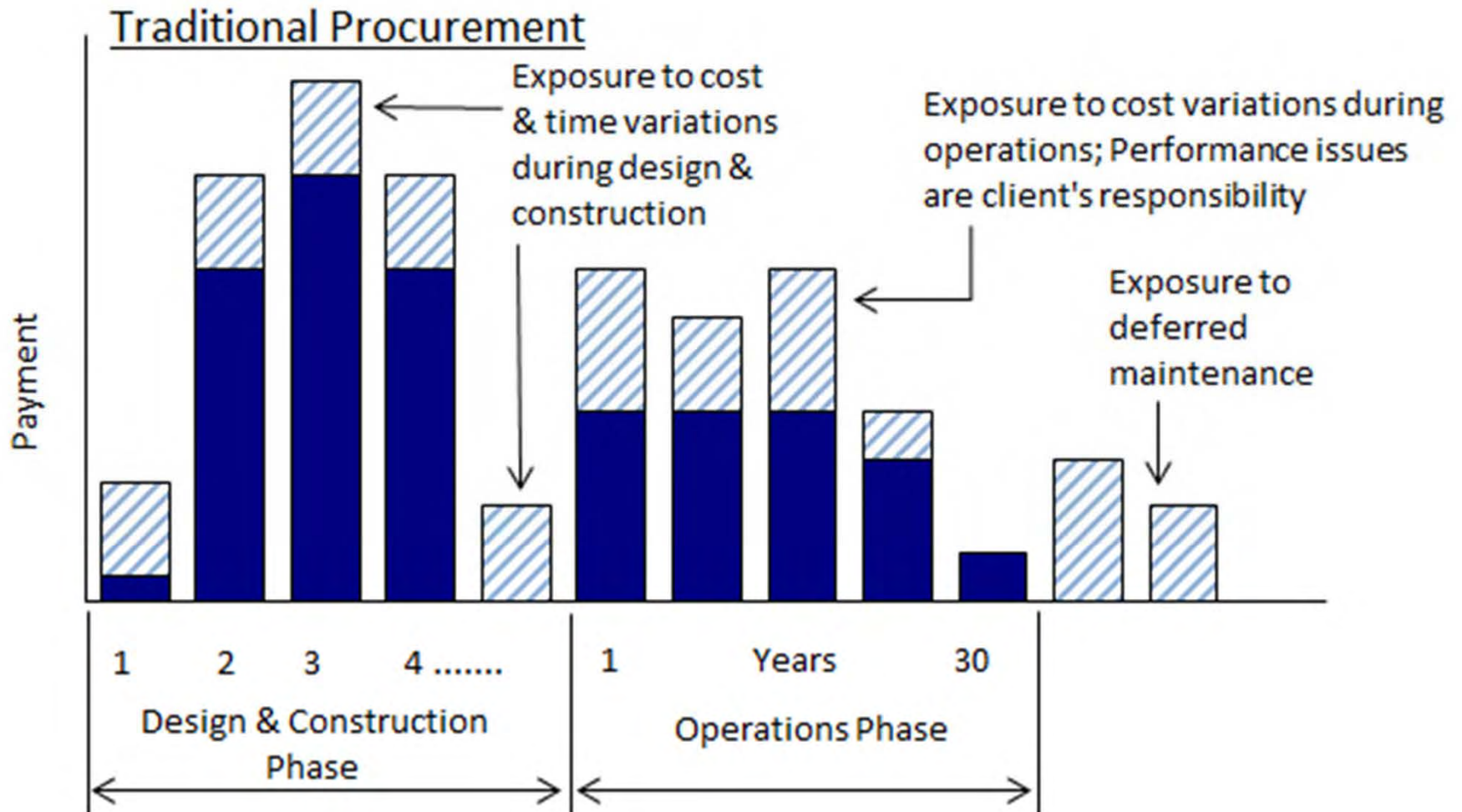
Public Private Partnerships

**Southern California
Association of Governments**

Los Angeles, CA

Feb 7, 2013

An all too common occurrence.....

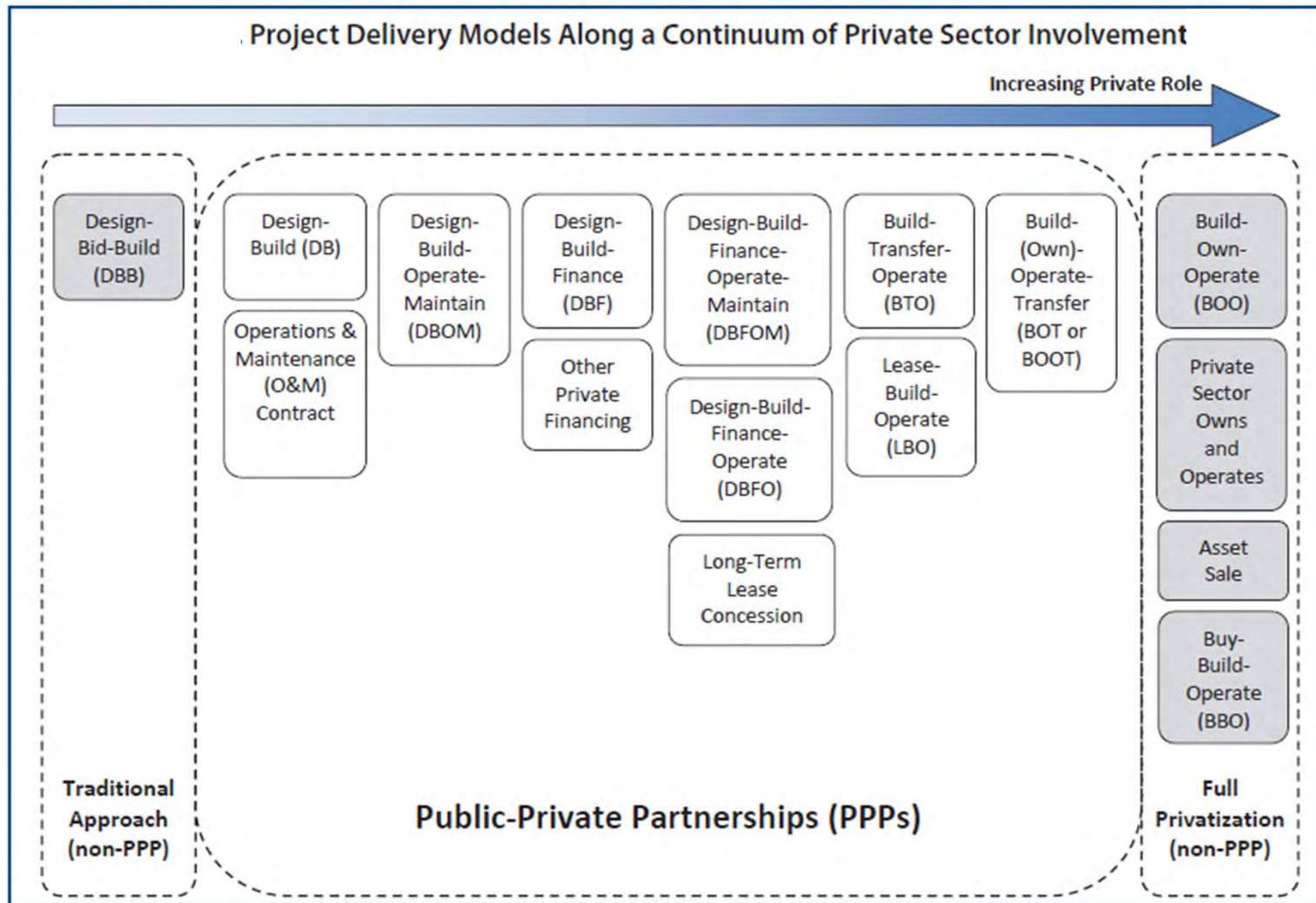


P3 Defined

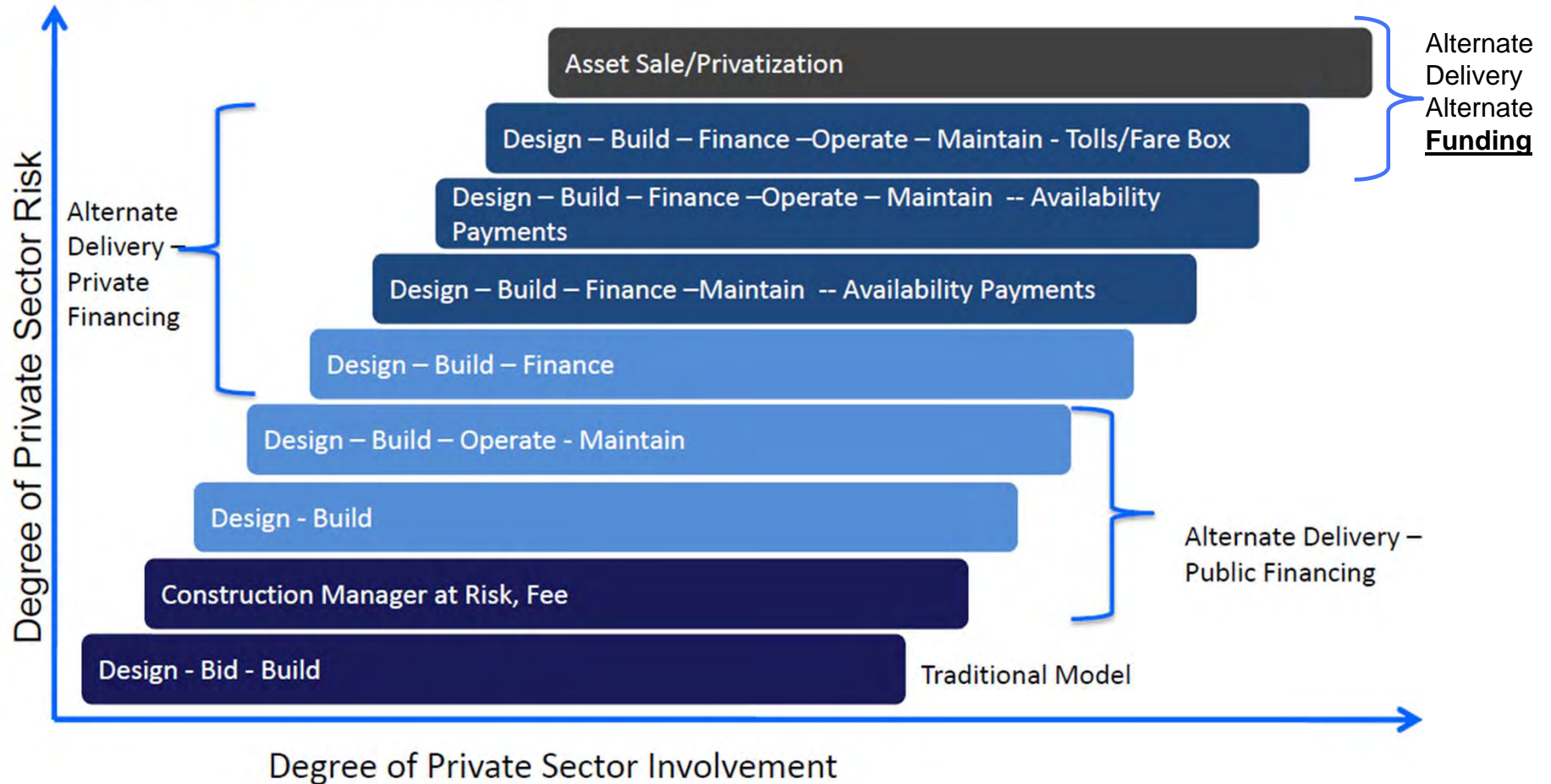
A Public-Private Partnership (PPP) is a contractual agreement between a public agency (federal, state or local) and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. In addition to the sharing of resources, each party shares in the risks and rewards potential in the delivery of the service and/or facility.

