Basic Concepts in Alternative Procurement, Operations and Financing for Public Infrastructure

WIRFC Learning Module Page Map and Content

Working Draft Version 1.5

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DELIBERATIVE MATERIAL Not for Distribution

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Finding Non-Traditional Value

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	Finding Non-Traditional Value				*Creating an Alternative*		
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Page Content

Basic Concepts in Infrastructure Alternative Procurement, Operations and Financing

Section 1: The Big Picture [link to 1.1]
Section 2: How This Learning Module is Organized [link to 2.1]
Section 3: Basic Concepts in Alternative Creation [link to 3.menu]

- First-time user recommendation: Go through Sections 1 and 2 at least once before proceeding to Section 3
- [Additional EPA/WIRFC information as needed]

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Section 1			Navigation Code: 1.1

Section 1: The Big Picture

A Big Challenge

Like many areas of US basic infrastructure, the water sector faces a critical need for immense capital expenditure to address decades of deferred maintenance and delayed investment. The challenge must be met in a difficult environment – slow recovery from 2008 financial crisis, major demographic shifts, increasing income inequality and a changing climate.

An Equally Big Opportunity to Provide Solutions

A more positive development is that the infrastructure investment challenge has been embraced as an opportunity by the private sector and a critical policy area by government. Both express strong support for new and innovative solutions that reduce cost, increase efficiency, improve service and incorporate the latest technology.

The Need for a Clearer Framework to Identify, Measure and Adapt New Solutions

However, progress is still slower than expected. The widespread enthusiasm for 'P3s' was instrumental in raising awareness of the potential value of new approaches. But there's a growing consensus among public infrastructure stakeholders, service providers and policymakers that a reset of the dialogue is needed to enable real progress. This reset emphasizes the 'nuts and bolts' of implementing successful solutions – realistic goals, clear description of specific purpose and value, stakeholder protection and complete transparency.

What's needed is a clearer framework to identify, measure and adapt improved approaches to the procurement, operations, financing and ownership of basic public infrastructure assets. Consistent with this objective, the Alternative Project Delivery Learning Module (LM) is based on a 'New Alternative Framework' that utilizes several new approaches to describing, categorizing and evaluating non-traditional solutions for infrastructure projects. The LM is intended to assist water-sector decisionmakers and stakeholders to understand and evaluate Alternative approaches for major capital investment from a practical and results-oriented perspective.

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Key Definitions

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Section 1			Navigation Code: 1.2

Words Matter!

A Clear Framework Requires Clear Definitions From the Start

- One of infrastructure sector's biggest issues is lack of clear language
- More precise definitions of existing terms will be an important part of this LM
- New terms for necessary new concepts: For example, 'Non-Traditional' is well-established approach outside the public sector but it only becomes a practical 'Alternative' after an approval process
- Key definitions will be highlighted in grey boxes throughout the LM [and linked to a glossary section]. To get started, the most frequently used terms are briefly defined below:

Key Definitions	
Project	Infrastructure asset or system capex
Agency	Decision-making authority responsible for public water infrastructure
Traditional Approach	Generally used by US Agencies for Project procurement, operations and financing
Non-Traditional Approach	Generally used by private-sector and some utilities for assets similar to Project
Alternative Approach	When Agency modifies and adopts a Non-Traditional approach for a Project
Public-Private Partnership or P3	A synergistic combination of Non-Traditional approaches adopted by an Agency as an Alternative

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Key Definitions

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Section 1			Navigation Code: 1.3

Focus on Function

- The potential value of an Alternative technique is **always** related to its specific function in the infrastructure project – there's no magic involved!
- But project functional categories are fundamentally different. A different process is required to identify, measure and adapt a new approach in each functional category – otherwise, you'll be mixing apples and oranges!
- **In this LM, all the aspects of considering new solutions are always described in terms of four clearly separated main tracks for each functional category (1) design & construction, (2) Operations & Maintenance, (3) Debt Financing and (4) Ownership & Equity**
- The tracks are consistently color-coded throughout all the sections:

		Processes to Create Alternatives			
Functional Category	***Non-Traditional Approach***	***Identify***	***Measure***	***Adapt***	***Approve***
Design & Construction	Design-Build	Cost and Time Savings	Short-term Model	Legal? Control?	Mainly Technical
Operations & Maintenance	Long-term outsourcing	Long-term Efficiency	Long-Term Model	Labor? Service Quality?	Interest Groups
Debt Financing	Private Placements	Fiscal Flexibility	Debt Affordability Analysis	Bonds? Transparency?	Mainly Technical
Ownership & Equity	Joint-ownership or Partnership	Risk Sharing	Equity Valuation Analysis	Legal? Control? Fairness?	General Public

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Key Definitions

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Section 1			Navigation Code: 1.4

Traditional Approaches

- Traditional approaches of US public-sector Agencies to water infrastructure procurement and operations evolved over a period of steady economic and demographic growth. They were effective in those conditions.
- Traditional approaches are a 'legacy' of benign period (roughly 1950-2000) – not a reflection of intrinsic public-sector limitations!
- Traditional approaches often prioritized an Agency's direct and sole responsibility for infrastructure as a simple and effective way to fulfill obligations to the community.

Functional Category	***Traditional Approach***	***Why Traditional Approach Worked 1950-2000***
Design & Construction	Design-Bid-Build	• Multiple low-bid steps created a simple and transparent process • Technological complexity and environmental standards were lower • Long-term cost-effectiveness less important in a growth environment where assets needed replacement or expansion before end of useful life
Operations & Maintenance	In-house capability	• In-house capability ensured direct control and responsibility to community • Steady or growing revenues meant steady or growing O&M budget • Simpler technology and lower environmental standards meant less need for outsourcing scale economies or expertise • Disciplined whole-life approach less important in growth environment where assets needed replacement or expansion before end of useful life
Debt Financing	Tax-exempt municipal bonds	• Relative inflexibility of bond debt was less important in stable conditions • Subsidized, dedicated muni market offered unbeatable interest rates and demand • Fewer binding fiscal constraints (e.g. statutory debt limits)
Equity Ownership	Sole municipal ownership	• Less need (and little community interest in) ownership risk transfer or sharing • Even smaller systems were considered viable in a growth environment • Local control more important during community development phase

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Key Definitions

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Non-Traditional Approaches

- Private-sector companies, and some utilities and non-US agencies developed different, Non-Traditional approaches for similar assets in response to competition, regulated returns or more limited resources.
- During 1950-2000 period, private-sector companies, some utilities (mainly energy) and certain non-US public sector agencies (mainly in UK, Canada, Australia) developed approaches for similar physical infrastructure assets under different, often less benign, conditions.
- The approaches are in fact well-established – they are called 'Non-Traditional' here only in the sense that they are not Traditional for US Agencies.

Functional Category	***Non-Traditional Approach***	***Purpose of Non-Traditional Approach***
Design & Construction	Design-Build and variations	• Cost efficiency and certainty of delivery date are central factors in competitive, non-monopoly environment • Specific performance more important than specific control • Latest technology needed to be included • Asset economics analyzed in entire useful life time frame
Operations & Maintenance	Long-term outsourcing	• Private-sector focus on core-competency; outsourcing non-core is standard • Cost efficiency through scale economies; specific control less important • Performance-based contracting is natural part of profit-maximization
Debt Financing	Private placement, Project finance	• Even for highly-rated companies with access to bond market, major physical assets often financed with private placements (bank, insurance debt) for flexibility, renegotiation • Project finance SPV framework for off-balance sheet accounting, contract attachment
Equity Ownership	Joint-ownership or partnership arrangements	• Natural co-alignment of profit-maximization among otherwise different partners means cost-effective sharing of risk, expertise • Higher cost-of-capital than public sector, equity is scarce resource

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Key Definitions

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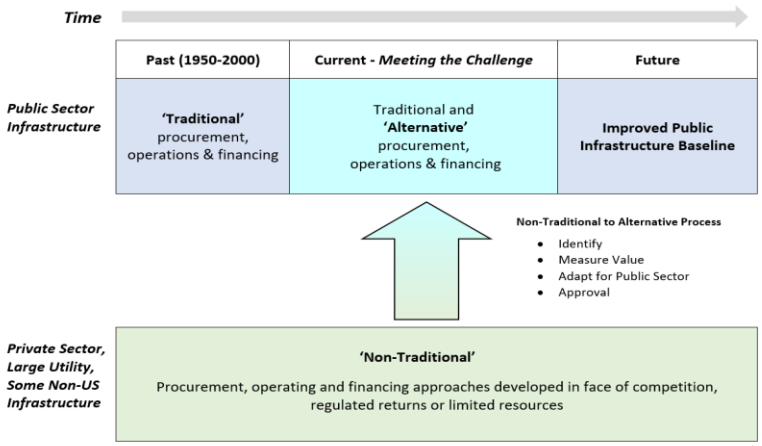
Section 1			Navigation Code: 1.6

Creating Practical Alternatives is a *Process*

- US public infrastructure renewal requires unprecedented levels of investment. To meet this challenge, public-sector agencies are seeking ways to improve infrastructure procurement and operational efficiency, financial flexibility and risk mitigation.

- Well-established Non-Traditional techniques for these purposes exist outside the public sector -- but they rarely can be immediately adopted because public-sector objectives and obligations are are often very different than those in the private-sector. A *process* is required to make them practical public-sector 'Alternatives' to Traditional approaches

- Throughout the LM, we focus on **improving and accelerating the process of creating Alternatives**. That's part of the path towards faster transition to an improved baseline for US public infrastructure



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Section 1			Navigation Code: 1.7

Clearing Up Confusion About P3s

- Combining Alternatives for different functional categories in the same project can provide significant additional value through synergies and scale economies. A single term, 'Public-Private Partnership' or 'P3', has evolved to refer to all such combinations, regardless of fundamental differences. This is the source of considerable confusion!

- In this LM, we aim to avoid this confusion. While the P3 name will be used in places, Alternative combinations will also always be described in terms of specific functional categories.

- Current industry acronyms are generally effective for this, but a new one is necessary: '**DBEFOM**' to refer to combinations that include significant change or sharing of 'E', project equity ownership.

