From theory to practice—Indian Experience

ADB Joint Regional Workshop

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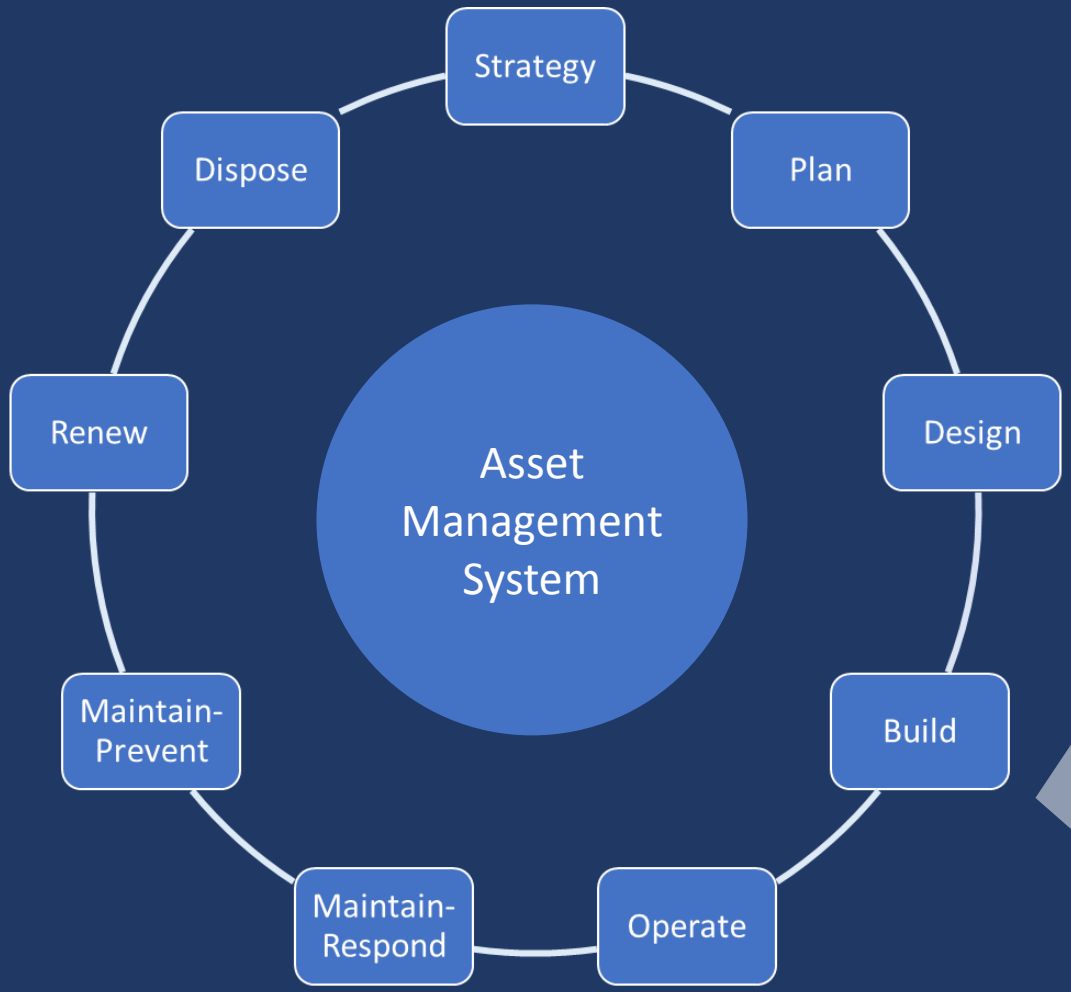
Session 4: Indian Experience

