Hawaii P3 Workshop

June 6, 2017
Department of the Navy
Public-Private Ventures (PPV)
Program Overview

Sandra Tanoue
Director, Public Private Ventures
6 June 2017
DoN Housing Public - Private Ventures

- Where We Were
- Navy PPV Objectives
- Navy Business Approach
- Business Model
- Economics
- Development
- Portfolio Management

Halsey Terrace
Where We Were

- Housing - Old, not adequately maintained, needed extensive renovating or replacement.
- Cost over $2B and 30 to 40 years
- Needed - Innovation or Transformation

Halsey Terrace, Pearl Harbor, HI
Navy Housing PPV Objectives

- Safe, high-quality and affordable
- Leverage Navy dollars
- Maximize Operations & Maintenance cost avoidance
- Protect value of Navy assets
- Minimize Navy’s liability
- Participate in key business decisions
- Maintain flexibility
Navy Business Approach

- Partnership
- Investments
- No guarantees
- Out lease of land to LLC and conveyance of existing property and facilities
- Revitalize existing inventory and address housing deficit
Typical Business Model

**PURPOSE**
Finance, Design, Construct, Acquire, Own, Lease, Convey, Operate, Manage, Maintain, and/or Renovate Housing for Service Members

**PROJECT HOUSING, LLC**

**DoN** (Member)
- Contributes Equity
- Contributes Land & Facilities via Ground Lease

**Private Entity** (Managing Member)
- Establishes the Business Entity – LLC
- Secures 1st Mortgage Debt
- Contributes Equity

**OPERATING AGREEMENT**

- Design/Build Contract
- Property Management Agreement
- Asset Management Agreement
- Consulting Architect Contract

**No longer Government Housing**

**No longer Government Contracting**
Economic Anatomy of a PPV

- Rent
- NOI
- Loan $
- Project Development Cost
- Developer Equity

Government Contribution
- Improvements
- Land via lease
- Cash
Development

Renovation
22% of Portfolio

Replacement/New Construction
35% of Portfolio

Minor or No Work
43% of Portfolio

Images: Luke Filed, Hale Moku and McGrew
Radford Terrace, Pearl Harbor, HI
Neighborhood Amenities
Maintaining Historic Integrity

Hospital Point

Makalapa

Hale Alii

Marine Barracks
Halsey Terrace Rooftop

Pearl City Peninsula
Visit the Department of Defense’s Military Housing Privatization Homepage at http://www.acq.osd.mil/housing for information on housing projects, references and reporting, and miscellaneous information.
Questions?
Speakers

Murray Clay
Ulupono Initiative

Seth Miller Gabriel
Director of the Office of Public-Private Partnerships (OP3) for the District of Columbia.

Benjamin Hall
John Laing Investments

Tuyen Mai
Ernst & Young

Tom Mulvihill
KeyBanc

Peter Morris
AECOM

Henry Navnitil
Kiewit Development Company

Rodney Moss
Hunt Companies

Dr. Joshua Schank
LA County Metropolitan Transportation Authority
Understanding Public-Private Partnerships (P3 101)
What is a P3?

P3 Defined

- A Public-Private Partnership (P3) is a contractual agreement between a public agency and a private entity that allows for greater private sector participation in the delivery and financing of a project.

...but, why?

- Role for the private sector in solving public challenge
- Variety of contract structures + financing
- Performance-based outcome-focused
Why Consider a P3?

P3s are an additional tool in the toolbox to deliver and maintain infrastructure efficiently.

Government Perspective...
1. Accelerate project delivery
2. Efficient transfer of risks
3. Life-cycle cost savings and price certainty
4. Retain ownership of public asset
5. Engage with the local community
6. Vehicle to get needed projects delivered

...Private Sector Perspective
1. Provides and investment opportunity
2. Complete management of project risks
3. Fosters innovation with performance based requirements
4. Competitive process and transparency
5. Secondary market opportunities
6. Vehicle to get needed projects delivered
<table>
<thead>
<tr>
<th><strong>TRADITIONAL</strong>&lt;br&gt;<strong>DESIGN-BID-BUILD (DBB)</strong></th>
<th>- Public agency retains ownership&lt;br&gt;- All phases of work occur sequentially and under separate contracts&lt;br&gt;- Public agency retains all project risks&lt;br&gt;- Public agency responsible for financing&lt;br&gt;- Focuses on price to achieve a defined scope</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>P3</strong></td>
<td>- Public agency retains ownership and substantial control, but transfers responsibility for D/B/F/O/M to private partner under a single contract&lt;br&gt;- Contracts may be long-term (often 20-99 years for DBFOM)&lt;br&gt;- Phases of work, such as design and construction, may overlap&lt;br&gt;- Public agency shares or transfers some project risks to private partner&lt;br&gt;- Focuses on “best value” and “performance”</td>
</tr>
<tr>
<td><strong>PRIVATIZATION</strong></td>
<td>- Ownership and control of facility is transferred to private sector</td>
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</table>
Delivery Models

Delivery Options for Infrastructure Delivery

- Design, Bid, Build
- Construction Manager-General Contractor
- Design-Build
- Design, Build, Finance
- Design, Build, Operate and Maintain
- DBFOM* – Availability Payment
- DBFOM* – Revenue Risk
- Privatization

Risk

Public Sector

Degree of private sector accountability, integrated delivery, risk transfer, and extent of private financing

Private Sector
Port of Miami Tunnel

- Twin, 42-ft diameter bored tunnels will allow direct access from Port of Miami to NHS
- 2nd US availability payment-based PPP to reach financial close (during 2009 fin. crisis) at less than half FDOT’s engineering estimates
- $900m Project was federalized after award
- Opening in 2014 proved the value of the P3
A P3 IS:

• **DESIGN AND CONTRUCTION, FINANCING, OPERATIONS AND MAINTENANCE PARTNERSHIP**
  Public Sector enters into a long-term contract with private sector to deliver assets and services for the benefit of the general public

• **A RISK SHARING APPROACH**
  Private sector assumes financial, technical and operational risk, public sector sets policy and retains ownership

• **LIFECYCLE PROCUREMENT APPROACH THAT GUARANTEES PERFORMANCE**
  By integrating design, construction, and financing, with operations and maintenance, the asset performance is optimized for the long term

• **A TRANSPARENT RELATIONSHIP**
  Public stakeholders have full control and can expect to be regularly updated and informed throughout the project
A P3 **IS NOT:**

- **PRIVATIZATION**
  Public sector retains ownership and ultimate control of public asset

- **A FUNDING SOLUTION**
  Government agency gains access to private debt and equity financing which may not be available in regular public procurement, but project must still be creditworthy for debt and equity investors

- **A LOW QUALITY DELIVERY MODEL**
  Private entity enters into a performance-based contract with financial penalties imposed by the public agency if availability and quality standards are not met

- **THE RIGHT SOLUTION FOR EVERY PROJECT**
  A Value-for-Money analysis is performed by experienced legal, technical and financial advisors to determine if a P3 is right for your project
Criteria for Viable P3 Projects

Not every project is suitable for P3!

<table>
<thead>
<tr>
<th>Legislation</th>
<th>• The owner has the appropriate legislative authority in place to undertake a P3 arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Size</td>
<td>• In general, projects with construction costs less than $50 million are not the best candidates for P3 arrangements with financing; however the use of bundling and other methods there are innovative ways to deliver projects</td>
</tr>
<tr>
<td>Project Complexity</td>
<td>• In general, projects with higher technical complexity offer relatively higher opportunity for private sector innovation and integration of design, construction, financing, operations and maintenance</td>
</tr>
<tr>
<td>Project Duration/Asset’s Life</td>
<td>• Generally speaking the value added through a P3 arrangement can increase with a longer duration of the P3 arrangement.</td>
</tr>
<tr>
<td>Performance Characteristics</td>
<td>• P3 arrangements are structured primarily around performance based contracts. It is important for owners to evaluate whether it is feasible to clearly define objective performance standards for the project.</td>
</tr>
</tbody>
</table>
Important Considerations

• P3s do not imply loss of control by owner
• Key is correct alignment of public and private interests and risks
• Not every project is suitable for a P3
• P3s are not “free” - private funding must be repaid
• Will not turn poorly conceived projects into a success
• P3 procurements are not inexpensive to administer, nor are they inexpensive to pursue
• 36 states have P3 legislation plus DC & PR

• 13 states have vertical authority plus DC & PR

• 12 states have water authority plus DC & PR
Project must have revenue stream!