- P3 combinations have their own color-coding: yellow background with insert of the main functional categories in the combination:

Functional Combinations	*Industry Names ('P3s')*	*Synergies and Applications of Non-Traditional Combinations*
Design & Construction + Operations & Maintenance	**DBOM** (Design-build + outsourced O&M)	• Integrating DB and whole-life O&M has significant synergies
Design & Construction + Operations & Maintenance + Debt Financing	**DBFOM, Sale/Leaseback, Availability Payment P3** (DBOM + Debt Project finance)	• Significant transactional economies of scale in doing service contracts in conjunction with customized private-placement debt • Additional standard contract options (e.g. lease) • Project finance lenders with debt at risk can add additional layer of asset oversight and value preservation (e.g. through covenants) that is relatively naturally co-aligned with Agency
Design & Construction + Operations & Maintenance + Debt Financing + Equity Ownership	**DBEFOM, Concession, Privatization** (DBFOM + significant ownership sharing)	• Private partner with equity at risk will be highly incentivized to optimize asset performance – this can be contractually co-aligned with Agency objectives • Significant but highly defined risk transfer through overall service and debt contractual structure

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Key Definitions

DBOM
DBFOM
DBEFOM

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Section 1			Navigation Code: 1.8

The Need to Accelerate Alternative Creation in 'New Normal' World

The process of adaptation, approval and acceptance will occur naturally over time in response to 'new normal' fiscal and demographic conditions, and Alternatives will become the 'new Traditional'. But due to the high accruing and compounding cost of deferred maintenance and delayed investment, this process must be accelerated.

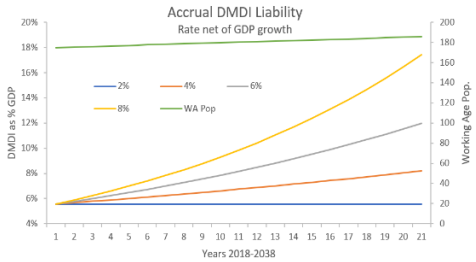
Multiple Cost Factors at Work

- Current period losses may be most obvious but least damaging
- Compounding costs are often not visible and may be allowed to persist – but have worst outcomes

Cost Factor	***Nature***
Current amount deferred or delayed	Accretive
Inflation	Compounding
Accelerated degradation - asset	Compounding
Accelerated degradation - system	Compounding
Catastrophic failure risk	Compounding
Inefficient 'quick fixes'	Current period loss
Quality of service degradation	Current period loss
Opportunity cost of using new tech	Current period loss

Headed to a 'Tipping Point'?

- Balance of deferred maintenance and delayed investment likely growing faster than working-age population.
- If much faster, the liability can hit 'tipping points' leading into difficult-to-manage crises



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Section 2			Navigation Code: 2.1

Section 2: How This Learning Module is Organized

Who Is This Learning Module For?

- There are many steps between the identification of a useful Non-Traditional technique and the execution of an Alternative approach. The full process involves an increasing number of parties.
- The process will benefit from establishing a solid foundation of clear concepts and value demonstration among project personnel who are closest to the technical issues and are involved throughout the process.
- This Learning Module is intended to assist project personnel establish a foundation for the Alternative process, primarily focused on the first stage of process and with specific objective as first presentation to outside parties.

LM focus on first stage here

	Identification of Potential Alternative Value	Decision to Proceed	RFQ	RFP	Selection & Final Approval	Execution
Project Personnel						
Management						
Board or Council						
Transaction Advisors						
Political						
Stakeholders						

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Section 2			Navigation Code: 2.2

A Two-Part Process

The first stage in the creation of a valuable (and practical) Alternative from a non-Traditional approach really has two distinct parts.

- The first part is to identify what Non-Traditional approaches might be most relevant for your specific project (and overall fiscal situation, in many cases). This involves understanding your own 'baseline' of potential areas of improvement, looking for Non-Traditional approaches (and their potential combinations) and getting a rough sense of the potential value (if any!).

- The second part is an early-stage 'reality check' about how practical it might be to create an Alternative from a Non-Traditional approach that looks relevant and potentially useful. This involves considering legal and public perception issues at a high level – looking for possible 'show stoppers' in particular. These issues won't be fully addressed until later in the process, but it's critical to identify them as early as possible. The final step of the second part is to summarize the 'case' for a specific Alternative creation.

- In this LM, we divide the process into seven 'steps'. Obviously, each situation is different, and our approach is by no means prescriptive! Instead, the goal is to cover basic concepts and typical scenarios is an organized way that can be consistently applied to the whole range of possible Alternatives.

- As described in the next two pages, Steps 1 through 4 cover the first part of the process ('Finding Non-Traditional Value') , and Steps 5 through 7 the second part ('Starting to Create an Alternative').

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Section 2			Navigation Code: 2.3

Steps 1-4:
Finding Non-Traditional Value

- There are a lot of potential approaches to each functional aspect of something as complicated as an infrastructure project! How to start looking in the right area? Steps 1 through 4 are intended as a rough guide to identify Non-Traditional approaches that might be relevant and valuable enough to be worth adapting as Alternatives.

Finding Non-Traditional Value			
Step 1: Develop Traditional Baseline	Step 2: Identify Relevant Non-Traditional	Step 3: Consider Non-Traditional Combinations	Step 4: Measure Comparative Value

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Section 2			Navigation Code: 2.4

Steps 5-7:
Starting to Create an Alternative

- Even if a Non-Traditional approach looks relevant and valuable for your project, it still might not be a practical Alternative for your situation. This is because the process of adaption and approval might have some real-world 'show-stoppers' for a particular Alternative. It's better to find this out sooner than later! Steps 5 and 6 are intended as a rough guide to identify high-level legal issues and stakeholder concerns that might arise in the process of creating a particular Alternative.

- Step 7 is where you summarize the 'case' to take the next step in proceeding to create an Alternative. You 'know the ground' better than we do, of course – this step just serves as a basic checklist of some things you'll want to cover.

Creating an Alternative		
Step 5: Identify Legal Requirements	Step 6: Identify Stakeholder Concerns	Step 7: Summarize Modifications & Adjusted Value

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Section 2			Navigation Code: 2.5

Four Function-Related Main Tracks

- As described earlier, this LM is based on a framework that always categorizes Non-Traditional and Alternative approaches in terms of their function in the project.

- Consistent with this functional focus, each of the four main functional areas has a separate 'track' for the seven steps. From the Section 3 menu, you can choose which track to start on. You can also navigate between tracks for each individual step. Color-coding is consistent throughout.

Section 3 Main Menu
Main Track 1: Design & Construction
Main Track 2: Operations & Maintenance
Main Track 3: Debt Financing
Main Track 4: Ownership & Equity

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Section 2			Navigation Code: 2.6

Four Combination-Related P3 Tracks

- As described earlier, this LM is based on a framework that always categorizes varieties of 'P3s' in terms of the underlying individual Alternative approaches that are combined in a single 'P3' transaction

- Consistent with this way of looking at P3s, the LM has four 'sub-tracks' that consider the most typical P3 combinations and are illustrative of almost any combination. The menu for this sub-track is accessible from Step 3 of any of the Main Track. Once you're in the sub-track group, you can also navigate between tracks for each individual step. All P3 combinations are color-coded in yellow background and include a color-coded box to show which of the four functional areas are being combined.

Section 3 Sub-Menu (Accessible in Step 3 of a Main Track)
P3 Track: DBOM
P3 Track: DBFOM
P3 Track: DBEFOMPub (with Public-Public Ownership)
P3 Track: DBEFOMPri (with Public-Private Ownership)

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Section 3			Navigation Code: 3.0 Menu

Section 3: Basic Concepts for Alternative Creation

Main Functional Tracks – [large buttons]

Design & Construction [link to 3.DC.1]
Operations & Maintenance [link to 3.OM.1]
Debt Financing [link to 3.DF.1]
Ownership & Equity [link to 3.OE.1]

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Section 3	Main Track: Design & Construction	Step 1	Navigation Code: 3.DC.1

Step 1: Developing a Baseline Case for Traditional Design & Construction of Your Project

The design and construction of any significant infrastructure project will naturally involve detailed plans, estimates of cost and delivery schedules. Under a Traditional approach, these will generally be developed in the context of a design-bid-build process.

To explore Non-Traditional approaches for design and construction of the project, the first step is to add some factors to this Traditional picture and develop a 'Baseline Case'. The Baseline Case is still based on the facts and estimates of the Traditional approach, but it's meant to highlight possible areas where Non-Traditional approaches might add value. In effect, it's a way to clarify and quantify your objectives at the earliest stage of creating an Alternative. The Baseline Case also provides an 'apples-to-apples' comparison later on for Non-Traditional approaches.

Some of the additional factors to consider in a design and construction Baseline Case:

- Define the project, not just as a specific construction plan, but in broadly in terms of 'inputs' and 'outputs' or similar results-specific concepts.
- Identify the aspects of the design & construction process where your full control is really necessary in order to fulfill your obligation and aspects where that's less important.
- Estimate the non-project opportunity cost of delay in completing the project. This goes beyond the cost factors at the project level and looks at the social or economic costs to the community of not having the project available. It also should estimate the cost of delaying the start of a renovation project in terms of further deterioration (i.e. 'the cost of doing nothing').
- Estimate the non-project impact of cost overruns – there may be a 'knock-on' effect to other aspects of your fiscal or system financial picture.

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Key Definitions

Baseline Case

LM Topic Expansion Sub-Pages

Design-bid-build – how prevalent, why it worked
Deferred maintenance and delayed investment – a costly liability

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Section 3	Main Track: Design & Construction	Step 2	Navigation Code: 3.DC.2

Step 2: Identifying Relevant Non-Traditional Approaches for Your Project Design and Construction

The problem of finding Non-Traditional approaches for the design and construction of most basic public infrastructure project is not that it's too hard – the problem is that it's too easy! There are many well-established techniques, generally centered around a design-bid process and its variations (*see Expansion Pages*), that are offered by experienced and substantial construction firms. The number of choices can be overwhelming – how to start?

This is where the Traditional Baseline Case developed in Step 1 gets its first use – early-stage guidance as to which Non-Traditional approaches might be most relevant, if any.

This can be illustrated with the additional factors suggested in the prior LM page:

- The more completely that that a project can be described in terms of inputs and outputs (vs. a specific asset plan), the more useful a design-build approach might be. This is because design-build allows more flexible integration of the designing and building stages to achieve specific results and can surface different and innovative methods that save money or speed delivery. This is especially relevant when the project might benefit from new technology .

- But this flexibility requires ceding some control over your project to the third-party firm. What's really necessary? Often it's less than the Traditional approach seems to require, esepcially when the project can be described in terms of inputs and outputs.

- Design-build flexibility combined with some third-party control means a more certain completion date – both by the nature of the process and the nature of a third-party obligation. If the opportunity cost of project delay is high for your community, completion date certainty may be a quantifable value of an Alternative approach.

- The same is true of the impact of cost-overruns. Non-Traditional design-build approaches can reduce the chance of signficant cost surprises, again both through the integrated nature of process and the more holistic thrid-party contractual obligations.

