

# Pacific Northwest Intergovernmental Audit Forum 2014

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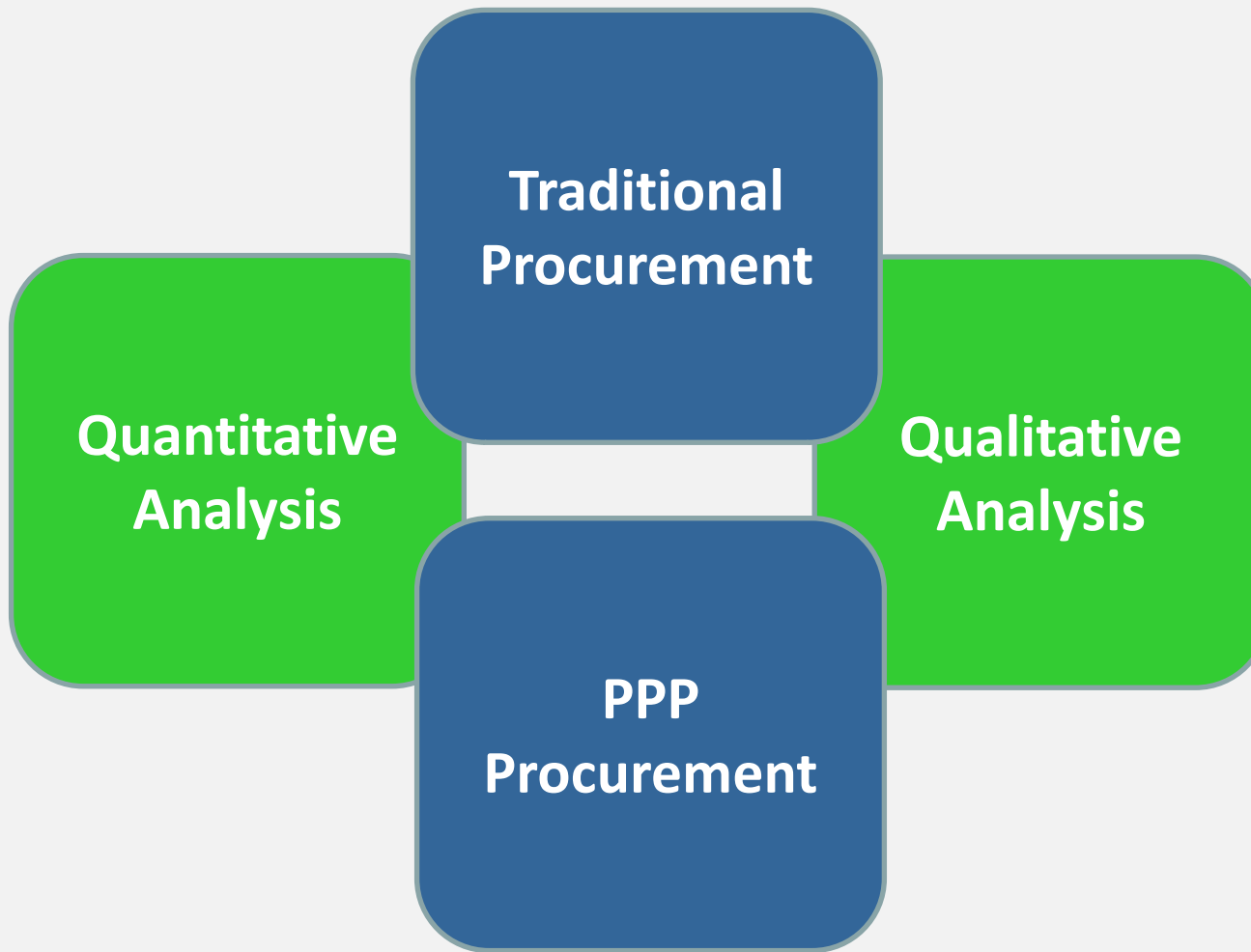
# Partnerships BC

