



Department of Electronics & Information Technology  
Ministry of communications Information Technology  
Government of India

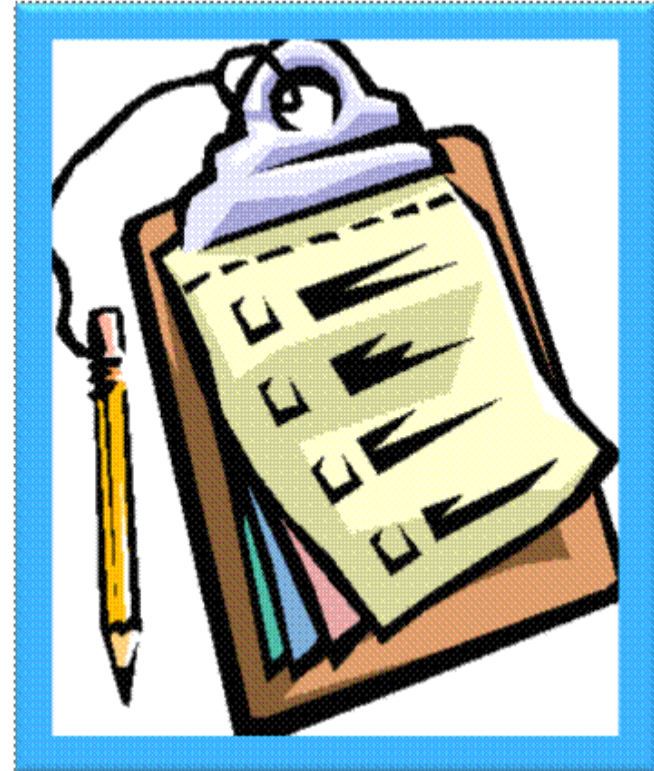


# Business Models for Implementation of e-Governance

# Agenda

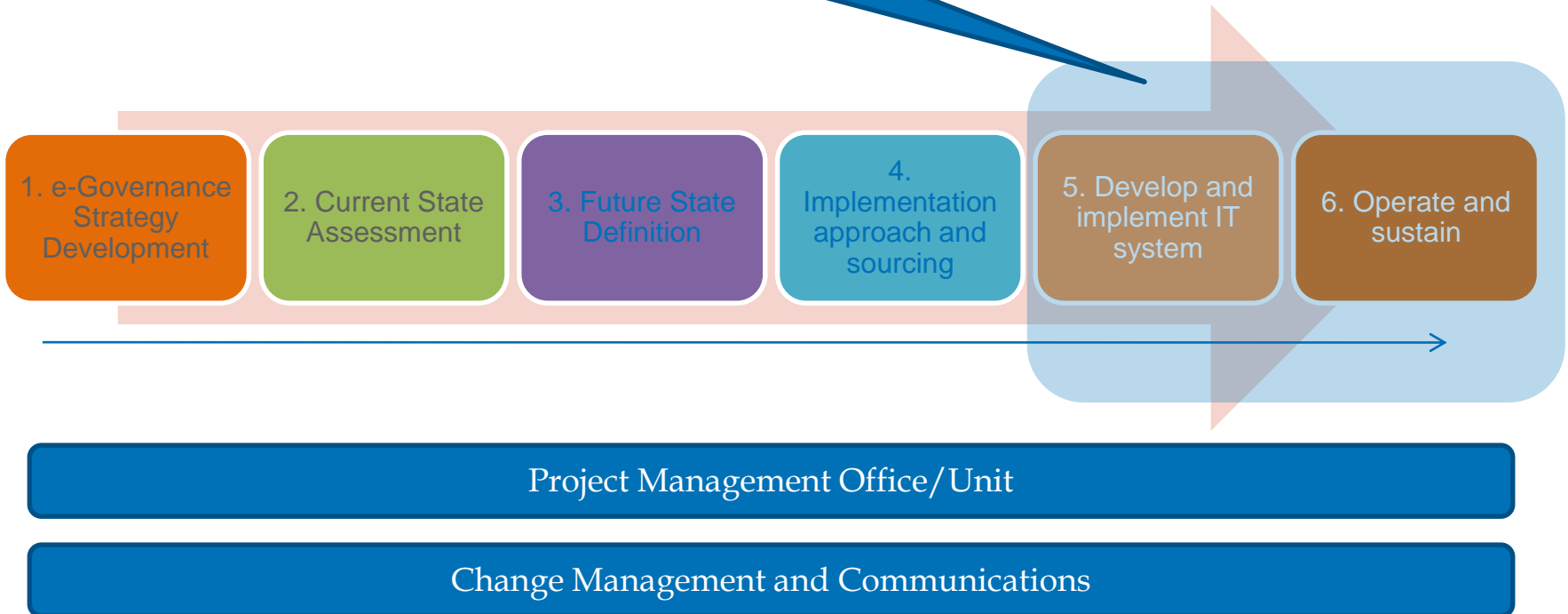
By the end of the session,  
you will be able to:

- ❑ Identify the cost components of an e-Governance Project.
- ❑ Identify the Business Models for e-Governance implementation.
- ❑ Discuss the strategic considerations for evaluation of Business Models.