- Typically partially / wholly financed by debt leveraging project revenues
  - Revenue streams: Availability Payments and/or some form of direct user fee (toll)
  - Revenues supplemented by money, right-of-way, or other contributions

Sources of Funds

- Private partner will make an equity investment; in long-term lease structure, likely will make upfront payment
- Public partner may need to make upfront payment (e.g., milestone payments) to reduce capital cost financing
- Private partner may be required to assume partial or full revenue risk
  - Revenue generators (or hybrid)
- May be structured as an availability payment
  - Non-revenue generators (or revenue doesn’t cover)

Drivers

- Revenue Stream
- Risk Appetite
- Scale
- Market
- Lenders
P3 Structure – DBFOM

- Provides a **single point of responsibility** for design, construction, operations, and maintenance
- Provides **opportunities for innovations and efficiencies** in design and construction
- Encourages the incorporation of **lifecycle** considerations in the project’s design and construction
- “Value-for-Money”
- Often results in the use of preventative maintenance techniques
- **Defers payment without deferring the benefit** of the project – each dollar of deferred maintenance will cost the public ten dollars in the future!
P3 Legislation should be broadly enabling, allowing government to fully consider the quantitative and qualitative factors for the particular project that create the most value for the taxpayer over the life of the asset.

The hallmark of best practice legislation is creation of a center of excellence that provides resources and guidance to properly screen the projects and design the procurement process so that the bidders with the best ideas and best cost of capital are attracted to the project and government is confident that the selection.

P3s for the right project can and should:

- Encourage innovation and creative solutions
- Incentivize local and regional economic impact
- Create opportunity for qualified, locally-based businesses
- Address local job growth and long-term economic stimulation
90/10 Debt to Equity ratio is a Typical Structure for Availability Payment Projects.
Under an availability payment mechanism, the government entity will make periodic availability payments to a concessionaire in consideration for the availability of the asset.

In order to receive payment, the concessionaire must ensure that the asset is completed on time, meets certain performance standards and is available for use by the public.

The concessionaire recoups its development, financing, construction and maintenance costs from availability payments over the term of the concession, subject to reduction for performance deductions.
• In a revenue-based payment mechanism, the demand risk resides with the concessionaire.

• Project revenues are captured in a waterfall and applied to operation and maintenance, debt service, reserves, concession payments and investor return on equity.

• Project revenue based payments require a stable base of users who are expected to be willing to pay for use of the asset over the life of the concession.
P3 Financing Packages

- **Traditional Governmental Finance Approach**
  - Governmental Purpose Bonds
  - Risk retention by the government
  - State revolving funds – EPA
  - Federal: WIFIA, USDA, CDBG, BOR, ACE and others

- **Public Private Partnership Approach**
  - Equity 10-30%
  - Debt 70-90%

- **Forms of P3 Debt**
  - Federal Sources Outlined Above plus
  - Private placement market
  - Tax-exempt Private Activity Bonds (PABs) – state cap allocation challenge (for surface transportation only)
  - Club Arrangements of Banks

- **P3 Equity Providers ($300B available in USA)**
  - Private Equity
  - Life Insurance Companies
  - Pension Funds
Value for Money (VfM) analysis is a process used to compare the financial impacts of a P3 project against traditional public delivery alternatives. The process to establish VfM includes:

- Creating a Public Sector Comparator (PSC), which estimates the whole-life cost of carrying out the project through a traditional approach;
- Estimating the whole-life cost of the P3 alternative (either as proposed by a private bidder or a hypothetical “shadow bid” at the pre-procurement stage); and
- Comparing results.

Value for Money is an industry-accepted decision driver.
Potential Benefits of P3

- Schedule Discipline
- Greater Budget Certainty
- Cost Savings
- Greater Innovation
- Life-Cycle Maintenance
- Accelerated Delivery
- Public Ownership & Control
- Effective Risk Transfer
- Job Creation
- Payment for Performance / Accountability
Optimized Allocation of Risk

Each Risk has a “Value”. The optimized allocation of specific risks occurs when risk is assigned to the party which can mitigate or manage the risk more efficiently.
One of the key drivers for the successful development of a P3 project is a defined, properly structured procurement process that encourages private sector companies to bring forward their best people and ideas. The key stages of the P3 process include:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
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<tbody>
<tr>
<td>Issue RFQ</td>
<td>RFQ document issued inviting teams to submit qualification credentials</td>
</tr>
<tr>
<td>Shortlist or Prequalify Proposers</td>
<td>Shortlist or prequalify teams chosen based on qualification criteria</td>
</tr>
<tr>
<td>Issue RFP</td>
<td>RFP documents released including project agreement and technical requirements</td>
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<tr>
<td>Proposal Period</td>
<td>Proposers develop comprehensive technical and financial proposals.</td>
</tr>
<tr>
<td>Select Preferred Proposer</td>
<td>Preferred proposer chosen based on evaluation criteria included in RFP</td>
</tr>
<tr>
<td>Negotiations</td>
<td>Negotiate final terms and conditions with preferred Proposer</td>
</tr>
<tr>
<td>Commercial &amp; Financial Close</td>
<td>Preferred proposer executes project documents (commercial close) and closes project financing</td>
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Typical Durations for a Procurement

- Issue RFQ: 30-60 days
- Shortlist or Prequalify Proposers: 30-45 days
- Issue RFP: 60-90 days after RFP issued
- Proposal period: 3 to 6 months
- Select Preferred Proposer: 30-60 days
- Negotiations: 30-60 days
- Commercial/Financial Close: 60-90 days

These timelines will vary by project and State legal requirements.

Every project is different!
Advisory Services

**Advisory services include:**
- Policy and program guidance and development
- Project screening, feasibility, and assessment
- Procurement services
- Contract/agreement administration
- Investor due diligence, life-cycle advisory and asset management

**Technical, Legal, Financial**
- Key to successful programmatic support
- Lean heavily on experienced advisors
Principles of Successful P3 Delivery

- Owner-defined scope
- Industry outreach
- Stakeholders outreach and involvement
- Performance-based specifications, open to innovation
- Head-to-head competition
- Transparency
- Fair treatment of bidders
- Inclusivity and Goal Setting
- Timely third-party approvals
- Timely decision making and speed in execution
- Effective and efficient risk transfer
Essentials for Successful P3 Program

- Committed Political Champion(s)
- Legislation authority and strong regulatory framework
- Critical need for a public facility to be delivered on an accelerated basis
- Agency acceptance of Value for Money/Risk Transfer methodologies
- Credible Analysis of Delivery Options
- Organized, Fair and Transparent Procurement Processes
- Key Stakeholder support and alignment
Lessons Learned on P3 Projects

**Highly Motivated Government Sponsor**
- Committed to project and process
- Politically supported
- Project champion
- Center of Expertise

**Appropriate Project Agreement**
- Government defined service requirements
- Private sector design solution
- Appropriate risk allocation

**Project Predictability**
- Pipeline of projects
- Driven by Policy screen
- Certainty of completion once in the market

**Economically Viable**
- Predictable source of cash flow
- User fee or availability payment

**Clearly Defined, High Priority Project**
- Well defined objectives
- Large capital investment
- Appropriate advisors

**Clearly Defined, Fair Process**
- Advance preparation
- Realistic timetables
- Respect for process costs
- Transparent scoring and selection of winning team
What’s Different About P3s Through the Lens of Case Studies

June 6, 2017
Year 1 Unsolicited Proposals (UPs)

In February 2016, Metro opened its doors to the private sector, at an Industry Forum.