- Founded in 2002
- Shareholder: Minister of Finance
- Board Governance
- Participated in more than 40 projects with an investment value of more than \$17 billion, of which \$7 billion is private sector capital.
- Involved in:
  - Planning
  - Procurement analysis
  - Procurement management
  - D&C oversight
  - Contract administration

# Partnerships BC

- We have worked in the following sectors:
  - Acute care
  - Outpatient care
  - Long-term care
  - Highways
  - Bridges
  - Rapid transit
  - Energy
  - Water treatment
  - Schools / advanced education
  - Social housing
  - Corrections
  - Sports/leisure centre

# Delivery Model Analysis



# What is a Traditional Delivery Model?

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- Selected by the Owner
- Specifications by Owner's consultants
- Typically awarded to lowest-bid
- Facilities Management (FM) by Owner
- Life cycle by Owner
- Referred to as Public Sector Comparator (PSC)

# What is a PPP?

## Long-term, performance-based contract

- Combines design, build, finance, maintain/rehabilitate
- Government retains ownership and control
- Risk transfer and innovation
- Life cycle planning

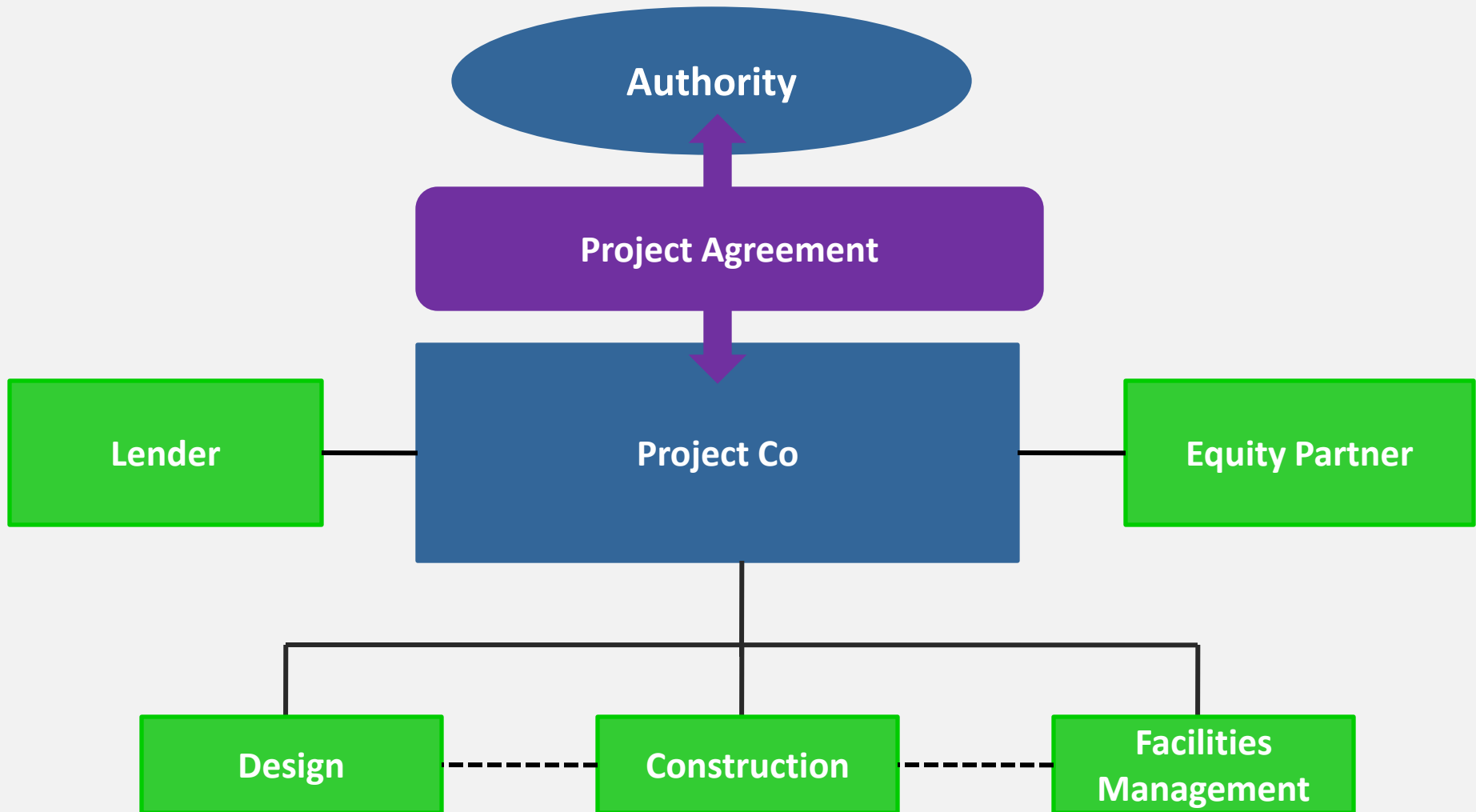


# What are the benefits of a PPP?

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- Private sector innovation
- Performance-based infrastructure
- Integration – creates efficiencies, cost savings
- Planning discipline
- Risk Transfer – e.g. design, cost, schedule
- Certainty – budget and schedule

# What does a PPP structure look like?





# Procurement Options Analysis

- The analysis includes quantitative and qualitative factors such as:
  - Public interest
  - Strategic, legislative, policy and legal
  - Service and program delivery
  - Design, construction and operations
  - Innovation and risk
  - Market, competition and transparency
  - Financial analysis
  - Management and operational capacity
  - Other unique project factors
- Prepares for evaluation and negotiations

# What is VFM?

## Value for Money

### Qualitative

Achieved when a particular procurement method is best able to support the non-financial objectives of a project.

### Quantitative

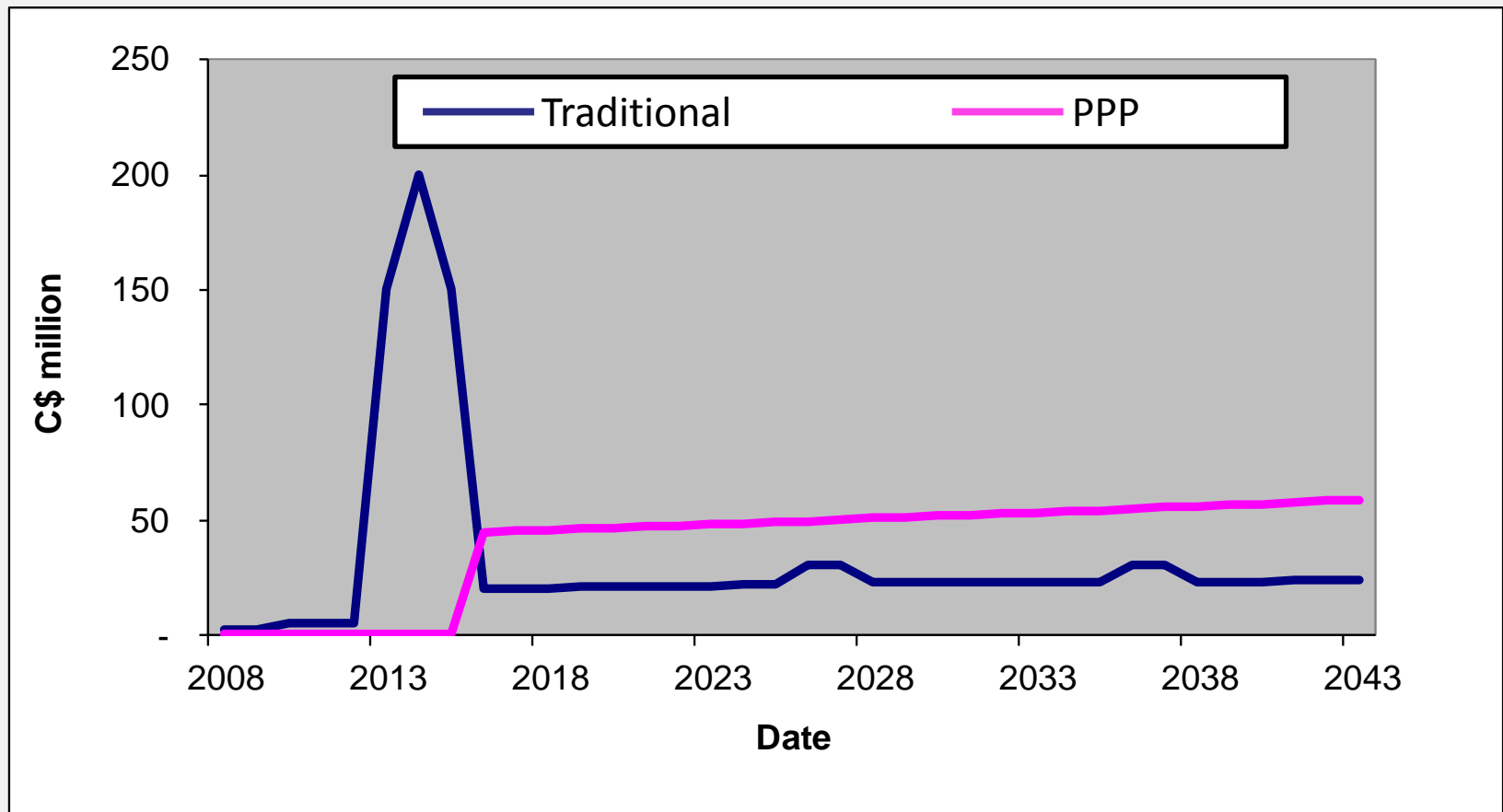
Achieved through lower whole life costs resulting from a particular procurement method.