<http://www.ncppp.org/howpart/index.shtml#define>

P3 Models – Private Role



P3 Models – Project Delivery Options & Risk Transfer

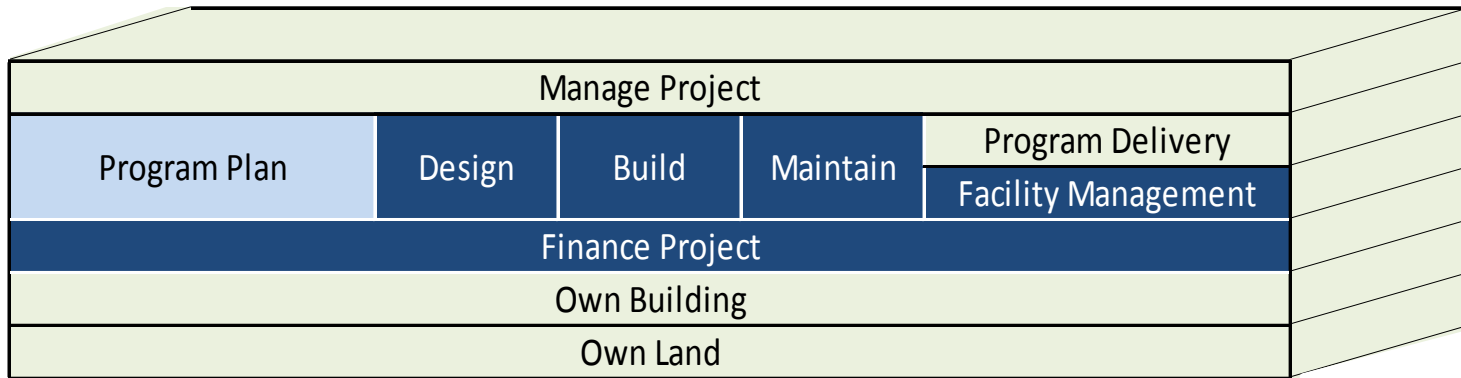


How is a P3 structured?

It goes by many names, but generally:

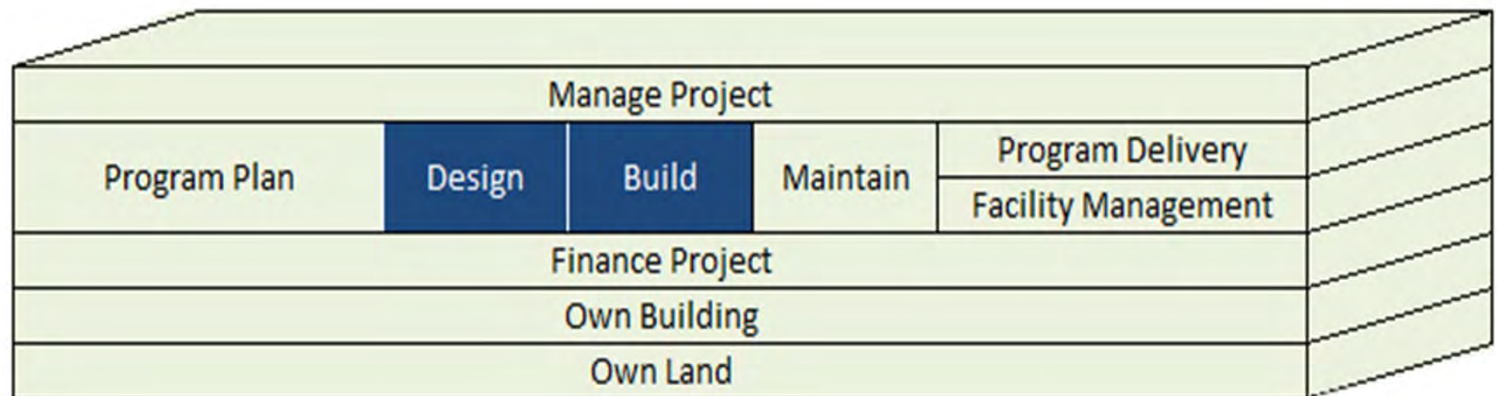
- Often known as Performance Based Initiative, Public Private Partnerships, Private Finance Initiative
- The private sector accepting responsibility to **Design, Build, Finance, Maintain** and in some cases **Operate** infrastructure (greenfield or renovations and expansions)
- Facilities management over a **long term concession** period (25 – 35 years) with pre-defined hand back conditions
- Single entity (“Project Company”) contracts with a Sponsor entity and in turn contracts with consortium partners
- **Performance based contracting** arrangements
 - Payment from Sponsor or users only begins upon completion of construction
 - On-going payments are subject to either usage or deduction for failures in service delivery

Facility Delivery Models Contrasted



P3 Approach

Traditional Approach



Two Approaches

1. Toll, or Revenue Based

The Concessionaire designs, builds, finances, operates and maintains project over a period of time. It is responsible for collecting toll revenue generated by the project. Toll revenue compensates the concessionaire for costs incurred. Performance standards are normally included in the P3 agreement; the inability of concessionaire to meet performance standards can be grounds for termination. The Concessionaire retains revenue risk (both upside and downside).

2. Availability Based

Off-taker makes fixed payments to a private entity that is responsible for design, construction, long-term maintenance and financing of project. An availability payment is a payment for performance, made irrespective of demand, but subject to performance and service failure deductions.

At a high level, two Models

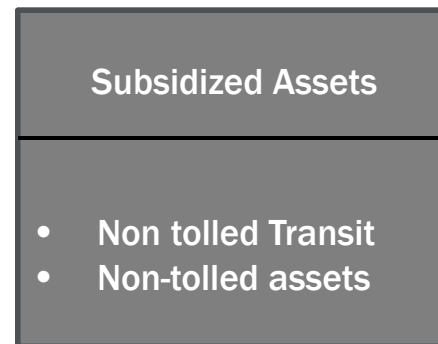
Toll / Revenue Model



P3 Toll or Revenue concession can:

- Raise funds for new projects
- Build new "greenfield" toll roads
- Expand capacity

Availability Payment Model



P3 availability structure can:

- Transfer risk,
- Reduce costs
- Increase certainty
- Accelerate funding / project completion

Models Contrasted

Availability Model

- The partner is repaid through incentive-based availability of the asset
- Can consist of payment guarantee by owner with user fees (tolls) billed to users – policy issues
- Firm price through the term; indexing on OM&R
- Project Performance is Guaranteed; use of performance failure deductions
- Financing, not funding to enforce the guarantee

Concession Model

- Partner is repaid through user fees such as traffic, fare box, etc
- Can use a “shadow toll” where owner tolls users and submits payment to Concessionaire – policy issues
- Tolls set based on “what the traffic will bear”
- Performance is at Concessionaire risk as it ensures funding for Project
- Usage / demand risk and benefit to Private Co

What P3 is Not ?

- Availability based models are **not** about the Financing:
 - Accounting rules tightened – no off-book treatment
 - Government / non-profits borrow at lower cost
- It is **not** about sale & leaseback or asset sales (“privatization”)
- It is **not** about a Real Estate transaction
 - Does not require private sector ownership of the asset
- It **is** about Performance Based Infrastructure & Facilities - RISK transfer

Infrastructure Finance Act

CA Government Code – Section 5956.1

5956.1: “It is the intent of the Legislature that local governmental agencies have the authority and flexibility to utilize private investment capital to study, plan, design, construct, develop, finance, maintain, rebuild, improve, repair, or operate, or any combination thereof, Fee-producing infrastructure facilities.”

