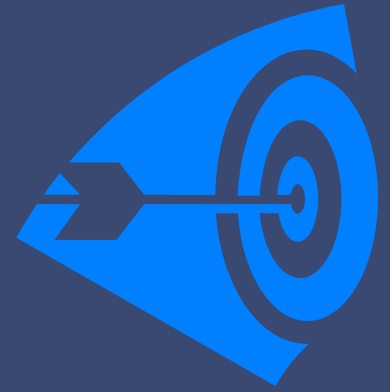


Course: Business models and Public Private Partnership (PPP) for e-Governance Project

Day 1

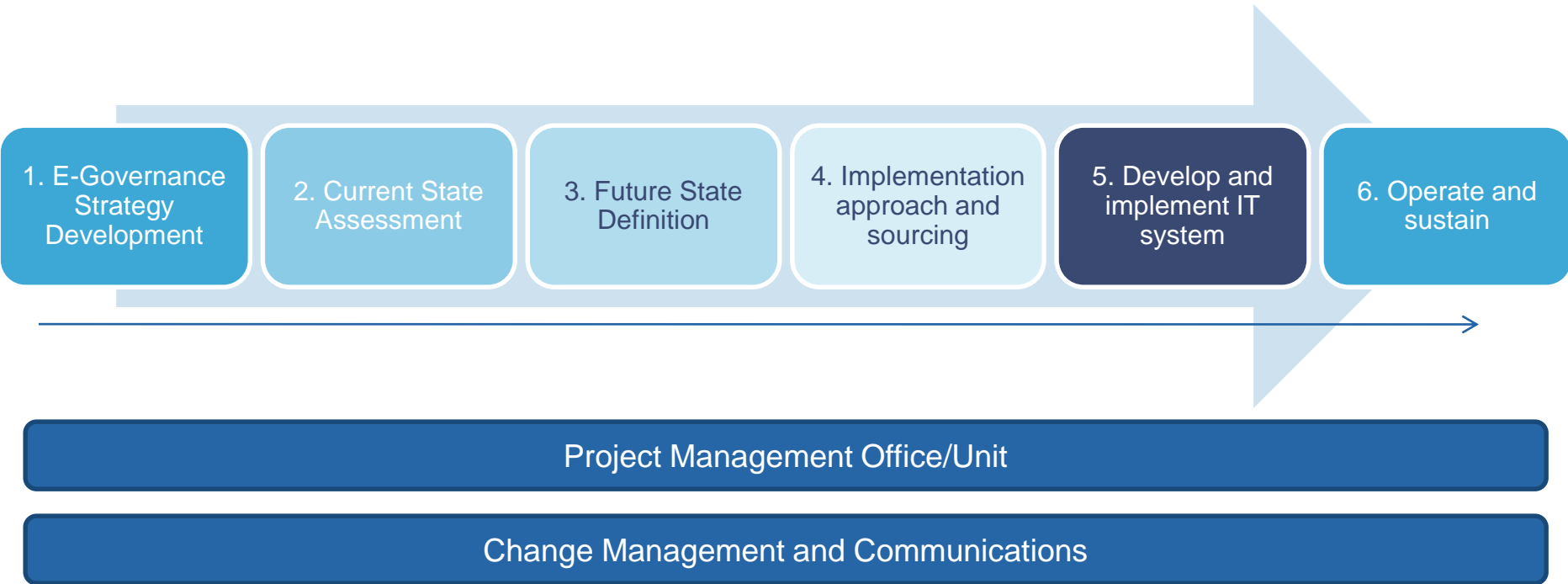
Session 2: Introduction to e-Governance lifecycle and project cost components

Agenda



- Introduction to categories of e-Governance projects and their features
- Introduction to e-Governance project lifecycle
- Introduction to costs and investments needed in e-Governance projects
- Approach for preparation of project cost estimates

E-Governance Project Lifecycle



E-Governance Project Lifecycle

E-Governance
Strategy
Development

Current State
Assessment

Future State
Definition

Implementation
approach and
sourcing

Develop and
implement T
system

Operate and
sustain

E-Governance Strategy Development

1. Needs Assessment
2. Define clear vision & objectives
3. Prioritization of services and projects
4. Incorporate domestic and global learnings
5. Identify institutional structures & capacities for implementation
6. Define funding requirements
7. Define monitoring and evaluation approach...