# How to Calculate VFM

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- Forecast net present cost of estimated PSC cash flows
  - Estimated PSC
- Forecast net present cost of PPP estimated cash flows
  - Replicate expected bids (the estimated Annual Service Payments)

# Project Cash Flows



# Interior Heart and Surgical Centre VFM Example

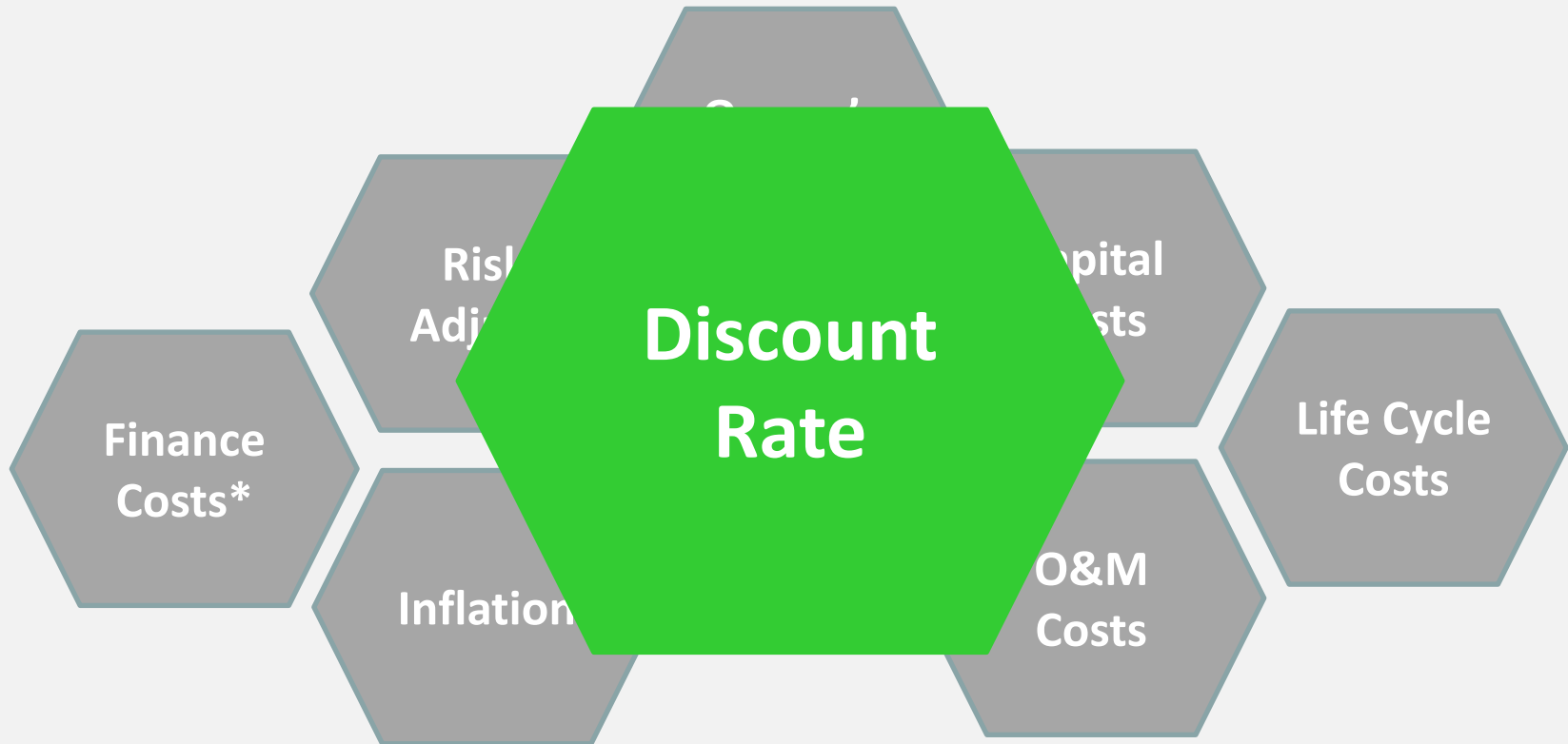
Net Present Cost (millions)		
	Final Project Cost	PSC
Annual Service Payments to Project Co	96.7	-