# e-Governance Project Lifecycle

IT systems are created/developed, implemented and managed here. Majority of investments happen in these phases of lifecycle.



# e-Governance Project Lifecycle

Planning for investment and procurement is performed here....CRITICAL PHASE WHICH DETERMINES SUCCESS AND IMPACT

Needs significant focus and attention at this point to safeguard the project success.....thus, project business model plays a crucial role in any project....

1. e-Governance Strategy Development

2. Current State Assessment

3. Future State Definition

4. Implementation approach and sourcing

5. Develop and implement IT system

6. Operate and sustain

Project Management Office/Unit

Change Management and Communications

# Costs in e-Governance Projects – Consultancy Services

## Project Conceptualisation and Design:

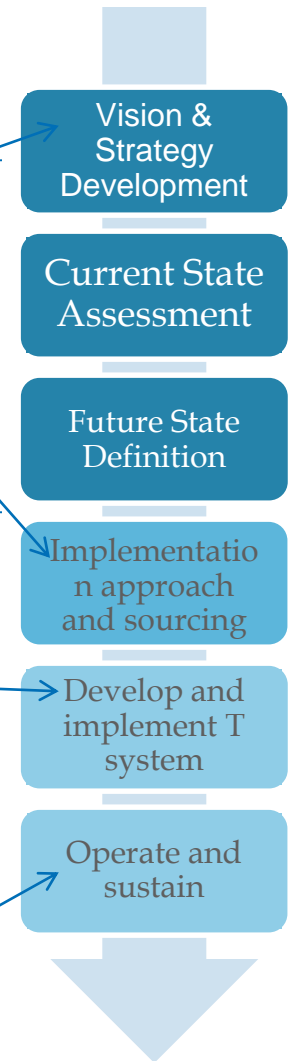
1. E-Governance Vision and Strategy Development
2. Process Study, Process Reengineering
3. Requirements Definition and System Design
4. Development Change Management, Capacity Building and Communications Strategy
5. Development of Business Model
6. RFP Development and Bid Process Management Support

## Systems Development/IT Infrastructure creation Phase:

1. Project and Programme Management
2. Software and Data Quality Assurance
3. Infrastructure Quality Assurance
4. Capacity Building, Change Management and Communications

## Project Operations Phase:

1. SLA Audits
2. Monitoring and Evaluation
3. Capacity Building, Change Management and Communications.



**Project Phases**

# Costs in e-Governance Projects – Software Design, Development and Maintenance

## One time costs:

### COTS Software:

1. System Software for Application Server, Database Server, Integration Server
2. Application Software for ERPs solutions
3. Workflow automation, Documentation Management Systems..

### Services Cost:

1. Requirements study and finalization
2. Software Design and Development
3. ERP Customisation and configuration
4. Project Documentation
5. Data digitization and migration

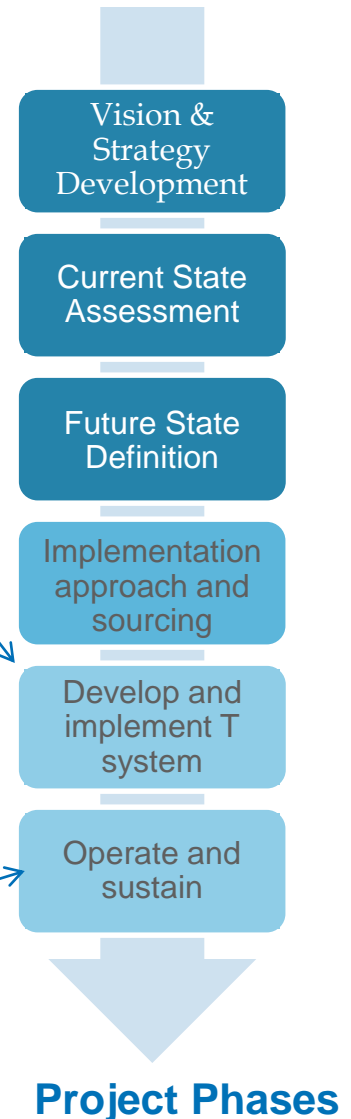
## Recurring Costs:

### COTS Software cost:

1. AMC for software licenses

### Services Cost (recurring):

1. Training and Capacity Building
2. Software maintenance and support, Software change management, Project documentation..



