Asia Regional Workshop on PPP
« Engaging the private sector »

Identifying, planning and implementing PPP projects

Tokyo, June 2nd & 3rd, 2015

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Summary

1. General introduction
2. Project preparation
3. Project structuring and transaction
4. Project implementation, monitoring, control and renegotiation

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1. General introduction
    1. PPP structuring options
    2. Decision path for a structuring option
    3. PPP project life cycle
2. Project preparation
3. Project structuring and transaction
4. Project implementation, monitoring, control and renegotiation

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Different types of PPP

	Types of PPP with limited risk transfer	Types of PPP with substantial risk transfer	
		Without Private Investment	With Private Investment
PUBLIC UTILITY MANAGEMAENT	Technical assistance Service contract Management contract	Management contract « Régie intéressée » « Affermage »	Service concession Public works concession
DEVELOPMENT / INFRASTRUCTURE MANAGEMENT	Design-Build (EPC) O&M	Design-Build-Operate DBFO	BOT, BOO, BTO, ROT, … PFI

Risk transfer to the private operator

Risk transfer according to the different types of PPP

PUBLIC → PRIVATE

<table>
<tr><th></th><th>Public procurement</th><th>Public procurement with EPC</th><th>Public Procurement with EPC and O&M</th><th>DBO</th><th>DBFO</th><th>BOT</th><th>Concession / PFI</th></tr>
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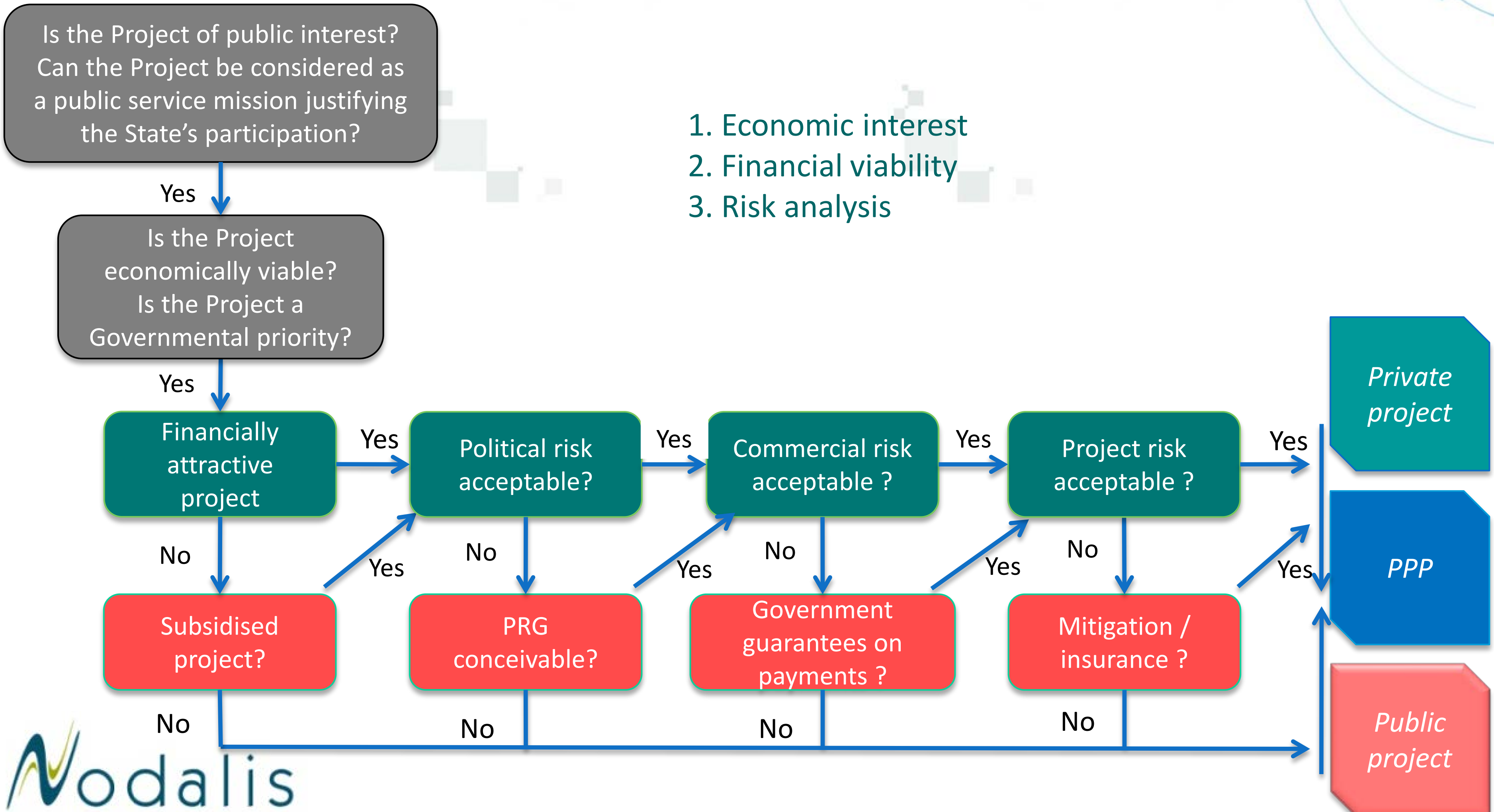
Decision path for the Private vs. Public choice