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Key Definitions

LM Topic Expansion Sub-Pages

Design-build in general
CMAR – construction manager at-risk
Progressive design-build

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Section 3	Main Track: Design & Construction	Step 3	Navigation Code: 3.DC.3

Step 3: Considering Non-Traditional Approach Combinations for Your Project Design and Construction

Most infrastructure assets are very long-lived, so the process of design and construction is especially relevant in connection with P3-type combinations of Non-Traditional approaches involving all the other aspects of the project -- O&M, financing and ownership (*see box below and Expansion Pages*).

Even at this early stage, it's likely worth gaining some familiarity with the various combinations that will include (often necessarily) a design-build approach. But before deciding to focus on creating a P3-type combination Alternative, you should consider some factors that suggest that a design and construction Alternative might be best developed as a standalone option first (with other Non-Traditional approaches added later);

- For new, large and complex projects, a design-build approach is especially valuable – this can be the 'value anchor' that (once approved in your community on a standalone basis) serves as a foundation for other Alternatives options, including P3-type combinations.
- Even for relatively small and simple projects, design-build value on its own can often be clearly described and demonstrable – a good place to start if your community is new to Alternative creation.

Functional Combinations	*Industry Names ('P3s')*	*Synergies and Applications of Non-Traditional Combinations*
Design & Construction + Operations & Maintenance	**DBOM** (Design-build + outsourced O&M)	• Integrating DB and whole-life O&M has significant synergies
Design & Construction + Operations & Maintenance + Debt Financing	**DBFOM, Sale/Leaseback, Availability Payment P3** (DBOM + Debt Project finance)	• Significant transactional economies of scale in doing service contracts in conjunction with customized private-placement debt • Additional standard contract options (e.g. lease) • Project finance lenders with debt at risk can add additional layer of asset oversight and value preservation (e.g. through covenants) that is relatively naturally co-aligned with Agency
Design & Construction + Operations & Maintenance + Debt Financing + Equity Ownership	**DBEFOM, Concession, Privatization** (DBFOM + significant ownership sharing)	• Private partner with equity at risk will be highly incentivized to optimize asset performance – this can be contractually co-aligned with Agency objectives • Significant but highly defined risk transfer through overall service and debt contractual structure

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Key Definitions

LM Topic Expansion Sub-Pages

DBOM P3
DBFOM P3
DBEFOM P3

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Section 3	Main Track: Design & Construction	Step 4	Navigation Code: 3.DC.4

Step 4: Measuring the Value of a Non-Traditional Approach Against Your Project Design & Construction Baseline

Once you've identified the most relevant Non-Traditional approach for the design and construction of your project, the next step is to roughly measure the value of that approach against the Baseline Case developed in Step 1. Generally this will involve the comparison of the Baseline case to a Non-Traditional case using comparable assumptions except for the specific approaches themselves. Standard project and BCA modelling techniques (see Expansion Pages) are in almost all cases adequate for the comparison at this stage. Some aspects of this may be very straightforward and easily quantified in the context of the project – total guaranteed cost for example.

Other aspects – often the most important ones for Alternative creation -- will involve the non-project factors discussed in Step 1. A sooner completion date for example might not signficantly change project cost but could have a big impact on reducing the social and economic opportunity cost of further delays in project availability to the community.

An important part of the comparison process will be to run downside scenarios in addition to the expected cases. Assessing the impact of possible completion cost overuns and delays will involve some estimate of the probabilities of a downside scenario occuring. Caution is reccomended here – while probabilistic models can appear very sophisticated, real world complexity and data limitations will curtail their potential accuracy in most situations. These 'best guess' models should be augmented with some skepticism and experience-based judgement calls (*see Expansion Page*)

Another area where caution is warranted is the use of discount rates to present-value the cash flow differences between the Baseline and Non-Traditional cases. Since most construction phases last only a few years, this is less important for design and construction Alternatives than others – but watch out when different discount rates seem to change results signifcantly (*see Expansion Page*).

- Most importantly, measurement of value of this stage is 'impressionistic' – it'd best to run many different cases and scenarios and get a rough 'feel' for where potential value comes from and how significant it might be. And if the source and scale of potential value can't be boiled down and described clearly in words and a few numbers, that's a strong indicator that there's not a compelling case for Alternative creation!

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Modelling probabilistic scenarios
Dangers of discount rates

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Section 3	Main Track: Design & Construction	Step 5	Navigation Code: 3.DC.5

Step 5: Identifying Legal and Regulatory Limitations on Non-Traditional Design and Construction

If a Non-Traditional design-build approach to your project appears to be relevant and realistically able to provide signficant value compared to your Traditional approach there may be a compelling case for the creation of an Alternative. Recall that as we define it in this Learning Module, a Non-Traditional approach (no matter how well-established in the private sector or compelling in terms of value) will almost always require a process of adaptation and adoption to become a practical Alternative for public-sector use.

This process effectively starts in this Step 5 – identfying any obvious legal or regulatory limitations on the use of a Non-Traditional approach.

This step is especially important for Non-Traditional approaches because many jurisdictions require the additional low-bid step of the Traditional design-bid-build process (*see Expansion Pages*).

- Note that the objective at this stage is *not* to make a defintive or final decision on whether a design and construction Alternative can be created for your project. That decision is primarily a legal or even political matter that will be addressed in later stages of Alternative creation that are beyond the scope of this Learning Module.

- Instead, the objective here is to surface the potential 'hard' legal or regulatory limitations that might apply to your specific project and the specific Non-Traditional approach that you are considering. Details often matter a great deal in such limitations. The sooner in the process that they are identified, the more efficient and effective later stages can be.

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Recent examples of change-in-law to permit design-build

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Section 3	Main Track: Design & Construction	Step 6	Navigation Code: 3.DC.6

Step 6: Identifying Community Stakeholder Concerns on Non-Traditional Design and Construction

After identifying the 'hard' legal and regulatory limitations that might apply to your project, the next step is to look for 'soft' (albeit very real) stakeholder concerns that might arise from the use of Non-Traditional approach.

Infrastructure project design and construction approaches per se are rarely a matter of widespread concern to the community – as long as whatever approach is chosen will demonstrably deliver good value for the citizens and taxpayers.

However, the loss of some control in the design-bid process may be of concern to specific stakeholders (e.g. within system or political adminstration) that are responsible in some way for areas affected by an Alternative approach.

- As with legal and regulatory limitations, the objective at this stage is *not* to make a defintive or final decision on whether stakeholder concerns can be effectively addressed. Instead, the objective is to surface those concerns and be able to describe them in as much detail as possible.

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Design-bid control issues

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Section 3	Main Track: Design & Construction	Step 7	Navigation Code: 3.DC.7

Step 7: Summarizing the Case for Creating a Design and Construction Alternative for Your Project

Step 7 is where the case for creating a Design and Construction Alternative for your project is pulled together and sumamrized for presentation to the 'First Committee'. Every case is of course different, but here are some topics you may want to include as a minimum:

- Words Matter! — Confusing words are a major issue with Alternatives – present clear definitions of key terms ('Traditional', 'Alternative' etc.) at outset
- Baseline Case — Highlight the social & economic opportunty cost of delay (and/or doing nothing) – this is often overlooked but is key to Alternative value in design & construction
- Mention Optional Combinations — Even if the case is based on a standalone design-build Alternative, it may be worth mentioning optional combinations – if only to clarify that a standalone design-build Alternative is not really a 'P3'
- Alternative Value Proposition — This is the core of the case – numbers are the central part, but clear & simple descriptions are also key for a non-technical audience (who will need to repeat the case in further stages to a widening audience)
- Possible legal and regulatory limitations — A list of the applicable limitations
- Possible Stakeholder Concerns — A descriptive list of possible stakeholder concerns
- Overall – Compelling or not? — Finally – based on work done to this stage and especially your overall impressionistic judgment – is the case compelling or not?

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Section 3	Main Track: Operations & Maintenance	Step 1	Navigation Code: 3.OM.1

Step 1: Developing a Baseline Case for Traditional Operations & Maintenance of Your Project

The design and construction of a new project or major renovation gets a lot of attention – but operations and maintenance (O&M) is actually the biggest (and often most variable) expense factor for a long-lived infrastructure asset.

The Traditional approach to O&M generally has two main characteristics: (1) mostly performed with in-house capability and (2) a planning horizon that is shorter than the useful life of the asset and often subject to annual budgeting.

The Traditional Baseline Case for O&M assumes the continuation of in-house performance (that's the 'Traditional' part) but extends the timeframe to match the useful life of the asset. That timeframe is likely where most of the potential value of an Alternative O&M approach will come. It's a way to clarify and quantify your objectives at the earliest stage of creating an O&M Alternative. The Baseline Case also provides an 'apples-to-apples' comparison later on for Non-Traditional approaches.

In the extended timeframe of the Traditional Baseline Case for O&M, here are some factors to consider:

- Based on historic experience, what's the realistic impact of a fluctuating O&M budget? What seem to be the driving factors of the fluctuation (e.g. local economic conditions, other spending, resource issues, etc.)? Are these factors somewhat predictable over a long time period?
- Again, based on historic experience, what's the cost of deferring maintenance in terms of higher future cost, loss of service, inefficiency of short-term fixes etc.?
- What aspects of O&M require your direct control? This might center on those aspects involving the interface of the infrastructure asset performance with end-users, both in terms of service quality and your core obligations to the community. Are there other 'behind the scenes' technical aspects that involve asset efficiency and performance but are distant from the end-user interface?

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Section 3	Main Track: Operations & Maintenance	Step 2	Navigation Code: 3.OM.2

Step 2: Identifying Relevant Non-Traditional Approaches for Your Project Operations & Maintenance

Short-term and task-specific outsourcing with private-sector firms is of course completely 'traditional' in the public sector – no need for Alternative creation for those applications!

What's not Traditional about Non-Traditional O&M approaches are long-term outsourcing contracts with a holistic scope, covering many integrated aspects of project O&M for a signficant portion of the asset's useful life. These approaches were developed by private sector companies that viewed a long-lived asset in 'bottom line' economic and efficiency terms over it's 'whole life'. These firms also recognized the value of outsourcing to other specialty firms as a way to access economies of scale and expertise, and also stay focused on their 'core' mission. Performance can be specified within the contract and incentivized with higher payments for better outcomes.

As in Non-Traditional Design and Construction, there are many well-established forms of long-term outsourcing offered by experienced and substantial firms. This step is about first identifying what's most relevant and practical for your project and general situation.

As always, the process starts with the factors idenified in your Traditional O&M Baseline Case:

- A large part of the potential value in a 'whole life' outsourcing approach to asset O&M arises simply from the budgetary discipline imposed by the obligations of a third-party contract – in effect, shielding the asset from budget fluctuations that often lead to inefficient deferred maintenance. There's no magic in this – just a practical approach to a real-world problem.

- The other main source of value in long-term outsourcing comes (as it does for private-sector firms) from the economies of scale and expertise that specialized firms can bring to bear to your asset. As you'd expect, this potential value is especially important for smaller systems.