E-Governance Project Lifecycle

E-Governance
Strategy
Development

Current State
Assessment

Future State
Definition

Implementation
approach and
sourcing

Develop and
implement T
system

Operate and
sustain

Current State Assessment

1. Critical assessment of current business processes and pain areas
2. Best practices in similar environments
3. Assess legal framework and current limitations
4. Assess current ICT systems and their ability to support future plans
5. Assessment of current capacities at all levels and their preparedness for e-governance..

E-Governance Project Lifecycle

E-Governance
Strategy
Development

Current State
Assessment

Future State
Definition

Implementation
approach and
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Develop and
implement T
system

Operate and
sustain

Future State Definition

1. Process reengineering and to –be process definition
2. Identify IT enablement opportunities and requirements
3. Define changes to the legal and regulatory environment
4. Develop People change and capacity building plan
5. Develop project awareness and communication requirements...

E-Governance Project Lifecycle

E-Governance
Strategy
Development

Current State
Assessment

Future State
Definition

Implementation
approach and
sourcing

Develop and
implement T
system

Operate and
sustain

Implementation approach and sourcing

1. Define implementation approach and phasing plan (functional and geographic)
2. Assess detailed funding requirements and business model
3. Develop vendor evaluation and selection criteria
4. Develop KPIs and performance levels for services and systems
5. Develop RFP
6. Bid evaluation and vendor selection

E-Governance Project Lifecycle

E-Governance
Strategy
Development

Current State
Assessment

Future State
Definition

Implementation
approach and
sourcing

Develop and
implement T
system

Operate and
sustain

Develop and implement T system

1. Definition of detailed functional and technical requirements
2. System design and development
3. Software quality assurance, acceptance testing and auditing
4. Training and capacity building
5. Change management and project communications
6. Project documentation
7. Project go-live