1. Economic interest
2. Financial viability
3. Risk analysis



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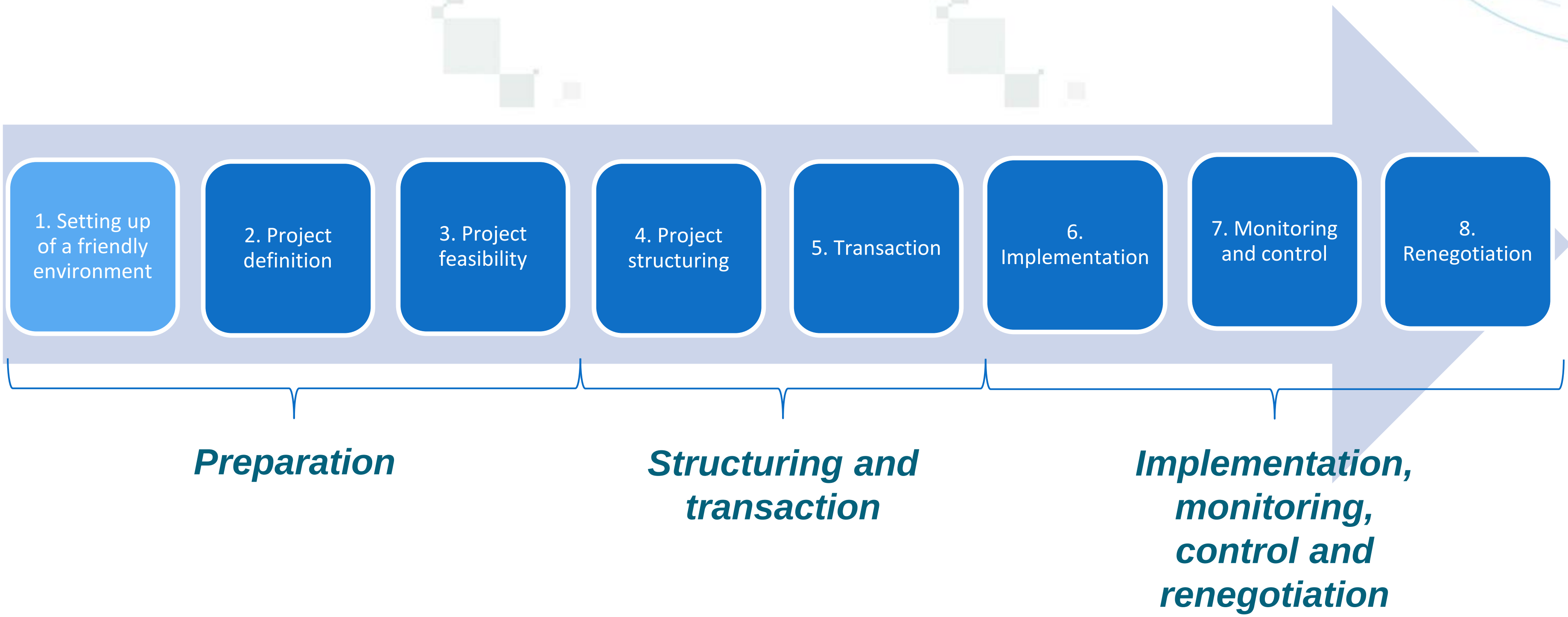
PPP project life cycle



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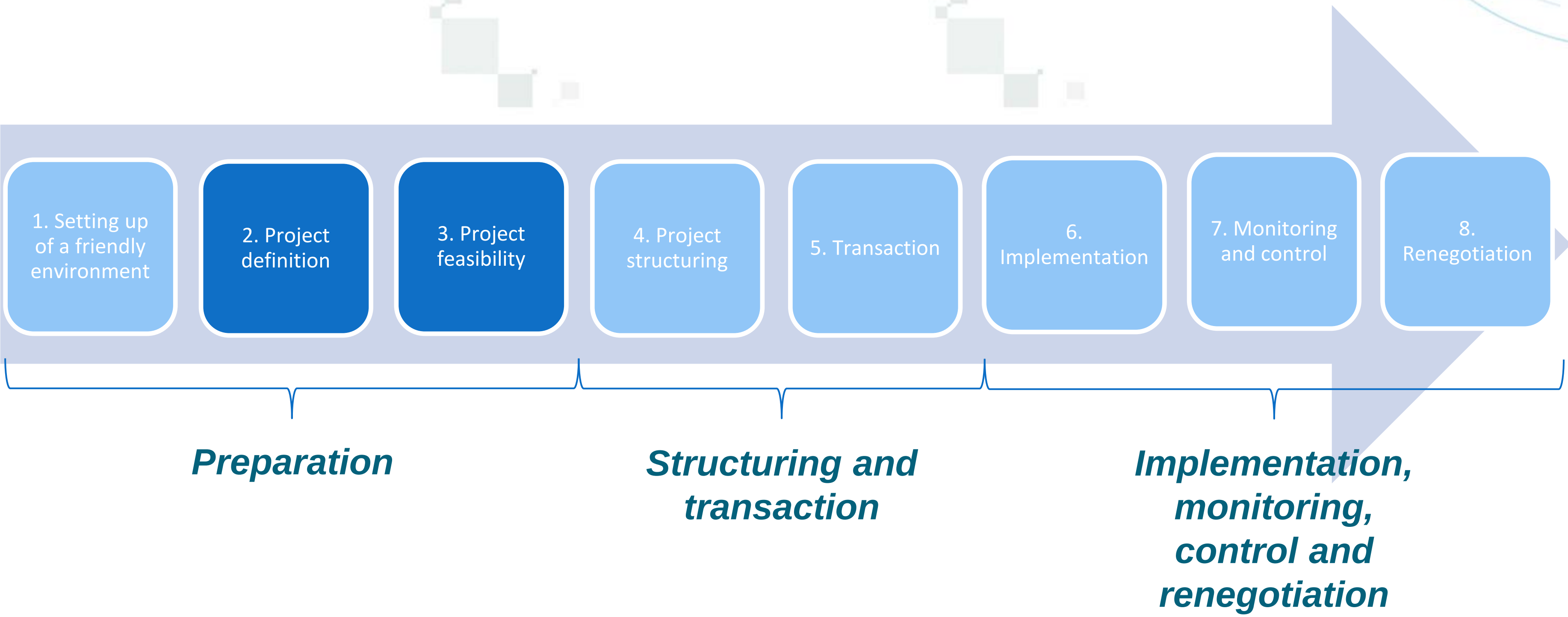