- Both types of potential value are mostly or wholly related to the operations and maintenance of the infrastructure assets itself. While long-term outsourcing of operations that involve extensive end-user interaction are of course available, these should be seen as a separate category of Non-Traditional options.

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Section 3	Main Track: Operations & Maintenance	Step 3	Navigation Code: 3.OM.3

Step 3: Considering Non-Traditional Approach Combinations for Your Project's Operations & Maintenance

For a new project, a 'whole life' approach to O&M would ideally start at the design and construction phases so that everything required for the asset to deliver a service can be optimally integrated. That's why design-build and long-term O&M outsourcing as a DBOM (often involving the same firms or group of firms) are the most frequently occurring 'P3' Alternative combination (*see box below and Expansion Pages*).

But the operations and maintenance of an infrastructure can have a big impact on certain types of non-recourse financing and shared equity ownership – outsourced O&M for some major aspects of project performance (especially revenue generation, if that's applicable) may be a required part of 'packaged' P3 solution.

- Even as part of a 'packaged' P3 solution, it is always useful to consider where the value of a proposed O&M solution is coming from in comparison to your Baseline Case – and to see how that value flows through in terms of the total economics of the P3.

Functional Combinations	*Industry Names ('P3s')*	*Synergies and Applications of Non-Traditional Combinations*
Design & Construction + Operations & Maintenance	**DBOM** (Design-build + outsourced O&M)	• Integrating DB and whole-life O&M has significant synergies
Design & Construction + Operations & Maintenance + Debt Financing	**DBFOM, Sale/Leaseback, Availability Payment P3** (DBOM + Debt Project finance)	• Significant transactional economies of scale in doing service contracts in conjunction with customized private-placement debt • Additional standard contract options (e.g. lease) • Project finance lenders with debt at risk can add additional layer of asset oversight and value preservation (e.g. through covenants) that is relatively naturally co-aligned with Agency
Design & Construction + Operations & Maintenance + Debt Financing + Equity Ownership	**DBEFOM, Concession, Privatization** (DBFOM + significant ownership sharing)	• Private partner with equity at risk will be highly incentivized to optimize asset performance – this can be contractually co-aligned with Agency objectives • Significant but highly defined risk transfer through overall service and debt contractual structure

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Section 3	Main Track: Operations & Maintenance	Step 4	Navigation Code: 3.OM.4

Step 4: Measuring the Value of a Non-Traditional Approach Against Project Operations & Maintenance Baseline

Once you've identified the most relevant Non-Traditional approach for the operations & maintenance of your project, the next step is to roughly measure the value of that approach against the Baseline Case developed in Step 1. Generally this will involve the comparison of the Baseline case to a Non-Traditional case using comparable assumptions except for the specific approaches themselves. Standard project and BCA modelling techniques (see Expansion Pages) are in almost all cases adequate for the comparison at this stage.

- One aspect of the comparison may be straightforward and easily quantified: due to the scale economies noted before, the annual cost of O&M under a long-term outsourced contract may be lower than with your Traditional approach. That's more likely when your system is relatively small.

- Another important aspect – the effect of budget discipline imposed by a of third-party contract – is more difficult to estimate. Assessing the frequency and impact of deferred maintenance will involve some estimate of the probabilities of a budget fluctuations the cost of deferral long into the future.

- Caution is reccomended here – while probabilistic models can appear very sophisticated, real world complexity and inherent data limitations will curtail their potential accuracy in most situations. These 'best guess' models should be augmented with some skepticism and experience-based judgement calls (*see Expansion Page*). One approach here is to model a break-even between the two cases where the variable is the frequency of deferred maintenance episodes – and judge heuritiscally from past experience how likely that frequency is to occur.

- Another area where caution is warranted is the use of discount rates to present-value the cash flow differences between the Baseline and Non-Traditional cases. As you'd expect, this factor can be relatively important for comparison of long-term O&M cases. It's a good idea to use a range (there's never a single 'right' value) and see how the comparison changes. Also, remember that the public sector operates in a 'low discount rate world' relative to the private sector (*see Expansion Page*). You should be able to use relatively low discount rates to make a compelling case for long-term O&M outsourcing.

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Section 3	Main Track: Operations & Maintenance	Step 5	Navigation Code: 3.OM.5

Step 5: Identifying Legal and Regulatory Limitations on Non-Traditional Operations & Maintenance

If a Non-Traditional long-term O&M outsourcing for your project appears to be relevant and realistically able to provide signficant value compared to your Traditional approach there may be a compelling case for the creation of an Alternative. Recall that as we define it in this Learning Module, a Non-Traditional approach (no matter how well-established in the private sector or compelling in terms of value) will almost always require a process of adaptation and adoption to become a practical Alternative for public-sector use.

- Since short-term and task-specific outsourcing contracts are often used for public-sector infrastructure, there are probably few legal or regulatory roadblocks to creating an O&M Alternative approach based on long-term contracts.

- There can be tax implications from long-term O&M contracts which include signficant performance-based incentive payments because (if taken to extremes) this can resemble an ownership interest in the asset by a private-sector firm. This is turn has implications for any tax-exempt debt issued to finance the asset. However, the IRS has recently issued 'safe harbor' regulations (Rev. Proc. 2016-44) that provide significant latitude in these contractual arrangements, especially for more basic infrastructure assets.

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Section 3	Main Track: Operations & Maintenance	Step 6	Navigation Code: 3.OM.6

Step 6: Identifying Community Stakeholder Concerns about Non-Traditional Operations & Maintenance

After identifying the 'hard' legal and regulatory limitations that might apply to your project, the next step is to look for 'soft' (albeit very real) stakeholder concerns that might arise from the use of Non-Traditional approach.

Stakeholder concerns arising from an Alternative approach based on long-term O&M outsourcing contracts may arise in several areas.

- As with an Alternative design-build approach for project design and construction, stakeholders within your system or political administration who are involved with O&M provided under a Traditional approach may express concerns. It is clearly better to surface these concerns as early as possible, especially since these 'insider' perspectives can signficantly improve the substance of the final Alternative approach.

- Many aspects of operations and maintenance involve direct interaction with end-users – your customers, in effect. If the outsourcing approach that you are considering includes extensive interaction with end-users, community and stakeholder concerns are an extremely important consideration. Even if all the other technical and economic metrics of an Alternative approach for O&M look compelling, it must also pass the test of public perception if it involves extensive interaction with end-users. In some situations this may prove very challenging. End-user perception will often become the deciding factor in this type of Alternative creation.

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Section 3	Main Track: Operations & Maintenance	Step 7	Navigation Code: 3.OM.7

Step 7: Summarizing the Case for Creating an Operations & Maintenance Alternative for Your Project

Step 7 is where the case for creating a Design and Construction Alternative for your project is pulled together and sumamrized for presentation to the 'First Committee'. Every case is of course different, but here are some topics you may want to include as a minimum:

- Words Matter! — Confusing words are a major issue with Alternatives – present clear definitions of key terms ('Traditional', 'Alternative', 'Outsourcing' etc.) at outset. This is especially important for O&M Alternatives that involve extensive end-user interaction!
- Baseline Case — Highlight the realistic risk and cost of deferred maintenance – especially if it has proven costly in the past. Note the lack of scale economies if your system is small – not as a criticism but simply a fact.
- Mention Optional Combinations — Even if the case is based on a standalone O&M outsourcing Alternative, it may be worth mentioning optional combinations – if only to clarify that a standalone O&M Alternative is not a 'P3'
- Alternative Value Proposition — This may be straightforward, but if a signficant part of the value of an O&M Alternative comes from probabilites of future occurances over the long term, it's important to base your case on real-world experience, not just analytical results.
- Possible legal and regulatory limitations — A brief description of tax implications of long-term incentive-based O&M contracts should be included – along with IRS 'safe harbors'
- Possible Stakeholder Concerns — A descriptive list of possible stakeholder concerns with a special focus on possible public perception issues if the O&M Alternative involves extensive interaction with end-users
- Overall – Compelling or not? — Finally – based on work done to this stage and especially your overall impressionistic judgment – is the case compelling or not?

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Section 3	Main Track: Debt Financing	Step 1	Navigation Code: 3.DF.1

Step 1: Developing a Baseline Case for Traditional Debt Financing of Your Project

Major infrastructure projects are almost invariably financed with long-term debt. The is because the near-term construction cost of a major project is usually far larger than the near-term funding available. Financing simply allows near-term project costs to be paid from long-term funding sources. It's always worth being very clear about the distinction between financing and funding – financing is a *temporary* transfer of resources (from a lender) and funding is a *permanent* transfer of resources (from a rate or taxpayer).

The Traditional form of debt financing for public infrastructure in the US is of course long-term tax-exempt bonds. Your assumptions about the cost and term of a bond issue for your project is naturally the basis of the Traditional Baseline Case. But to identify potentially valuable Non-Traditional options, other factors (often related to your overall fiscal situation) should be included in the Baseline Case:

- Impact on your overall debt capacity — Traditional muni debt will generally use up capacity in terms of market appetite, statutory debt limits and credit rating implications. The Baseline Case should put this factor in the context of your overall long-term situation.
- Ability to negotiate future amendments — Traditional muni debt, as bonds, is generally not amended or renegotiated with lenders once issued (though defeasance is standard). The Baseline Case should assess the possible need for this.
- Nature of the debt service schedule — Traditional muni debt generally has a fixed interest rate and debt service schedule for its term. The Baseline Case should consider how this may impact your overall situation in overall downside scenarios.
- Customized terms related to project — Traditional muni bonds are highly standardized (that helps deliver a low rate). The Baseline Case should consider whether terms customized to your specific project could be useful (e.g. extra-long tenor for some assets)
- Policy-oriented lenders — Traditional muni debt bond buyers (lenders) are almost exclusively private-sector investors seeking market terms and returns [DC EIB minor exception – other SGE?]

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Step 2: Identifying Relevant Non-Traditional Approaches for Your Project's Debt Financing

Global debt capital markets offer many Non-Traditional options outside the US muni market. But your search can be narrowed by two observations. The first is that the muni market is basically unbeatable with respect to interest rates on bonds due to tax-exemption and a dedicated investor base. So the potential value of Non-Traditional debt will most likely arise from non-price factors like the ones suggested in Step 1.