From 2011 presentation by Brownstein Hyatt Farber Schreck, LLP

Infrastructure Finance Act

Application of IFA

- Broad and flexible authority for PPPs, if applicable
- Independent authority, does not overlap with other general or organic statutes or home rule
- May be used by local governmental agencies:
 - Cities – charter or general law
 - Counties – charter or general law
 - School district or community college district
 - Public district
- Joint powers authority
 - Transportation commission or authority
 - Any other public or municipal corporation

Infrastructure Finance Act

Exclusions from IFA

- May not be used by state agencies
- May not be used for state projects:
 - Toll roads on state highways
 - State water projects
 - State park and recreation projects
 - State financed projects
- Blocks projects that have any state grant monies, e.g., State Revolving Fund loans for water or wastewater projects



Infrastructure Finance Act

Fee Producing Infrastructure

- Applies only to fee-producing infrastructure
- “Fee-producing” means operation of the infrastructure project will be paid for by the persons benefited by or utilizing the project
- Utilities
 - Irrigation, drainage, water supply treatment and distribution, flood control, sewage disposal, treatment and recycling
 - Refuse disposal
 - Energy, power production
- Transportation
 - Inland waterways, harbors, airports, runways
 - Municipal improvements
 - Commuter and light rail
 - Highways, bridges, tunnels
- Buildings and structures, except primarily sporting/entertainment events

Tale of Two Projects

Same Time

Same Location

Similar Markets

PGF vs Traditional Procurement

Abbotsford P3 Hospital



Size: 650,000 ft²

Services Available:

- 300 Bed Acute Care hospital and ambulatory care facility
- Regional cancer centre

Project Value: \$450 m



Client: Fraser Health / BC Cancer Agency
Completion: May 2008
Structure: Design, Build, Finance, Operate, Maintain
Status: Operations

Abbotsford PGF Hospital



Key project successes:

- \$ 0 change orders – first for Canadian public healthcare capital projects
- On time – May 7, 2008

- No preconceived design; Performance-based specifications
- Partnership attitude
- Strong political commitment
- Health Co P3 knowledge & strong project management
- Learned from others

Vancouver Convention Centre



- Large scale project undertaken by public sector with external project managers and construction management contract
 - Started as P3, but changed approach to Construction Management with a robust governance model using P3 principles
- Results:
 - Increase in price to over \$880m – up from original \$565m
 - Late by 6 months
 - Focus on “first costs” at the expense of lifecycle optimization
 - Even if completed on-budget, all risk with facility performance is still with VCC

Comparison – ARHCC / VCC



Abbotsford Hospital & Cancer Centre

Architect:	MCM
Constructor:	PCL
Construction Start:	2004
Procurement:	DBFM – P3
Result:	On / Under Budget
Operations Start:	On Time

Vancouver Convention Centre

Architect:	MCM
Constructor:	PCL
Construction Start:	2004
Procurement:	Const. Management
Result:	Over budget (55% over)
Operations Start:	6 Months late

Why the Difference?

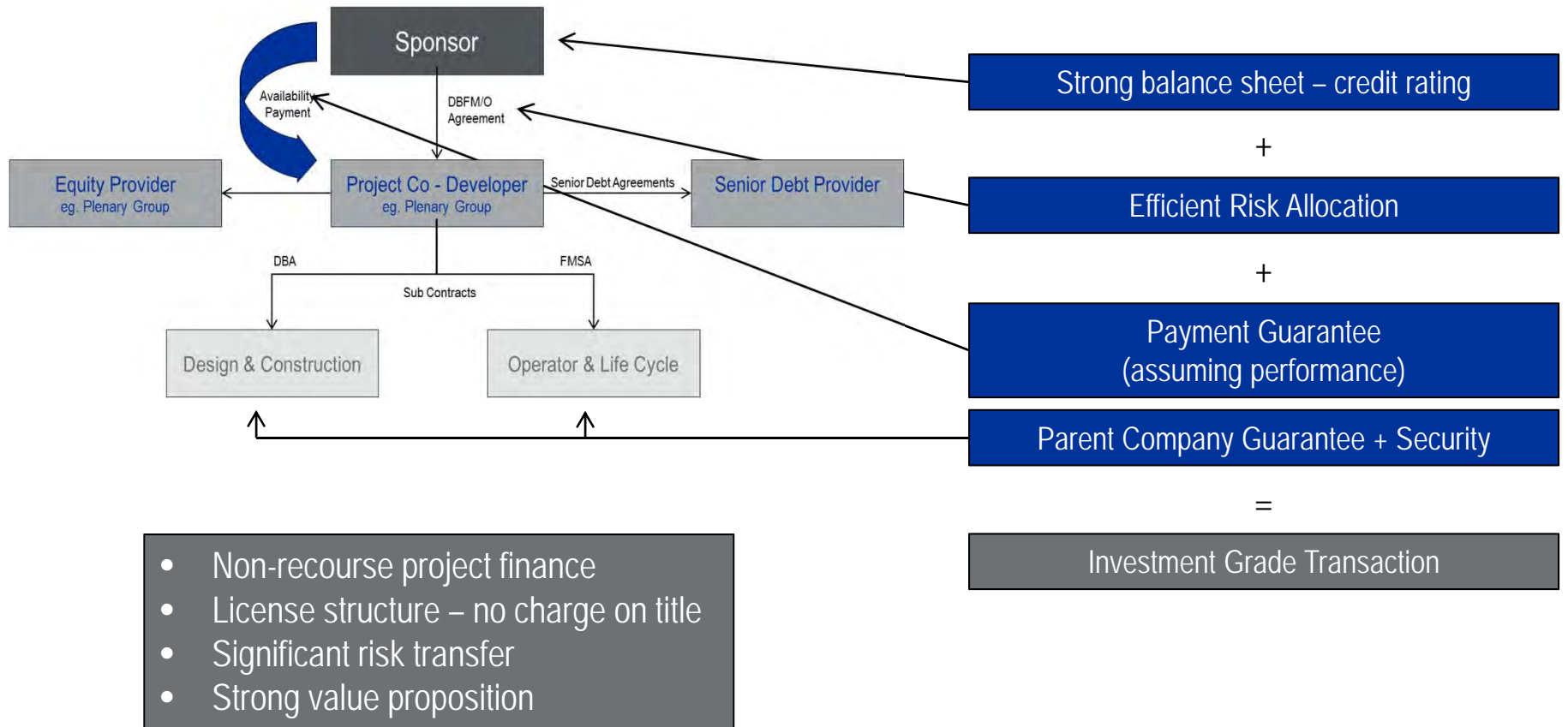
Hospital – P3

- Alignment of interests
- Very timely decision-making
- Cost over-runs hit the developer – it is their money and therefore, it has a direct impact on the employees managing the project
- Facility performance guaranteed
 - Abatements in the first year for performance issues

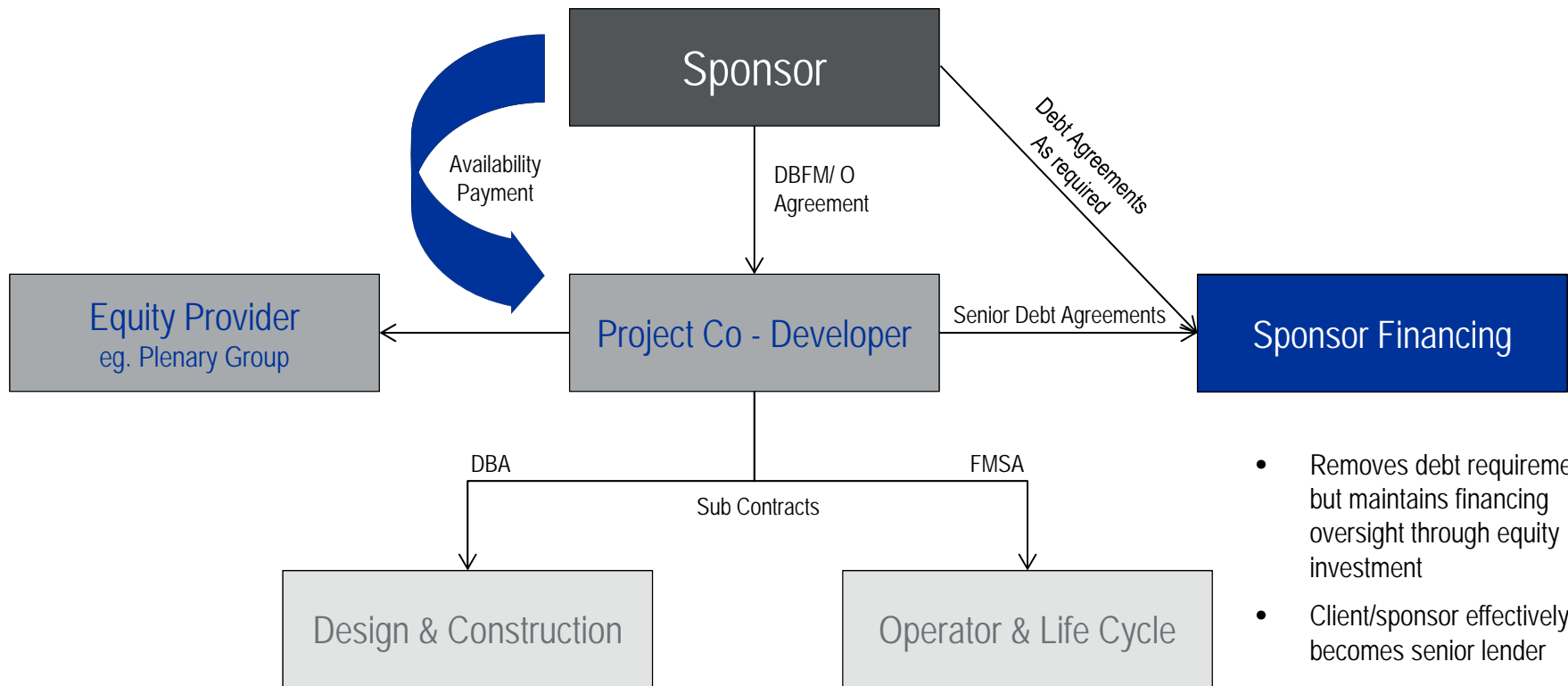
Convention Centre - CM

- Despite having an independent Board and project Company, they were encumbered by bureaucracy and government approvals
- Slow decision making
- Misaligned incentives – compensation was not outcomes based
- Not spending their own money

Ideal Structure Attributes – Availability Model



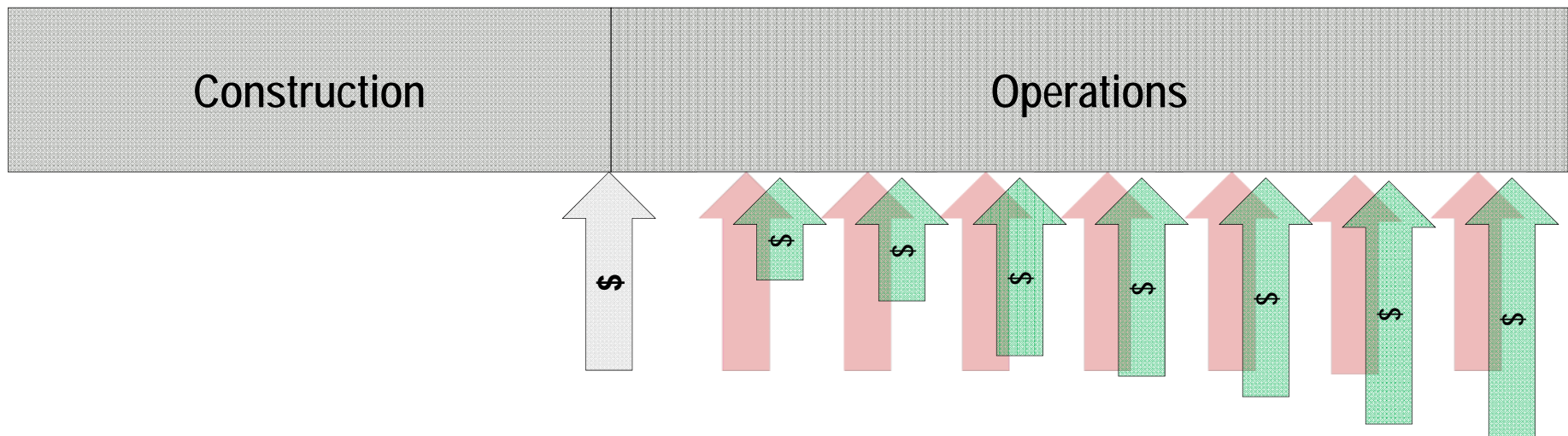
Sponsor Accessed Finance



- Removes debt requirement, but maintains financing oversight through equity investment
- Client/sponsor effectively becomes senior lender
- Allows sponsor to access lower cost capital while retaining most of the risk transfer benefits of DBFM structures