Capital Costs		105.2
Contributions during Construction	27.2	
Life Cycle and Operating Costs	-	28.4
Risk Adjustment	-	28.1
Project management costs, including HST, insurance and procurement	16.0	11.7
<b>Total</b>	<b>140.0</b>	<b>173.3</b>
Cost Differential		33.4
% Saving over PSC		19%

# Quantitative Analysis - Elements



\*private sector only

# Discount Rate



\*private sector only

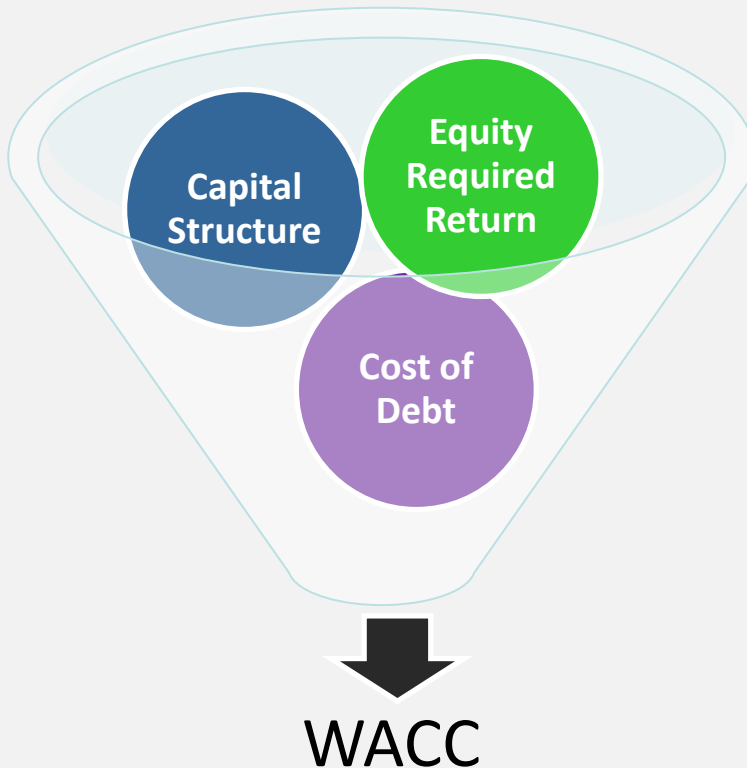
# What is a Discount Rate?