# Costs in e-Governance Projects – IT Infrastructure Creation and Maintenance

## One time costs..

### Data Center and Network Infrastructure (IT and Non-IT):

1. Data centre site cost, preparation cost, supporting facilities (power, cooling, physical security, fire and environmental controls)
2. Computing infrastructure (servers)
3. Storage Infrastructure (SAN Switches, SAN storage, tape library, backup solutions)
4. LAN and WAN (Switches, Routers, Modems, VPN)
5. Security (Firewall, IPS/IDS, Antivirus, IDM..)
6. Cabling
7. Insurance

### End User Computing Infrastructure IT Infrastructure:

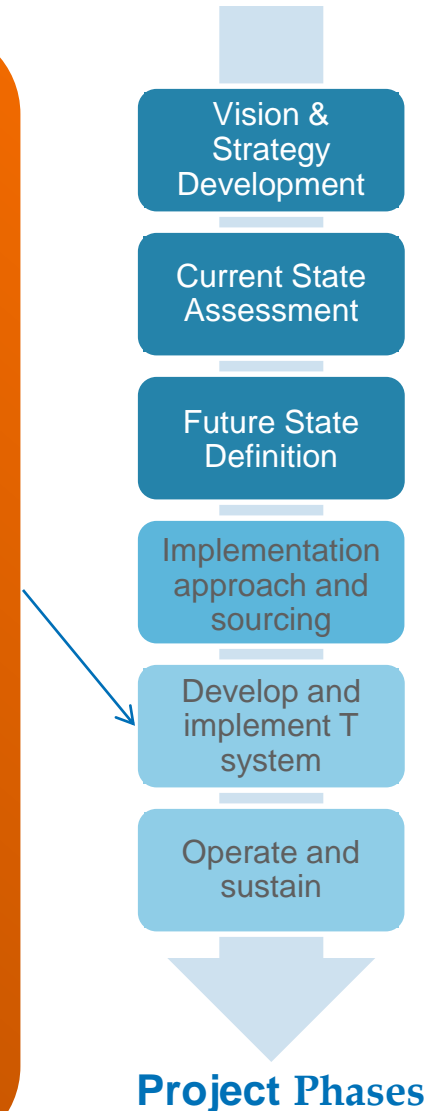
1. PCs ,Printers, Scanners, LAN, UPS, generators, LAN and power cabling

### System Software:

1. Network/Enterprise Management Software, Storage management solution, Server Operating Systems, Antivirus gateway and end client software, email suite

### Services cost:

1. Requirements assessment, solution design, documentation
2. Installation and configuration
3. Testing and go-live

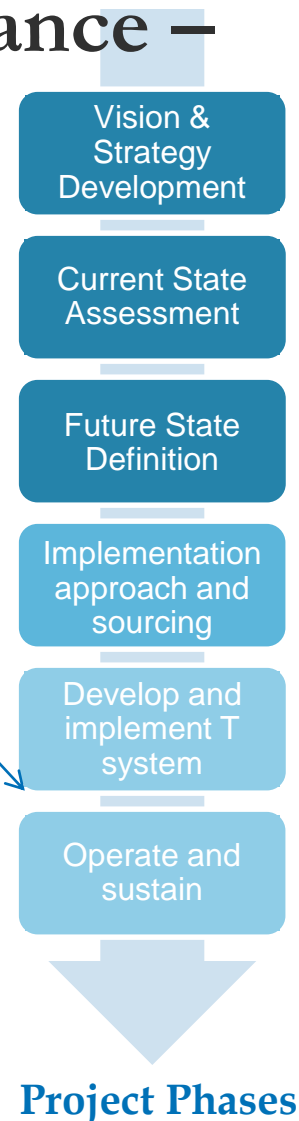


# Costs in e-Governance Projects – IT Infrastructure Creation and Maintenance – Contd.

## Recurring costs:

### Data Center and Network Infrastructure (IT and Non-IT):

1. AMC/ Warranty for system software and hardware
2. Facilities Management Services
3. IT Infrastructure monitoring and management services
4. Insurance
5. Consumables
6. Leased lines/ISDN – connectivity charges
7. Power, fuel





# Revenues in Government Projects

- ❖ Various projects undertaken by the government have significant revenue generation potential.
- ❖ Revenue referred here is different from the taxes and duties expected to be paid by the citizen under the constitution.
- ❖ These revenue sources are new money to the government.