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Project definition

Goal	Defining the different components, parameters and the basic design of the project
Activities	Defining the objectives, needs, and identification of the expected results and the potential stakeholders Defining the priority of the project in comparison with others Action planning and programming Prefeasibility study
Issue concerning PPP	The choice of a PPP project is a strategic and a political choice, with expected results that must be clearly defined by public authorities The project definition should satisfy the requirements of lenders (private: commercial banks; or public: development banks, IFIs)
Tools	Evaluation of needs/Demand analysis VFM assessment Prefeasibility study Investment plan

Project feasibility

Goal	Undertake detailed feasibility studies
Activities	Assessment of the organizational and administrative support to sponsor the project Financial analysis and modelling Socioeconomic (incl. CBA), environmental, technical and engineering studies
Issue concerning PPP	For a private partner, the feasibility of the technical, commercial and financial aspects of the project are to be demonstrated
Tools	Public team in charge of the project Diagnosis of the existing operator (if applicable) Physical, economic and financial models

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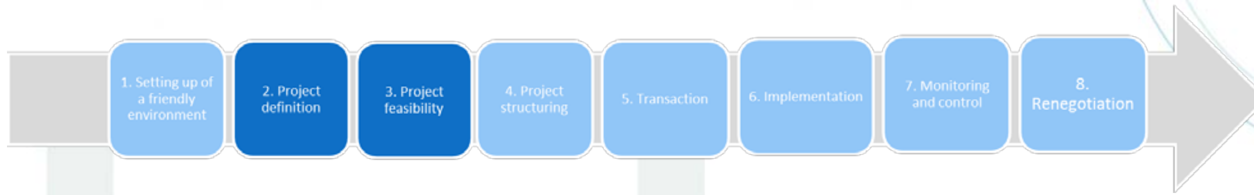
Evaluation of needs / Demand analysis

Stage	1. Setting up of a friendly environment 2. Project definition 3. Project feasibility 4. Project structuring 5. Transaction 6. Implementation 7. Monitoring and control 8. Renegotiation
Goal	Assess and predict the development of water connections, electrical connections, consumptions per type of users (administrations, industries and domestic), traffic (transportation), etc. in order to size the required investments
Approach	Surveys Customer database analysis Demand modelling
Results	Knowledge of existing and future demand (in terms of volumes and number of users) (energy and water sectors)
Additional analysis	Willingness to pay and tariff sustainability studies

Socioeconomic analysis

Stage	
Goal	Assess the benefit of the project for the society Quantify this benefit: monetization of quantifiable impacts
Approach	Standard methodology allowing projects comparisons
Results	Cost-Benefit Analysis (CBA) between two solutions (baseline and project) Distributive analysis: socioeconomic impacts on different stakeholder groups
Additional analysis	Sensitivity analysis Environmental impact assessment Carbon balance Social impact assessment

Socioeconomic analysis: CBA

- Baseline scenario:
  - Most probable scenario in the absence of the project at different time frames
  - Not “everything stays the same”, but “business as usual”
- Project scenario: includes the infrastructure, the service, tariffs, rival infrastructure…
- Assessment of the project’s main direct benefits and costs, for society as a whole, but also for different groups of stakeholders considered separately
- Discount rate: reflects the preference of the concerned stakeholder for short-term prospects
- Main indicators:
  - NPV
  - IRR

