Specialized Training

STeP

for e-Governance Programme

e-Governance

Capacity Building

Government Process Re-engineering

GPR

Reading Supplement Handbook

NISG
Architecting e-Government

राष्ट्रीय इ-गवर्नेंस योजना
National e-Governance Plan
Public Services Closer Home

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

DISCLAIMER

This publication is a work product of internal knowledge base and compilation of published / unpublished content from various other sources. National Institute for Smart Governance (NISG) duly acknowledges the respective sources.

The objective of this document is to provide an overview or preliminary understanding, only on the subjects/areas covered as part of the training programme. For undertaking the areas covered under the training programme, the This document should be treated as only background quick reference on the topic(s), and should not be treated as a guideline and/or instructions for undertaking the activities covered under the e-Governance projects. It is expected to provide useful learning for members working in the area of e-Governance. The document by no means has any commercial intention and is solely developed for the purpose of knowledge sharing.

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NISG-15-500/CBKM/STeP/04-2012
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How to use this Handbook

This Handbook on *Government Process Re-engineering* is aimed primarily for the officials in Government departments who are responsible for or associated with managing the e-Governance projects in their departments. It is also a unique compendium of information from diverse sources which will be invaluable to the readers from both IT and non-IT background as a quick reference guide on various concepts, covered during the training programme.

The Handbook is organized into 7 sections which represent a gist of various concepts, techniques, models & frameworks related to process re-engineering covered during the training programme. Although the sections of this book follow a logical sequence, these sections may as well be read "stand alone", in any order, depending upon the reader's interest. All sections of this book have been written with due consideration for differing level of technical expertise among the readers and facilitate a layman's understanding of the concepts covered therein.

Flow diagrams, tables, graphs & images are used extensively to enable easy comprehension and quick recollection of the topics covered during the training.

In the changing times where the Government needs to constantly review and redefine the way it operates, interacts, interface, and transacts with its stakeholders, this handbook on GPR can certainly prove resourceful for all the readers to gain a quick grasp on the key issues involved in process re-engineering

Feedback from the readers & of this handbook is greatly valued by us.

Please write to us at:
stephelpdesk@nisg.org

List of Acronyms

GPR	Government Process Re-engineering
GPS	Global Positioning System
ICR	Intelligent Character Recognition
ICT	Information Communication Technology
ILIS	Integrated Land Information System
IPR	Intellectual Property Right
IRR	Internal Rate of Return
ISDN	Integrated Services Digital Network
ISS	Information System Security
ITAA	IT Act Amendment
ITES	IT enabled Services
JV	Joint Venture
KPI	Key Performance Indicator
LAN	Local Area Network
LCS	Least Cost Selection – L1
LSIP	Large Scale Interactive Process
M&E	Monitoring & Evaluation
MCA	Ministry of Corporate Affairs
MIS	Management Information System
MMP	Mission Mode Project
MSA	Measurement System Analysis
NeGD	National e Governance Division
NeGP	National e Governance Plan
NICNET	National Informatics Center Network

NLSA	National Level Service Agency
NPV	Net Present Value
NSDG	National Service Delivery Gateway
OCR	Optical Character Recognition
OMR	Optical Mark Recognition
PDA	Personal Digital Assistant
PeMT	Project e-Governance Mission Team
PKI	Public Key Infrastructure
PMC	Project Management Committee
PMU	Project Management Unit
PPP	Public Private Partnership
PSC	Public Sector Comparator
QBS	Quality Based Selection
QCBS	Quality & Cost Based Selection
RA	Registration Authority
RAO	Rapid Application Development
RFID	Radio Frequency Identification
RFP	Request for Proposal
RFQ	Request for Qualification
ROC	Registrar of Companies
ROI	Return of Investment
SAP	Service Access Provider
SAS	Software as Service
SDA	State Designated Agency
SDC	State Data Center

SDLC	Software Development Life Cycle
SeMT	State e-Governance Mission Team
SLA	Service Level Agreement
SLM	Service Level Management
SLO	Service Level Objective
SLO	Service Level Objective
SMART	Simple, Moral, Accountable, Responsive, Transparent
SOA	Service Oriented Architecture
SOW	Scope of Work
SOW	Scope of Work
SP	Service Provider
SPV	Special Purpose Vehicle
SSDG	State e-Governance Service Delivery Gateway
STOC	Standards Testing Certification
SWAN	State Wide Area Network
TCV	Tender Contract Value
UAT	User Acceptance Test
UCID	Unique Company Identification Number
UID	Unique Identification Number
UNCITRAL	United Nations Commission on International Trade Law
VLE	Village Level Entrepreneur
WAN	Wide Area Network

Table of Contents

1. Introduction

1.1. Introduction to the Course

The "Government Process Re-engineering" (GPR) course is designed to equip the participants with necessary skills and knowledge to enhance operational efficiency in administration and service delivery. The knowledge of GPR enables government personnel to improve government functioning through:

i. Improved citizen focus and experience,
ii. Minimized process complexity, cost and service delivery time
iii. Increased transparency levels,
iv. Reduced administrative burden,
v. Adoption of best practices

The course discusses the various steps involved in Government Process Re-engineering, along with real life examples.