This prompts the second observation: the type of debt where the terms affecting those factors are most different than muni bonds is generally the taxable private placement market (*see Expansion pages*). This is where banks, insurance companies and other institutional lenders make direct long-term loans to borrowers on a negotiated and often very customized basis. Here's how that might look with regard to the factors idenitifed in your Baseline Case:

- Impact on your overall debt capacity — Private placement debt may be treated somewhat differently than Traditional debt with regard to limits. But 'debt is debt' – there's no free lunch here.
- Ability to negotiate future amendments — In a private placement, you generally know your lenders (often on a relationship basis) and renegotiating terms after issue is possible. It's also relatively standard in long-term, asset-oriented financings.
- Nature of the debt service schedule — Private placements can work with a huge variety of interest rate and debt service schedule options. But again, remember there's no free lunch – complex, 'too good to be true' products should be approached with caution
- Customized terms related to project — A big potential benefit of Non-Traditional debt financing is the ability to seek more customized terms that can mitigate the impact of your project's debt financing on your overall situation
- Policy-oriented lenders — There are extensive US federal and state infrastructure lending programs – SRFs, WIFIA, USDA, etc. that offer long-term private placement debt on non-market terms in order to further policy objectives. If your project qualifies, this Non-Traditional source of debt financing can provide significant value.

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Section 3	Main Track: Debt Financing	Step 3	Navigation Code: 3.DF.3

Step 3: Considering Non-Traditional Approach Combinations for Your Project's Debt Financing

Non-Traditional debt financing is often combined with design-build and O&M outsourcing Alternatives to create a 'DBFOM', a widely-used type of P3 (*see box below and Expansion Pages*).

A key feature of most Alternative combinations involving debt financing is that the debt and other service contracts are 'packaged' in a lease-type or project finance framework. This framework creates a new formal issuer for the debt (usually some form of 'Special Purpose Vehicle' or SPV) that is also the attachment point for the service contracts.

An SPV framework can have in itself significant value in addition to the value provided by the debt and service contract Alternatives themselves. This is because the framework moves the infrastructure asset and its debt financing outside of the formal public-sector institutional context. This will expand service contract options and may provide some relief from formal debt constraints. At the same time, the nature of the contracts can still provide a very large range of public-sector control and support of the infrastructure asset and debt financing (e.g. a long-term lease agreement). The flexibility and easing of formal constraints of an SPV framework can unlock the full synergies of DBFOM combination. If Non-Traditional debt financing appears to have significant potential value for your project, a combination involving an SPV framework is likely worth considering.

Functional Combinations	*Industry Names ('P3s')*
Design & Construction + Operations & Maintenance + Debt Financing	**DBFOM, Sale/Leaseback, Availability Payment P3** (DBOM + Private Placements)
Design & Construction + Operations & Maintenance + Debt Financing + Equity Ownership	**DBEFOM, Concession, Privatization** (DBFOM + significant ownership sharing)

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Section 3	Main Track: Debt Financing	Step 4	Navigation Code: 3.DF.4

Step 4: Measuring the Value of Non-Traditional Debt Financing Against Traditional Debt Baseline

Once you've identified the most relevant Non-Traditional options for the debt financing of your project, the next step is to roughly measure the value of that approach against the Baseline Case developed in Step 1. Generally this will involve the comparison of the Baseline case to a Non-Traditional case using comparable assumptions except for the specific approaches themselves. Standard project and BCA modelling techniques (see Expansion Pages) are in almost all cases adequate for the comparison at this stage.

- On a simple level, the comparison of the Traditional Baseline Case to a Non-Traditional debt financing option is very starightforward. For both cases, the debt service schedule can be matched over the long-term and the difference discounted to a present value. As noted in Step 2, the Traditional muni market option will almost always be cheaper in this comparison.

- However, the important comparison relates to the difference in *non-price terms* between Traditional and Non-Traditional debt financings and how the differences can cause different outcomes in various what-if scenarios, especially those involving your overall fiscal situation.

- This comparison will require some long-term models of your overall fiscal situation to assess the impact of the different debt options. That's rarely easy. However, even a very approximate model including only the major factors (e.g. statutory debt limits, impact of debt service on other spending during a downturn, etc.) can provide a sense of whether there's really compelling value in a Non-Tradtional debt financing.

- The discount rate to use in a comparison of two different types of debt financing is (as always!) a matter fo some theoretical debate. But the most conservative rule of thumb is simply to use the interest rate in your Traditional Baseline Case. That approach 'set the bar' which the value of the non-price factors of a Non-Traditional option must overcome for a compelling case for Alternative creation.

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Section 3	Main Track: Debt Financing	Step 5	Navigation Code: 3.DF.5

Step 5: Identifying Legal and Regulatory Limitations on Non-Traditional Debt Financing

If a Non-Traditional debt financing for your project appears to be relevant and realistically able to provide signficant value compared to your Traditional approach there may be a compelling case for the creation of an Alternative. Recall that as we define it in this Learning Module, a Non-Traditional approach (no matter how well-established in the private sector or compelling in terms of value) will almost always require a process of adaptation and adoption to become a practical Alternative for public-sector use.

- Traditional muni bond debt is invariably issued in the context of many well-established legal and institutional rules. A Non-Traditional private placement debt financing may actually be subject to fewer requirements, primarily to due its direct placement with sophisticated institutional lenders.

- However, specific features of privately-placed debt may add – or even further reduce – legal and regulatory limitations that should be considered before deciding on the creation of a debt financing Alternative. For example, complex interest-rate indexing may be prohibited by budgetary rules. On the other hand, private placement terms that result in some subordination to your other debt or limit recourse to non-project revenues may reduce the impact of the finaning on your debt limits.

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Section 3	Main Track: Debt Financing	Step 6	Navigation Code: 3.DF.6

Step 6: Identifying Community Stakeholder Concerns about Non-Traditional Debt Financing

After identifying the 'hard' legal and regulatory limitations that might apply to your project, the next step is to look for 'soft' (albeit very real) stakeholder concerns that might arise from the use of Non-Traditional approach.

- Like project design and construction approaches, Non-Traditional debt financing options are rarely a matter of widespread concern to the community – as long as whatever approach is chosen will demonstrably deliver good value for the citizens and taxpayers.

- Still, two things are worth noting. First, the muni bond 'industry' is in many ways a stakeholder in your community, and your relationship with this industry is obviously very important. It's helpful to put how the choice of a Non-Traditional (i.e. non-muni bond) debt finaning will impact this stakeholder in the context of not only the immediate project but in the larger, longer-term picture as well. For example, in the absence of an Alternative debt financing, the project might not proceed at all due to fiscal constraints on a Traditional bond issue. Or addrsssing a deferred maintenance issue as quickly as possible (regardless of debt finaning option) could result in improved issuing ratings and capacity in the long run, with an overall volume benefit to the muni industry.

- Second, private placement debt in the public sector is often subject to less disclosure than formal muni debt for a variety of reasons. This can be a hot button to stakeholder groups concerned with fiscal matters. Regardless of the minimum disclosure requirements, it's a good to idea to provide as much dislocure and transparency as possible within the confidentiality limits set by a private lender.

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Section 3	Main Track: Debt Financing	Step 7	Navigation Code: 3.DF.7

Step 7: Summarizing the Case for Creating a Debt Financing Alternative for Your Project

Step 7 is where the case for creating a Debt Financing Alternative for your project is pulled together and sumamrized for presentation to the 'First Committee'. Every case is of course different, but here are some topics you may want to include as a minimum:

- Words Matter! — Confusing words are a major issue with Alternatives – present clear definitions of key terms ('Traditional', 'Alternative', 'private placement' etc.) at outset.
- Baseline Case — Highlight and explain important factors (especially those concerning your overall fiscal siutation) beyond interest rates – those are likely the reason that Non-Traditional debt options are being considered in the first place.
- Mention Optional Combinations — Describe the SPV Framework as a typical option for Non-Traditional debt financings using widely-understood examples (e.g. municipal leases)
- Alternative Value Proposition — The primary value of a Non-Traditional debt option will likely arise from non-price terms. The basic numbers matter, but clear & simple descriptions are also key for a non-technical audience who will need to explain why the lowest-price option (i.e. Traditional muni bond) might not be the best one in this case.
- Possible legal and regulatory limitations — A brief list of how a Non-Traditional debt option would 'check the boxes' of Traditional requirements would likely be adequate at this stage
- Possible Stakeholder Concerns — Anticipate concerns from from the muni industry and how to address them. Introduce posible types of additional disclosure on Non-Traditional debt options beyond minimum requirements
- Overall – Compelling or not? — Finally – based on work done to this stage and especially your overall impressionistic judgment – is the case compelling or not?

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Section 3	Main Track: Ownership & Equity	Step 1	Navigation Code: 3.OE.1

Step 1: Developing a Baseline Case for Traditional Ownership of Your Project

Major infrastructure assets that provide essential services are almost always owned solely by the public-sector, either directly by a governmental entity or through an agency. There are many fundamentally good reasons for this, quite apart from historical or traditional aspects of sole public ownership. But the whole picture (as interesting as it might be!) is not really relevant for developing a Baseline Case for your project in order to identify potentially valuable Non-Traditional approaches that share ownership. Instead, as a practical matter, the Baseline Case should focus on a few factors that present upside opportunities or help mitigate challenges through an *incremental or partial* change in sole ownership.

The factors to consider generally fall into three groups:

- Gaining Big Rewards — Some infrastructure assets offer services that could be so significantly improved by dedicated, specialized and highly-incentivized management that sharing ownership is the clearest path to unlocking significant rewards. This usually involves retail-like businesses (where revenues can be dramatically improved) or innovative technological approaches (where costs might be dramatically lowered). Note that these situations are relatively rare for basic infrastructure assets that provide essential or monopoly services.

- Avoiding Big Risks — More typical are situations involving projects where rewards are inherently limited but the downside risks can be very significant in the context of your overall fiscal situation. As a sole owner, all those risks belong to you! Shared ownership can be a form of 'insurance' where risks are pooled with another public-sector entity or transferred to a private-sector specialist investor. Unlike a risk-reducing service contract, co-owners will assume a broader range of risk but will require some control to manage it, as well as a significant return on their capital at risk.

- Cheaper Cost of Equity Capital — Through its unique ability to impose taxes and user-fees on essential monoploy services, the public sector generally has a lower 'implicit cost of equity' (i.e. the return required to raise investment funding) than any private-sector investor. In some situations, this may not be the case, and the sale of an ownership interest in an asset (a 'monetization') will result in a lower cost of asset capitalization. This usually involves real long-term fiscal distress (not just a temporary budget crisis!). Fortunately, this situation is actually very rare among US state & local governments.

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Section 3	Main Track: Ownership & Equity	Step 2	Navigation Code: 3.OE.2

Step 2: Identifying Relevant Non-Traditional Approaches for Your Project's Ownership & Equity

Once you've clarified important ownership factors for your project in the Traditional Baseline Case, the search for potentially useful Non-Traditional approaches to ownership & equity will be considerably narrowed. In most situations, only one of the factors described in the previous page will be relevant for your particular project and overall fiscal situation.