Payment by the Sponsor

Availability-based P3's are performance based contracting arrangements



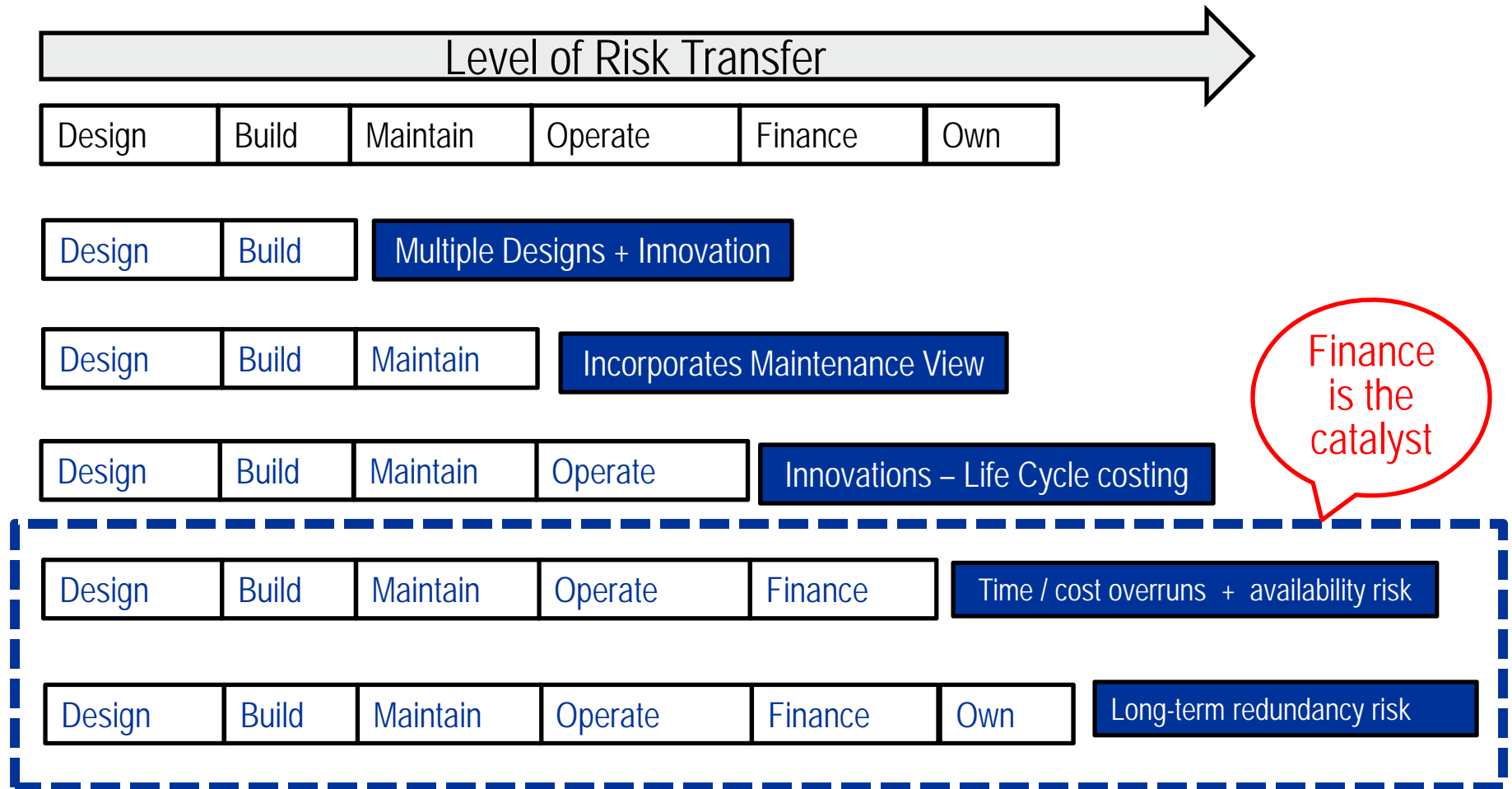
Payment from Sponsor entity only begins upon completion of construction

Initial payment can include Sponsor contribution to lower long term financing costs

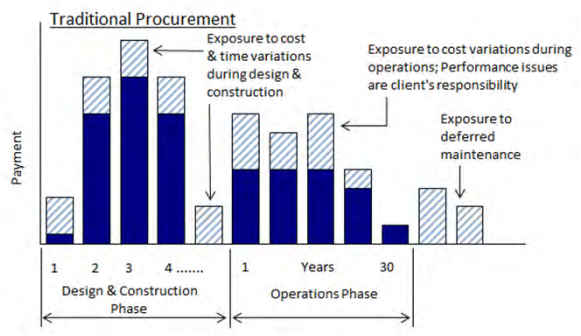
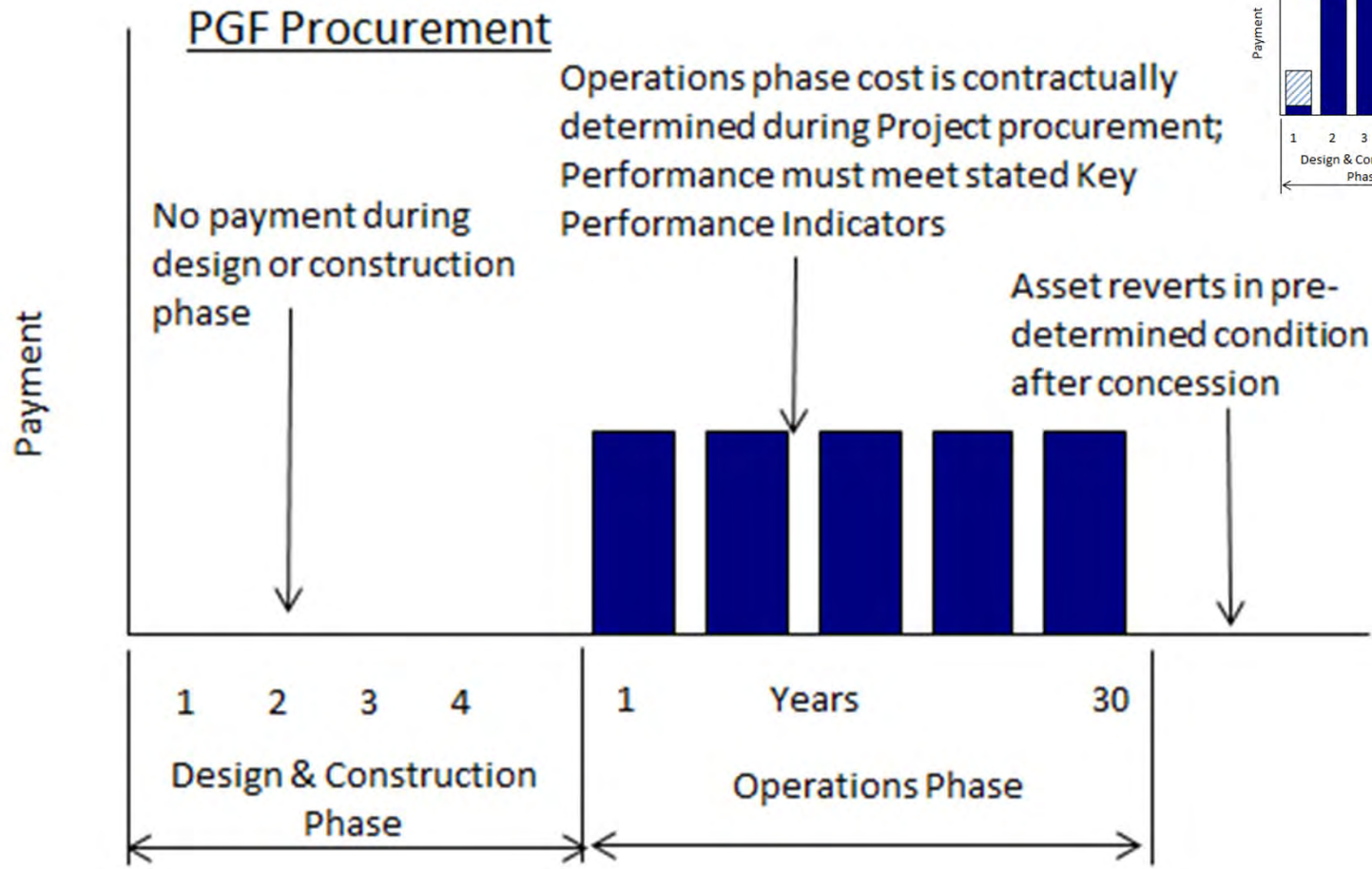
Ongoing payments remain subject to deductions for performance failures in service delivery