# Illustrative Revenue Sources

## ❖ e-Governance Projects:

- Portal registration/subscription charges
- Transaction fees for the online services
- Advertising revenue from the portal
- Advertising revenues from service center
- Fees for delivery of B2C and B2G services through common service centers
- Convenience fees – enhancement in the current fees/charges

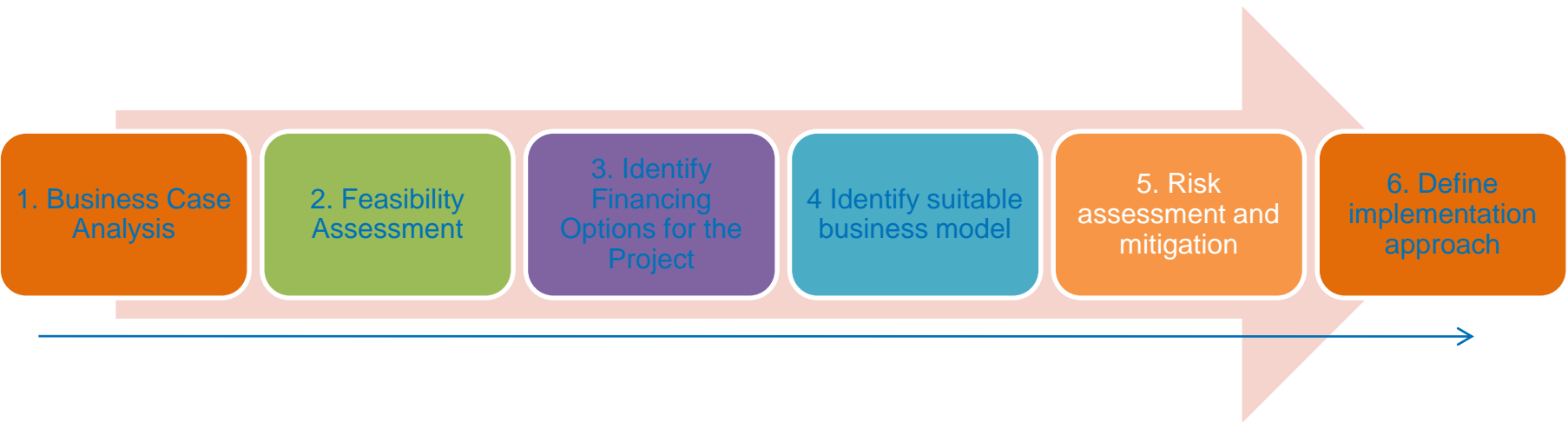
## ❖ Non-e-Gov Projects:

- ❖ Toll charges – Roads
- ❖ Development charges – Airports

# Understanding Business Model in Simple Terms

- ❖ A Business model for a project should address/answer the following :
- ❖ How much does it cost to create and maintain the project?
- ❖ Is the project feasible?
- ❖ Who is funding for the Project?
- ❖ Who is developing or implementing the project?
- ❖ Who is paying for the project?
- ❖ What are payment terms?
- ❖ Roles and responsibilities of the parties concerned with the business model
- ❖ Duration of the contract ..etc