- Gaining Big Rewards — For realizing upside on retail-type or hi-tech infrastructure assets, potentially valuable shared ownership is invariably with a private-sector operating company (which has the specialized management expertise) often in collaboration with a private-sector equity investor (which provides the specialized risk capital in return for high potential rewards). This is generally what's meant by 'public-private' co-ownership. As you'd expect, their services and products are well-advertised! (*see Expansion Pages and Case Studies)*

- Avoiding Big Risks — For reducing your ownership risks on basic infrastructure projects providing essential or monopoly services, two fundamentally different paths might be available, depending on your specific situation. The first is to share ownership with another public-sector entity, most typically with an adjacent system or jurisdiction that can also share the project's output. Other public-sector co-owners include [higher levels of governments that have a policy objective in expanding infrastructure investment]. 'Public-public' co-ownership, either in the form of joint-venture or explicit equity investment, has the benefit of being fundamentally co-aligned with public sector objectives.

  The second path is to seek a private-sector company that will invest risk capital in the project. Since (by our definition) signficant upside from project revenue or operations is limited, the purpose of this risk capital is to absorb the risks that might be costly for you and can't be otherwise transferred under service contracts. It's very important that you clarify what these risks might be at the outset – risk transfer is never free, and you don't want to buy something you don't need!

- Cheaper Cost of Equity Capital — If the long-term cost of equity capital appears to be a factor for your project (again, not just a temporary budget constraint), Non-Traditional ownership is likely to be an important option to get your project done. But if this is the case equity grant programs at higher levels of government or philanthropic foundations may also be a an option. These programs in effect provide low-cost or 'no-cost' equity capital for infrastructure projects. If your project or overall fiscal situation qualifies, this 'Non-Traditional' option can be a very compelling 'Alternative'.]

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Section 3	Main Track: Ownership & Equity	Step 3	Navigation Code: 3.OE.3

Step 3: Considering Non-Traditional Approach Combinations for Your Project's Ownership & Equity

Non-Traditional ownership & equity approaches are almost always combined with design-build, O&M outsourcing and Debt Financing Alternatives to create a 'DBEFOM', which (though actually much less common than DBOMs or DBFOMs) are what most people think of as a 'public-private partnership' (*see box below and Expansion Pages*).

A key feature of almost all Alternative combinations involving equity is that the debt and other service contracts are 'packaged' in a joint-venture or project company framework. This framework creates a new and possibly substantive issuer for the debt and the attachment point for the service contracts. The degree of control you have over the project in this framework can vary widely – from something close to a lease-type contract to almost full privatization of project risks and rewards for several decades. This arrangement is highly customized, to say the least!

As described in the pervious page, an important distinction in ownership & equity Alternative is whether the co-owner is another public-sector entity or a private-sector company. This distinction flows through to the combinations considered in the P3 Tracks.

Functional Combinations	*Industry Names ('P3s')*
Design & Construction + Operations & Maintenance + Debt Financing + Shared Public-Sector Ownership	**DBEFOM - Public, Public-Public Partnership, JV** (DBFOM + public-sector equity)
Design & Construction + Operations & Maintenance + Debt Financing + Private-Sector Equity Ownership	**DBEFOM - Private, Concession, Privatization** (DBFOM + private-sector equity ownership)

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Section 3	Main Track: Ownership & Equity	Step 4	Navigation Code: 3.OE.4

Step 4: Measuring the Value of Non-Traditional Ownership & Equity Against Traditional Baseline

Once you've identified the most relevant Non-Traditional approach for the ownership of your project, the next step is to roughly measure the value of that approach against the Baseline Case developed in Step 1. Generally this will involve the comparison of the Baseline case to a Non-Traditional case using comparable assumptions except for the specific approaches themselves. Standard project and BCA modelling techniques (see Expansion Pages) can provide some general perspective for ownership & equity comparison at this stage but you should note that equity valuation is a very complex area of financial analysis. Results are likely to rely heavily on probabilistic scenarios and may be difficult to draw clear conclusions from.

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Section 3	Main Track: Ownership & Equity	Step 5	Navigation Code: 3.OE.5

Step 5: Identifying Legal and Regulatory Limitations on Ownership & Equity Alternatives

If Non-Traditional ownership or outside equity investment for your project appears to be relevant and realistically able to provide signficant value compared to your Traditional approach there may be a compelling case for the creation of an Alternative. Recall that as we define it in this Learning Module, a Non-Traditional approach (no matter how well-established in the private sector or compelling in terms of value) will almost always require a process of adaptation and adoption to become a practical Alternative for public-sector use. This is especially true for ownership & equity Alternatives for basic and essential infrastructure assets!

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Section 3	Main Track: Ownership & Equity	Step 6	Navigation Code: 3.OE.6

Step 6: Identifying Community Stakeholder Concerns About Ownership & Equity Alternatives

After identifying the 'hard' legal and regulatory limitations that might apply to your project, the next step is to look for 'soft' (albeit very real) stakeholder concerns that might arise from the use of Non-Traditional approach.

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Section 3	Main Track: Ownership & Equity	Step 7	Navigation Code: 3.OE.7

Step 7: Summarizing the Case for Creating an Ownership & Equity Alternative for Your Project

Step 7 is where the case for creating a Debt Financownership & equity Alternative for your project is pulled together and sumamrized for presentation to the 'First Committee'. Every case is of course different, but here are some topics you may want to include as a minimum:

- Words Matter! — Confusing words are a major issue with Alternatives – present clear definitions of key terms ('Traditional', 'Alternative', 'private placement' etc.) at outset.
- Baseline Case — Highlight and explain important factors (especially those concerning your overall fiscal siutation) beyond interest rates – those are likely the reason that Non-Traditional debt options are being considered in the first place.
- Mention Optional Combinations — Describe the SPV Framework as a typical option for Non-Traditional debt financings using widely-understood examples (e.g. municipal leases)
- Alternative Value Proposition — The primary value of a Non-Traditional debt option will likely arise from non-price terms. The basic numbers matter, but clear & simple descriptions are also key for a non-technical audience who will need to explain why the lowest-price option (i.e. Traditional muni bond) might not be the best one in this case.
- Possible legal and regulatory limitations — A brief list of how a Non-Traditional debt option would 'check the boxes' of Traditional requirements would likely be adequate at this stage
- Possible Stakeholder Concerns — Anticipate concerns from from the muni industry and how to address them. Introduce posible types of additional disclosure on Non-Traditional debt options beyond minimum requirements
- Overall – Compelling or not? — Finally – based on work done to this stage and especially your overall impressionistic judgment – is the case compelling or not?

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Design-Build, Outsource O&M
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Public-Public Ownership DBFOM (DBEFOMPub)
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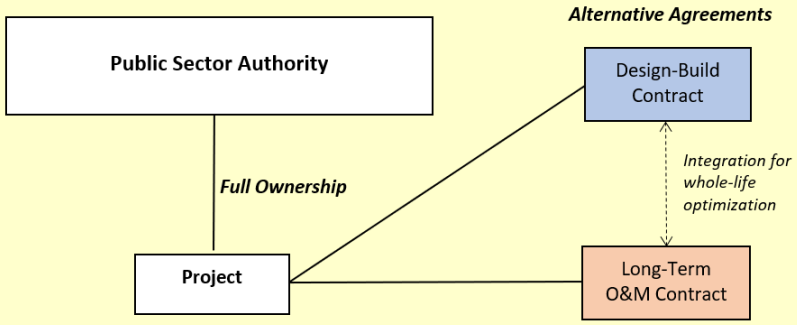
Section 3	P3 Track: DBOM		Navigation Code: 3.DBOM.3

Step [3]: DBOM P3 Combination

As defined in this Learning Module, a 'P3' is simply a combination of two or more of the Alternative approaches described in the Main Tracks. A P3 combination can often deliver more value than simply the sum of its parts through integration and synergies of the Alternative approaches or even just by transactional scale economies. But it's important to remember that ***nothing 'magical' happens in a P3*** *– if combination delivers additional value, you should be able to understand, measure and (most importantly) describe it clearly.*

- A DBOM combination is the simplest type of P3. The value of the combination arises primarily at the project level by integration of the design and construction of the asset with its long-term O&M, usually through a consortium of construction and operating firms. That way, the asset can be optimized for cost-efficiency and performance through its whole life – with outcomes and budgeting discipline that are contractually enforced.



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Section 3	P3 Track: DBOM		Navigation Code: 3.DBOM.4

Step [4]: DBOM P3 Combination: Modified Value for Money Comparison

The classic methodology to measure P3 value, known as 'Value for Money', involves a comparison of the overall combination of Alternative approaches to the equivalent combination of Traditional approaches (called the 'Public Sector Comparator'). In this Learning Module, we outline a modified methodology that (1) compares individual Alternative and Traditional approaches within functional categories (permitting closer 'apples-to-apples' analysis than cross-functional analysis) and (2) makes a major distinction between expected case outcomes and the range of outcomes from what-if scenario testing.

- DBOM combination value should be easy to see at the project level by comparison of proposed contractual terms with the (realistic) traditional equivalent.
- Due to basic economies of scale and expertise, it is possible that the expected case analysis is compelling in itself. If so, additional value from what-if downside scenarios is in effect a type of insurance, which may be important in the context of your overall fiscal situation (e.g. the need to avoid cost overruns and O&M surprises)

	Value Compared to Traditional Equivalent (Comparator)	
	Deterministic Analysis (Expected Case)	Probabilistic Analysis (What-If Scenarios)
Design-Build	Possible lower cost, faster delivery	Insurance against cost overruns, delayed delivery
Long-Term O&M	Possible lower cost, better performance	Insurance against 'surprises' and contractual discipline against deferred maintenance
P3 'Value for Money'	May be significantly better than Traditional	Consider in context of long-term fiscal stress

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Section 3	P3 Track: DBOM		Navigation Code: 3.DBOM.5

Step [5]: DBOM P3 Combination: Identifying Legal and Regulatory Limitations

If a Non-Traditional DBOM for your project appears to be relevant and realistically able to provide signficant value compared to your Traditional approach there may be a compelling case for the creation of an Alternative. Recall that as we define it in this Learning Module, a Non-Traditional approach (no matter how well-established in the private sector or compelling in terms of value) will almost always require a process of adaptation and adoption to become a practical Alternative for public-sector use.

- Despite the possible application of the 'P3' name, a DBOM combination will probably not be subject to any further limitations than the individual DB and OM components are subject to.

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Section 3	P3 Track: DBOM		Navigation Code: 3.DBOM.6

Step [6]: DBOM P3 Combination: Identifying Stakeholder Concerns

After identifying the 'hard' legal and regulatory limitations that might apply to your project, the next step is to look for 'soft' (albeit very real) stakeholder concerns that might arise from the use of a 'P3' Non-Traditional combination approach.