> Pledged our commitment to pursuing agency-wide innovation
> Focus on partnerships-based approach to drive value
> Debuted the Unsolicited Proposal Policy
  o Any company can submit a proposal on any idea
  o Encourages the private sector to tell us what we should do differently
  o Declares intention to implement ideas with financial/technical merit
Unsolicited Proposals to Date

> Total of 72 proposals received
> 10 for Major Capital Projects and Programs
> 56 completed Phase I Review
> 16 have advanced to Phase II for detailed analysis
  > 5 Phase II proposals received
  > Phase II analysis underway for 7 Major Capital projects
> 5 projects currently in implementation
> 2 being recommended for implementation
Unsolicited Proposal (UP) Submitted to Procurement

OEI Phase I Evaluation

OEI Requests Phase II

OEI Evaluates Phase II

OEI Develops RFP or Sole Source
West Santa Ana Branch Corridor

Metro Planned Delivery

> Light rail transit split into two phases:
  o $3.7-$4.5 billion capital cost
  o Groundbreaking in 2022
  o Delivery in 2028 (Phase I) & 2041 (Phase II)

Unsolicited Proposals

> Innovations regarding project delivery and management approach, financing strategies, construction, & O&M
  o Potential benefits include acceleration, risk transfer, performance, and cost savings
Sepulveda Pass Transit Corridor

**Metro Planned Delivery**

> Managed lanes through Sepulveda pass with transit element
>  - $9.8 billion capital cost
>  - Groundbreaking in 2024
>  - Delivery in 2026 (Managed Lanes), 2033 (transit element), & 2048 (transit to LAX)

**Unsolicited Proposals**

> Innovations regarding project development & design, phasing, financing strategies, construction approach, operational strategies, & maintenance
>  - Potential benefits include acceleration, risk transfer, construction innovation, performance, and cost savings
Assessment Background

- The assessment is *not a “funding” study*. It looks at finance and delivery options that can accelerate delivery, reduce public sector risk and lower cost.

- Preliminary findings are meant to inform stakeholders about potential benefits of Public-Private Partnerships (“P3”).

- FTA wants a revised financial plan by the end of April or lose $1.55B federal funding of which $712 MM is already spent.

- Expected G.E.T. Surcharge revenues, insufficient to cover costs.

- JLL was engaged to undertake an assessment of potential alternative finance and delivery structures, such as P3 to help the City and County of Honolulu, State of Hawai’i, and the Honolulu Authority for Rapid Transportation (HART) deliver the Project in the timeliest and most cost-effective manner possible.

- Focus has been primarily on the financing and delivery of the Section 4 “CCGS*” (4.2 miles across 8 stations from Kalihi to Ala Moana Center Station), the Pearl Highlands Transit Center ($1.63B total including contingency), as well as system-wide O&M.

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**UK Study: P3 vs. Publicly Built**

<table>
<thead>
<tr>
<th>Metric</th>
<th>UK P3 Projects</th>
<th>UK Publicly-Built Projects</th>
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<tbody>
<tr>
<td>Price Certainty (On budget)</td>
<td>80%</td>
<td>17%</td>
</tr>
<tr>
<td>Schedule Certainty (On time)</td>
<td>66%</td>
<td>30%</td>
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*P3 projects in the UK, on average, showed estimated cost savings of approximately 17% against a public sector comparator.**

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Project Background

- **PROJECT SCOPE**
  20.1-mile rail line across 21 stations

- **PROJECT OBJECTIVES**
  
  Reduce traffic congestion
  According to the Texas A&M 2015 Urban Mobility Scorecard Hawaii is:
  - #53 in Population rank
  - #3 in Stress Index rank

  Affordable public transportation

  Enable transit-oriented development around rail stations
  - Through 2050 vs. Business As Usual TOD can*:
    - Save est. 7,000 acres agricultural land
    - Save est. $7.2B of highway road costs

  Support the State goal of using 100% clean energy by 2045

*Honolulu Transit Oriented Development Study Scenarios results report 2013
Calthrope Associates, Pacific Resource Partnership

- **HISTORY**
  - Experienced significant delays and cost overruns
    - Lawsuits and contract disputes
    - Shortage of available funding
  - Macroeconomic factors: recession and subsequent rapid rise in inflation (i.e. in 2014, annual rate of construction inflation reached 14%)
  - Cost of utility relocations
Public-Private Partnership (P3) Overview

**Infrastructure Delivery Spectrum of Options**

- **Traditional Delivery**
  - Works & Service Contracts (DBB, CMAR, PDB, DB)

- **Public-Private-Partnerships**
  - Management Contracts (Peer partnerships, O&M agreements, etc.)
  - Lease-like Agreements (LDO, DBOM, Lease-Backs)
  - Concessions (DBFOM, BOT, etc.)

- **Privatization**
  - Divestiture (Sale, Sale-leaseback, etc.)

**Extent of Ownership and Risk Transfer to the Private Sector**

- **Low**
- **High**

**Extent of Private Sector Financing**

- **Wide range of structures:** Cooperation between public authorities and the private sector to ensure the financing, construction, renovation, management, operation and/or maintenance of an infrastructure facility

- **P3 projects yield 15-25% cost savings*** as compared public/traditional procurements (i.e. DBB)

  *Based on case studies examined

- **Life-cycle focus** (often includes O&M)

- Payment to the private partner is output and performance based

- Risks shifted to private partner
Case Studies: P3s for Commuter Rail Lines

**Evergreen Line (Vancouver, Canada)**
Design-Build-Finance (DBF)
- **Scope**: 6.83 mi extension of existing SkyTrain system (driverless and automated); 28 new SkyTrain Vehicles; 6 stations and provision for 2 potential future stations; Vehicle storage facility
- **Total Project Cost**: $1.431 billion
- **Outcomes/Savings**:
  - **Total Project Cost Savings of 15-16%**
  - DBF option reduced project costs by 10% ($134 mn) over Design-Build option and P3 Concessionaire achieved additional 5-6% in cost savings ($70-85 million), below $1.431 bn budget

**Eagle P3 (Denver, CO)**
Design-Build-Finance-Operate-Maintain (DBFOM)
- **Scope**: 40.2 miles for 3 new rail lines; 15 new stations; 54 commuter rail cars; 1 Commuter Rail Maintenance Facility
- **Total Project Cost**: $2.2 billion
- **Outcomes/Savings**:
  - Winning P3 bid came in $300 million (27%) lower than public sector budget estimates
  - Additional O&M cost savings achieved during operations phase
P3 Potential for Honolulu Rail Line

Alternative Finance and Delivery Structures could be helpful for the following reasons:
• Reduce/transfer cost and schedule risk
• Accelerate delivery
• Eliminate costly delays due to funding shortfalls
• Provide budget predictability
• Allow State and City to pay ONLY AFTER COMPLETION (align repayment with delivery of public benefits)
• Potentially reduce capital and/or O&M costs

Challenges to a P3
• Project still fully dependent on public funding
• Project midstream (potential legal challenge)
• Due to small footprint of rail stations, limited commercialization and monetization opportunities
• Overlapping public authorities (State/HART/DTS)
• Limited local P3 track-record
• May need enabling legislation for some options
Value-for-Money Assessment – Summary

• A qualitative and quantitative assessment was undertaken to review whether these alternative structures would provide value for money (VFM) or other benefits when compared to DB procurement options
• VFM assessment process included a risk analysis to identify and quantify value of risk transfer under P3 scenarios
• JLL ran 4 scenarios where the capital costs under DBF and DBFOM were discounted by 5%, 10%, 15%, and 20% to reflect P3 efficiencies, as compared to the baseline (DB) scenario
  o Further, the O&M costs under DBFOM were discounted by 15% versus HART estimates
  o The reductions are due to efficiencies gained by the private partner and based on industry averages and case studies
• The P3 options show lifecycle cost savings of 6-16% compared to the Baseline (DB) scenario, which is more modest than earlier stated averages – that P3 projects yield 15-25% cost savings as compared public/traditional procurements (i.e. DBB)
Conclusions and Recommendations

“The Good News”
Design-Build-Finance Structure
• City can address cash flow constraints and defer payments until Project completion
• Reduces cost risk (and the credit impact thereof)
• Most likely enabled under existing legislation
• Does not conflict with existing contracts
• Could accelerate delivery timeline
• Anticipated savings: ~15% versus DB

“The Bad News”
• P3 is NOT free money
• Public funding is required to close the nearly $2B funding gap
• G.E.T. is the convenient funding option
• If funding responsibilities are transferred to the City & County of Honolulu, there is a higher possibility of costly project delays
• Accelerated delivery potential could be eliminated with legal challenge to change in procurement

P3 can potentially deliver the project more efficiently with less risk. However, public funding is still required.
Mahalo!