# Approach for Development of a Business Model

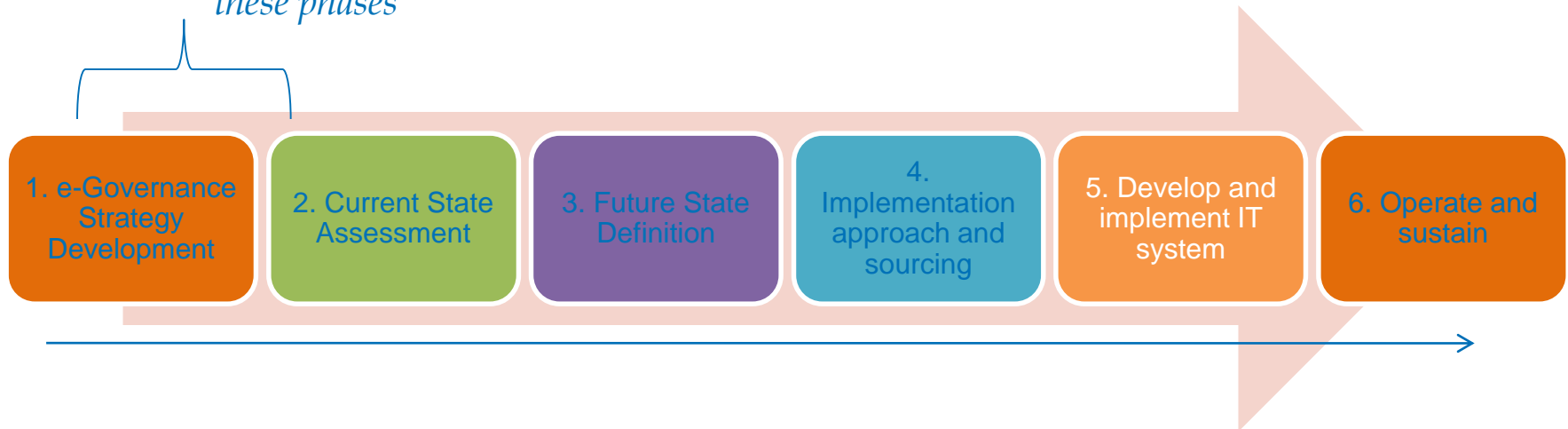


# Business Case Analysis (BCA)

- ❖ BCA is aimed to:
- ❖ Assess the needs of the stakeholder,
- ❖ Assess the need for the project,
- ❖ Identify the project objectives and project benefits,
- ❖ To define the outputs and outcomes of the project,
- ❖ Assess the learnings from similar implementations in the country and globally,
- ❖ Define the requirements and scope of the project.
- ❖ In summary, to establish the business case for undertaking the project.

# When is BCA performed in e-Gov. Project Lifecycle

*Business Case Establishment and project definition happens during these phases*



# Feasibility Assessment

- ❖ Feasibility Assessment is carried out in several ways:
- ❖ Justification for the project – is addressed through Business Case Analysis.
- ❖ Technical feasibility of the project – addressed through solution evaluation and benchmarking with domestic and global experiences in similar context.
- ❖ Financial feasibility:
  - Is the planned budget sufficient for the expected investments needed for the project (creation and maintenance) Or Can the project be undertaken within the available budgets?
  - Are project budget, expected funding (including external funding sources) and revenues (services charges, transaction fees..) sufficient for project creation and maintenance?
  - Is there sufficient market size for the private partner?
  - Will this project be profitable for the private partners and will there be sufficient interest from private partners in the project?
  - What should be viability gap funding to address the profit requirements of the private partners to achieve the minimum/standard Internal Rate of Return.

# Feasibility Assessment

## ❖ Financial feasibility

- In most e-Governance projects financial feasibility assessment is not performed
- The project costs are estimated and necessary budgetary provisions are made based on the project cost or project features are modified to suit the budgeted project cost
- Financial feasibility assessment plays key role in
  - When a project is expected to provide returns to the government or the private implementation partner through user/service charges and
  - The investments and profits are expected to be realized through the services delivered through the created project etc.



# Approach for Feasibility Assessment 1

- Arrive at a benchmark cost
- Analyse the revenue sources
- Calculate the NPV and IRR for the project
- The NPV of the appropriate model should be less than budget available for the department
- If not, NPV is greater than the allocated budget:
  - Examine the possibility of bringing down the specifications
  - Examine revising the SLAs
  - Seek more funds

# Approach for Feasibility Assessment 2

- Based on the estimated IRR:
  - Assess whether the project is financially feasible.
  - Assess the concessions, subsidies, gap funding, budgetary support or alternate funding resources needed for ensuring the private sector participation and project sustainability.
  - Identify the controls to ensure that unreasonably high returns are not accrued to the private partner – pass on the benefits to the government or end users (citizens).

# Understanding Project Financing Options

## ❖ Project Finance Options:

- Public Finance
- Private Finance
- Project Finance

# Public Finance

- ❖ Government sponsors the project through:
  - Budgetary sources or
  - Loans
- ❖ Project is implemented through a execution contract with the private partner.
- ❖ Execution contract refers to the contract with the private partner stating:
  - Scope of services
  - Commercials quoted during the bidding/vendor selection processes
  - Payment terms
  - Implementation/delivery schedule for the project
  - SLA's
  - And other terms and conditions of the project

# Public Finance (Contd.)

- ❖ Where applicable, service charges are collected from the users by the government:
  - Government is in the business of public service
  - Not in all e-Government projects, the service charges can be collected by the government
  - Government earns revenue from the service charges, where applicable
- ❖ This is a conventional process of project implementations by the government
- ❖ Payments are made to the private partner based on the quality of the services delivered in the project

# Private Finance

- ❖ Two important terms:
  - Concession : The agreement between government and the private partner stipulating rights and responsibilities for the use of public assets.
  - Concessionaire : The private partner with whom the government enters into concession agreement.
- ❖ The project is financed by a private body through equity and debt.
- ❖ The revenue is through the user charges and/ or annuity payments by the government.
- ❖ Not suitable for capital Intensive projects as private organization do not like to strain its balance sheet through debt.