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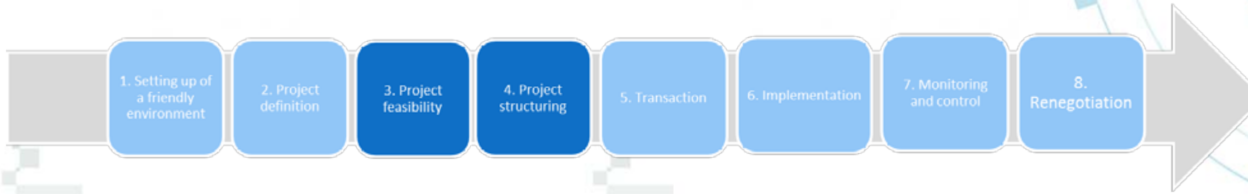
Socioeconomic analysis: quantified impacts

- Overall socioeconomic costs and benefits: sum of every actor's costs and benefits
  - An actor's benefit can be another actor's cost (ex: taxes) but not necessarily
  - The net sum is the net benefit (or cost) to society
- Different types of actors:
  - Economic actors directly related to the project: operator, infrastructure manager (transportation, water, energy sectors), institutions for which an economic record can be assessed
  - Other stakeholders affected by the project: users, state authorities (taxes), operators and infrastructure managers of rival services, other actors concerned by external effects (resettled population…)
- High importance of the distributive analysis
  - The results of the distributive analysis depend strongly on the implementation structure

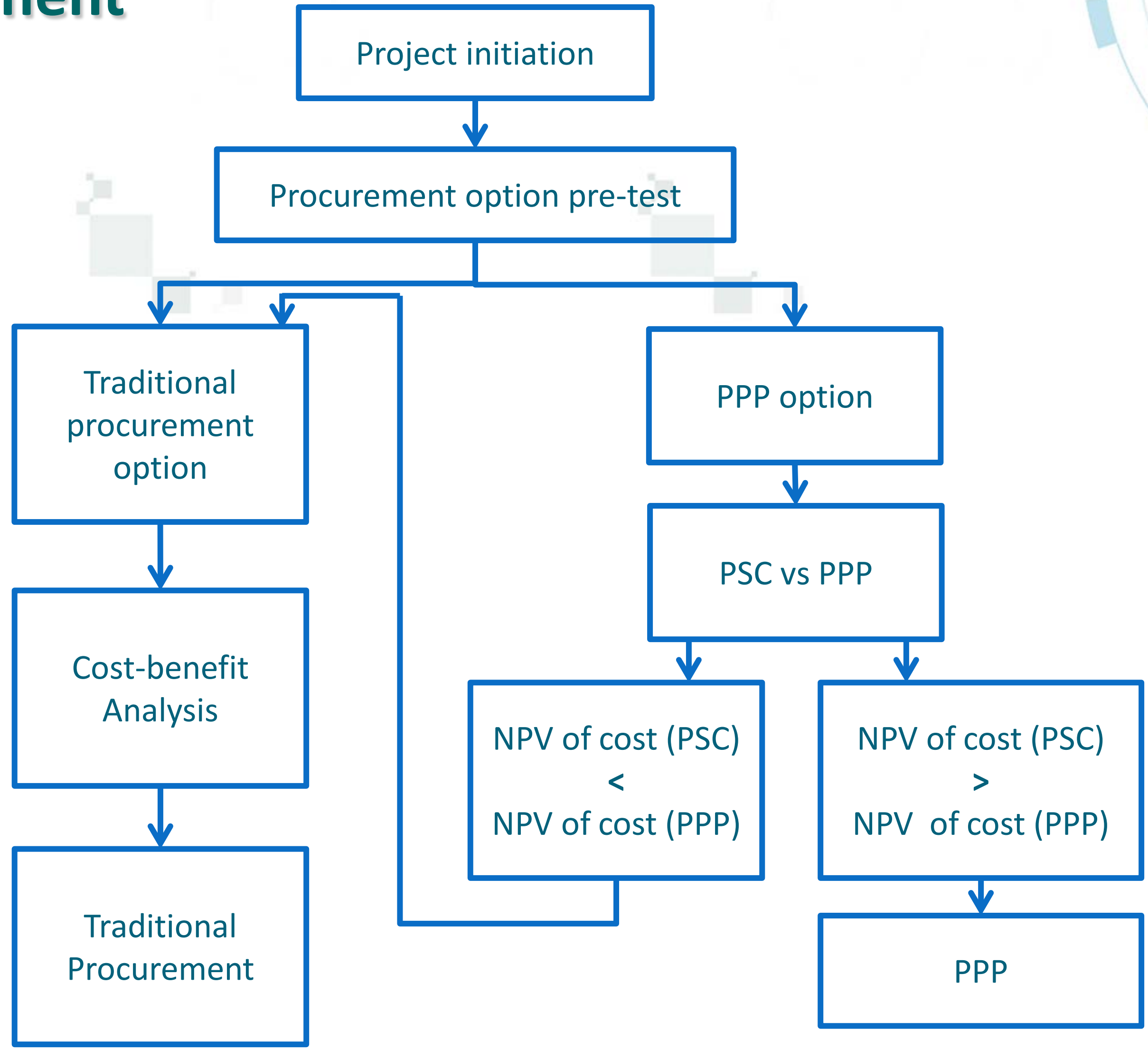
VFM assessment

Stage	
Goal	Tool allowing decision-making between traditional infrastructure procurement (TIP) and PPP: the decision should favor the method creating the most *value for money*
Approach	Ex-ante VFM: • Preliminary screening: use of Public Sector Comparator (PSC) • Comparison of risk-weighted present value of project costs and revenues of the same project implemented under PPP and TIP • PSC provides a benchmark for estimating VfM between alternative bids and between hypothetical public procurement Ex-post VFM: • Determines whether or not the project has actually delivered *value for money*
Results	Ex-ante VFM Ex-post VFM
Additional analysis	PSC CBA analysis