For more information visit www.ulupono.com

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Real Estate and Value Capture in Infrastructure P3s

Tuyen Mai
Senior Managing Director, EY
### Various TOD Available for Rail Infrastructure

<table>
<thead>
<tr>
<th>SF BART to Silicon Valley Phase II</th>
<th>Downtown Los Angeles Streetcar</th>
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<tbody>
<tr>
<td>► $4.7B BART extension from Berryessa to San Jose/Santa Clara</td>
<td>► $250M+ redevelopment of historic Downtown Streetcar</td>
</tr>
<tr>
<td>► $2.4B funding gap closing strategy leverages cap and trade, sales tax and TOD mechanisms</td>
<td>► Major funding sources for capital and operations/maintenance include FTA Small Starts and local sales taxes (Measures R and M)</td>
</tr>
<tr>
<td>► New 30-yr half-cent Measure B sales tax recently approved will contribute $1.5B</td>
<td>► Special Assessment “Mello-Roos” District to fund up to $85M</td>
</tr>
<tr>
<td>► Enhanced Infrastructure Financing District and Community Facilities District will contribute pay-as-you-go and allow capital financing</td>
<td>► Potential for joint development at the Maintenance Storage Facility</td>
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Moynihan Station, New York, NY

- $1B+ redevelopment of the Farley Post Office building adjacent to the existing Penn Station
- Transaction structure combines train hall and real estate development into a single contract including over 700,000 SF of commercial space
- Value capture strategy includes upfront payment from private developer and monetization of over time property taxes to fund train hall costs
- Multiple sponsor agencies include federal, state and local partners

Denver Union Station, Denver, CO

- $500M+ redevelopment of the Denver Union area into a multi-modal hub with adjacent TOD
- Train hall and adjacent hotel and retail space delivered through a PPP
- Value capture strategy combined annual governmental payments with future real estate parcel sales
- First project to combine federal TIFIA and RRIF assistance in capital structure
Civic & Justice Facilities DBFOMs

### Long Beach Courthouse
- P3 development of new $490M, 531,000 SF facility with 31 court rooms and administrative and commercial space.
- First US performance-based facilities P3
- Additional parking, retail and lease revenues supplement availability payments
- Project completed 3 years ago and refinanced

### Long Beach Civic Center
- P3 development of new $520M civic center for the City and Port of Long Beach, including new City Hall, Port headquarters, and city library. Financial close achieved in April 2016 and completion anticipated in June 2019
- City Hall and Port headquarters designed as separate and distinct buildings, each meeting their own requirements
- ~$20M adjacent site leveraged to buy down availability payment
Los Angeles Civic Center Master Plan

- 5,000 staff spread across City facilities Downtown making 150,000 monthly trips

- 10+yr development plan to redevelop 3M SF Civic Center facilities around City Hall

- **Innovative funding strategy**
  - Ground leases fees from residential / retail
  - Sale/termination of existing properties and leases
  - Reduced maintenance and utilities costs
  - Hidden cost of ageing facilities/deferred maintenance

- **Availability Payments P3 considerations for 1.2M SF civic office facilities development**
  - Cost and schedule overrun risk transfer
  - Long-term maintenance budgeting (vs. yr-on-yr)
  - Not booked as debt / counting against 6% debt cap
  - Infrastructure vs. real estate investor distinction
  - Narrow taxable / tax-exempt financing gap
2020 Program Overview

- 10,000 students projected by 2020
- 1 million Assignable Square Feet of additional program
- Program:
  - Academic and Research Space
  - 1,700 built beds
  - Mixed-use, collaborative and sustainable
  - Recreation, dining and student life facilities

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<tr>
<th></th>
<th>ASF</th>
<th>GSF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Space</td>
<td>419,212</td>
<td>698,686</td>
</tr>
<tr>
<td>Housing &amp; Student Dining</td>
<td>400,992</td>
<td>589,694</td>
</tr>
<tr>
<td>Academic Support</td>
<td>164,740</td>
<td>257,646</td>
</tr>
<tr>
<td>Athletics and Recreation Buildings</td>
<td>101,520</td>
<td>167,085</td>
</tr>
<tr>
<td>Fields</td>
<td>N/A</td>
<td>403,500</td>
</tr>
</tbody>
</table>
219-acre Project Site includes 136 acres of undeveloped land
Policy Landscape

- Draft Physical Design Framework document
- Environmental Impact Report (EIR) Performance Criteria
- Draft Circulation Performance Criteria and Metrics
- Draft Land Use Performance Criteria and Metrics
- “Toolkit” of supporting documents to assist development teams

Content will help shape Request for Proposals Document
UC Merced Goals for ZNE, GHG Neutral, ZLF

UC Merced is committed to achieving the following sustainability goals by 2020:

**Zero Net Energy**
- Net energy through efficiency and renewable energy production.

**Zero Landfill Waste**
- Divert from landfill all campus waste by reducing excess consumption and recycling to the maximum extent feasible.

**Zero Net Greenhouse Gas Emissions**
- Prevent as much carbon emissions as it produces.
Financial Landscape

2020 Preliminary Capital Cost Distribution

Cost Allocation by Expense Type

- Buildings
- Site
- Infrastructure
- Central Plant

Cost Allocation by Revenue

- State Eligible
- Revenue
- Campus Resource
P3 Finance and Commercial Highlights

1st Higher Ed US DBFOM

- $1.3bn capital project delivered through 39-year DBFOM structure
- Financial close in August 2016 – first delivery in Summer 2018
- Hybrid availability payment leveraged UC exceptional muni market access

P3 Structure Drivers

- Long-term affordability was a key risk due to scale of O&M
- Balanced academic program ramp-up focus vs. facilities delivery
- Staggered delivery & LDs structure matching academic year schedule

Financial Strategy

- Subsidized academic facilities trumped housing/dining excess revenues
- Auxiliaries, tuition, state support, other revenues captured at campus-wide level
- RFP price “upset limit” drove affordability
Lessons Learned

Experience

What Worked Well
- Very strong political commitment
- Good coalition building
- Buy in from stakeholders
- Well organized/small owner team
- Good industry review meetings
- High level of external oversight – forced good defense

Struggles
- Team built in stages – led to a lot of rework
- Lack of initial data (existing space utilization)
- Changes to scope and program
- Very diverse group of stakeholders
Program Overview

- Existing City operations scattered across several sites
- Facilities mostly 50 – 60 years old, include former retail and residential buildings
- Need:
  - Expanded space
  - Elimination of duplicated space and cost
  - Unified public service points/Improved identity

<table>
<thead>
<tr>
<th></th>
<th>ASF</th>
<th>GSF</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Hall</td>
<td>31,984</td>
<td>54,500</td>
</tr>
<tr>
<td>Public Safety</td>
<td>15,745</td>
<td>23,000</td>
</tr>
<tr>
<td>Essential Service</td>
<td>14,544</td>
<td>22,900</td>
</tr>
<tr>
<td>Fire Station</td>
<td>8,446</td>
<td>12,900</td>
</tr>
<tr>
<td>Public Outdoor Space</td>
<td>N/A</td>
<td>8,000</td>
</tr>
</tbody>
</table>
Physical Landscape
Proposals
Proposals
Lessons Learned

Experience

What Worked Well
- Well developed program – Clear Vision
- Well organized/small owner team
- Buy in from stakeholders
- Open to innovation/alternatives
- Good industry review meetings
- Good understanding of cost/impact of “no-action” alternative
- Healthy city finances/stable organization
- Two high quality but very different proposals

Struggles
- Small scale of project
- Parking demand
- Affordable/Workforce housing component
- Two high quality but very different proposals
University of California
Student Housing Initiative
Physical Landscape

Two campuses in initial program
- UC Santa Cruz
- UC Riverside
Program Overview

• Urgent need for affordable student housing throughout UC System

• Need:
  – Expanded bed count
  – Student Life: Dining, Study, Recreation, Activity, Child Care
  – Affordability
Lessons Learned

Experience

What Worked Well
- Clearly defined need
- Experienced OP and Campus teams
- Buy in from stakeholders
- Open to innovation/alternatives
- Funding Capacity

Struggles
- Entitlements
- Parking demand
- Affordability
- Utility Infrastructure capacity
- Tension between private and public practices/policies
CONCEPT

Colorado State University
C. Wayne McIlwraith Translational Medicine Institute

AECOM
Questions and Answers
Island Palm Communities LLC

An award-winning model for public-private partnerships

June 6, 2017
DoD housing before privatization

Before privatization, the DoD had ascertained:

- 60% of DoD-owned family housing – approximately 180,000 units – were inadequate
- $20B and 30 years using Military Construction (MILCON)
- Housing was not a core competency of the military or DoD
MHPI OVERVIEW
A public policy solution

MHPI provided the legislative authorities to facilitate real estate transactions between the government and private developers and property managers.