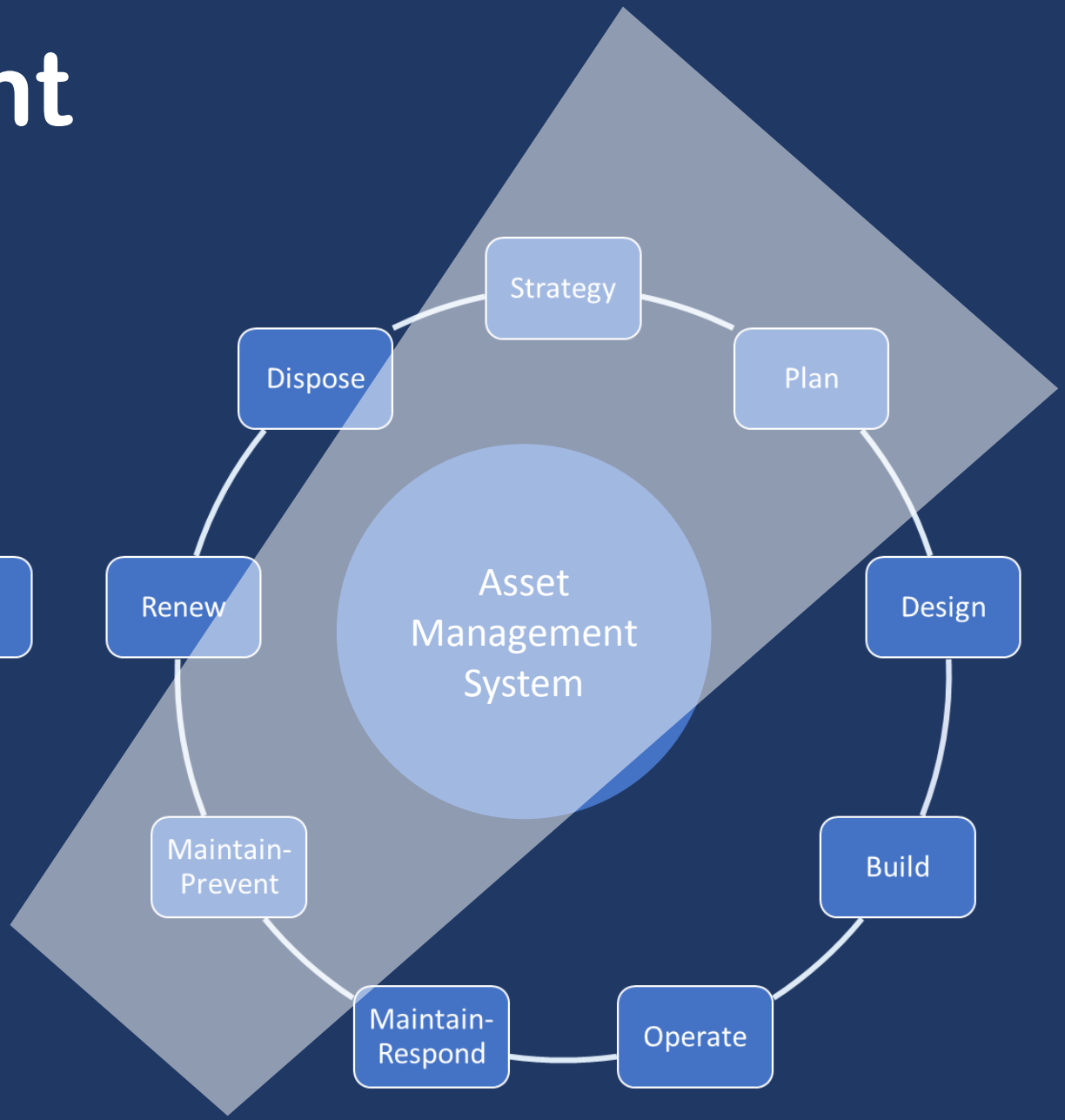
Matching Practices to Bidding Documents
Potential Bidders Qualifications and Improvement