VFM assessment

- According to laws applicable in the country, VFM can be mandatory
- PSC shall include every costs and benefits of the project to the public: includes quantified costs of risks being retained by Governments (such as construction cost overruns, and technological obsolescence, in addition to CAPEX and OPEX)
- Such comparison should be made over the whole life of the contract and reflect all components of the contract

VFM assessment



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VFM assessment: option pre-test

- To be applied at the end of the definition step
- Eligibility criteria, for example:
  - RISK: Can risk be defined, identified and measured?
  - TRANSFERABILITY: Can the right type of risk be transferred?
  - SIZE: Is the risk large enough to incentivize towards VfM?
  - ENGAGEMENT: Is the private sector willing to accept the risk to be transferred?
  - COMPETITION: What is the competitive environment and how much competition is there for the market?
  - LIFE-TIME VALUE: How considerable are the benefits from combining the construction and the operating phases of the project in a single contract?
  - MEASURABILITY: Can the quality and quantity of service outputs to be delivered by the private sector be clearly measured, so as to deal with possible cost and quality trade-offs?
  - RADICALITY: How much innovation is required?
  - OPERABILITY: What is the availability in the public sector of the skills required to operate the asset?
  - RATE OF DETERIORATION: How rapidly and significantly does technology needed for the project change?

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PPP project life cycle

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8. Renegotiation

Preparation

Structuring and transaction

Implementation, monitoring, control and renegotiation

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3. Project structuring and transaction

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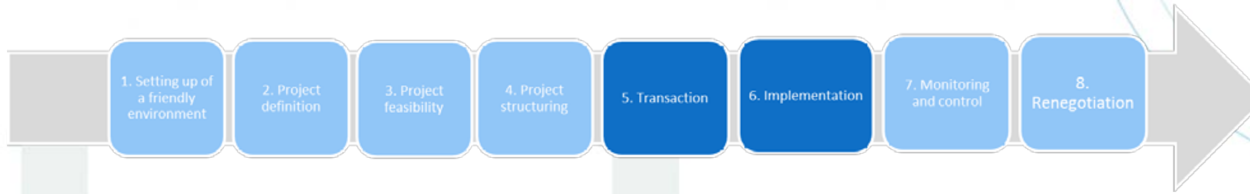
Project structuring

Goal	Creation of an appropriate technical and commercial project structure in order to optimize risk allocation and to present a coherent mix of finance from private and/or public funds
Activities	Public/Private options assessment Project finance assessment Legal and technical structuring
Issue concerning PPP	Risk allocation between public and private partner must guarantee project bankability and should limit risks for the public body at an acceptable cost
Tools	Risk allocation matrix Market survey (potential investors/operators)

Transaction

Goal	Select the best candidate/offer through a truly competitive process and close the transaction
Activities	"Roadshow" Selection of the private operator (preparation of tender documents, bid evaluation and contract negotiation) Financial closing (financing documents preparation and negotiation with lenders)
Issue concerning PPP	Process transparency: need to reduce the scope for negotiation The selection of the private operator should be on the basis of objective criteria (price or equivalent) and comparable bids The tender documents must include a complete or almost complete contract, so that the sharing of risks is identical in all bids This requires excellent preparation (long and costly)
Tools	Dialogue with candidates when elaborating tender documents and contracts

Upstream dialogue with candidates

Stage	
Goal	Allow candidates to submit their best offer. It depends on: • The system performance • The attractiveness of the partnership • The information's reliability and quality • The level of competition quality
Approach	Submission of draft tender documents (including draft contract) to candidates Declaration of candidates wishes and concerns Eventually, organization of an information meeting Compilation of discussions and public authority's decisions on changes Sending of revised tender documents and draft contract to candidates
Results	Limited risk on unsuccessful tender Greater competition and economically more attractive proposal Essential clauses of the contract beforehand negotiated and limited negotiation period with the contractor

Selection of the private operator

Dialogue with candidates

- Undertake a preliminary survey among private sector in order to test their interest for the project
- Conduct a dialogue with candidates on draft tender documents and contract
- Facilitate access to information (dataroom)
- Organize site visits and information meetings

Selection of the private operator

Selection criteria

- Technical offer: Pass or fail criteria
  - Conformity of the technical offer with the functional specifications
  - Compliance with technical standards
  - Technical, environmental and social safeguards
  - HR
- Financial offer
  - Price (for example: price per kWh of the electricity produced by a power plant)
  - Public NPV / subsidy level

Selection of the private operator

Selection process

- How to preserve innovation (technical, financial and contractual) in complex projects ?
- Two-step international bid process (with pre-qualification or post-qualification)
  - 1st step: technical proposal assessment with a minimum score to reach; includes comments on legal documents, technical requirements, etc.
  - Variant bids are encouraged
  - Revised bid documents issued
  - 2nd step: usual evaluation (technical pas or fail and financial evaluation)