Benefits to the Army:
- Preservation of public capital
- Speed to market
- Technical expertise
- Shared risk
- Efficiency and reliability
- Long-term asset management

The 1996 National Defense Authorization Act passed by Congress gave life to the Military Housing Privatization Initiative (MHPI)
Section 02
Who We Are
Lendlease is an international real estate developer, builder and owner.

In our Communities’ business we work with public and private sector partners to provide affordable housing choices.

In-house expertise to design, develop, fund, build, and manage a range of residential options.
Island Palm Communities is a 50-year partnership between Lendlease and the U.S. Army.

**Role**
Owner, developer, asset manager

**Completion**
2054

**Partner**
U.S. Army

**Project Size**
7,756 homes

**Construction**
4,725 new home construction
7 community centers
2,515 renovated homes

**Project Value**
$2.3 billion
Largest MHPI project awarded by the Army

Operations span seven installations encompassing 1,702 acres.

Over 7,900 homes under management.

$2.3B 12 year initial development period

$5.35B Over remaining 37 years
Highlights and achievements

$1.77B in construction and $65M in renovations contracts awarded to date. Over 90% awarded to local businesses.

Nearly $20M in contracts awarded annually by property operations.

Significant job creation:

• 1,000 plus local tradesmen and tradeswomen on site at peak of construction
• PLA with local unions; no inquiries to date
• Asset and property operations offer long term employment opportunities for 400+ Hawaii residents
• North American Public-Private Partnership Deal of the Year - Project Finance Magazine, 2005
• Award-winning tree preservation program, The Outdoor Circle, 2005
• 18MW rooftop photovoltaic system
• LEED Certified Neighborhood Development
• Building Energy Management System
• Established Kunia Agricultural Park in partnership with the Hawaii Agricultural Foundation and Monsanto.
• More than $200k donated locally through corporate 501(c)3 non-profits
Section 03
Project Structure
Section 04
Challenges and Keys to Success
Challenges and Keys to Success

Partnership Challenges
- Approval process and timing
- Changes to base assumptions
- Complex legal structure

Army Challenges
- Perception of contractor v. partner
- Private sector profit motive
- Changes in local leadership
Established early on an agreed and executed shared vision.

Developed a culture of mutual trust and transparency.

Fostered a willingness of everyone to learn.

Instituted clear processes.

Agreed on roles and responsibilities.

 Adopted a partnership mentality.
Section 05
Lessons Learned
LESSONS LEARNED

Identify the Revenue Stream is Key
Choose Partners Wisely
Deal Structuring is Not a Governmental Function
Manage for the Long Term
Managing Project Control
THANK YOU
Financing Models and Risk Management

June 6, 2017
Infrastructure – An Investment Worth Making

We cannot afford to wait.

- **The Cost of Doing Nothing**
  - Deferred Maintenance
  - Inflation
  - Increased Congestion / Limited Capacity
  - Closures / Systemic Failures

- **The Need to Address Critical Infrastructure**
  - You need a place to live
  - Your house needs a roof

- **Stretching Dollars Further Utilizing P3**
  - Accelerated Project Delivery
  - More Efficient Project Management
  - Greater Innovation
  - Lower Life Cycle Cost
P3 Basics
Key Considerations

- Typically partially / wholly **financed** by debt leveraging project revenues
  - Revenue streams: lease payments, some form of direct user fee (toll)
  - Revenues supplemented by money, right-of-way, or other contributions
- Private partner *will* make an **equity** investment; in long-term lease structure, likely will make upfront payment
- Public partner *may* need to make upfront payment (e.g., milestone payments) to reduce capital cost financing
- Private partner *may* be required to assume partial or full **revenue risk**
  - Revenue generators (or hybrid)
- May be structured as an **availability payment**
  - Non-revenue generators (or revenue doesn’t cover)
- May be structured as **lease-leaseback (long-term lease)**

**Drivers:** Revenue Stream, Risk Appetite, Scale, Market, Lenders
P3 Basics
Delivery Models

Delivery Options for Infrastructure Delivery

- Construction Manager-General Contractor
- Design-Build
- Design, Build, Finance
- Design, Build, Operate and Maintain
- DBFOM* – Availability Payment
- DBFOM* – Revenue Risk
- Privatization

Risk

Public Sector

Private Sector

Degree of private sector accountability, integrated delivery, risk transfer, and extent of private financing
90/10 Debt to Equity ratio is a Typical Structure for Availability Payment Projects.
Funding
Public money made available to the project. This contributed capital is not intended to be repaid or carry a cost (i.e. interest or return on investment). Typical sources include:

• Availability Payments
• User Fee Revenue
  Tolls
  Fees/charges
  Rent

Financing
Money provided by private investors to pay for construction costs, concession payments and other large project costs. This capital is intended to be repaid and does carry a cost (i.e. interest and return on investment). Typical sources include:

• Debt
• Equity
A Framework for Innovation

• Set the parameters
  • Counterparty Credit Quality
  • Appropriations Risk
  • Affordability and other Limits

• Be receptive to innovation
  • Establish a framework to assess alternate concepts

• Don’t be too prescriptive – allow the market to innovate
  • Funding types
  • Financing profiles
P3 Financing Packages

- **Traditional Governmental Finance Approach**
  - Governmental Purpose Bonds – Qualified Management Contract requirement means limited private involvement
  - Risk retention by the government
  - State revolving funds – EPA
  - Federal: WIFIA, USDA, CDBG, BOR, ACE and others

- **Public Private Partnership Approach**
  - Equity 10-30%
  - Debt 70-90%

- **Forms of P3 Debt**
  - Federal Sources Outlined Above plus
  - Private project finance market
  - Tax-exempt Private Activity Bonds (PABs) – state cap allocation challenge
  - Club Arrangements of Banks

- **P3 Equity Providers ($300B available in USA)**
  - Private Equity
  - Life Insurance Companies
  - Pension Funds
### Repayment Methods

<table>
<thead>
<tr>
<th>Revenue Risk</th>
<th>Availability Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private partner directly dependent upon sources of revenue collected by the operation of an asset to offset the capital investments made to deliver the asset</td>
<td>Project owner repays private partner for operating and maintaining that level of performance, throughout the life cycle of that asset</td>
</tr>
<tr>
<td>Private partner directly collects fees, fares or tolls</td>
<td>Project owner sets rates and retains all revenues</td>
</tr>
<tr>
<td>Private partner unable to collect revenue if asset is unavailable</td>
<td>Project owner levies punitive measure for non-availability</td>
</tr>
<tr>
<td>Private sector may see an “upside” and benefit from usage; or, may experience a “downside” if there isn’t sufficient usage of the asset</td>
<td>No private sector “upside” or downside and no private benefit from usage because the project owner retains demand risk</td>
</tr>
</tbody>
</table>