Payments can reflect projected revenue increases

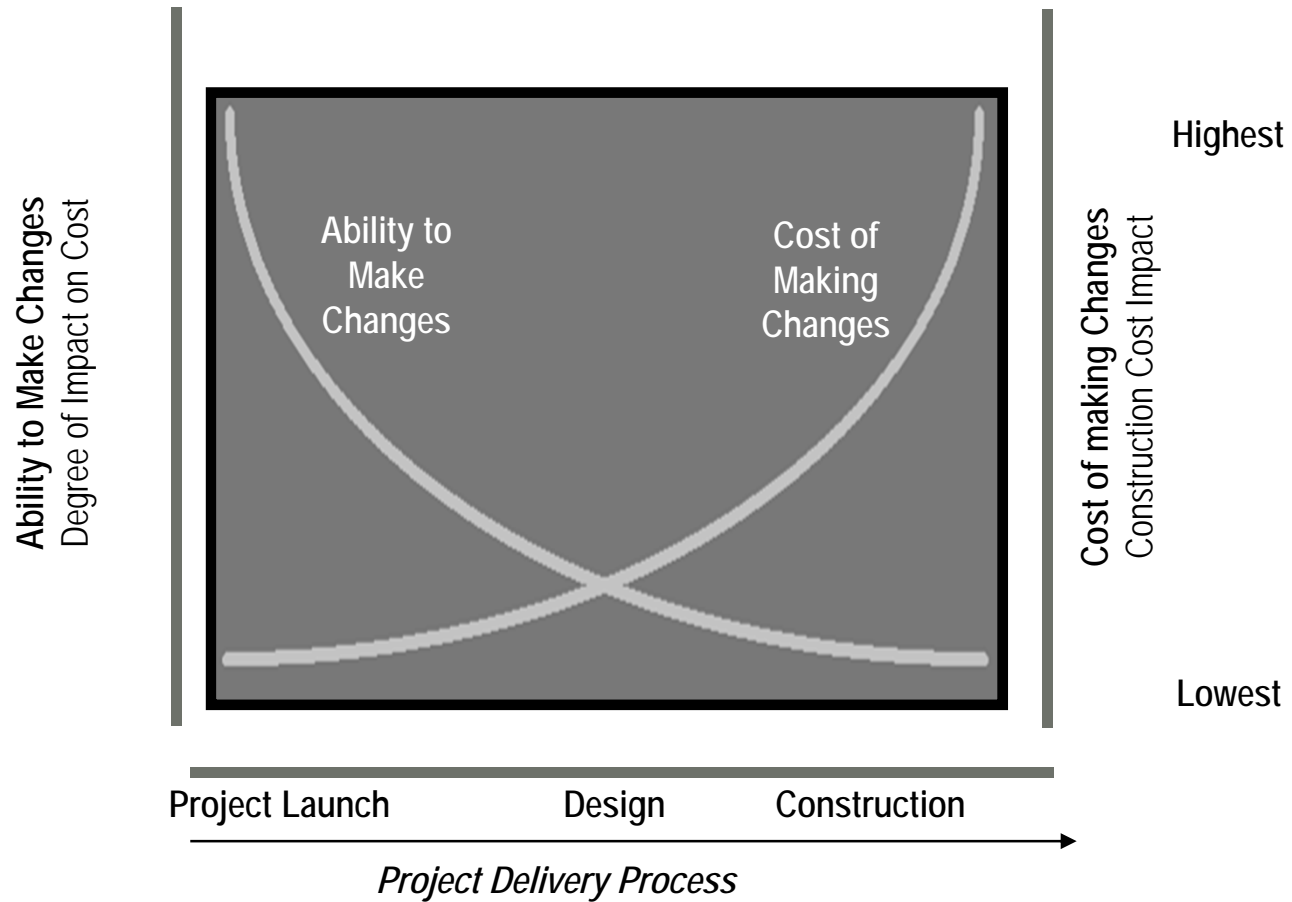
P3 Comparative Advantages



Risk Transfer

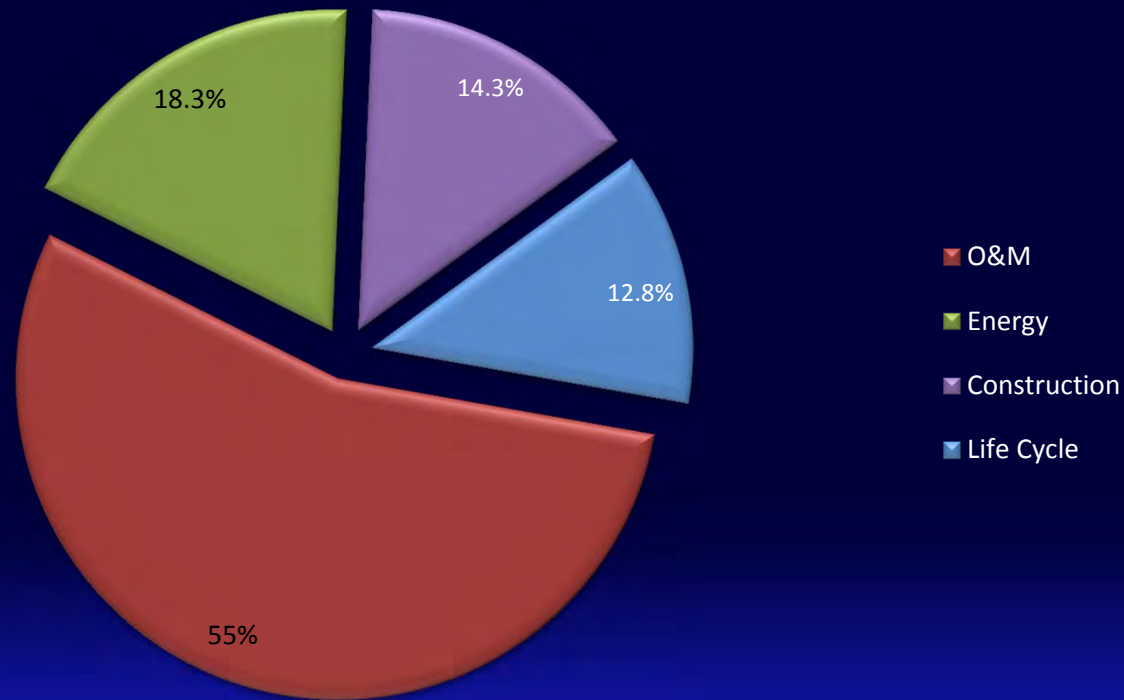


Tenets Related to Infrastructure



Tenets Related to Facilities e.g. K-12

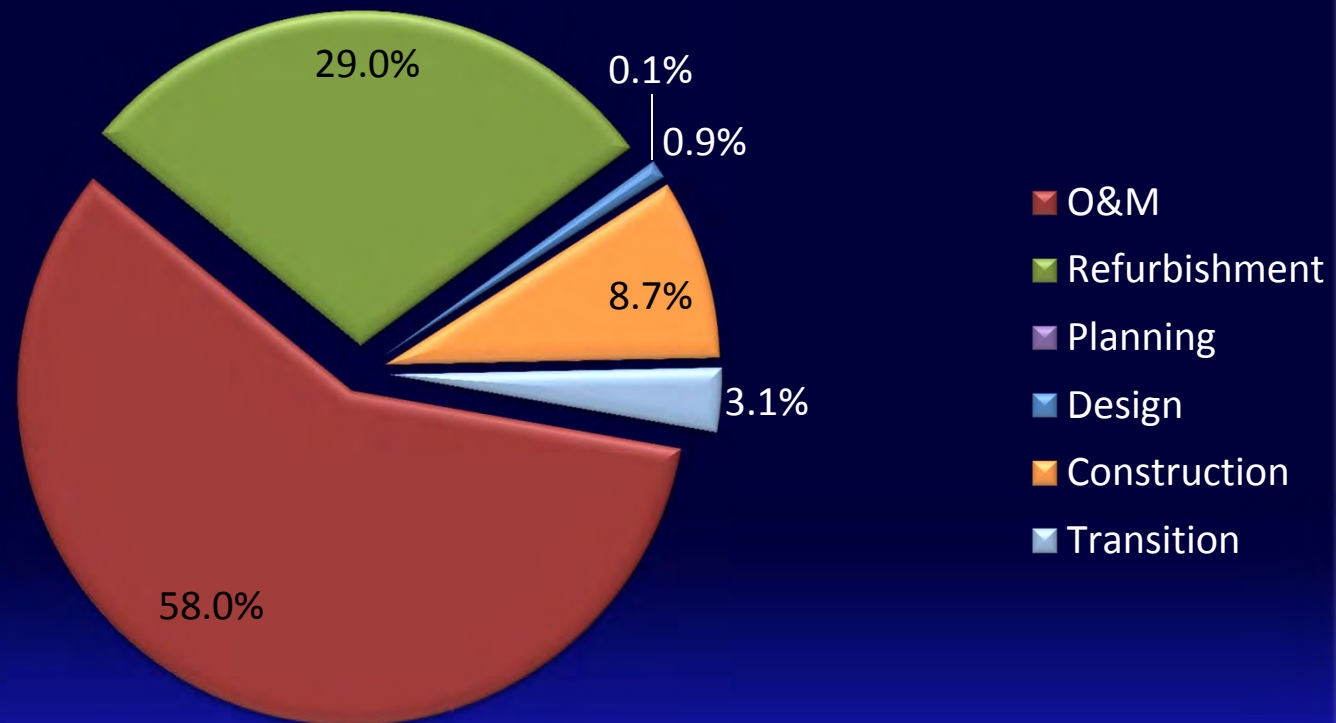
50 Year Facility Cost of Operations¹



Note¹: Operations data from Whitestone Facilities Operations Cost Breakdown 2011/2012 indexed at 2%; Construction data from School Clearing House Cost info, 2011 data, weighted average