Specific case of a selection of a developer (1)

- In some advanced PPP schemes (concession, BOT), the private operator can act as a “developer” from the feasibility stage of the project
- The private operator takes over the project development
  - Complementary studies: confirmation of the project feasibility
  - Reference shareholder of the forthcoming SPV and looks for other shareholders to match the funding
  - Building of the project financing
  - Concession/BOT contract negotiation
  - Recruitment of EPC/O&M contract holder
- The private operator benefits from development exclusivity during a certain lapse of time which can be transformed into a concession/BOT contract
- The state should be allowed to take back the project in case of default

Specific case of a selection of a developer (2)

- Standard criteria
  - References
  - Methodology and work plan
  - Staff qualification
  - Duration of the development phase
- Objective financial criteria
  - Internal rate of return (IRR)
  - Threshold of development costs
  - Control of EPC and O&M costs
  - Price (for example: price per kWh of the electricity produced by a power plant)
- The selection of the financial criterion depends on the project competitiveness and on the project progress stage
  - If the project isn't very competitive and not very advanced, the IRR is preferred
  - If the project is developed enough with few risks and uncertainties on costs, the price is preferred

3. Project structuring and transaction

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Risks allocation

Step	1. Setting up of a friendly environment → 2. Project definition → 3. Project feasibility → **4. Project structuring** → **5. Transaction** → 6. Implementation → 7. Monitoring and control → 8. Renegotiation
Objective	Allocate risks to the private or public partner the most able to bear it
Method	Use of risks matrix, quantification of likelihood, distribution law, etc. assessment of the risk criticality, mitigation options… The risk matrix should indicate: - Who bears the risk - The impacts of the risk } Criticality - The likelihood of occurrence } Criticality - How the risk is mitigated, and its residual criticality
Results	Allocated risks and responsibilities Key terms and conditions for the draft contract

Risks allocation

PUBLIC → PRIVATE

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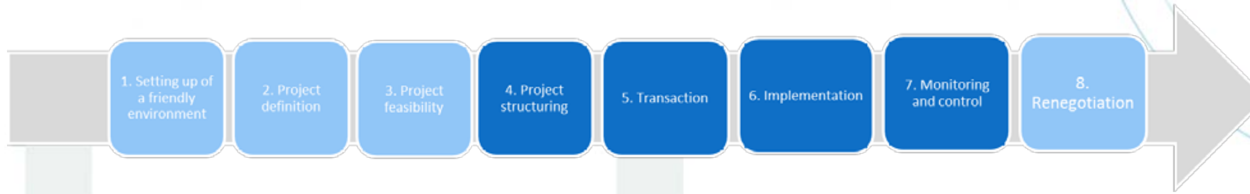
3. Project structuring and transaction

Financial modelling

Stage	
Goal	Comparing different PPP structuring options, their impact on the performance and on the tariff allowing financial equilibrium Analysis of structuring options, tariffs evolution, different investment financing options in order to achieve economic and financial balance of the project Support tariff regulation in the execution stage of the PPP
Approach	Operation module (demand, CAPEX and OPEX forecasts) Investment/financing module (investment plan and financing plan) Financial assets module (amortization scheme) Financial module (income statement, balance sheet, supply and use table Sensitivity module (tests on volumes, tariffs, expenses and investments)
Results	Financial profitability ratios, DSCR Step 4: Commercially viable, bankable project Step 5: Verification of bidders' proposals, negotiation Steps 6&7 (Bidder's audited model): Monitoring and renegotiation

Funding (project finance model)

- Type of financing with limited recourse: loans are granted directly to the SPV and are reimbursed with the project's cash flows.
- The debt is only guaranteed by the assets and the future revenue streams of the project
- Benefit for sponsors: their risk is strictly limited to the amount of equity
- Allows longer maturities, matching the life of the contract or the life of the assets (provided sources of funding with long maturities are available)
- This was initially used to keep the assets off-balance sheet, but under IFRS rules this is no longer always the case (consolidation is based on control of the SPV company)

Funding (project finance model)

Resources to fund the initial investment include:

- Equity
- Quasi-equity
- Debt:
  - Loan from DFIs-private sector window
  - Loan from export credit agencies (ECA)
  - Loans from commercial banks (market rate)
  - Financial markets (bond issue)
  - Sovereign-backed loans or on-lent sovereign loans from International Financial Institutions
- Potential subsidies from the State in order to ensure the financial balance of the project

Other private funding options

- Using the credit quality of the shareholders or of a specific asset

	Corporate finance	Project finance	Asset-based finance (leasing)
Cash flows used to reimburse the lenders	Project or shareholder flows	Project flows	Asset flows
Recourse to shareholders	Full	None or strictly limited	None to full
Termination value based on	Shareholder credit	Value of contractual project rights	Re-sale or re-use value of asset
Maturity	Short to medium	Medium to long	Medium to long