# Project Finance (Contd.)

- ❖ Project assets and its potential future earnings finance the project.
- ❖ Generally a Special Purpose Vehicle is created which is legally independent.
- ❖ Debt financing is the primary source of funding.
- ❖ Risks are shared by participation of multiple complementing partners in the SPV.
- ❖ The concession agreement is with the SPV or the Project company so formed.

# Examples of Project Finance

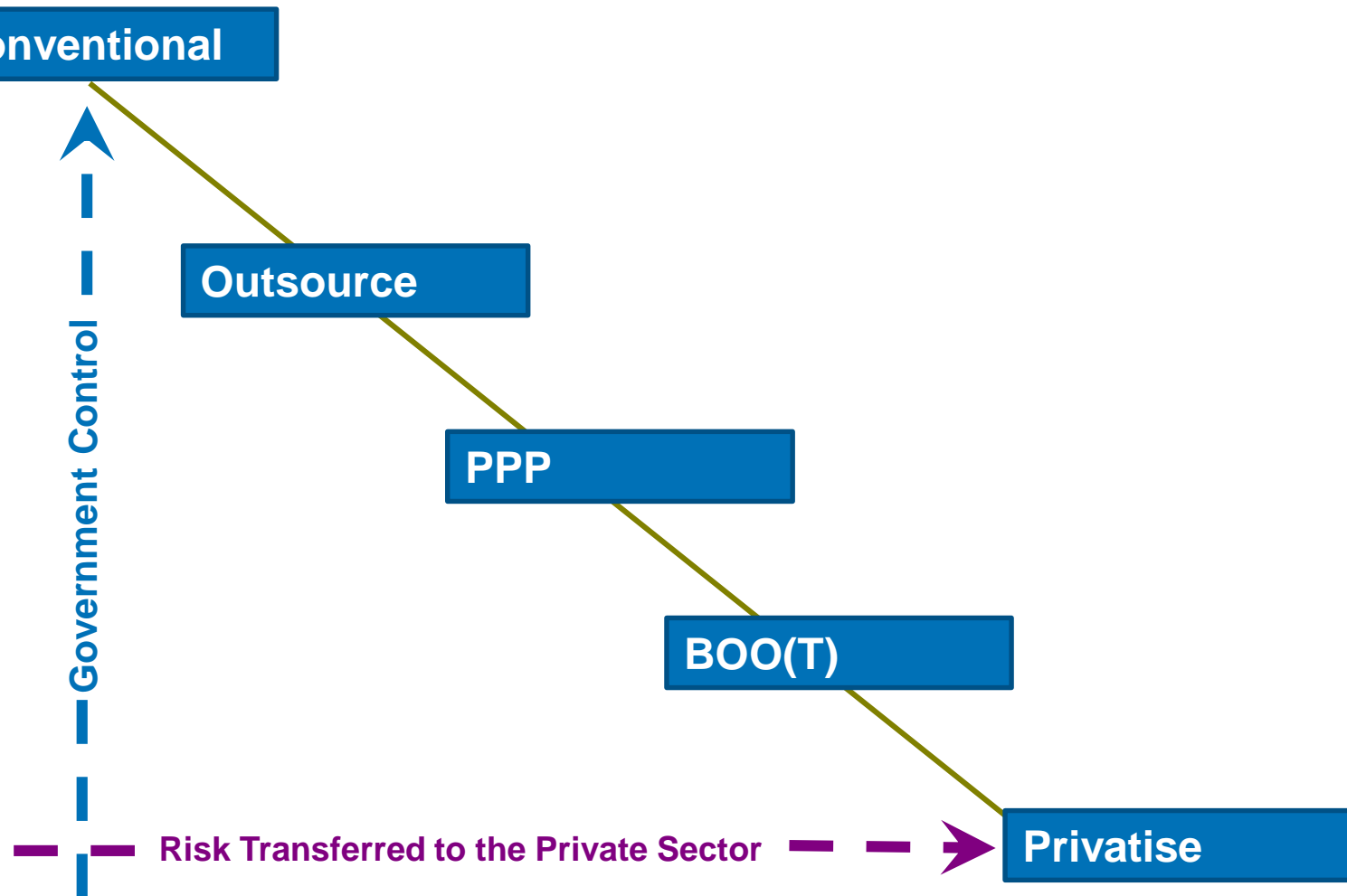
- Large Infrastructure projects
  - » Roads
  - » Power Projects
  - » Airports etc.



