Preliminaries
Definitions/Distinctions

How Are Project Costs Paid?

Direct

Government pays for projects with public resources – “directly”.

This includes monies obtained: (i) through taxes, user fees, or other funds received by government; (ii) funds borrowed from capital markets (typically bonds or bond anticipation notes); and (iii) grants of money from other governments. Funds are borrowed (ii) based on the credit-worthiness of the government. Grants (iii) received are available through taxes or charges by other governments.

Indirect

Government attracts the Private Sector to pay for projects with private sector resources – “indirectly.” This is typically done by ceding specific, limited, control over a public infrastructure asset to create a revenue stream which the private sector will use to earn a return on capital invested and a profit.

“Indirect” includes monies obtained: (i) through user fees, or other funds received by the private sector that are “at risk” to the private sector; (ii) funds borrowed by the private sector from capital markets (typically bonds or other debt); and (iii) equity invested. Funds are typically borrowed for design and construction based on the credit-worthiness of the project to produce sufficient revenue to repay the borrowed funds (with interest), to pay for long term O&M, and a profit.
How Are Project Elements Delivered?

The three (3) key elements of infrastructure projects are delivered – “Piecemeal” – separated from each other – “Segmented.”

Distinctions remain between capital budgets for the Initial Delivery of projects and the operating budgets for long term repair, operations, and maintenance.

Combining Design with Construction (Design-Build) included here, with O&M.

Design
Construction
Design-Build

Operations & Maintenance

Segmented

The three (3) key elements of infrastructure projects are delivered together – integrated with each other – “Combined.”

Distinctions are eliminated between capital budgets and operating budgets for these projects.

All “Public Private Partnerships”

Design-Build-Operate-Maintain (including all combinations of public and private sector funding)

Combined
Delivery Methods Distinguished

The World’s Project Delivery Methods

**IV**
- **O&M Alliancing**
  - Operate-Maintain
- **CM Agency**
  - Constr. Mangmt.
- **DBB**
  - Design-Bid-Build
- **CM At Risk**
  - Constr. Mangmt.
  - Segmented

**III**
- **PP**
  - Parallel Prime
- **TKY**
  - Turnkey
- **FT**
  - Fast Track

**II**
- **Concession**
  - with Govt Finance
- **“Super”-TKY**
  - Turnkey with Finance
- **DBO**
  - Design-Build-Operate
- **DBOM**
  - Design-Build-Operate-Maintain
- **BOOT**
  - Build Own Operate Transfer
- **DBFOM**
  - Design-Build-Finance-Operate-Maintain
  - Concession with Private Finance (at risk)

**I**
- **EPC**
  - Eng-Proc-Construct
- **Direct**
- **Combined**
- **BOT**
  - Build-Operate-Transfer
- **BOO**
  - Build-Own-Operate
- **DBOT**
  - Design-Build-Operate Transfer

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Six Key Delivery Methods

I. Direct
   - Design-Build-Operate-Maintain
     (Alt 1 - all public funding)
   - Design-Build (And Construction Mgmt. At Risk)
   - Operate & Maintain

II. Combined
   - Design-Build-Finance-Operate-Maintain
     (NO public funding)

III. Indirect
   - Design-Bid-Build

IV. Segmented
   - Design-Build

"PUBLIC PRIVATE PARTNERSHIPS"

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The Quadrant Framework

Quadrants I and II Are Confusingly Lumped Together as PPP’s

US History of Delivery Methods: 1780 to 1933

Direct

Segmented

Combined

Indirect

Track One - Direct Funding

Track Two - Indirect Funding

800 Projects Authorized by Congress
The 2000 ABA Model Procurement Code

Project: August, 1997 to July 11, 2000
Approved by the ABA House of Delegates

2007 ABA Model Code for Public Infrastructure Procurement
A Condensation of the 2000 MPC focused ONLY on Public Infrastructure Procurement
1. Pure O&M