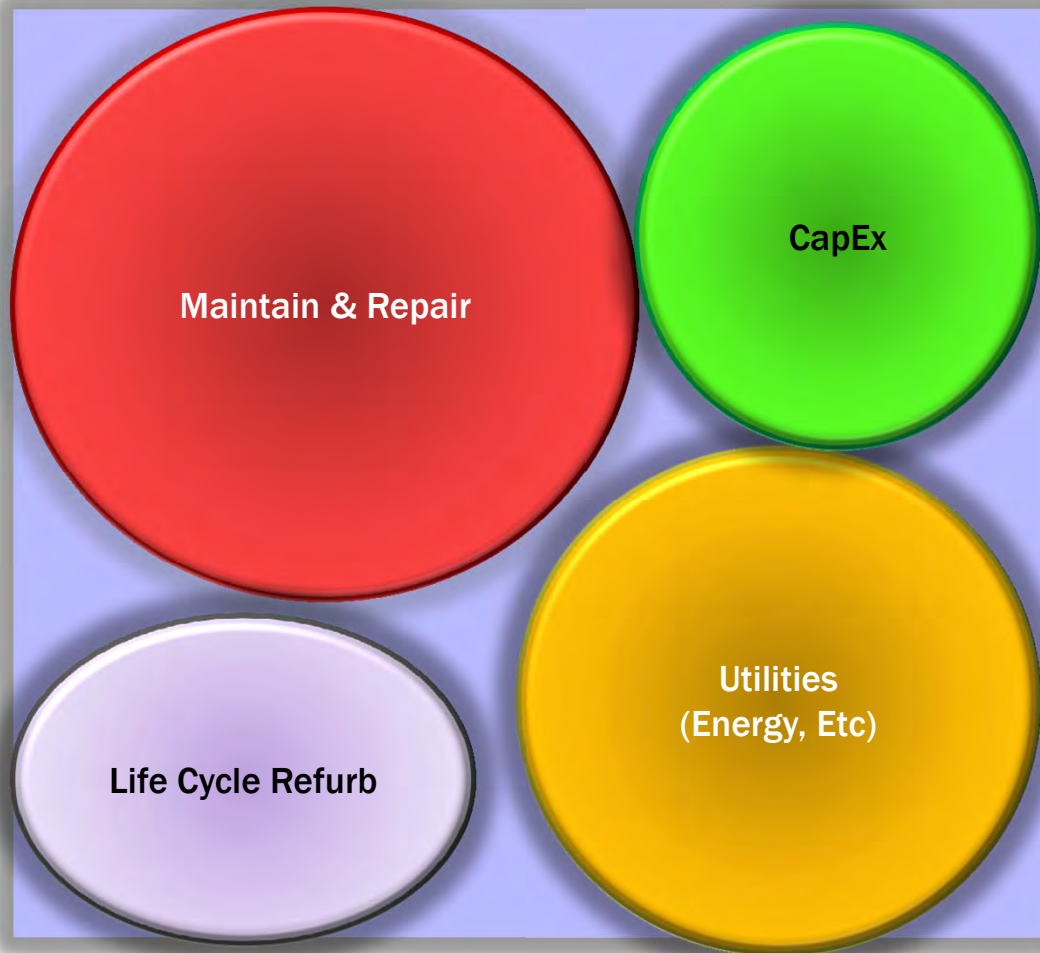
Tenets Related to Facilities e.g. Health Care

40 Year Facility Cost of Operations¹



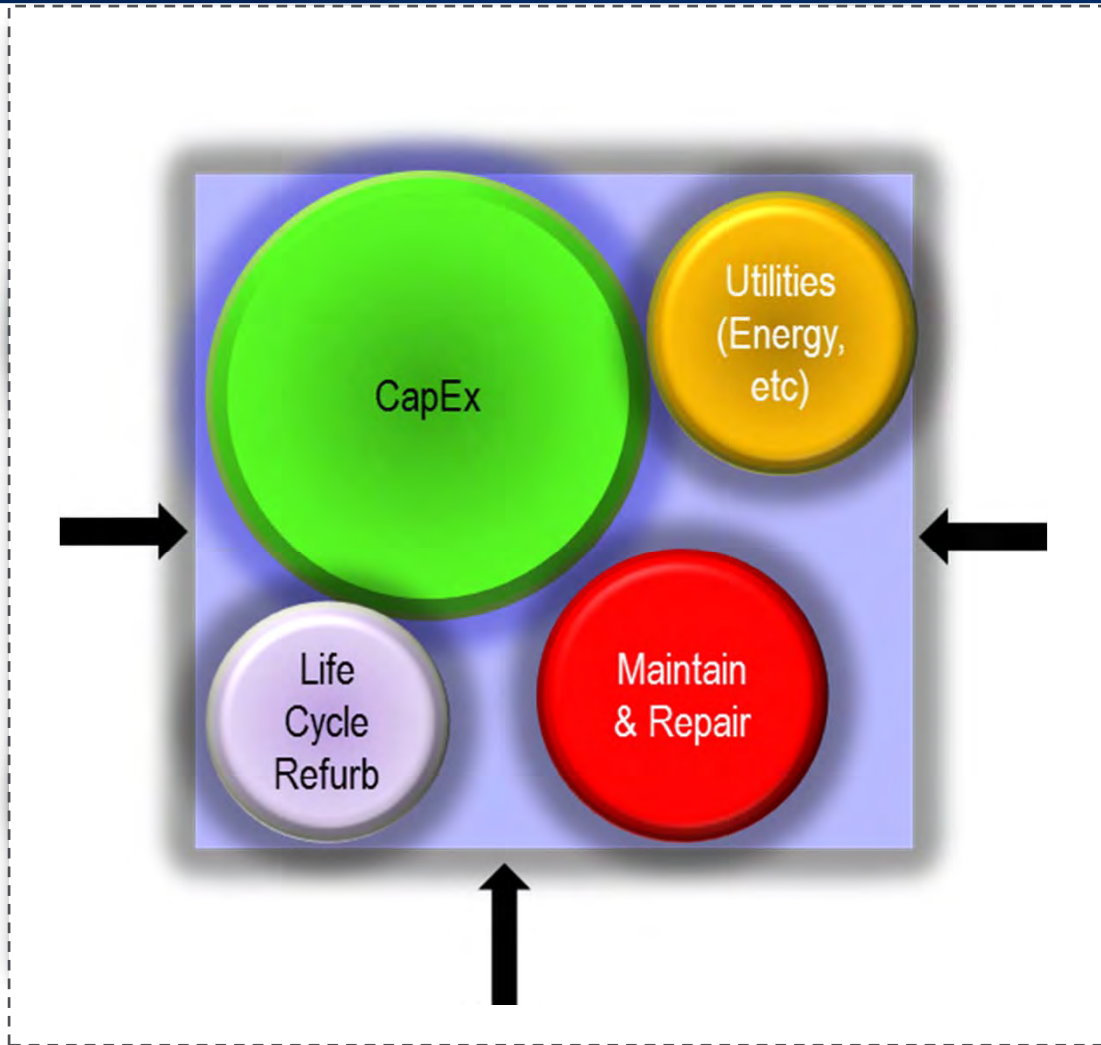
Note 1: From July 2010 Healthcare BIM Consortium, An Organization consisting of Department of Defense Military Health System (DoD MHS), Department of Veterans Affairs (DVA), Kaiser Permanente (KP), and Sutter Health, representing \$26B of Healthcare construction

Value Proposition – “Value for Money”



- All aspects of Facility costs should be considered
- Decisions in one cost category will impact the others
- Driving down construction costs can have an adverse impact on long term costs and facility performance

Value Proposition – P3



- Long term “Whole of Life” costs instead of first cost construction
- Considers impact of “Key Performance Indicators” (“KPI’s”)
- Good decisions during design process consider Value for Money and best investment approach
- Results in lower whole-of-life facility cost (the “box” is smaller)
- Provides outcomes that are guaranteed
- Financing returns are vehicle for Sponsor to enforce the guarantees and KPI’s

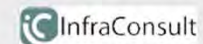
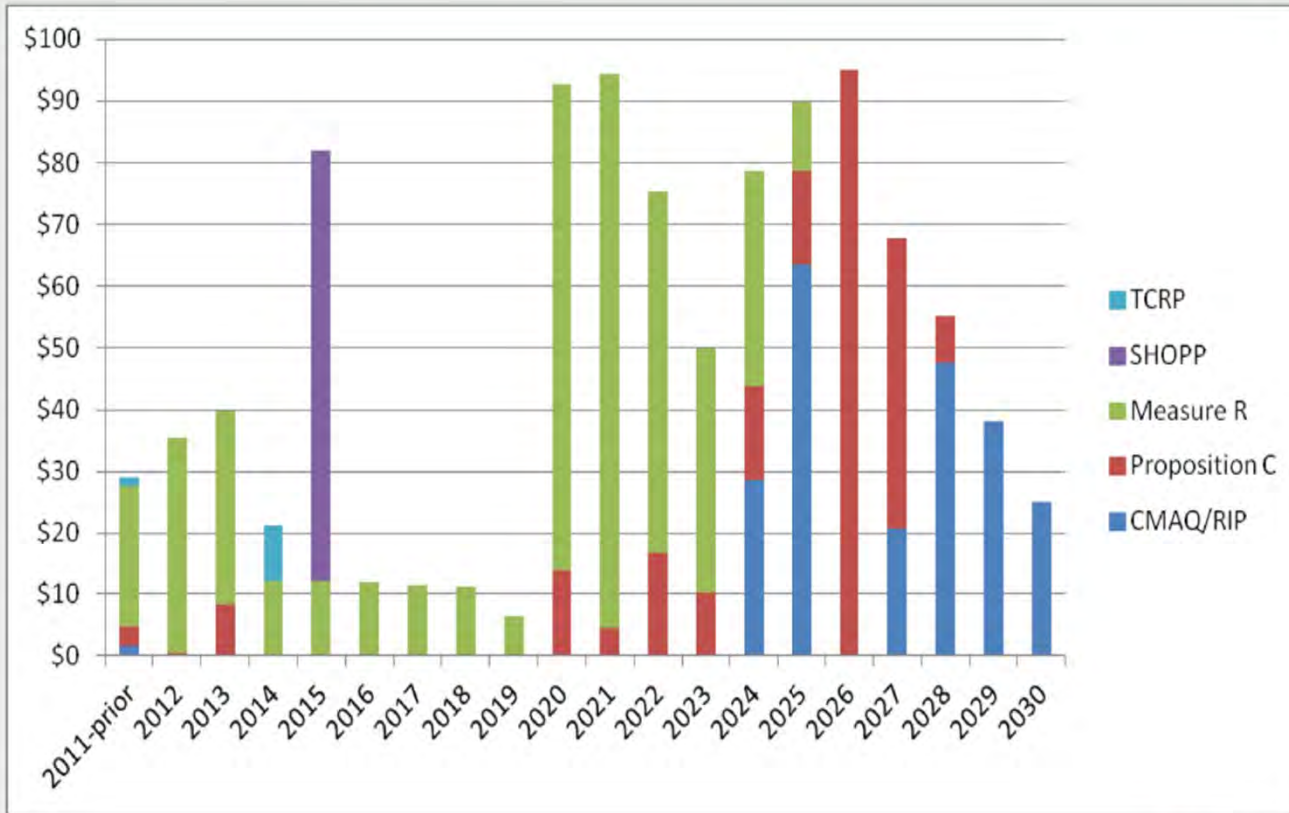
Procurement Methods Compared