E-Governance Project Lifecycle

E-Governance
Strategy
Development

Current State
Assessment

Future State
Definition

Implementation
approach and
sourcing

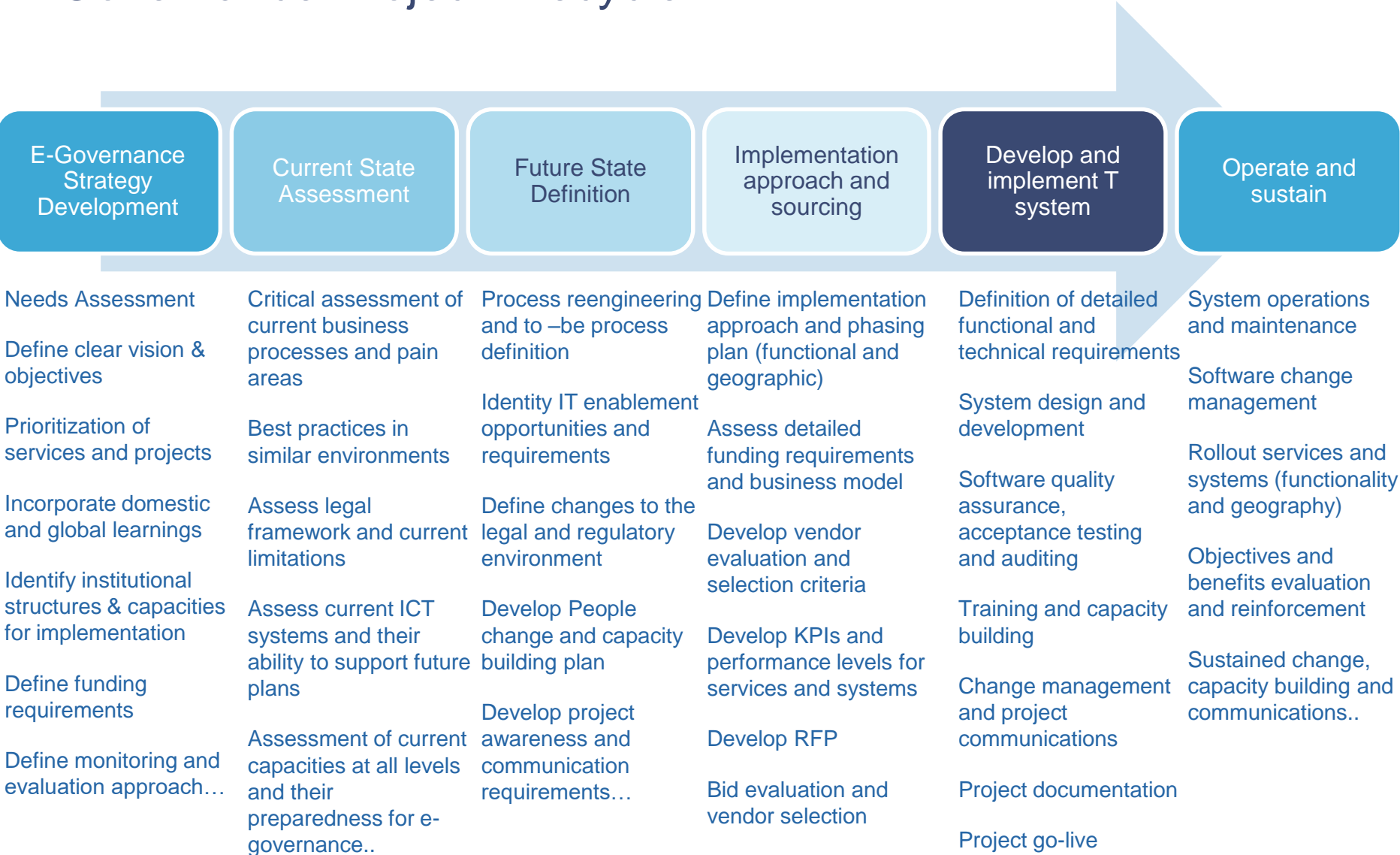
Develop and
implement T
system

Operate and
sustain

Operate and sustain

1. System operations and maintenance
2. Software change management
3. Rollout services and systems (functionality and geography)
4. Objectives and benefits evaluation and reinforcement
5. Sustained change, capacity building and communications..

E-Governance Project Lifecycle



E-Governance Project Lifecycle

Consulting are spread across all the phases of lifecycle...details in later slides..