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- A specific interest rate by which a series of future cash flows are adjusted to achieve an equivalent present date value.
- It is used to remove the time value of money so that future cash flows can be compared with values in the present.
- A way of measuring the “opportunity cost” of losing one thing by buying another.



# Discount Rate



- Project IRR  $\approx$  WACC
- Lenders determine what portion of total capital to provide and at what cost, based on project risk.
- Equity providers contribute the remainder and require a higher return for assuming greater risk.

IRR = Internal Rate of Return  
WACC = Weighted Average Cost of Capital

# Government Cost of Borrowing

## Government Borrowing

- Government cost of borrowing is based on the ability to collect taxes.
- Risk profile of project is not related to the government cost of borrowing

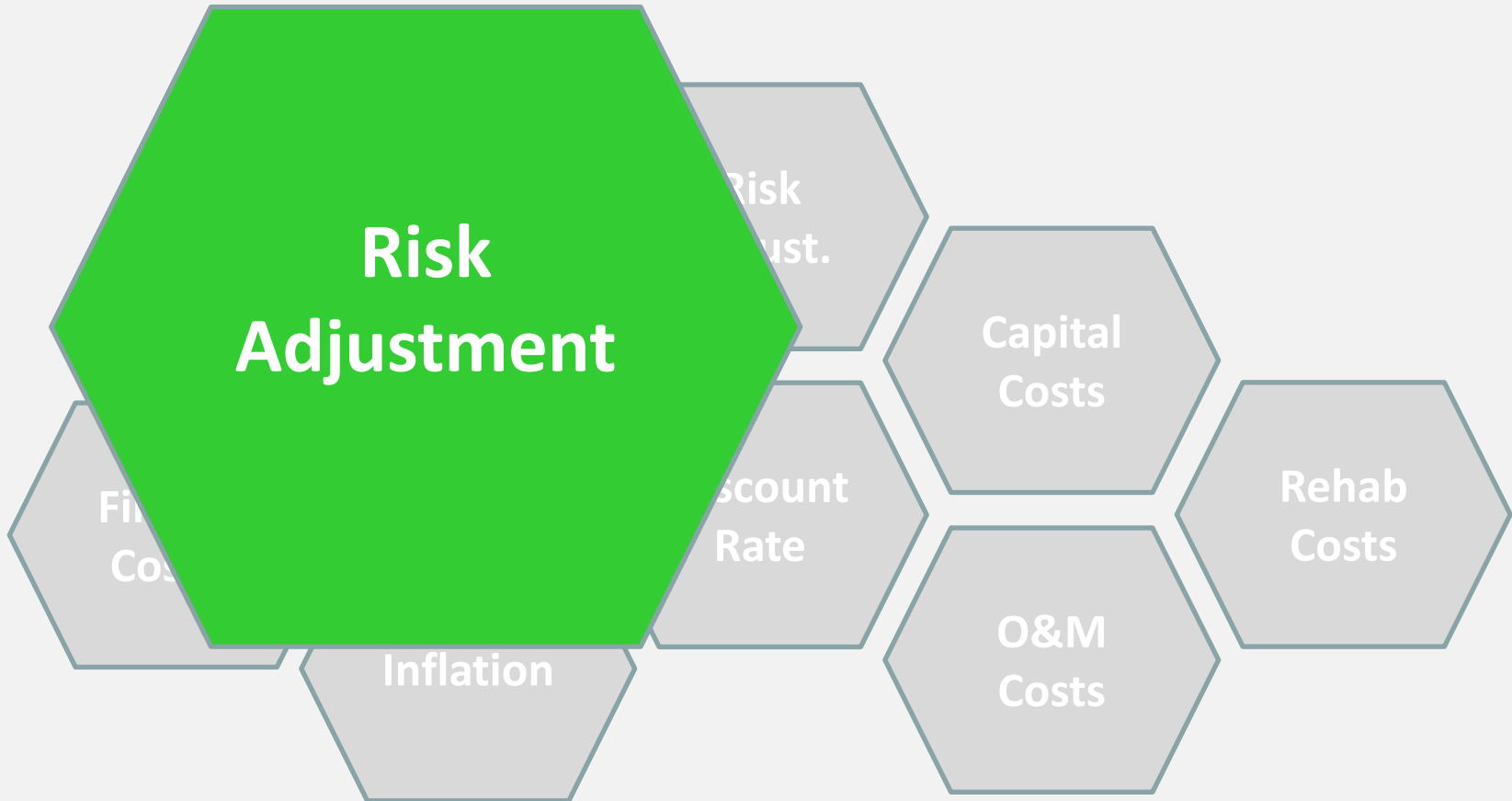
## Use of IRR (Private Sector)