# Project Finance in e-Governance

- ❖ Project Finance in e governance is relevant for:
  - » Turn key projects of high investment.
  - » Projects with regular stream of revenue.
  - » Projects which require participation of multiple partners with complementing capabilities.

# Various Models for Private Sector Participation



# Various Models for Private Sector Participation

Conventional



Outsource

PPP

BOO(T)

Privatise

- Government maintains complete control on the project creation, execution and assets
- Government funds the project investments for the capital and operational expenditure during the project tenure
- Government creates/develops the project
- Government Maintains the project including operations and maintenance of the project
- 100% of the project risk and returns are accrued to government only

# Various Models for Private Sector Participation

Conventional

Outsource

PPP

BOO(T)

Privatise

- Government maintains complete control on the project creation, execution and assets.
- Government funds the project investments for the capital and operational expenditure during the project tenure.
- Government leverages private sector strengths for creation of the project or maintenance of the project or both.
- Risks are allocated to the government and private sector based on the responsibilities (e.g. government will have the risk of project demand, the private sector will carry the risk of performance and quality of the services delivered to the government).

# Various Models for Private Sector Participation

Conventional

Outsource

PPP

BOO(T)

Privatise

- The government does not need to own infrastructure to deliver services.
- The government retains political responsibility/accountability to deliver services for the community.
- The government defines the timeframe in which the services must be delivered; and the quality and quantity of services needed.
- The private sector delivers the services and finances or part finances the project.
- Government provides the concessions for the private party, if needed.
- Private sector remunerated through services charges/transaction fees/gap funding.
- Risks are allocated between the public and private sectors.
- Various flavors of PPP exist with varying roles and responsibilities of public and private sectors.

# Various Models for Private Sector Participation

Conventional

Outsource

PPP

**BOO(T)**

Privatise

- The government retains political responsibility/accountability to deliver services for the community.
- The government defines the timeframe in which the services must be delivered; and the quality and quantity of services needed.
- Private entity receives concession from government to finance, design, construct, implement and operate the project.
- Private sector is remunerated through services charges/transaction fees/gap funding.
- The assets of the project are transferred to the government at the end of the concession period.

# Various Models for Private Sector Participation

Conventional

Outsource

PPP

BOO(T)

Privatise

- The responsibility for delivery of services is completely transferred to the private sector
- The ownership of the project or a business is completely transferred to the private sector
- Government only regulates the functioning of the private sector

# Typical Project Risks

- ❑ Land acquisition, planning and permissions
- ❑ Design
- ❑ Construction
- ❑ Commissioning
- ❑ Latent defects
- ❑ Operating performance
- ❑ Operating and maintenance costs
- ❑ Third party revenue
- ❑ Demand (volume)
- ❑ Residual value
- ❑ Inflation
- ❑ Regulatory
- ❑ Taxation
- ❑ Force Majeure
- ❑ Changes in requirement



# Risk Allocation

- Key considerations for risk allocation:
  - Who is best placed to reduce the probability of risk occurring?
  - Who is best placed to manage the cost of risk if it does occur?