Sector Management

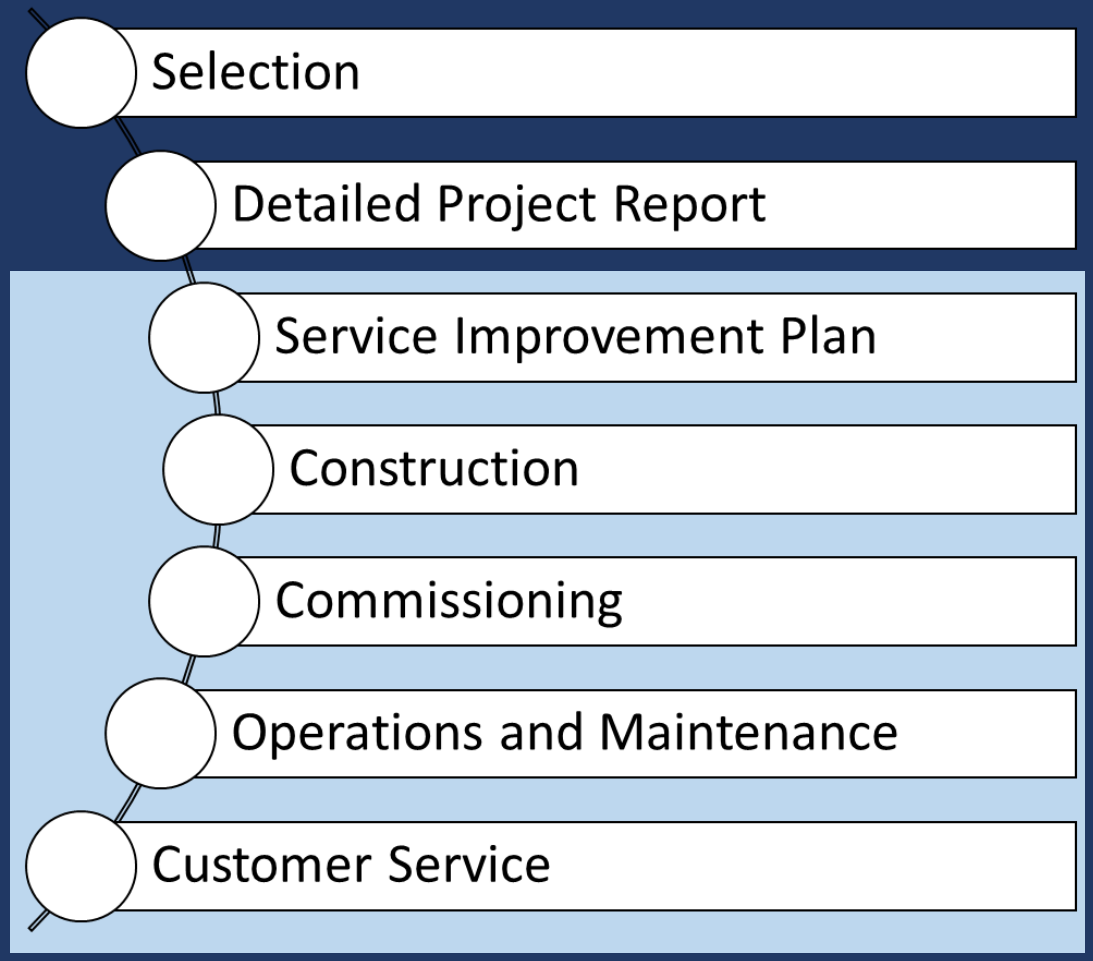
Standards and Guidelines	Excellent. Developed by Japanese in 1999. Need updating
Regulation and Compliance	Not practised or enforced. Missing required data collection and processing systems. Friendly reporting.
Structure	Devolvement down the line: federal, states, cities, urban local bodies
Capacity	Centralised. Location factor. Ex PHED staff. Water and sewer systems are new. Little precedent.
Plant and Equipment	Confined to local suppliers. Lowest purchase price.
Customer Service	Has no precedent
Cost Recovery	Target operations and responsive maintenance only