- Cost of borrowing is based on the risk profile of the project and risk tolerance of investors.
- All of the risk of a PPP is contained within a project.

**There is a link between risk quantification approach and discount rate**

\*NOTE: If the government were to issue project bonds directly, with similar non-recourse terms, the rate of return required by investors would be similar to the private sector cost of borrowing for the same project.

# Risk Analysis



# Purpose of Risk Analysis

Document expected risk tolerance

Risk quantification for financial models

Determine full cost of project

Project management tool

Risk profile for legal agreements

# Risk Assessment

- Risks are divided into 3 categories:

**#1**  
Approval,  
Procurement,  
and Design &  
Construction

**#2**  
Maintenance  
and  
Life Cycle

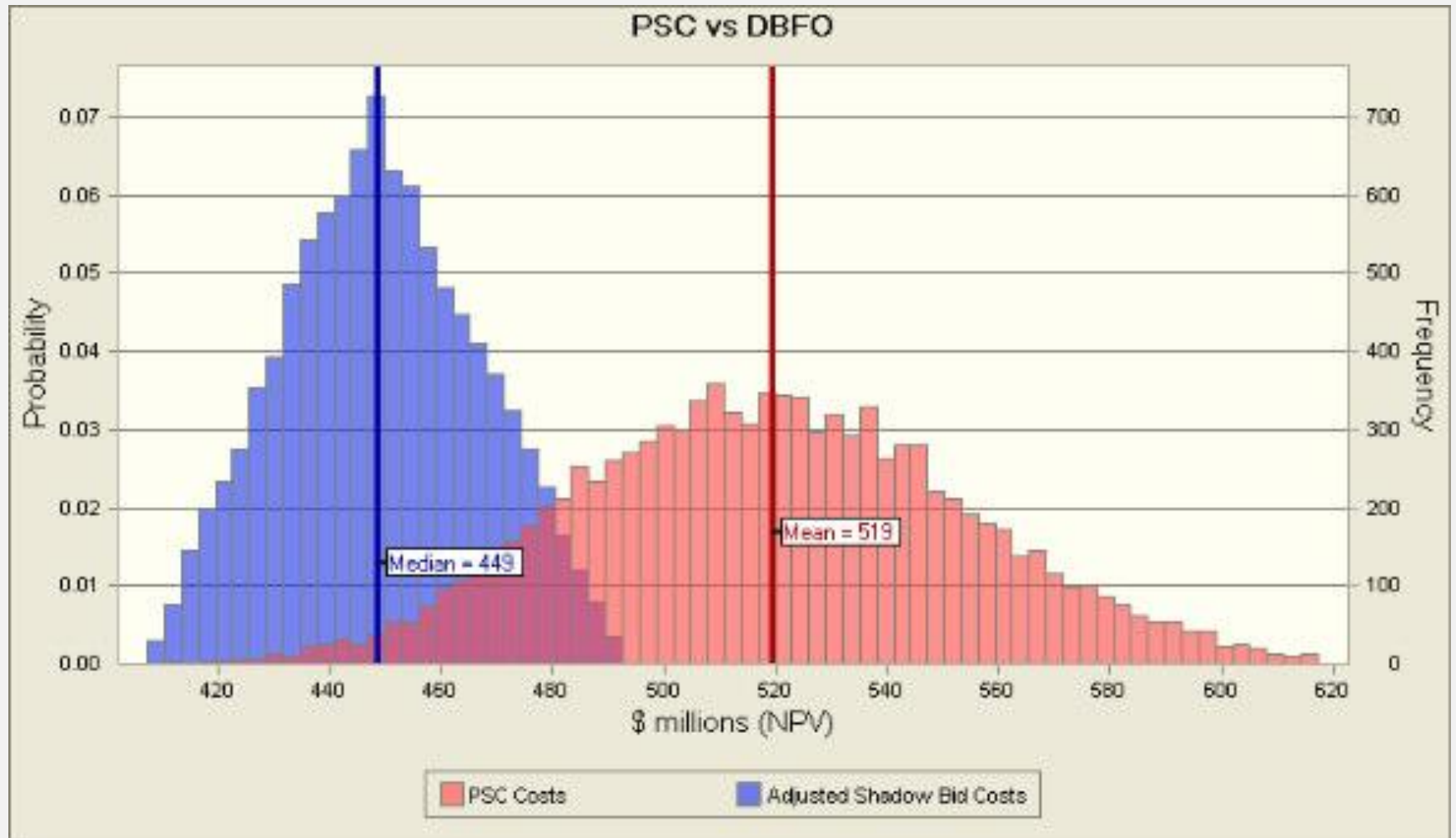
**#3**  
Commercial  
and  
Financial

\*\*Risks that relate to operations of the Facility are not typically included in the risk matrix.

# Risk Quantification

- Document the following for each procurement model:
  - Probability of occurrence (Likelihood)
  - Cost drivers
  - Consequences for the following scenarios, including back up for cost values:
    - Low impact
    - Most likely scenario
    - High impact
- Monte Carlo simulation on quantified risks
- Risk quantification approach is integrally linked to discount rate approach.