**Examples:**
- 495 HOTLanes and I-95 Express, Virginia
- Texas A&M University, Texas
- North Tarrant Expressway, Texas

**Example:**
- I-595, Florida
- Goethals Bridge, PANY&NJ
<table>
<thead>
<tr>
<th>REVENUE</th>
<th>DEMAND RISK</th>
<th>EXAMPLE</th>
<th>DESCRIPTION</th>
<th>RISKS &amp; CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIXED-USE CHARGE FOR UTILIZATION OF ASSET</td>
<td>Fees, Fares, Taxes or Tolls</td>
<td>- A ship is charged for the use of a port.</td>
<td>- A ship is charged for the use of a port.</td>
<td>Demand risk can be taken by the public or private entity or both. Typically, risks are borne by the private sector as this is how investment returns are achieved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- A car is charged a toll for using a bridge or tunnel.</td>
<td></td>
<td>Functional daily control of the asset can be outsourced to experts if desired. Ownership ALWAYS remains with the public entity.</td>
</tr>
<tr>
<td>AGREED UPON FEES FOR SERVICES PROVIDED</td>
<td>Campus Housing</td>
<td>Students pay for their room and board, and this “fee for service” is collected and directed to offset capital investments made to restore or modernize or build new campus housing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VARIABLE USAGE FEES (MILEAGE-BASED, TIME-OF-USE BASIS)</td>
<td>Managed Lanes</td>
<td>Access to converted HOV (High occupancy Vehicle) lanes to ease congestion or provide alternative lanes for travelers, where a car is charged according to predetermined amounts, based on length of segment or time of day usage on managed lanes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Standard Terms – Availability

<table>
<thead>
<tr>
<th>AVAILABILITY RISK</th>
<th>EXAMPLE</th>
<th>DESCRIPTION</th>
<th>RISKS &amp; CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MILESTONE PAYMENTS FOR REACHING AGREED UPON DESIGN, PRE-CONSTRUCTION OR CONSTRUCTION GOALS.</strong></td>
<td>Design drawings completed to specified level to initiate construction.</td>
<td>Payments to the construction company and/or sponsor come due once a bridge is complete. The public sector takes minimal construction risk, but if project is completed as agreed, payments are made.</td>
<td>In availability projects, the construction, and at times performance risk of an asset is shifted to private sector. Public funds are only paid when construction is complete or services are delivered. Control typically transfer to public entity once construction requirements are met. Ownership ALWAYS remains with public entity.</td>
</tr>
<tr>
<td><strong>PAYMENTS FOR PROVIDING A FACILITY IN AN ACCEPTABLE CONDITION.</strong></td>
<td>Ensuring that facility meets performance and acceptable use standards.</td>
<td>Payments to concessionaire can be structured in a managed service contract. Private sector takes on responsibility for a single, fully integrated service solution for security, building maintenance, management of all day-to-day operations, and would only be paid when services are delivered.</td>
<td></td>
</tr>
</tbody>
</table>
## Standard Terms – Availability

<table>
<thead>
<tr>
<th>HYBRID MODELS</th>
<th>EXAMPLE</th>
<th>DESCRIPTION</th>
<th>RISKS &amp; CONTROL</th>
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</thead>
<tbody>
<tr>
<td><strong>REVENUE RISK FOR OPERATIONAL PHASE ASSUMED BY PUBLIC SECTOR.</strong></td>
<td>Fare box revenue to offset investments, in DBFM when operations remain with public sector.</td>
<td>Availability to perform operations determines payment to private sector, while public partner takes on fare or fee collection.</td>
<td>Risks can be shared or remain with either the public or private entity, depending on the project and needs of the owner (public entity, sponsor).</td>
</tr>
<tr>
<td><strong>LAND VALUE EXCHANGE (AIR RIGHTS, FAR OR DEVELOPMENT RIGHTS, TAX INCREMENT FINANCING (TIF)).</strong></td>
<td>Off balance sheet transaction value to provide capital cash offset.</td>
<td>Sale of excess city land parcels to accommodate a consolidation of municipal facilities.</td>
<td></td>
</tr>
</tbody>
</table>


Focusing on finance costs alone misses the significant advantages that a P3 structure offers the public sector:

1. Risk Transfer and Innovation;
2. Short and Long Term Budget Certainty; and
3. Matching long term revenues (tax or user fees) with long term expenses (availability payments)

There is no free lunch – costs and benefits need to be balanced
How the Model Works

**Scenarios**
- Inputs by scenario
- Outputs comparison

**Inputs**
- Construction and Operations Timing
- Technical Data
- Financing Costs

**Timing & Inflation**
- Model timelines
- Timing flags
- Inflation factors
- Discount factors

**Construction Period Calculations**
- Project costs
- Debt drawdowns, interest and financing fees
- Equity drawdowns

**Operations Period Calculations**
- Project costs
- Debt service and financial ratios
- Equity return and repayment

**Checks**

**Financial Statements**

**Summary**

**Key Outputs**
- NPV, IRR
- Financial Ratios
- Sources and users
- Other outputs
## Example Screenshot of Input Tab

### P3 - Pre-Construction

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Total</th>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3 - Pre-construction period timeline</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P3 - Pre-construction period year #</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P3 - Pre-construction cost 1 - Profile</td>
<td>%</td>
<td>100.0%</td>
<td>50.00%</td>
<td>50.00%</td>
</tr>
<tr>
<td>P3 - Pre-construction cost 2 - Profile</td>
<td>%</td>
<td>100.0%</td>
<td>50.00%</td>
<td>50.00%</td>
</tr>
<tr>
<td>P3 - Pre-construction cost 3 - Profile</td>
<td>%</td>
<td>100.0%</td>
<td>50.00%</td>
<td>50.00%</td>
</tr>
<tr>
<td>P3 - Private procurement costs (cost of winning bid) - Profile</td>
<td>%</td>
<td>100.0%</td>
<td>50.00%</td>
<td>50.00%</td>
</tr>
<tr>
<td>P3 - Private procurement costs (cost of non-compensated losing bids, only considered in PDCC)</td>
<td>%</td>
<td>100.0%</td>
<td>50.00%</td>
<td>50.00%</td>
</tr>
</tbody>
</table>

### P3 - Construction

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Total</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3 - Construction period timeline</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P3 - Construction period year #</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P3 - Construction cost 1 - Profile</td>
<td>%</td>
<td>100.0%</td>
<td>33.00%</td>
<td>33.00%</td>
<td>34.00%</td>
</tr>
<tr>
<td>P3 - Construction cost 2 - Profile</td>
<td>%</td>
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<td>33.00%</td>
<td>33.00%</td>
<td>34.00%</td>
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<tr>
<td>P3 - Construction cost 3 - Profile</td>
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<tr>
<td>P3 - Construction cost 4 - Profile</td>
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<td>34.00%</td>
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<tr>
<td>P3 - Construction cost 5 - Profile</td>
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<td>33.00%</td>
<td>34.00%</td>
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<tr>
<td>P3 - Construction cost 6 - Profile</td>
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<td>33.00%</td>
<td>34.00%</td>
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<tr>
<td>P3 - Construction cost 7 - Profile</td>
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<td>33.00%</td>
<td>34.00%</td>
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<tr>
<td>P3 - Quality assurance - Profile</td>
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<td>33.00%</td>
<td>34.00%</td>
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</table>

### P3 - Traffic Ramp Up

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<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
<th>Year 7</th>
<th>Year 8</th>
<th>Year 9</th>
<th>Year 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3 - Operations period timeline</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>P3 - Operations period year #</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P3 - Traffic ramp up - Profile</td>
<td>%</td>
<td>100.0%</td>
<td>50.00%</td>
<td>60.00%</td>
<td>70.00%</td>
<td>80.00%</td>
<td>90.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

### P3 - Subsidy / Milestone Payment

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Total</th>
<th>Year 1</th>
<th>Year 2</th>
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<th>Year 4</th>
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<th>Year 6</th>
<th>Year 7</th>
<th>Year 8</th>
<th>Year 9</th>
<th>Year 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3 - Subsidy / milestone payment period timeline</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Example Screenshot of Output Tab
Identifying and Allocating Risks

- **Risk sharing is a key component and feature of P3s**
  - Partners exercise greater control and responsibility
  - Integrated function (mitigates risk, creates efficiencies)
  - Spreads risk over time (life cycle of asset)

- **Private Partner prices its risks**
  - VfM: assessing costs of transfer of risks to experts who can (best) manage
  - Macro-economic risks, project risks, participants’ risks
  - There are market-tested allocations, know them

- **Allocate parties better positioned to manage, or share**
  - Assign to third party (i.e., insurers)

- **Risk Management Best Practices**
Risk Distribution
Risk Opportunities

• The financial elements and long term obligations provide risk opportunities that differ from other alternative contracting approaches.