- It should be recognized that the 'P3' name in itself can often be the source of concern because the term 'P3' covers many situations, some of which are inherently contoversial (e.g. privatizations). It's important to clarify for a DBOM exactly what is being proposed in functional terms and the additive value of the combination before (or ideally, instead of) the proposed transaction being widely known as a 'P3'.

- For a DBOM, clarifying the functional value combination should be straightforward. The stakeholder concerns arising from the DB and OM Alternatives individually (as described in the Main Tracks in this Learning Module) will of course need to be addressed.

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Section 3	P3 Track: DBOM		Navigation Code: 3.DBOM.7

Step [7]: DBOM P3 Combination: Summarizing the Case

Step 7 is where the case for creating a 'P3' DBOM Alternative Combination for your project is pulled together and sumamrized for presentation to the 'First Committee'. Every case is of course different, but here are some topics you may want to include as a minimum:

➢ Words Matter!	Confusing words are a very major issue for P3 Alternative Combinations! Present clear definitions of key terms ('Traditional', 'Alternative', 'P3', 'DBOM', etc.) at the outset.
➢ Traditional Comparator	Traditional design-bid-build, in-house O&M
➢ Modified Value for Money	Same as DB and OM components and additional value from whole-life integration and optimization
➢ Possible legal and regulatory limitations	[probably same as DB, OM components]
➢ Possible Stakeholder Concerns	Stakeholder concerns are often a major issue for 'P3'. Should be possible to clarify these do not apply to DBOM
➢ Overall – Compelling or not?	Finally – based on work done to this stage and especially your overall impressionistic judgment – is the case compelling or not?

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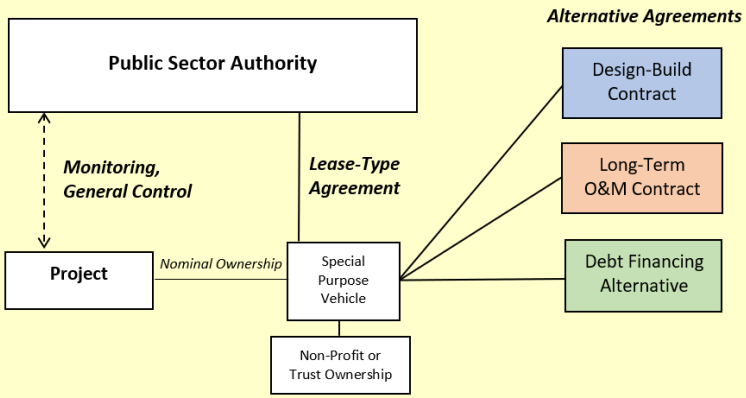
Section 3	P3 Track: DBFOM		Navigation Code: 3.DBFOM.3

Step [3]: DBFOM P3 Combination

As defined in this Learning Module, a 'P3' is simply a combination of two or more of the Alternative approaches described in the Main Tracks. A P3 combination can often deliver more value than simply the sum of its parts through integration and synergies of the Alternative approaches or even just by transactional scale economies. But it's important to remember that ***nothing 'magical' happens in a P3*** *– if combination delivers additional value, you should be able to understand, measure and (most importantly) describe it clearly.*

- A DBFOM appears to simply add a Debt Financing Alternative to a DBOM combination. But almost invariably, a DBFOM involves putting the asset into a new contractual framework that in itself may add value to the combination, especially with respect to your overall fiscal situation.

- In a lease-type DBFOM (the most typical), the infrastructure asset is nominally owned by a passive 'Special Purpose Vehicle' (SPV) designed for accounting or regulatory purposes. General control is retained by the public sector through a long-term lease. This simple structure permits more flexibility for both the project-level DB and O&M contracts and for the debt alternatives.



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Section 3	P3 Track: DBFOM		Navigation Code: 3.DBFOM.4

Step [4]: DBFOM P3 Combination: Modified Value for Money Comparison

The classic methodology to measure P3 value, known as 'Value for Money', involves a comparison of the overall combination of Alternative approaches to the equivalent combination of Traditional approaches (called the 'Public Sector Comparator'). In this Learning Module, we outline a modified methodology that (1) compares individual Alternative and Traditional approaches within functional categories (permitting closer 'apples-to-apples' analysis than cross-functional analysis) and (2) makes a major distinction between expected case outcomes and the range of outcomes from what-if scenario testing

- In a DBFOM, the full potential value of the DB and O&M Alternatives should be about the same as in a straight DBOM combination (their synergies are with each other at the project level).
- The Debt Alternative is likely to look more expensive than Traditional muni-bond financing in the expected case. The real value of the Debt Alternative is usually found in probabilistic scenarios involving your fiscal situation – the need for flexibility, avoiding arbitrary debt constraints and (especially) access to policy-oriented lending.
- Overall, the expected case for a DBFOM may look marginal. The what-if scenario analyses are likely to be the most important part of your decision.

	Value Compared to Traditional Equivalent (Comparator)	
	Deterministic Analysis (Expected Case)	Probabilistic Analysis (What-If Scenarios)
Design-Build	Possible lower cost, faster delivery	Insurance against cost overruns, delayed delivery
Long-Term O&M	Possible lower cost, better performance	Insurance against 'surprises' and contractual discipline against deferred maintenance
Debt Alternative	Likely more expensive than tax-exempt Traditional (if not policy-oriented)	May be valuable in context of fiscal constraints and inflexibility of Traditional debt.
P3 'Value for Money'	Marginal (positive value of DB and OM balanced against negative value of Debt Alternative)	Potentially high insurance value against both project and fiscal long-term stress

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Step [5]: DBFOM P3 Combination: Identifying Legal and Regulatory Limitations

If a Non-Traditional DBFOM for your project appears to be relevant and realistically able to provide signficant value compared to your Traditional approach there may be a compelling case for the creation of an Alternative. Recall that as we define it in this Learning Module, a Non-Traditional approach (no matter how well-established in the private sector or compelling in terms of value) will almost always require a process of adaptation and adoption to become a practical Alternative for public-sector use.

- [A DBFOM will usually involve an SPV Framework where nominal ownership of the asset will be with a third-party trust or non-profit (though substantive control and ownership will be effectively unchanged). This may have legal and regulatory implications that range from simple municipal lease considerations and protocols to more complex issues.]

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Section 3	P3 Track: DBFOM		Navigation Code: 3.DBFOM.6

Step [6]: DBFOM P3 Combination: Identifying Stakeholder Concerns

After identifying the 'hard' legal and regulatory limitations that might apply to your project, the next step is to look for 'soft' (albeit very real) stakeholder concerns that might arise from the use of a 'P3' Non-Traditional combination approach.

- It should be recognized that the 'P3' name in itself can often be the source of concern because the term 'P3' covers many situations, some of which are inherently contoversial (e.g. privatizations). It's important to clarify for a DBFOM exactly what is being proposed in functional terms and the additive value of the combination before (or ideally, instead of) the proposed transaction being widely known as a 'P3'.

- For a DBFOM, clarifying the functional value combination of the DB and OM components should be straightforward. However, the SPV Framework that is usually involved with adding a Debt Alternative to the P3 combination can sometimes be perceived as a substantive change of ownership (which it isn't). To guide a better – and readily accessible –understanding of the purpose of this structure, you can consider making a close analogy to simple municipal leasing. For most municipal leases of equipment and buildings, public-sector control of the important elements of the service remains complete – ownership form and residual elements are not controversial. This is generally true of DBFOM combination structures even when the basic is not actually called a 'lease' (e.g. an 'availability payment' contract).

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Step [7]: DBFOM P3 Combination: Summarizing the Case

Step 7 is where the case for creating a 'P3' DBFOM Alternative Combination for your project is pulled together and sumamrized for presentation to the 'First Committee'. Every case is of course different, but here are some topics you may want to include as a minimum:

- Words Matter! — Confusing words are a very major issue for P3 Alternative Combinations! Present clear definitions of key terms ('Traditional', 'Alternative', 'P3', 'DBOM', etc.) at the outset.
- Traditional Comparators — Traditional design-bid-build, in-house O&M and muni debt
- Modified Value for Money — In addition to DBOM, Debt Alternative value in what-if scenarios, and additional value due to flexibility and fiscal constraint relief from SPV ownership framework.
- Possible legal and regulatory limitations — [probably same as DB, OM and F components plus any special issues for SPV framework (may be same a municipal lease)]
- Possible Stakeholder Concerns — Stakeholder concerns are often a major issue for 'P3'. It is important to clearly separate perceptual and substantive issues
- Overall – Compelling or not? — Finally – based on work done to this stage and especially your overall impressionistic judgment – is the case compelling or not?

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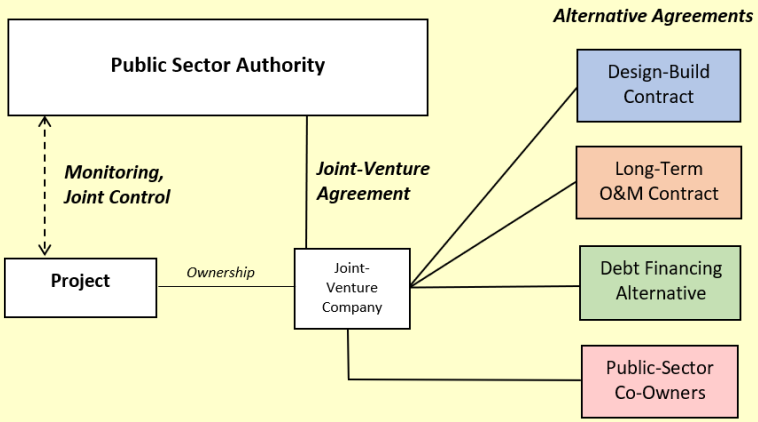
Section 3	P3 Track: DBEFOMPub		Navigation Code: 3.DBEFOMPub.3

Step [3]: DBEFOMPub P3 Combination

As defined in this Learning Module, a 'P3' is simply a combination of two or more of the Alternative approaches described in the Main Tracks. A P3 combination can often deliver more value than simply the sum of its parts through integration and synergies of the Alternative approaches or even just by transactional scale economies. But it's important to remember that ***nothing 'magical' happens in a P3*** *– if combination delivers additional value, you should be able to understand, measure and (most importantly) describe it clearly.*

- A DBEFOM with public-sector equity ownership is in effect a joint-venture arrangement with another project owner whose interests should be roughly co-aligned with your own. The value of the DB, OM and F components will likely be about the same but by pooling equity resources with the joint owner your downside risk can be lessened. This is especially relevant in cases where the project is large (in context of your system size) and downside outcomes (e.g. cost overruns, delays, O&M surprises, etc.) could significantly increase your overall level of fiscal stress.