1. E-Governance Strategy Development

2. Current State Assessment

3. Future State Definition

4. Implementation approach and sourcing

5. Develop and implement IT system

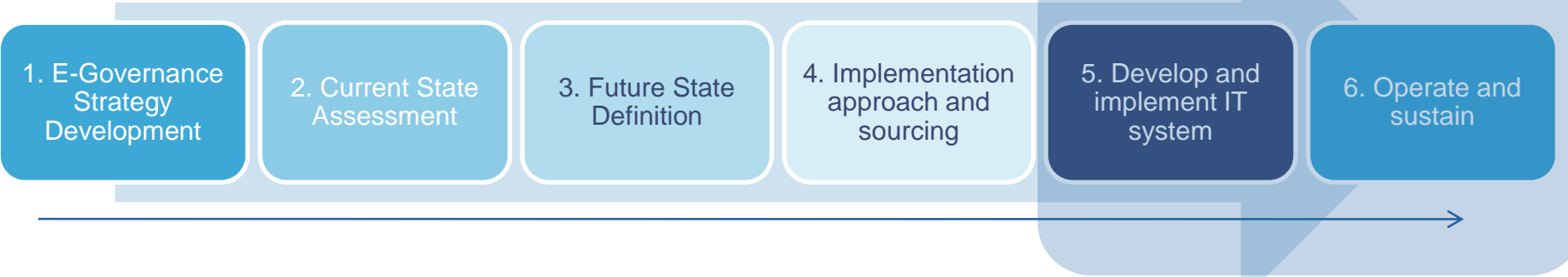
6. Operate and sustain

Project Management Office/Unit

Change Management and Communications

E-Governance Project Lifecycle

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



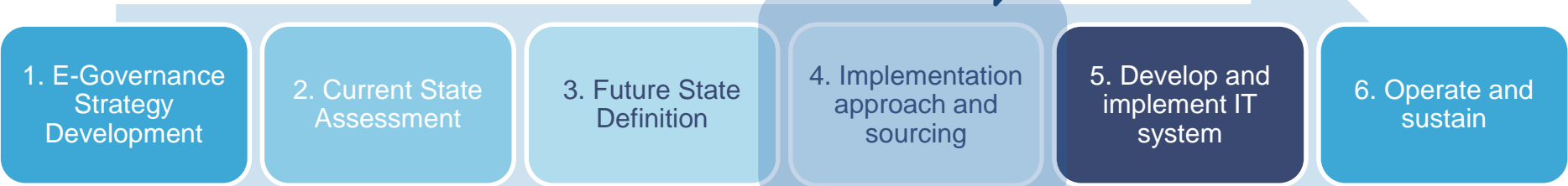
Project Management Office/Unit

Change Management and Communications

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....



Project Management Office/Unit

Change Management and Communications

E-Governance Project Lifecycle

For determining the right business model, it is important to understand the project costs right...across the project lifecycle...

Let us understand the project costs/investments needed in e-Governance Projects....

Categories of e-Governance Projects

1. Consultancy Services

2. Software Design, Development and Maintenance

3. IT Infrastructure creation and maintenance

4. Citizen Service Delivery

5. Turnkey Projects combining all the services above...

Categories of e-Governance Projects

Consultancy Services

Software Design,
Development and
Maintenance

IT Infrastructure
creation and
maintenance

Citizen Service
Delivery

Turnkey Project

Consultancy Services

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

Categories of e-Governance Projects

Consultancy Services

Software Design,
Development and
Maintenance

IT Infrastructure
creation and
maintenance

Citizen Service
Delivery

Turnkey Project

Consultancy Services (contd..)

8. Project and Programme Management
9. Third Party Audits and SLA Monitoring
10. Monitoring and Evaluation

Categories of e-Governance Projects

Consultancy Services

Software Design,
Development and
Maintenance

IT Infrastructure
creation and
maintenance

Citizen Service
Delivery

Turnkey Project

Software Design, Development and Maintenance

1. Definition of detailed functional and technical requirements
2. System design and development
3. Procurement and supply of software (system software, ERP..)
4. Software Testing
5. Data Digitization
6. Training and capacity building
7. Project documentation
8. Software Operations and Maintenance
9. System Software AMC

Software Project Categories:

1. COTS/ERP Implementations
2. Bespoke/Custom Application Software Development

Categories of e-Governance Projects

Consultancy Services

Software Design,
Development and
Maintenance

IT Infrastructure
creation and
maintenance

Citizen Service
Delivery

Turnkey Project

IT Infrastructure creation and maintenance

1. IT Infrastructure Procurement and Supply
2. Installation, Configuration of IT Infrastructure
3. Go-Live of IT Infrastructure solution
4. IT Infrastructure Monitoring
5. IT Infrastructure Operations and Management

IT Infrastructure Categories:

1. Data Centre Infrastructure (e.g. SDC)
2. Network Infrastructure (e.g. SWAN)
3. Client side infrastructure (PCs, printers, LAN..)

Categories of e-Governance Projects

Consultancy Services

Software Design,
Development and
Maintenance

IT Infrastructure
creation and
maintenance

Citizen Service
Delivery

Turnkey Project

Citizen Service Delivery

1. Establishment of Citizen Service Centres
2. Facilitate in delivery of G2B, G2C services
3. Establishment of call centre, operations and management

Categories of e-Governance Projects

Consultancy Services

Software Design,
Development and
Maintenance

IT Infrastructure
creation and
maintenance

Citizen Service
Delivery

Turnkey Project

Turnkey Project

In Turnkey projects, the scope of services include:

1. Software Design, Development and Maintenance
2. IT Infrastructure creation and maintenance
3. Citizen Service Delivery

Costs in e-Governance Projects – Consultancy Services...