Asset Management





Schedule

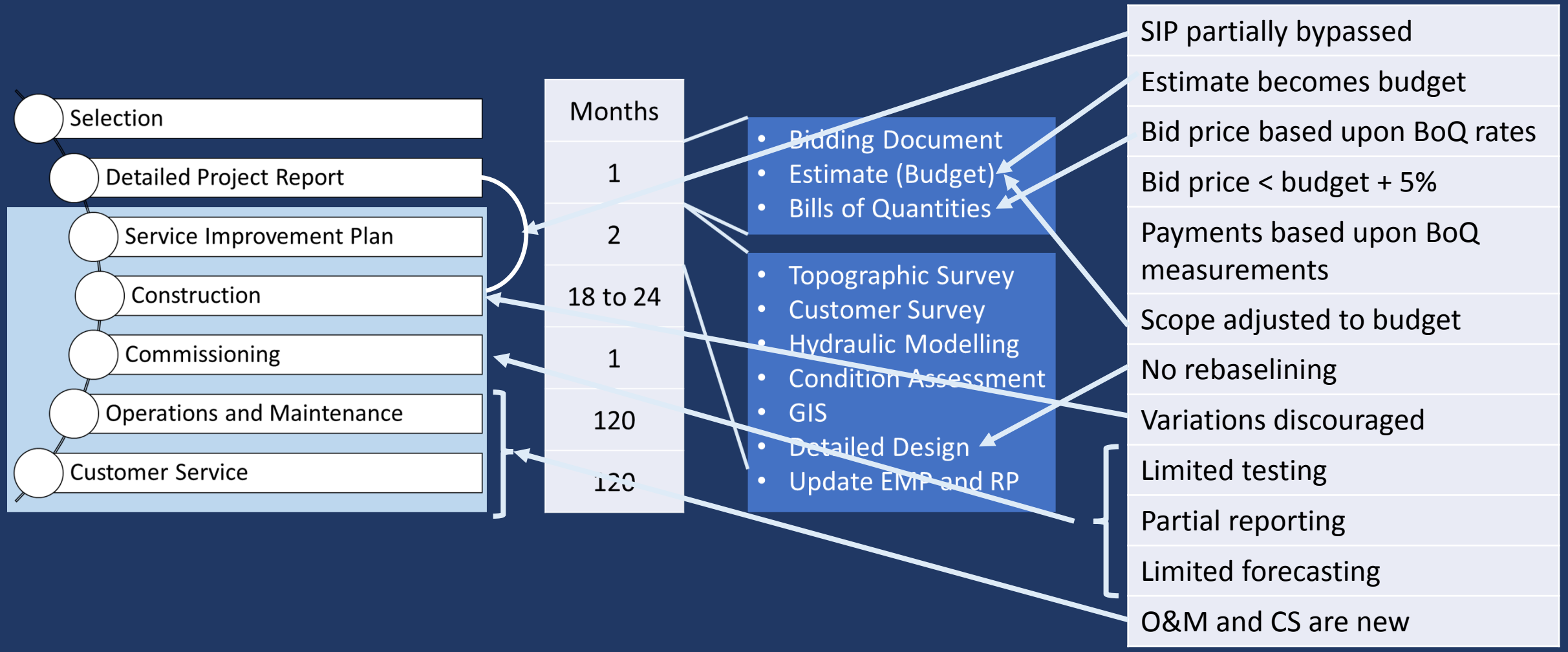


Months
1
2-3
18 to 24
1
120
120

- Bidding Document
- Estimate (Budget)
- Bills of Quantities

- Topographic Survey
- Customer Survey
- Hydraulic Modelling
- Condition Assessment
- GIS
- Detailed Design
- Update EMP and RP

Session 3: Indian Experience Process Flow



Case Study 2: O&M Payments

23,700 water and 23,700 sewer connections

O&M Payments
These are subject to damages

Case Study 1

	Schedule-1 "Design Build"					
669	*Schedule-2 "Provisional Sum"*					
670	**Provisional sum for Shifting of Utilities e.g. electric poles, cables, telephone lines & poles etc. (@10% of Excavation cost)**		job			
671	*Schedule-3 "Operation and Maintenance"*					
672	Operation, maintenance and management of entire water supply system through regular water supply up to consumer water meter points as per specifications including consumables & excluding power charges as directed by Engineer Incharge. (no of connections 23700 and O&M of scheme shall be	2667120	Per consumer per month			
673	Operation & maintenance of sewerage collection & conveyance system (RCC/ HDPE/HDPE DWC pipes) from consumer point to STP complete. (line between property chamber and sewer manhole will not be measured for payment purpose). (sewer line 88.56 Km and O&M of scheme shall be 10	10627.0	Km per Month			
674	Fix provision for O & M of sewr line, STP and SPSs created under this project for ten years as per tender document (yearwise yearwise payment amount is given in tender document).	1	No.			

Case Study 2: Responsiveness

Case Study 2

USD 60 million water supply system

Response to Employer's Requirements

Responsiveness Assessment	Bidder 1	Bidder 2	Bidder 3
Employer's Requirements			
Invitation to Bid Pages	64	64	64
Submitted Method Statement Pages	19	5	26

Case Study 3: Employer's Requirements

Preventative Maintenance Sewage Treatment Plant	Employer's requirements for maintenance	**Case Study 3**

6.3.20.12 PREVENTIVE MAINTENANCE

The Contractor shall plan the day-to-day and the preventive maintenance. This planning must include, for each equipment, the estimated necessary hours in preventive maintenance and break down maintenance. It shall also include the qualification of the foreseen maintenance personnel.