• Risk allocation is at the core of P3s:
  
  Risk transfer = Innovation Incentive

• Transferring too little risk diminishes potential VfM.

• Transferring too much risk (a risk that is unmanageable) results in contingency additives diminishing the VfM.
Risk Opportunities

- Phased construction may lower overall costs or at least defer capital expenditures until actually required

- Higher capital costs may result in lower life cycle costs providing an overall better project at lower cost

- Higher capital costs may result in a better overall project – for example (toll project):
  - Better mobility solution/enhanced traffic access
  - Higher revenue/stronger financial feasibility.

- Construction challenges with unique solutions may result in a lower cost yet result in a positive level of product performance that could not have been met with traditional risk/contracting approaches
Risk Analysis and Management

Traditional Project Delivery
- Design-Bid-Build (DBB)

Alternative Project Delivery
- CM/GC
- Design-Build (DB)
- Design-Build-Finance (DBF)
- Alliancing (Equal Responsibility and Shared Risk)

Increasing Private Responsibility
- Public-Private Partnership (P3) (Concession – Revenue Risk)
- Design-Build-Finance-Maintenance-Operation (DBFOM) (Availability Payment – No Revenue Risk)

Risk Transfer
Risk Analysis and Management

Typical Risk Allocations between public/private

Construction
- Accuracy and Design Completion
- Environmental policy requirements
- Labor Agreements
- Scope Changes
- Cost Growth

Financial
- Schedule
- Interest Rate

Operational
- Revenue
- Level of Service
Risk Analysis and Management

Standard Example Risk Matrix (with discussion around valuing likelihood/severity of risks)

Risk Rating = Likelihood \times Severity

Preferred approach:
Dividing severity into two 5 point components of cost impact and schedule impact for a possible score of 10 with likelihood of 5 points and a total possible of 50 tends to provide a better analysis.

This approach allows mitigation planning to reduce all three categories and reflect a truer adjusted score.
Value for Money – What matters to you

• There are many ways to achieve effective risk transfer through the use of private funding tools.

• Identify what matters for each project:
  • Risk management, transfer or elimination
  • Minimize project costs
  • Maximize project scope

• Select from the vast toolkit of available models
  • Balance the amount, timing and type of public funding
### Value for Money (VFM)

<table>
<thead>
<tr>
<th>Traditional Procurement</th>
<th>P3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public</strong></td>
<td><strong>Private</strong></td>
</tr>
<tr>
<td>Financing</td>
<td>Financing</td>
</tr>
<tr>
<td>Construction Permits</td>
<td>Construction Permits</td>
</tr>
<tr>
<td>Environmental Permits</td>
<td>Environmental Permits</td>
</tr>
<tr>
<td>3rd Party Permits</td>
<td>3rd Party Permits</td>
</tr>
<tr>
<td>Force Majeure</td>
<td>Force Majeure</td>
</tr>
<tr>
<td>Organization</td>
<td>Organization</td>
</tr>
<tr>
<td>Design</td>
<td>Design</td>
</tr>
<tr>
<td>Construction</td>
<td>Construction</td>
</tr>
<tr>
<td>Operation</td>
<td>Operation</td>
</tr>
<tr>
<td>Revenue</td>
<td>Revenue</td>
</tr>
<tr>
<td>Geotechnical</td>
<td>Geotechnical</td>
</tr>
</tbody>
</table>

Each Risk has a “Value”. The optimized allocation of specific risks occurs when risk is assigned to the party which can mitigate or manage the risk more efficiently.
Value for Money

→ Value for Money (VfM) analysis is a process used to compare the financial impacts of a P3 project against traditional public delivery alternatives. The process to establish VfM includes:

  ▪ Creating a Public Sector Comparator (PSC), which estimates the whole-life cost of carrying out the project through a traditional approach;
  ▪ Estimating the whole-life cost of the P3 alternative (either as proposed by a private bidder or a hypothetical “shadow bid” at the pre-procurement stage); and
  ▪ Comparing results.

→ Value for Money is an industry-accepted decision driver.
Questions
How to do a P3
(in 1500 easy steps)
What is the process?

First:

Is it a good project?

Good projects make good P3 projects

The P3 procurement process cannot save a bad project idea!
While most P3s in the United States have been revenue-based (toll roads) the P3 model as worked well in the social infrastructure space. Governments just need to be prepared to work with the private sector to identify good projects and agree to a long-term partnership.
P3 Public Engagement Opportunities
What is the process?

MAKING THE RIGHT PROJECT APPROACH DECISIONS AT THE RIGHT TIME REQUIRES THE RIGHT PROCESS

START HERE

HAVE SOLID PSI FRIENDLY LEGISLATION IN PLACE
Clear definition of escalation guidelines & type of PSI content allowed

CLEARLY DEFINE THE PROJECT INTENT
Who/what benefits?
How likely is public support?
What is the long-term value to the client?

IS PSI RIGHT FOR THIS PROJECT?
This is your first opportunity to evaluate PSI as a viable option for the project. Does it still sound like the right solution?

YES PROCEED
NO IS THE AUTHORITY AND PROCUREMENT PROCESS IN PLACE? PROCEED

YES PROCEED
PROCEED

NO IS DELIVERY OPTIONS ANALYSIS COMPLETE? PROCEED

YES PROCEED
PROCEED

WHAT HIGH-RISK DELIVERY OPTIONS ARE AVAILABLE?
Identify a public sector champion to work together w/ PSI Council
Set up a Graduate/Excellence
Deliver an innovative and transparent procurement process

CONDUCT DELIVERY OPTIONS ANALYSIS
Identify core customer support project determine whether it is affordable

PRELIMINARY PSI GO/NO GO
You now have a broad view of the options. Does PSI still make sense for this project?

YES PROCEED
NO PSI IS NOT A Viable Solution

GET INDUSTRY AND KEY STAKEHOLDERS ENGAGED
Conduct market sounding with industry & seek three agreements with preferred suppliers

SECONDARY PSI GO/NO GO
You now have enough information to make an informed decision. Do you agree or not?

YES PROCEED
NO END

HIGH RESOLUTION PROCESS
Preparing Request for Qualifications (RFQ)
Detail shortlist - 3-4 firms with agile delivery and expertise

FINAL PSI GO/NO GO

YES PROCEED
NO END

AIAI
High Performance Project Module
A GUIDE TO SUCCESSFUL UTILIZATION AND DELIVERY

AIAI
What is the Process?

START HERE

HAVE SOLID P3 FRIENDLY LEGISLATION IN PLACE
- Clear definition in statute or guidelines of the types of P3 contracts allowed
- Clear definition of the specific types of projects allowed
- Clear definition of the procurement methods allowed

CLEARLY DEFINE THE PROJECT INTENT
- Who does it benefit?
- How likely is public support?
- What is the long term value to the public?

AFTER THE PROJECT INTENT HAS BEEN CLEARLY ESTABLISHED, PROCEED>

IS P3 RIGHT FOR THIS PROJECT?
This is your first opportunity to evaluate P3 as a viable option for this project. Does it still sound like the right solution?

YES
PROCEED

NO
Stop & pursue other delivery method

• Can you do this?

• Does anyone want this?
What is the Process?