Project Conceptualisation and Design:

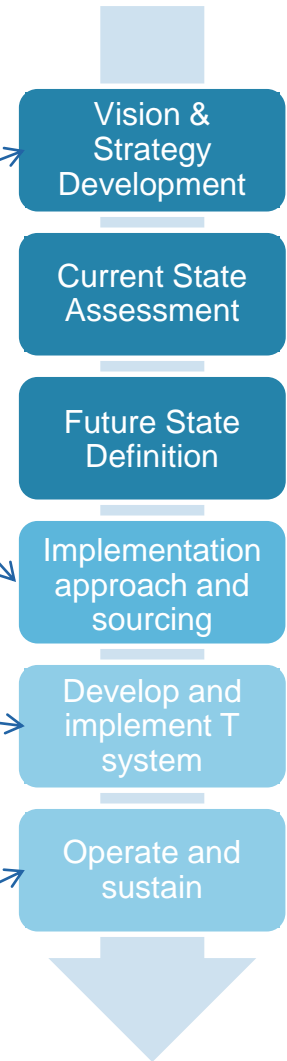
1. E-Governance Vision and Strategy Development
2. Process Study, Process Reengineering
3. Requirements Definition and System Design
4. Development Change Management, Capacity Building and Communications Strategy
5. Development of Business Model
6. RFP Development and Bid Process Management Support

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...



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

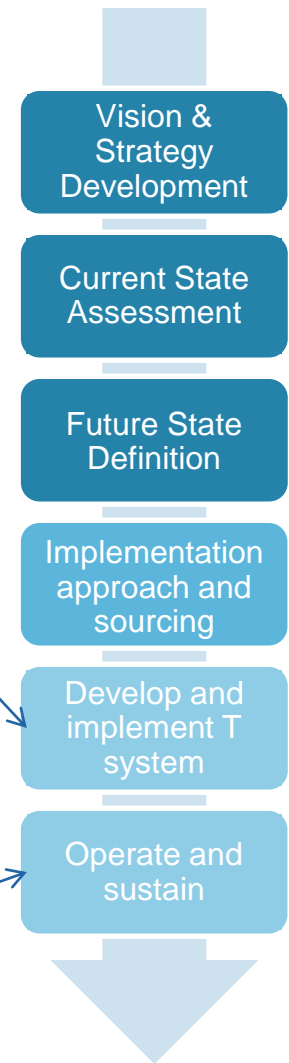
Recurring Costs:

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..



Project Phases

Specialized Training

STEP
for e-Governance Programme

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:

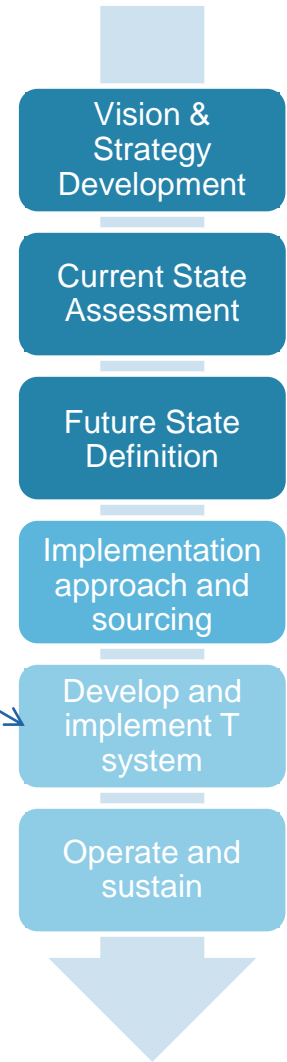
1. PCs ,Printers, Scanners, LAN, UPS, generators, LAN and power cabling...