The Contractor shall provide the yearly requirement of spare parts and consumable needed for the maintenance of each piece of equipment for the day-to-day maintenance, preventive maintenance, and foreseen break down maintenance/overhaul, if any.

Observations

Which two do you want?

Time and cost are major drivers

Observations

Cost	Quality	Time
Over-loading of contract industry	Inexperienced clients and contractors	Multi-project programs not staged
Selecting on cheapest price	Inexperienced program managers	Held up by other Government initiatives
Excessive Damages	Limited planning time	Ambitious project deadlines and disbursements
Lengthy and detailed bidding documents	Exclusion of bid response from assessment	
All risks placed on contractor	Inability to attract people	
	Limited to buying local	

Contractor Selection

Project
Specific singular endeavour to produce a tangible output

Program
Group of complimentary projects managed in a coordinated way (to increase the benefits)

Observations and Possible Changes

- Extend project deadlines and disbursement goals
- Provide time for and attention to the planning and design stage
- Stage the rolling out of programs
- Undertake background work on standardisation
- Set up central coordination unit for O&M period
- Provide a location adjustment for prices/people
- Partner with international expert hands-on companies
- Properly resource project management consultants

Contractor Selection

Number
Competency
Willingness
Availability
Competition

Contactor Selection Criteria

Selection Criteria

Program Panel of Contractors

Project Allocation Criteria

Program Manager

Project Procurement

Bidding Documents and Contracts

3 EVALUATION AND QUALIFICATION CRITERIA

3.1 Evaluation

3.1.1 Technical Evaluation

3.1.2 Alternative Technical Solutions

3.1.3 Economic Evaluation

3.1.4 Multiple Contracts

3.2 Qualification

3.2.1 Eligibility

3.2.1.1 Nationality

3.2.1.2 Conflict of Interest

3.2.1.3 ADB Eligibility

3.2.1.4 Government Owned Enterprise

3.2.1.5 United Nations Eligibility

3.2.2 Pending Litigation and arbitration

3.3 Financial Requirements

3.3.1 Historical Financial Performance

3.3.2 Average Annual Turnover

3.3.3 Financial Resources

3.4 Bidder's Experience

3.4.1 Contracts of Similar Size and Nature

3.4.2 Experience in Key Areas

3.5 Bidder's Proposal

3.5.1 Design-Build Period

3.5.2 Operation service Period

3.6 Subcontractors

Evaluation	
Qualification	
Financial Requirements	Has the financial capacity and resources to undertake the project
Bidder's Experience	Has the corporate and/or individual experience to undertake the project
Bidder's Proposal	Has a clear plan for undertaking the project and a good understanding of the work required
Subcontractors	

Contractor Selection

Procurement strategy depends upon the dimensions of the project and the outcome of the market survey			
Assets	Functions	Resources	Selection
Production	Planning	Corporate	• What • Where • When • (How) • Value or similar (must be defined)
Distribution	Design	Partner(s)	
Retail	Construction	Subcontractor(s)	
	Operation		
	Maintenance		
	Retail	Individual(s)	Functional Strengthening

Contractor Selection

The procurement strategy and the contractor selection criteria should be tailored to:

1. Whether the project is stand alone or part of a program
2. The size, function and location of the project
3. The results of a market survey

End of Session 4

Session 1: Summary

The required outcomes from a project are:

- An improvement in the delivery of services; and
- For the improvement to be sustained over the life of the assets

To get the required outcomes from the new infrastructure

- It must be constructed properly; and
- It must be maintained properly thereafter

DBO projects are undertaken to deliver services, not to build works

DBO contractors are moving from a constructor to a service deliverer

There is much more to a DBO contract than a DB contract

Session 3: Summary

Maintenance must be included in the bidding document and contractors must be required to, and encouraged to, undertake the maintenance
The right amount of maintenance must be specified, priced and locked in as part of the procurement process
When procuring, recruit contractors who know what to do; or contractor's willing and able to learn what to do; and recruit a trainer who has done it before, even if it costs money
The procurement strategy must be tailored to the relevant contracting industry
The FIDIC DBO is a very good base but must be adapted suit to local jurisdictions and procurement practices

Session 4: Summary

There are trade offs to be made between time, cost and quality
Restricting one has flow on effects to the other two
Current practices are (unintentionally) driving poor quality leading to unstainable projects (my opinion)
There are some things we can readily improve on if we have the will to do so
Both the Executing Agency and the ADB will need to work collaboratively to bring about these changes