2. DBB (1) And CMAR
   - Design
   - Construction
   - Self Operate

3. DBB (2) And CMAR
   - Design
   - Construction
   - Contract O&M

4. DB (1)
   - Design-Build
   - Self Operate

5. DB (2)
   - Design-Build
   - Contract O&M

6. DBO
   - Design-Build-Operate

7. DBFO
   - Design-Build-Finance-Operate
The 2000 MPC and the 2007 MC PIP

Move From This

Direct

Segmented

Combined

Indirect

1850

1900

1950

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To This:
Three Proven Source Selection Methods

**Article 3-202**
Competitive Sealed Bids:
- Construction;
- Operations & Maintenance

**Article 3-203**
**Article 5-204**
Competitive Sealed Proposals:
- Design-Build;
- Design-Build-Operate;
- Design-Build-Finance-Operate

**Article 5-205**
Qualifications Based Selection:
- Architectural and Engineering Services
Some Advantages of the MPC
Competitive Processes

- In Existence for >30 Years
- Successfully Used in Millions of Procurement Transactions in 20+ States
- Language has been repeatedly construed by numerous courts across the country

- BUT
The Goal Isn’t Just the Procurement Process

- Get the Procurement Process Out of the Way
- Design, Build, Repair, Operate
  - entire “collections” or “portfolios” of projects.
- Which delivery method is “best” for one project is silly Question today.
  - Facilities badly in need of repair
  - Facilities with poor performance (i.e., energy)
What 21st Public Infrastructure Procurement Could Look Like

The Pieces Exist
The Portfolio Configuration Problem

Capital Sources

Source 1  Source 2  Source 3  Source 4

The List of Desirable Infrastructure Projects

Project 1  Project 2  Project 3  Project 4  etc.

The Variables: Alternative Means of Delivery

Design-Bid-Build
Design-Build
Design-Build-Operate
Build-Operate-Transfer

etc.
Scenario Tools Explore Different Combinations of Projects and Delivery Methods

Scenario 1 Sources
- Historical Sources
- Projected Sources of Funds

Scenario 1 Uses
- Historical Uses
- Projected Uses of Funds

Excel © Microsoft: CHOICES Scenario Tools

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One (of Many) Scenarios for A Project Portfolio

Project Portfolio Scenario

Historical

Future

Revenues

Forecast

Expenses

Current Year

Portfolio Summary By Qtr

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Example of Range Analysis

Scenarios 5 and 6: Adjusted Base Cases with Fee Increases Plus Completion of Major Capital Program
(Assumes Twenty Year Bond at 4%, Beginning in 2002)

Year

Surplus (Deficit) Dollars ($)

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

(2,000,000) (4,000,000) (6,000,000) (8,000,000) (10,000,000) (12,000,000) (14,000,000) (16,000,000)

Scenario 3 (Conservative with Fee Adjustments)
Scenario 4 (Optimistic with Fee Adjustments)
Scenario 5 (Scenario 3 Plus Capital Program)
Scenario 6 (Scenario 4 Plus Capital Program)

Scenarios 5 and 6
Range of Likely Outcomes (With Fee Increases and Completion of Capital Program)

Adj. Conserv. Base Case
Adj. Optimistic Base Case
Adj. Conserv. Base Case with Capital
Adj. Optimistic Base Case with Capital

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Variables in The New Discipline

- Multiple Revenue Sources
- Project Start Dates
- Scope of Projects in the Portfolio
- Needs Exceed Funds
- Project Delivery Method
- Level of Investment ("Pace")
- Timing of Investment ("Pace")
- Sources of Investment
The Result – a Proper (and a COMMON) Foundation for:

Capital Budgeting,
Asset Inventory,
Condition Assessment,
Capital Programming, and
Financial Reporting
The 21st Century Frontier in Public Infrastructure Procurement:

1. Move Decision-Making to the Portfolio Level
2. Make Decisions on Numerous Projects at Once
3. Delivery Method Chosen in the Context of the Portfolio

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