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



Project Phases

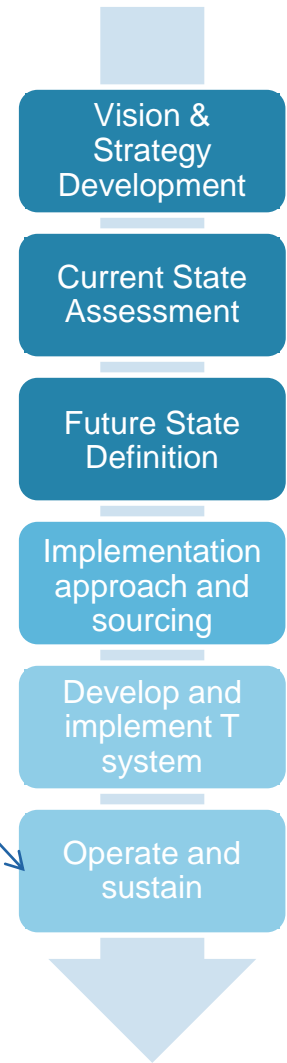


Costs in e-Governance Projects – IT Infrastructure creation and maintenance – contd..

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



E-Governance Project Costs – Illustrative Example/Templates..

S.No	Cost Item	Cost	Y1	Y2	Y3	Y4	Y5	Y6
1	Application Software							
2	System Software							
3	Data Center Infrastructure Cost							
4	Network Infrastructure cost							
5	DR Capacity of SDC (at 40% of SDC load)							
6	End User computing infrastructure							
7	Capacity Building & Change Management							
8	Data Digitization							
9	Software Quality Assurance Cost							
10	Data Quality Assurance							
11	Total Cost (one time)	INR 0	INR 0	INR 0	INR 0	INR 0	INR 0	INR 0

E-Governance Project Costs – Illustrative Example/Templates..

Recurring Cost				Y2	Y3	Y4	Y5	Y6
1	Network connectivity costs							
2	System Software AMC							
3	IT Infrastructure Hardware Maintenance							
4	Application Software Change Management							
5	Application Software Maintenance							
6	Hardware Insurance							
7	Data Entry Operators							
8	Project Management Unit/Services							
9	Monitoring and Evaluation Cost							
10	Consumables							
11	Total Recurring Costs per year			INR 0	INR 0	INR 0	INR 0	INR 0
10	Overall Project contingency cost		INR 0	INR 0	INR 0	INR 0	INR 0	INR 0
11	Grand Total							
12	Total Project Cost - Year Wise Expenditure			INR 0	INR 0	INR 0	INR 0	INR 0

E-Governance Project Costs – Illustrative Example/Templates..

Infrastructure Component	Per Unit Price (Rs.)	No. of Units	Cost per Item (Rs.)
Application Servers			
Web or Portal Servers			
E-Mail Server			
Database Servers			
Firewall			
IPS			
Directory Server			
Antivirus Server/gateway			
Infrastructure Management Servers			
Document Management Server			
Staging & Testing Servers			
PCs - Monitoring			
Servers Cost			
Aggregation router- SDC			
Aggregation router- District Center			
Internet Router			
Proxy Server			
24 Port Manageable Switch			
SAN Solution with SAN Switches			
Tape Library			
24 Port Patch Panel			
Modems 2 Mbps - Two Pairs			
Network & Security Cost			
Laser Printers			
42 U Racks			
Peripherals Cost			
Total Hardware Cost			

E-Governance Project Costs – Illustrative Example/Templates..

Infrastructure Component	Per Unit Price (Rs.)	No. of Units	Cost per Item (Rs.)
Application Server Software			
Database Server - Enterprise Edition (including RAC)			
Antivirus Server			
Enterprise Management Software			
Document Management System			
Directory Solution			
Colloboration suite (e-mail)			
Data Backup Management software			
System Software Cost			
License Management			
Birth & Death Registration			
Scheme Management			
Drug Distribution Management (including asset mgmt)			
Patient Care Management			
Decision Support Systems & MIS			
Disease Survivelance System (including GIS system sot)			
Call Centre Management & GR System			
HR System			
E-Learning			
Knowledge Management System			
Application Software Cost			
Total Software Cost			

E-Governance Project Costs – Illustrative Example/Templates..

Infrastructure Component	No. of Units	Per Unit Cost	Total
Personal Computers			
Printers			
Scanners			
Digital Certificate			
UPS			
Modems			
LAN Switch			
Total Cost for End User Infrastructure			0

E-Governance Project Costs – Illustrative Example/Templates..