Financial structuring

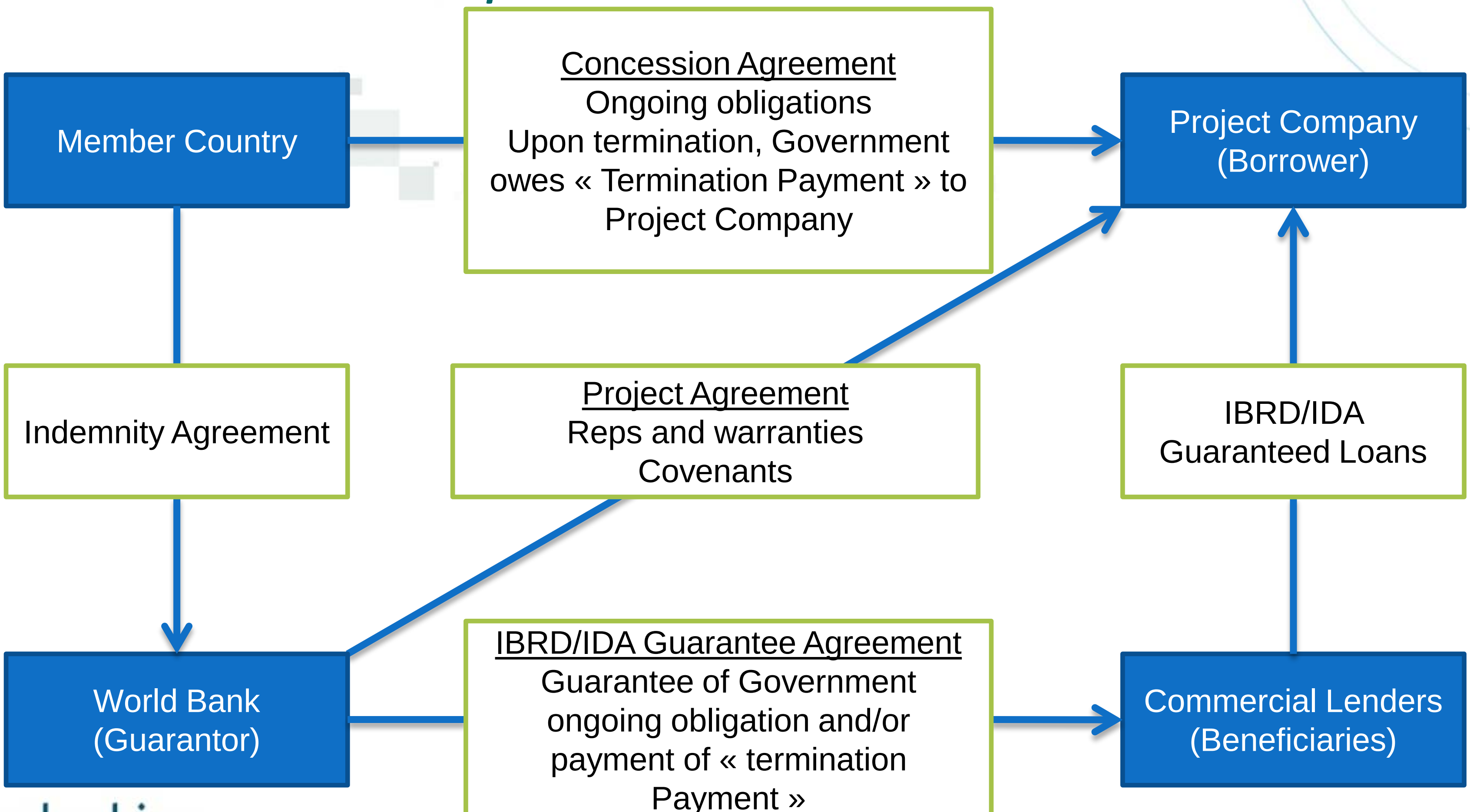
Guarantees

- Private shareholders and foreign commercial lenders seek to secure their investments in subscribing guarantees
- They raise the financing cost and can have an impact on the country's debt
- Political risk insurance (PRI)
  - For capital investors
  - Covers: non-convertibility of currency, expropriation, armed conflict, civil disorder, breach of contract, non respect of arbitral award
  - Example of a provider : MIGA
- Partial risk guarantee (PRG)
  - For private lenders (Commercial Banks)
  - Covers : non-respect by the Government of its contractual commitments, lack of decision by the Government, non-respect of a payment guarantee, non-respect of an arbitral judgement
  - Example of a provider : IDA, BAD