**ESTABLISH A DECISION MAKING AUTHORITY AND PROCUREMENT PROCESS**
- Identify a public sector champion
- Put together a P3 Council
- Set up a Center of Excellence
- Define an interactive and transparent procurement process
- Develop preliminary Request for Information (RFI)
- Use council/authority as sounding board to develop structure

**ONCE THE AUTHORITY AND PROCUREMENT PROCESS HAS BEEN PUT IN PLACE, PROCEED >**

**CONDUCT DELIVERY OPTIONS ANALYSIS**
(P3 vs. traditional methods)
- Identify revenue source to support the project, determine whether it is affordable
- Perform Value-for-Money Analysis (VfM)
- Perform Risk Analysis
- Determine which method will provide best overall value to public
- Engage experienced financial, legal and technical advisors

**ONCE DELIVERY OPTIONS ANALYSIS IS COMPLETE, PROCEED >**

**PRELIMINARY P3 GO/NO GO**
- You now have a broad view of the options
  - Does a P3 still make sense for this project?
  - If yes: **YES PROCEED >**
  - If no: **NO Stop & pursue other delivery method**

**How should you do this?**

**Can you afford this?**
What is the Process?

- Is there interest in the market?
- Did you find the right partner?
One of the key drivers for the successful development of a P3 project is a defined, properly structured procurement process that encourages private sector companies to bring forward their best people and ideas. The key stages of the P3 process include:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue RFQ</td>
<td>• RFQ document issued inviting teams to submit qualification credentials</td>
</tr>
<tr>
<td>Shortlist or Prequalify Proposers</td>
<td>• Shortlist or prequalify teams chosen based on qualification criteria</td>
</tr>
<tr>
<td>Issue RFP</td>
<td>• RFP documents released including project agreement and technical requirements</td>
</tr>
<tr>
<td>Proposal Period</td>
<td>• Proposers develop comprehensive technical and financial proposals.</td>
</tr>
<tr>
<td>Select Preferred Proposer</td>
<td>• Preferred proposer chosen based on evaluation criteria included in RFP</td>
</tr>
<tr>
<td>Negotiations</td>
<td>• Negotiate final terms and conditions with preferred proposer</td>
</tr>
<tr>
<td>Commercial &amp; Financial Close</td>
<td>• Preferred proposer executes project documents (commercial close) and closes project financing</td>
</tr>
</tbody>
</table>
Contractual Landscape

Contract Documents

- ‘Deliverable’
- Instruction to Proposers
- Codes/Mandates
- Policy
- Program
- Specifications
- Project Agreement
- Reference

- Master Plan
- Review Procedures
- Environmental Sustainability
- D&C Specs
- Central Plant Specs
- Commissioning
- O&M Requirements
- Handback
Public Agency Owner
• May be required to pay private partner a fixed fee over term; Fee may be subject to incentives or deductions based on performance
• Monitors private partner’s performance for term of contract
• Owner of project

Concessionaire (Private Partner)
• Responsible for financing, design, construction, operations and maintenance
• May be responsible for future capital improvements
• May pay public agency owner an up-front fee for concession

Investors
• Provide equity investment

Lenders
• Provide debt financing to the concessionaire

Lenders Technical Advisor(s)
• Provide technical advisory services to lenders

Contractors, Consultants
Suppliers, & Operator
Typical Durations for a Procurement

- Issue RFQ – 30-60 days
- Shortlist or Prequalify Proposers – 30-45 days
- Issue RFP – 60-90 days after RFP issued
- Proposal period – 3 to 6 months
- Select Preferred Proposer – 30-60 days
- Negotiations – 30-60 days
- Commercial/Financial Close – 60-90 days
CRITICAL POINTS TO REMEMBER
Thoughts on Procurement

• “What are we trying to do here”
• Public Sector habits: quality, no risk, specificity, low price
• Private Sector wants: payment certainty, capped risks, transparency, full public/political buy-in
• P3 procurement and negotiation:
  • Focus on performance (rather than specificity)
  • *Priceable* risks
  • *Reliable* payment stream
  • *Reduced* political risk – think statutory solutions before the start!
  • Partner attitude
  • Chance at the upside
• Guiding principles lead to **procurement best practices**
More Thoughts on Procurement

- Industry Days; RFIs
- Qualifications
- Draft Documents with Proposal instructions
- Hard look at regulatory, conventional requirements
- Industry Review during Procurement, with one-on-ones
- ATC process (there are others)
- Separate financial and technical evaluations
- Stipends (are they needed for the project?)
Lessons Learned

1. Exploration
   - Coalition Building
   - “Fatal Flaw” evaluation
   Preliminary work – one to two years – Internal
   Hire Core team

2. Program/Budget
   - Goals
   - Boundaries
   - Policies
   - Risk Tolerance
   - Deal Structure
   “Vision” Development: 3 to 6 months – Core Team

3. Marketing and Industry Outreach
   - Develop RFQ
   - Industry Review
   - Develop RFP
   - Develop Project
   - Develop Technical Req.
   - Develop ITP
   - Execute
   Procure: 12 to 24 months

Procure: 12 to 24 months
## Lessons Learned

<table>
<thead>
<tr>
<th>Know what you want</th>
<th>Get the right advisors</th>
<th>Have a clearly defined process</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Establish clear goals and success criteria</td>
<td>• Real Estate and Development Advisory</td>
<td>• Transaction structure including financing considerations</td>
</tr>
<tr>
<td>• Develop a strong program with clear output specifications</td>
<td>• Capital formation strategies and analysis</td>
<td>• Attainable schedule and milestones identified</td>
</tr>
<tr>
<td>• What do you want the partner to do?</td>
<td>• Legal and legislative</td>
<td>• Clear goals, expectations &amp; evaluation criteria</td>
</tr>
<tr>
<td>• What risk will you assume?</td>
<td>• Public procurement process expertise</td>
<td>• Clearly defined design process</td>
</tr>
<tr>
<td>• Benchmark costs and establish targets</td>
<td>• Expertise in complex evaluation and contract negotiations</td>
<td>• Clearly defined performance specifications</td>
</tr>
<tr>
<td>• Evaluate Financing strategies</td>
<td>• Design and construction oversight</td>
<td>• Construction oversight</td>
</tr>
<tr>
<td></td>
<td>• Communication and public outreach</td>
<td>• Ensure transparency and accountability in process</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Communication plan for internal and external stakeholders</td>
</tr>
</tbody>
</table>
P3 Public Engagement Opportunities

Project Concept
- Metropolitan Planning Organization Meetings
- Six Year Improvement Program Meetings
- Environmental Stakeholder Meetings as requested
- Media Advisory

Homeowner Association Meetings as requested
- VAP3 Detail-Level Screening Report
- VAP3 High-Level Screening Report

PPTA Advisory Committee
- Initial Finding of Public Interest (FOPI)
- Request for Qualifications

Project Completion
- Comprehensive Agreement Execution
- Design Public Hearing(s)

Planning
- Oversight Board Meeting - Environmental Document
- Oversight Board Meeting on project development

Environmental Studies
- Oversight Board Meeting on P3 procurement
- Press Release on start of P3 procurement

P3 Project Development
- Oversight Board Meeting on Final FOPI
- Posting of Award

P3 Procurement
- Press Release on Selected Partner

Construction
- Continuous Communication

Website Information and Updates
A little guidance can go a long way, especially when it comes to P3s.

**Introducing P3Direct.**

P3Direct is an AIAI partnership program which seeks to create a connection between experienced P3 industry professionals (our members) and public sector representatives across agencies at every level. The program is active throughout the year and has a strong presence at the annual P3 Conference (Feb. 27 - Mar. 5, 2017 in Dallas).

**WHO IS P3DIRECT RIGHT FOR?**

- Public officials/administrators who have some interest in P3s but aren’t entirely clear on the benefits or details of this delivery method
- Those who have tried to institute P3s in their districts or states, but have not succeeded
- Those who think P3s might be a good option for their projects, but have no idea where to start

**PROGRAM BENEFITS**

- A base understanding of how to navigate the complex process of P3s
- An informal relationship where P3-centric questions can be asked and complexities clarified
- An introduction to current trends, challenges, and opportunities in the P3 market
- Introductions to other participants and organizations

**INTERESTED IN PARTICIPATING?**

In order for us to make P3Direct as effective as possible, we need your input. Please answer a few quick questions and also to be considered as a participant:

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Together, we move P3s forward.

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