S.N	Name of the Training Programme	Indicative Duration (Days)	No. of Users for training	Avg Batch Size	Total no. of batches	Per batch cost	Total Cost
1	Orientation to change management						
2	Change Management						
3	Communication Skills						
4	Teamwork Skills						
5	Presentation Skills						
6	Project Management						
7	IT Training						
8	Application Training						
Total Cost							

E-Governance Project Costs – Illustrative Example/Templates..

Role	Number of Man months needed					Costs		
	Y1	Y2	Y3	Y4	Y5	Total Man Months	Man-month cost	Total cost
Change Management - GM								
Change Team Memebers								
Contracts Manager								
Accountant								
Technical Manager								
Software Architects								
Infrastructure Architects								
QA Team								
Testing Team								
Healthcare Manager								
Clinical SMEs								
Public Health Experts								
SLA Team								
Service SLA Monitoring Team								
Total Cost for PMU								

When and Where do we prepare cost estimates?

Detailed Project Report or DPR

- The Detailed Project Report is an essential building block for firming up a proposed project initiative
- The DPR contains details about the proposed project to enable appraisal, approval, and subsequently implementation
- Usually prepared according to funding agencies' templates and guidelines e.g. DIT guidelines for NeGP projects, World Bank guidelines...

What is a DPR used for?

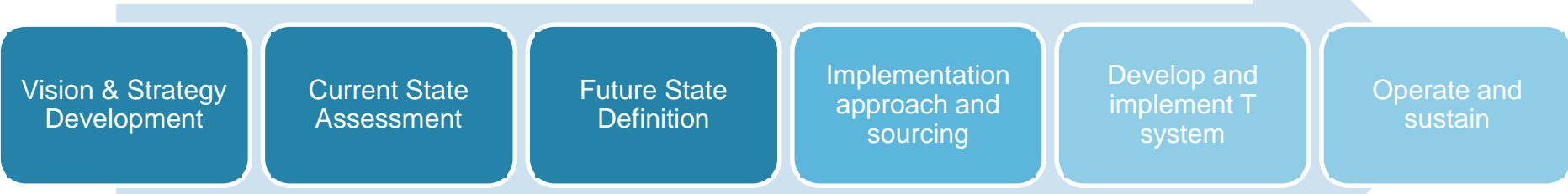
It is a comprehensive proposal prepared for all types of projects and used as a basis for:

- Investment decision making
- Approval of plans and designs
- Project planning
- Implementation scheduling and budgeting

DPR involves a detailed study on various aspects of the project and should be prepared before the Selection of Vendors.

When is a DPR prepared?

E-Governance Project Lifecycle (EGLC)



Stakeholder Needs Assessment

Define clear vision & objectives

Prioritization of services and projects

Incorporate domestic and global learnings

Identify institutional structures & capacities for implementation

Define funding requirements

Define monitoring and evaluation approach

Critical assessment of current business processes and pain areas

Best practices in similar environments

Assess legal framework and current limitations

Assess current ICT systems and their ability to support future plans

Assessment of current capacities at all levels and their preparedness for e-governance.

Process reengineering and to –be process definition

Identify IT enablement opportunities and requirements

Define changes to the legal and regulatory environment

Develop People change and capacity building plan

Develop project awareness and communication requirements...

Define implementation approach and phasing plan (functional and geographic)

Assess detailed funding requirements and business model

Prepare DPR

Develop evaluation and selection criteria

Develop KPIs and performance levels for services and systems

Develop RFP

Bid evaluation and vendor selection

Definition of detailed System operations

The highlighted activities in the EGLC provide inputs to the DPR

However, the DPR may make provisions of detailed study or implementation in some of these areas e.g. Legal reforms may be a separate project

How is DPR different from feasibility report?

While Feasibility study report

- Defines overall objectives of the proposed system
- Is a primary report for formulation of the initiative
- Is a base document for investment decision-making

DPR is a **project proposal** that is used

- **not only** for the investment decision-making,
- **but also** for preparation of the project plan and execution of the project.

Revenues from e-Governance Projects

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...

End of Session