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Section 3	P3 Track: DBEFOMPub		Navigation Code: 3.DBEFOMPub.4

Step [4]: DBEFOMPub P3 Combination: Modified Value for Money Comparison

The classic methodology to measure P3 value, known as 'Value for Money', involves a comparison of the overall combination of Alternative approaches to the equivalent combination of Traditional approaches (called the 'Public Sector Comparator'). In this Learning Module, we outline a modified methodology that (1) compares individual Alternative and Traditional approaches within functional categories (permitting closer 'apples-to-apples' analysis than cross-functional analysis) and (2) makes a major distinction between expected case outcomes and the range of outcomes from what-if scenario testing.

- Since the DB, OM and F components of a DBEFOM P3 with public-sector equity are roughly the same as with a DBFOM, the analysis can focus on the value of pooling equity resources (generally, long-term funding capacity from user fees and taxes) to mitigate the impact of downside risks.

	Value Compared to Traditional Equivalent (Comparator)	
	Deterministic Analysis (Expected Case)	Probabilistic Analysis (What-If Scenarios)
Design-Build	Possible lower cost, faster delivery	Insurance against cost overruns, delayed delivery
Long-Term O&M	Possible lower cost, better performance	Insurance against 'surprises' and contractual discipline against deferred maintenance
Debt Alternative	Likely more expensive than tax-exempt Traditional (if not policy-oriented)	May be valuable in context of fiscal constraints and inflexibility of Traditional debt.
Public Co-Ownership	Likely roughly similar to your own cost of equity capital	Possibly very valuable to share equity risks on a co-aligned basis
P3 'Value for Money'	Likely break-even or slightly negative due to frictional and transaction costs	Potentially high value for large infrastructure assets to reduce long-term project and fiscal stress

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Section 3	P3 Track: DBEFOMPub		Navigation Code: 3.DBEFOMPub.5

Step [5]: DBEFOMPub P3 Combination: Identifying Legal and Regulatory Limitations

If a Non-Traditional DBEFOM for your project appears to be relevant and realistically able to provide signficant value compared to your Traditional approach there may be a compelling case for the creation of an Alternative. Recall that as we define it in this Learning Module, a Non-Traditional approach (no matter how well-established in the private sector or compelling in terms of value) will almost always require a process of adaptation and adoption to become a practical Alternative for public-sector use.

- [potentially significant and complex issues – joint authorities issues, consolidation etc.]

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Section 3	P3 Track: DBEFOMPub		Navigation Code: 3.DBEFOMPub.6

Step [6]: DBEFOMPub P3 Combination: Identifying Stakeholder Concerns

After identifying the 'hard' legal and regulatory limitations that might apply to your project, the next step is to look for 'soft' (albeit very real) stakeholder concerns that might arise from the use of a 'P3' Non-Traditional combination approach.

- It should be recognized that the 'P3' name in itself can often be the source of concern because the term 'P3' covers many situations, some of which are inherently contoversial (e.g. privatizations). It's important to clarify for a DBEFOM exactly what is being proposed in functional terms.

- A DBEFOM with public-sector equity will involve a signficant change or dilution of infrastructure asset ownership – that's the point. Stakeholders of course deserve a very clear and full explanation of why this is being proposed in terms of potential benefits (risk pooling with a co-aligned owner) but also the costs (some loss of control, unintended consequences). But it should be made clear at the outset that co-ownership with another public-sector entity is categorically different in terms of natural co-alignment than a partnership with a private-sector investor. By definition, it is not in any way a 'privatization'.

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Step [7]: DBEFOMPub P3 Combination: Summarizing the Case

Step 7 is where the case for creating a 'P3' DBEFOM Alternative Combination for your project is pulled together and sumamrized for presentation to the 'First Committee'. Every case is of course different, but here are some topics you may want to include as a minimum:

- Words Matter! — Confusing words are a very major issue for P3 Alternative Combinations! Present clear definitions of key terms ('Traditional', 'Alternative', 'P3', 'DBEFOM', etc.) at the outset.
- Traditional Comparator — [design-bid-build, in-house O&M, muni debt, sole ownership]
- Modified Value for Money — [in addition to DBFOM, risk sharing with co-aligned public-sector owner highlighted]
- Possible legal and regulatory limitations — [complex – identify to extent possible, decided at a later stage]
- Possible Stakeholder Concerns — Stakeholder concerns are often a major issue for 'P3'. It is important to clearly clarify DBEFOM with public-sector equity is not privatization
- Overall – Compelling or not? — Finally – based on work done to this stage and especially your overall impressionistic judgment – is the case compelling or not?

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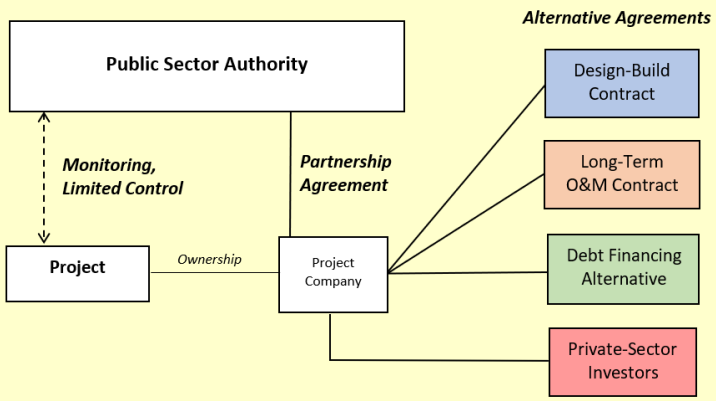
Step [3]: DBEFOMPri P3 Combination

As defined in this Learning Module, a 'P3' is simply a combination of two or more of the Alternative approaches described in the Main Tracks. A P3 combination can often deliver more value than simply the sum of its parts through integration and synergies of the Alternative approaches or even just by transactional scale economies. But it's important to remember that ***nothing 'magical' happens in a P3*** *– if combination delivers additional value, you should be able to understand, measure and (most importantly) describe it clearly.*

- A DBEFOM with private-sector equity ownership is in effect a small company in which you are a partner. If the infrastructure asset is the type that can generate non-monopoly revenues and there's scope to improve that revenue with better service or innovative technology (e.g. retail operations and some hi-tech assets), there may be significant upside in this approach. But it will naturally come at a cost in terms of loss of control, the need to share revenue upside, a relatively high baseline cost if revenues don't improve and (like any complex transaction) unintended consequences. This is a powerful Alternative but generally has limited application for basic essential-service monopoly infrastructure assets.



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Step [4]: DBEFOMPri P3 Combination: Modified Value for Money Comparison

The classic methodology to measure P3 value, known as 'Value for Money', involves a comparison of the overall combination of Alternative approaches to the equivalent combination of Traditional approaches (called the 'Public Sector Comparator'). In this Learning Module, we outline a modified methodology that (1) compares individual Alternative and Traditional approaches within functional categories (permitting closer 'apples-to-apples' analysis than cross-functional analysis) and (2) makes a major distinction between expected case outcomes and the range of outcomes from what-if scenario testing.

- Note that the DB, OM and F components of real public-private partnership may provide additional value through increased risk transfer (e.g. non-recourse debt), specialized expert management and highly incentivized performance. But the basic concepts behind their individual value should remain the same.
- The private-equity ownership component will require a very sophisticated probabilistic analysis (as with any equity valuation) – you may want to consider hiring outside technical experts to assist

	Value Compared to Traditional Equivalent (Comparator)	
	Deterministic Analysis (Expected Case)	Probabilistic Analysis (What-If Scenarios)
Design-Build	Possible lower cost, faster delivery	Insurance against cost overruns, delayed delivery
Long-Term O&M	Possible lower cost, better performance	Insurance against 'surprises' and contractual discipline against deferred maintenance
Debt Alternative	Likely more expensive than tax-exempt Traditional (if not policy-oriented)	May be valuable in context of fiscal constraints and inflexibility of Traditional debt.
Private Equity	Very likely much higher than your cost of equity capital, may require sharing of funding upside	Significant potential value in operational, technological and funding risk transfer and revenue improvement
P3 'Value for Money'	Expected case likely negative without revenue improvement	Potentially high value for complex, non-monopoly infrastructure assets with scope for revenue improvement

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Step [5]: DBEFOMPri P3 Combination: Identifying Legal and Regulatory Limitations

If a Non-Traditional DBEFOM for your project appears to be relevant and realistically able to provide signficant value compared to your Traditional approach there may be a compelling case for the creation of an Alternative. Recall that as we define it in this Learning Module, a Non-Traditional approach (no matter how well-established in the private sector or compelling in terms of value) will almost always require a process of adaptation and adoption to become a practical Alternative for public-sector use.

- [potentially significant and complex issues – privatization of public interest]

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Step [6]: DBEFOMPri P3 Combination: Identifying Stakeholder Concerns

After identifying the 'hard' legal and regulatory limitations that might apply to your project, the next step is to look for 'soft' (albeit very real) stakeholder concerns that might arise from the use of a 'P3' Non-Traditional combination approach.

- If the term 'P3' accurately describes anything, it is a DBEFOM Alternative combination with private-sector ownership. In essence, the proposed transaction is indeed a privatization of some (but not all) of the public-sector's ownership interest in an infrastructure asset.
- For infrastructure assets that provide an optional or back-up capacity service (e.g. de-salination plants in many cases), a compelling case for some privatization can be made, especially when technology or resource risks are involved. The non-essential, non-monopoly context should be emphasized at the outset.
- Privatization of monopoly-type infrastructure assets providing essential services (e.g. basic water) is a specialized situation usually involving extreme fiscal stress. In those situations, stakeholders may accept a 'lesser of two evils' argument, but this not reduce the necessity of providing clear explanations about the loss of value and control is being minimized in a proposed DBEFOM transaction.

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Step [7]: DBEFOMPri P3 Combination: Summarizing the Case

Step 7 is where the case for creating a 'P3' DBEFOM Alternative Combination for your project is pulled together and sumamrized for presentation to the 'First Committee'. Every case is of course different, but here are some topics you may want to include as a minimum:

- Words Matter! — Confusing words are a very major issue for P3 Alternative Combinations! Present clear definitions of key terms ('Traditional', 'Alternative', 'P3', 'DBOM', etc.) at the outset.
- Traditional Comparator — [design-bid-build, in-house O&M, muni debt, sole ownership – including natural inability to maximize revenue upside]
- Modified Value for Money — [in addition to DBFOM, risk and reward sharing with profit-oriented private-sector investor to maximize upside – should be very significant & compelling!]
- Possible legal and regulatory limitations — [complex and possibly signficant – decided at later stage]
- Possible Stakeholder Concerns — Stakeholder concerns are often a major issue for 'P3' and these actually really apply in the case of a DBEFOM with private-secotr equity!
- Overall – Compelling or not? — Finally – based on work done to this stage and especially your overall impressionistic judgment – is the case compelling or not?

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