# Distribution Sample



# Qualitative Factors – Multiple Criteria Analysis (MCA)

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- The MCA
  - Ties the quantitative and qualitative analysis together
  - Summarizes the entire procurement options analysis
  - Criteria for MCA mirror the project objectives
- Facilitates selected procurement option that:
  - Best meets established project criteria
  - Maximizes overall value for money



# Hypothetical MCA

<b>Criteria</b>	<b>Option A - DBB</b>	<b>Option B - DBFM</b>
<b>Market Interest and Capacity</b>	√√√√	√√√√
<b>Responsiveness to Stakeholders</b>	√√√√	√√
<b>Schedule Certainty</b>	√√√	√√√√
<b>Cost Certainty</b>	√√	√√√
<b>Asset Performance throughout Life Cycle</b>	√√	√√√√
<b>Procurement Process For Flexibility and Innovation in Design</b>	√√	√√√√
<b>Facility Design</b>	√√	√√√√
<b>Capital Cost and Operating Cost Optimization</b>	√√	√√√√

# Challenges and Lessons Learned

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- Importance of documenting key decisions and assumptions
- Ongoing project success difficult to define and measure
- Templated disclosure reports
- Documenting internal review process

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# Questions?

\*For more information, please read our Discussion Paper, *Methodology for Quantitative Procurement Options Analysis* at [www.partnershipsbc.ca](http://www.partnershipsbc.ca), or by clicking [this link](#).



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