Attribute	DBB	CM	DB / GMP	P3
• Speed to market		✓	✓	✓
• “Dream Team”		✓	✓	✓
• Procurement Cost			✓	✓
• Design Alternatives		✓	✓	✓
• Value for Money				✓
• Collaborative Process		✓	✓	✓
• On time Completion				✓
• On Budget Completion			✓	✓
• Guaranteed Cost of Operations				✓
• No deferred maintenance				✓
• Committed Operational KPI's				✓

DBB - Design Bid Build; stipulated price
 CM - Construction Management
 DB / GMP - Design Build with Guaranteed Maximum Price
 PGF - Performance Guaranteed Facilities

P3 and Project Timing - example

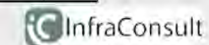
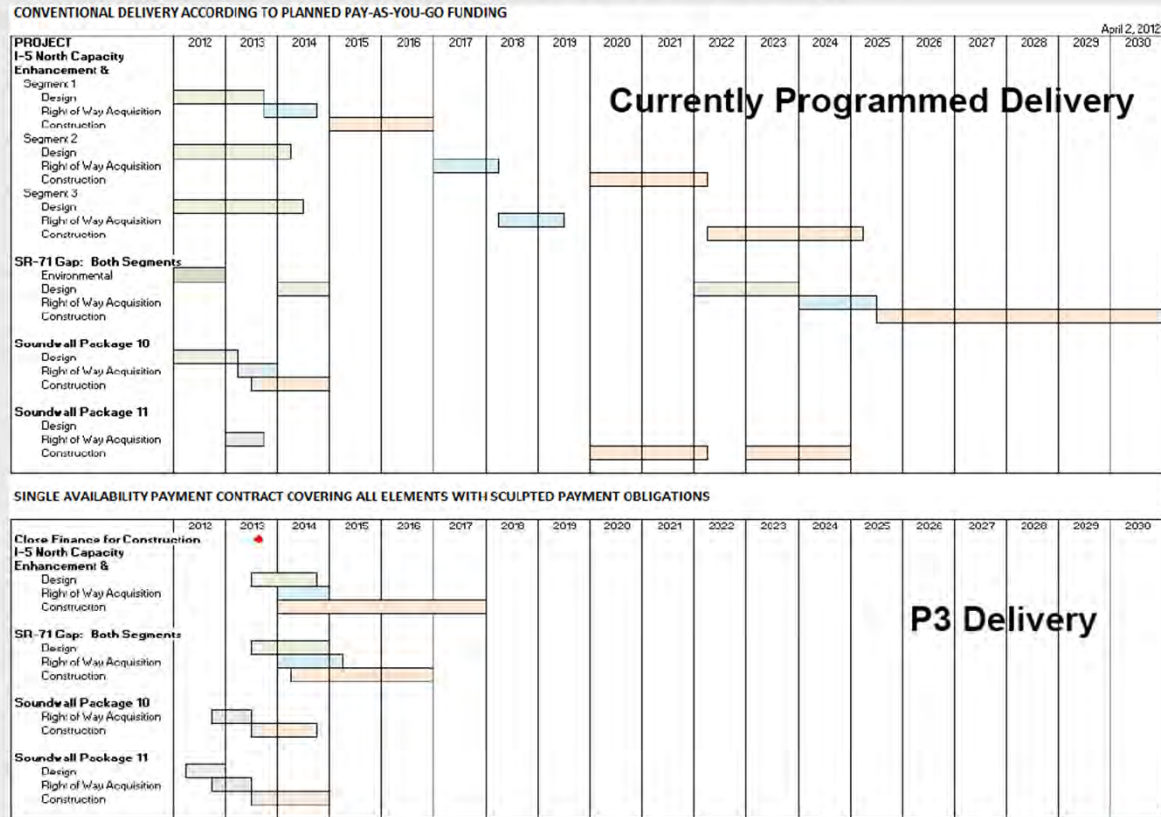
Fund Sources and Availability



Delivery Impact

Accelerated Delivery Under P3

Highway / Goods Movement Package



Transit Infrastructure considerations

- Revenue based model or Availability model?
 - Policy issues
 - Business Case to demonstrate viability
- “Debundle” Project, but retain alignment of interests
 - Availability model for infrastructure
 - Revenue model for rolling stock
 - Increased competitive tension; better value for money
- Multiple phases or single large project
 - Potential downstream impacts

IFA Procurement

- Independent source of authority, not governed by Public Contract Code
- Selection of contractor
 - Competitive negotiation, bidding not required
 - Primary standard is demonstrated competence and qualification
 - Criteria shall ensure that project is operated at fair and reasonable prices to the user
- Unsolicited proposals accepted
- Governmental agency may be reimbursed for services provided, e.g., planning, environmental review, preliminary design
- CEQA (CA Environmental Quality Act) does not apply to selection/agreement with contractor, but does to project
- Govt. Code § 5956.7: "The governmental agency may consult with legal, financial, and other consultants in the negotiation and development of the agreement."

IFA Contract Terms

- Private entity actions: study, plan, design, construct, develop, finance, maintain, rebuild, improve, repair, operate or any combination
- Facilities must be owned by the governmental agency, unless ...
 - May be leased to private entity up to 35 years
 - Ownership must revert to governmental agency at no charge
 - Buy-out or termination provision required
- Private entity must provide security for completion of project and appropriate insurance
- Project must comply with all applicable governmental design standards for the type of infrastructure
- Labor Code provisions apply, including prevailing wage law

IFA Finances

- Permissible financing sources
 - Private financing w/ negotiated reasonable return on investment
 - Federal and local money
 - No state financing
- Revenue from user fees
 - Set by governmental agency, with no delegation
 - Dedicated exclusively to pay for direct and indirect costs for capital and operations
 - Fair and reasonable prices to users of the facility
 - Fees cannot exceed costs of service
 - Public hearing required to set or change fees
 - Private entity must prepare annual audit report for the public

Benefits to the Sponsor

- Speed to market
- Ownership of the asset is retained by the Sponsor
- Emphasis on a clear and well-defined risk allocation
- Optimization and Certainty of “Whole-of-Life” costs
- Commitment to safe, secure asset, performing to expectations
- Private sector expertise, innovation, and discipline
- On-time and on-budget delivery
- Sponsor can focus on core services instead of procurement, contract management, construction oversight, Facility operations, etc.

Better value for money through innovation, discipline and risk transfer



Questions?



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Los Angeles County

Metropolitan Transportation Authority

Public-Private Partnership Program

High Desert Multipurpose Corridor (HDMC)

InfraConsult LLC

February 7, 2013

Objectives

- Augment High Desert Corridor (HDC) Interim Business Plan
- Enhance Regional Connectivity (connecting with CaHSR and XpressWest)
- High quality passenger rail service
- Explore other development opportunities along the Corridor
- Water conveyance
- Electrical transmission
- Energy generation (Wind and Solar)

HDC + Other Opportunities = HDMC

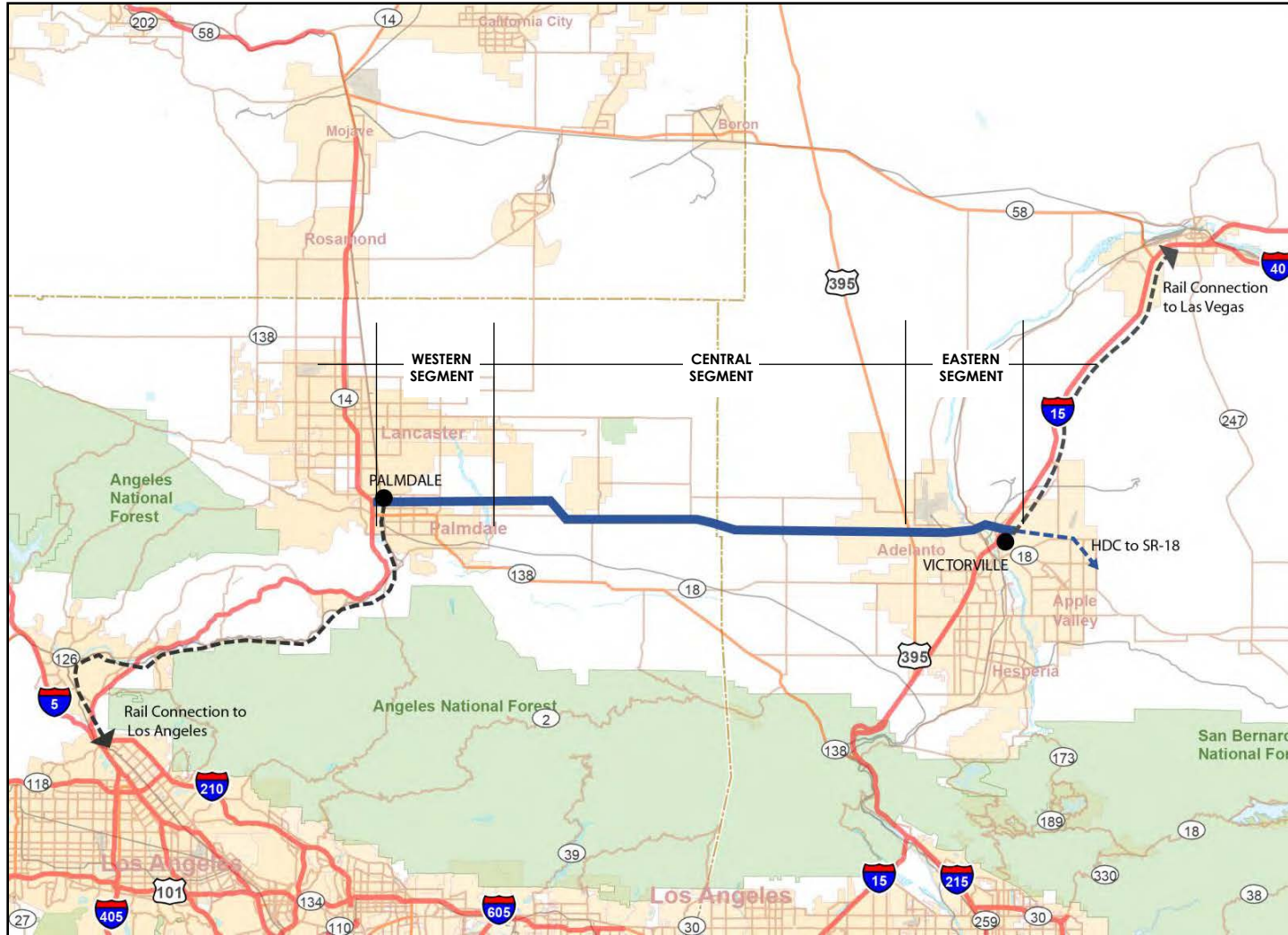
Regional Setting



Primary Project Components

- NEW 50-mile 4 to 8 lanes Freeway/tollway from:
 - SR-14 in Palmdale to
 - I-15 in Victorville
 - 3 Segments
 - Freeway Segments: East and West Segments, 9-miles each
 - Tollway Segment: Central Segment, 32 miles
- NEW Passenger High Speed Passenger Rail from:
 - Existing Metrolink Station in Palmdale to
 - XpressWest Station in Victorville