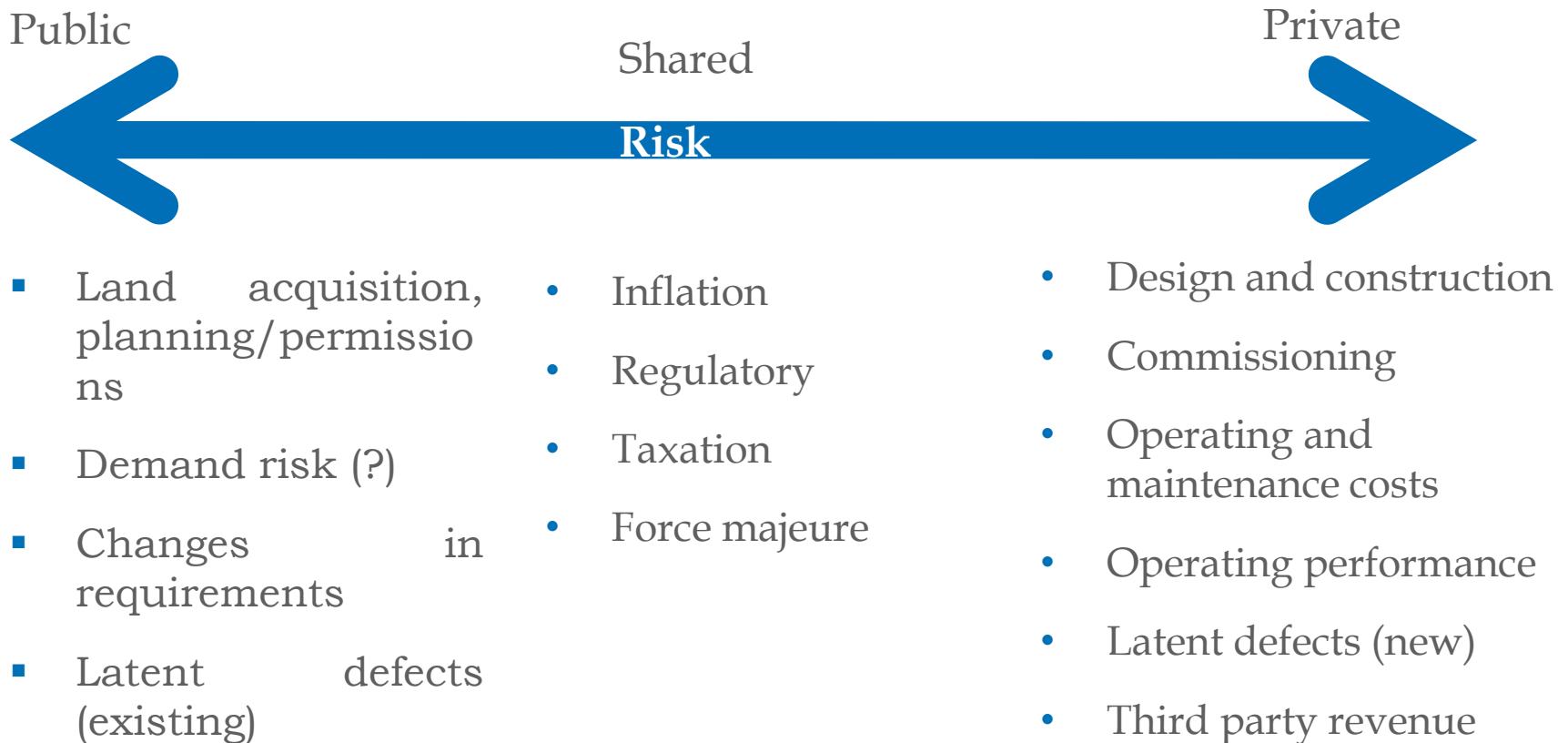
Minimizing the expected cost of risk is crucial for maximizing returns

Risks should be allocated to the party best able to understand and manage them..



# Risk Allocation

Risks should be allocated to the party best able to understand and manage them



# Implementation Strategy

- ❖ Project management structure
  - » Steering Committee structure
  - » Project Management structure
- ❖ Identify the project phases
  - » Project inception
  - » Requirement definition
  - » Design
  - » Implementation
  - » Stabilization
  - » Support
- ❖ Identify project milestones in each of the phases
- ❖ Define the deliverables for each of the mile stones

# Implementation Strategy

- ❖ Payment structure
  - Payment linked to mile stones
- ❖ Budget provisioning
  - Financing model
  - Year wise allocation of funds
- ❖ Resource deployment
  - Capacity building
  - New recruitments
- ❖ Transition from private sector to department

# Business Models for e-Governance

## Applications - Illustrative Examples

### ❖ Option 1: Government Owned Applications

- State Government or Individual Department will own the application software designed and developed for its business needs
- Entire investment in software design, development, implementation and maintenance is incurred by the government and private entity is engaged to deliver these services through a services contract
- Service provider is paid based on the quality and performance of the service

### Pros

- Government has complete control on the application software, its data.
- Can have rights for usage and changes to the software lifetime.
- Government can share or provide software services at cost to other government entities in similar business (e.g. e-procurement) – for project cost recovery and sustenance.

### Cons

- High cost of ownership as entire investments are needed from govt.
- Needs significant technical capabilities to ensure that department is getting right product or need to depend on third parties for QA.
- Risk of software adoption and success is completely with the government.
- Needs strong management capabilities in managing the delivery and services of vendor.

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