3. Project structuring and transaction

Financial structuring

Guarantees –PRG IDA example



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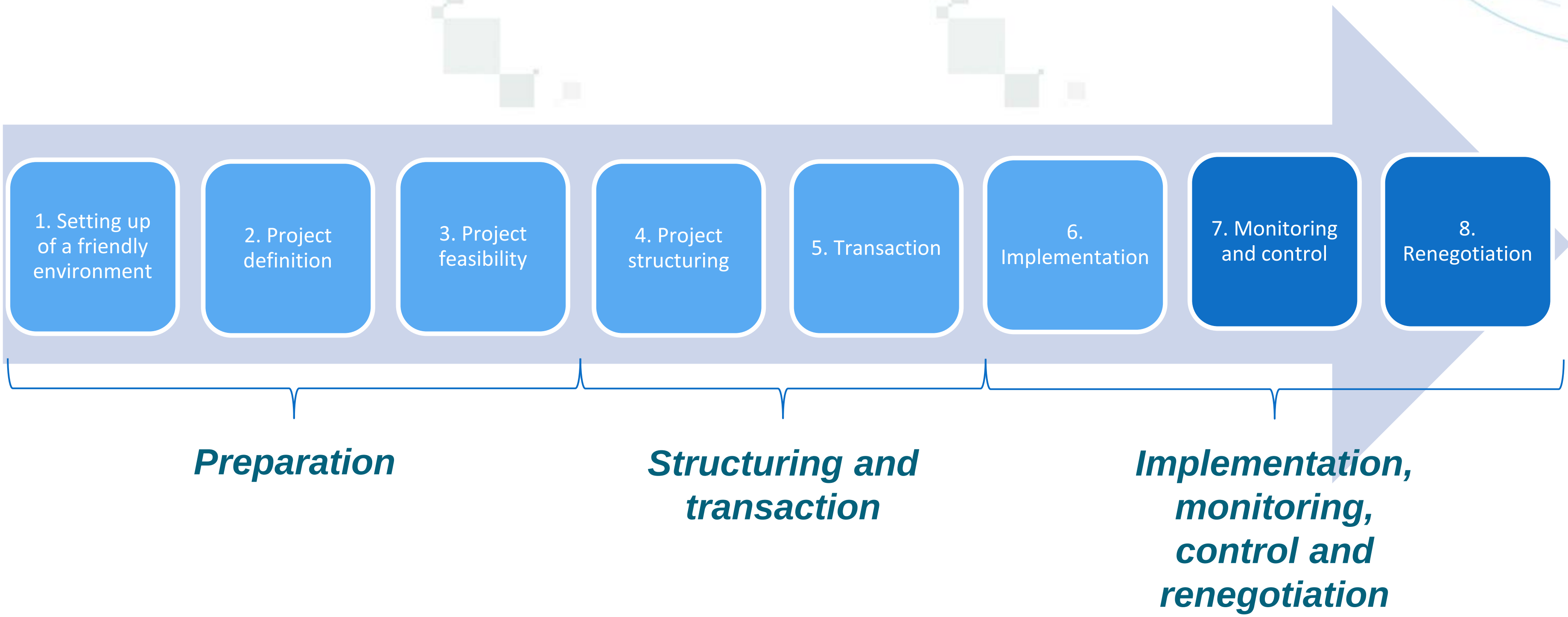
PPP project life cycle



4. Project implementation, monitoring, control and renegotiation

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    2. Tool

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Implementation, monitoring and control

Goal	Guarantee proper implementation of the contract throughout the life of its execution and, if needed, proceed with adjustments of goals initially set
Activities	Control compliance with contractual requirements by all parties and monitor the achievement of the objectives stated in the contract Conduct the required tariff adjustments Set up dispute resolution mechanisms
Issue concerning PPP	PPP projects require that every stakeholder fulfills its obligations The regulator must have the authority to conduct tariff adjustments and to update performance goals Every change in circumstances during the execution of the contracts can lead to renegotiation or the need for new financing
Tools	Implementation of an internal reporting system Recruitment of an independent external auditor Implementation of a regulation-phase financial model for tariff adjustments Ex-post VFM

Renegotiation of the contract

Goal	Adjust the contract in order take into account unforeseeable changes in circumstances
Activities	Contract design Contract adjustment
Issue concerning PPP	Ambivalent nature of renegotiations: • Opportunistic behaviors from either the public or the private party (*e.g.* aggressive bidding by the private operator who anticipates ex post renegotiation; avoiding budgetary mandates on the public side) ➢ Use of rigid contracts in order to limit opportunistic renegotiation occurrences • PPP contracts are inherently incomplete: they cannot predict precisely every contingency ➢ Use of flexible contracts allowing ex-post adjustments in order to facilitate such beneficial renegotiations ➢ Need for a strong institutional framework (*incl.* regulator)
Tools	Regulatory audit Independent adjudication

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4. Project implementation, monitoring, control and renegotiation

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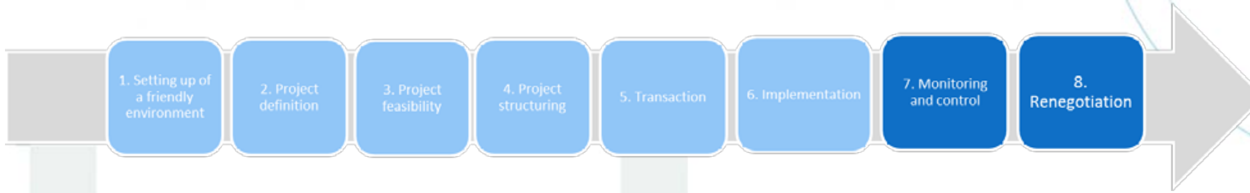
Regulatory audit

Stage	
Goal	In-depth analysis of the concessionaire's performance against its obligations Assessment of variations in the business plan
Approach	Different from an accounting audit On a defined regular basis (every 3/5 years preferred) Audit of every aspect of the concession: technical, managerial, commercial, financial and legal
Results	If needed, revision of certain clauses: normal adjustments for long life-span contracts which need to be flexible Renegotiation of the contract

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Thank you for your attention

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