Primary Project Components



Rail Component Options

- One Seat Ride
 - Los Angeles Union Station (LAUS) to Victorville
 - Average operating speed of 150 mph
 - Intermediate stop at Palmdale (potential stops at Burbank and Santa Clarita)
- Two Seat Ride
 - Palmdale to Victorville
 - Access to Palmdale via auto or existing Metrolink service between LAUS and Palmdale
- “Enhanced” Two Seat Ride
 - Same as Two Seat, but CaSHR between LAUS and Palmdale

Travel Market and Ridership

Total Travel Market in Southern California

2012	2020	2030	2040	2050
21.0 M	25.8 M	30.7 M	35.6 M	39.4 M

Annual Ridership (in Person Trips)

	2020	2030	2040	2050
One Seat Ride	5.51 M	6.56 M	7.60 M	8.40 M
Two Seat Ride (Basic)	2.91 M	3.39 M	3.87 M	4.30 M
Two Seat Ride (Enhanced)	4.20 M	4.90 M	5.56 M	6.22 M

Other Possible Project Components Explored

- Water Usage
 - Conveyance of groundwater from Mohave aquifer to Coast (Not determined feasible)
- Energy Generation
 - Solar (Potentially Feasible)
 - Wind (Does not appear cost Effective)
- Compressed Natural Gas (CNG) Refueling Stations (Potentially cost effective but not significant contributor)
- Transmission Line Infrastructure (Potentially cost effective)

<u>Solar Scenario</u>	Total Gross Income	Total Net Income
Total Cost	\$123.6 M	\$35.2 M
\$88.4 M		
Total kWh	Average kWh per year	Average Cost per kWh
1,073,000,000	35,800,000	\$0.08236

Fundamental Conclusions

Project Component	Self-Financing	Contribution to Funding Gap Reduction
West Segment of Highway Corridor	NO	NONE
East Segment of Highway Corridor	NO	NONE
Central Segment of Highway Corridor	YES	MINIMAL to NONE
Rail Service in Corridor: 1 seat ride LA Union Station to Las Vegas	YES	STRONG*
Rail Service in Corridor: 2 seat ride LA Union Station to Las Vegas	NO	NO**
Rail Service in Corridor: Enhanced 2 seat ride LA Union Station to Las Vegas	YES	<\$100M**
Solar Energy Development in the Corridor	YES	LIMITED***

* On the order of \$1.0 Billion

** Enhanced potential for obtaining a 49 percent share of TIFIA through a multimodal approach. Also, this scenario generates substantial revenue for the operator of the service between LAUS and Palmdale which is not included in the financial analysis for the Palmdale to Victorville segment.

*** Potential for reducing the operating cost of the trains by providing electrical energy approximately 20% more cost effectively than traditional sources

Summary

- Rail service enhances overall financial viability of HDC (assuming XpressWest service is implemented)
- One Seat Ride scenario may result in a corridor that is self-financing and self-supporting (based on highway toll revenue and rail fare box revenue)
- The “right” connection between LAUS and Palmdale is critical to ridership and revenue generation
- Potential for being “zero” energy corridor if solar energy use for the corridor is implemented

Key Assumptions

- Accuracy of ridership and revenue forecasts
- Assumption of the cost of track improvements for the Los Angeles - Palmdale corridor by the CaHSRA
- Availability of TIFIA and RRIF loans up to the statutory program maximums
- Adequate market appetite for the level of equity participation required in a revenue risk, greenfield project
- Availability of early public funding for at least \$520 million YOY in pre-development costs

Project Capital Cost

HDMC Project Element	Total Capital Cost	Cost Retained by Public Sector	Cost Attributed to Private Partner(s)
2011\$			
Palmdale – Victorville Highway	\$2,243 M	\$476 M	\$1,724 M
Palmdale – Victorville Rail Corridor	\$1,604 M	0	\$1,604 M
Los Angeles – Palmdale Rail Corridor			
Trainsets & Systems	\$680 M	0	\$680 M
Track Improvements	TBD	TBD	0
Solar Energy Corridor	\$90 M	0	\$90 M
TOTAL	\$4,527 M	\$476 M	\$4,028 M

Rail Revenue

Scenario	Average Annual Revenue	Total Gross Revenue (thru FY 2064)	
		2012\$	YOE
One Seat Ride	\$368 M	\$15,672 M	\$44,955 M
Two Seat Ride	\$82 M	\$3,842 M	\$10,035 M
Enhanced Two Seat Ride	\$124 M	\$5,259 M	\$14,638 M
Incremental LAUS to Palmdale under "Enhanced" Two Seat Ride	\$149 M	\$6,550 M	\$18,225 M

Financial Assumptions (1 of 2)

Items	One Seat Ride	Two Seat Ride (Basic and Enhanced)
P3 approach	Toll and rail concession including transfer of risks associated with design, construction, operations, financing and maintenance.	Same as One-Seat Ride
P3 contract term	50 years from the start of construction	Same as One-Seat Ride
Analysis start date	2012 – includes predevelopment activities to be completed by Metro	Same as One-Seat Ride
Construction start date – end date	2015-2019	Same as One-Seat Ride
Operations start date – end date	2020-2064	Same as One-Seat Ride

Financial Assumptions (2 of 2)

Items	One Seat Ride	Two Seat Ride (Basic and Enhanced)
Revenues	Highway: Tolls Rail: Fare revenues LAUS-VV	Highway: Tolls Rail: Fare revenues Palmdale to Victorville only
Timing	50-year concession	Same as One-Seat Ride
Financing structure	TIFIA loan, RRIF loan, and private equity	Same as One-Seat Ride
Target Gearing	70:30 (debt to equity)	80:20 (debt to equity)
Cost of financing	3.00% - TIFIA 3.00% - RRIF 14% - Private Equity IRR (pre-tax)	Same as One-Seat Ride

Comparative Financial Analysis

Sources of Funds	One Seat	Two Seat	Enhanced Two Seat	Highway Only
PAB				\$524 M
TIFIA Proceeds	\$2,861 M	\$1,946 M	\$2,305 M	\$789 M
RRIF Proceeds	\$1,349 M	\$585 M	\$1,039 M	\$0 M
Equity	\$1,212 M	\$360 M	\$615 M	\$315 M
Interest Income	\$89 M	\$54 M	\$69 M	\$29 M
Total Private Financing	\$5,511 M	\$2,945 M	\$4,028 M	\$1,657 M
<i>Construction Subsidy</i>	<i>\$0 M</i>	<i>\$1,492 M</i>	<i>\$525 M</i>	<i>\$907 M</i>
Total Capital Cost	\$5,511 M	\$4,437 M	\$4,553 M	\$2,564 M
Construction Costs	\$4,999 M	\$4,147 M	\$4,147 M	\$2,166 M
Financing Costs	\$512 M	\$289 M	\$406 M	\$398 M
Debt to Equity Ratio	78:22	88:22	84:16	81:19

O & M Cost

	Unit	Cost/ Unit	Palmdale to Victorville	Los Angeles to Palmdale	Total Los Angeles to Victorville
Route Length	Miles		55	63	118
Train Operations (2)	Train-Miles	\$0.025	\$23,800	\$27,200	\$51,000
Maintenance of Infrastructure	Route- Miles	\$250	\$13,700	\$15,800	\$29,500
Cleaning of Stations and Trains	# of Stations	\$5,100	\$5,100	\$5,100	\$10,200
Insurance	Route- Miles	\$62	\$3,400	\$3,400	\$6,800
Administration	% of Costs	10%	\$4,600	\$5,100	\$9,700
Contingency	% of Costs	10%	\$5,100	\$5,700	\$10,800
TOTAL			\$55,700	\$62,300	\$118,000

Public Funding Sources

Source	Total	Prior	FY 2010	FY 2011	FY 2012	FY 2013	...	FY 2021-2040
Local								
Measure R	\$33.0 M		\$0.03 M	\$12.5 M	\$11.5 M	\$8.8 M		
Measure I	\$16.0 - 27.7 M							\$16.0 - 27.7 M
Federal Earmarks	\$16.8 M	\$16.8 M						
TOTAL	\$65.8 - 77.5 M	\$16.8 M	\$0.03 M	\$12.5 M	\$11.5 M	\$8.8 M		\$16.0 - 27.7 M

Potential Implementation Schedule

<u>Milestone/Items/Action</u>	<u>Project Dates</u>
Begin Work	08/2010
Initiate Public Scoping	10/2010
Prepare Draft Technical Studies	08/2010 – 06/2013
Draft EIR/EIS Circulation	Summer 2013
Public Hearings	10/2013
Respond to Comments/Complete Final EIR/EIS	12/2013 – 03/2014
Caltrans signs Final EIR/EIS	04/2014
Caltrans Signs ROD and files NOD	06/2014

*Notes: Revised PA&ED schedule for HDMC
Source: Caltrans*

Potential Key Milestone Dates

Activity	P3 Combined DB/DBFOM Delivery	Traditional DBB Procurement
Draft EIR/EIS circulation	3 rd Quarter 2013	3 rd Quarter 2013
Complete Final EIR/EIS	1 st Quarter 2014	1 st Quarter 2014
Record of Decision	2 nd Quarter 2014	2 nd Quarter 2014
Issue Request for Proposal	4 th Quarter 2013	2 nd Quarter 2016
Commercial Close	4 th Quarter 2014	3 rd Quarter 2016
Contract Award	4 th Quarter 2014	4 th Quarter 2016
Construction Commencement	1 st Quarter 2015	1 st Quarter 2017
East & West Segments complete	4 th Quarter 2017	4 th Quarter 2020
Central Segment complete	4 th Quarter 2019	4 th Quarter 2023
Operations Commencement	1 st Quarter 2020	1 st Quarter 2025

Questions???