1.2. Performance Objectives of the Course:

The training course performance objectives in terms of expected capabilities to be demonstrated by the participants in their respective departments post training completion includes the following:

- Lead the government departments in undertaking government process re-engineering initiative to optimise the government processes and service delivery model
- Define the business case for GPR in terms of need, benefits and scope for GPR in the department
- Manage the government process re-engineering initiatives including engagement of consulting firms for conducting GPR, quality assurance and validate the deliverables from the consultant
- Lead in awareness creation and capacity building within the department in GPR and its significance

1.3. Knowledge, Skill and Attitude Development Focus in the Course

Following summarises the key Knowledge, Skills and Attitude development focus areas under this course.

Knowledge

- Relevance, importance and benefits of process re-engineering in the government
- Key concepts in GPR
- Process documentation and mapping methods and tools

- Principles, methods and tools of process re-engineering
- Need for change management for implementation of process changes
- IT led process re-engineering
- Statutory implications of process re-engineering
- Learnings from GPR experiences

Attitude

- Recognize the need for change in government processes
- Recognize the need of customer focus
- Recognize the need for change management and capacity building in the context of GPR
- Recognise the need for transformation in e-Governance than translation

The following section discusses the key aspects as listed in section 1.1 above.

2. Overview of Government Process Re-engineering

2.1. e-Governance and Traditional Approach to e-Governance

Ministry of Information Technology, Government of India, defines e-Governance as "… the application of Information Technology to processes of government functioning to bring about a Simple, Moral, Accountable, Responsive and Transparent governance". In other words, e-Governance uses Technology tools in government functioning and service delivery.

The traditional approach to e-Governance has been one of IT enablement of existing processes, without much change to the underlying processes. Thus IT enablement initiatives included:

- Automation of existing processes through the use of IT
- Making services of the department available online (Providing e-forms for submission of applications, File Management System etc)

In these cases, the process remains the same, but is carried out electronically. The advantages of this approach included easier implementation with minimal legal changes, easier status updates, real time Management Information Systems (MIS), anytime / anywhere service etc.

But IT enablement alone cannot bring in dramatic improvements in government functioning. This follows from the fact that many of the government processes may be inefficient and obsolete. Most of the processes were defined long back (in many cases, in pre-independence era) with the scenario at that time as the backdrop. The constraints which were present at that time, are no longer present or can be overcome through the use of IT.

In many cases, processes were defined with compliance in mind, rather than enhanced citizen service. Thus re-engineering the process through GPR and process redesign allows leveraging the benefits of IT rather than just replicating existing processes.

2.2. Understanding Business Processes

Every government service is supported by a set of *business processes*, which provides approach and guidance to deliver the service. To understand Business Processes and Government Processes, consider the following definitions:

Process	A group of tasks / activities carried out to reach a (desired) outcome
Business Process	Any set of activities performed by a business that is • initiated by an event, • transforms information, materials or business commitments, • produces an output
Government Process	Any set of activities performed by a Government that is • initiated by an event, (e.g. Service Request, Event Trigger) • transforms information, materials or business commitments, • produces an output (delivery of Service to Citizen / Business of Government)

Government Processes are processes in the government domain. The process environment or a *Business system* is a collection of processes that take one or more inputs and create output that is of value to all stakeholders. Processes and not functions drive an organization. Processes are the key to satisfying customers and stakeholders.

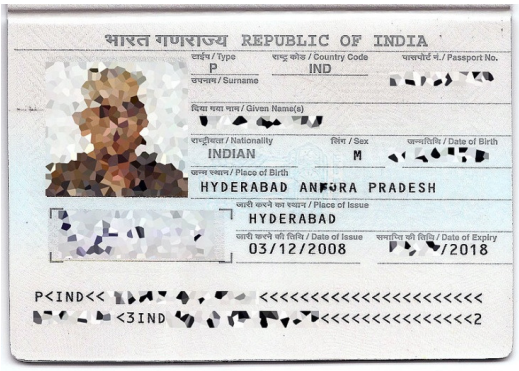
Accordingly it should be the endeavour for the Government to improve its internal and citizen service delivery processes.

2.3. Understanding Service Quality

Service Quality is an important concept to be kept in mind while undertaking GPR initiatives. Service Quality comprises of the physical **Product**, the **Time** taken to deliver it, the **Cost** of getting the service, and **Customer Experience** or **Service Delivery.** A GPR exercise should identify the Service Quality Parameters associated with the service being re-engineered, and strive to improve those parameters.

To illustrate service quality, let us take the example of the Passport Issuance process.

At first glance the only tangible product in Passport Issuance process is the physical passport itself. There



are various parameters by which the quality of the physical product can be measured:

- Name & Photo are correct
- Personal information like sex, date of birth, address etc are correct
- The passport is stamped / signed and is valid
- Physical passport is as expected
- Not torn or damaged (Does not have pages missing / has correct number of pages)

But for a citizen, the Service Quality is dependent on a lot of other factors apart from the Physical product. These include a host of factors, including the following:

- **Time:** time taken for completion of service by the citizen/business, time taken for delivery of service by the Government
- **Cost:** Cost incurred in receiving the service by the citizen/business, cost incurred by the government in delivery of service
- **Complexity (illustrative):** Number of forms to be filled, amount of information to be provided, number of offices to be approached etc by the citizen/business
- **Transparency:** Knowledge on process for delivery of service, delivery timelines, status of service request to citizen and business
- **Citizen Experience:** Quality of interactions (courtesy, politeness, treatment) with the government during service delivery

A holistic process improvement initiative should address all these Service Quality Parameters**.**

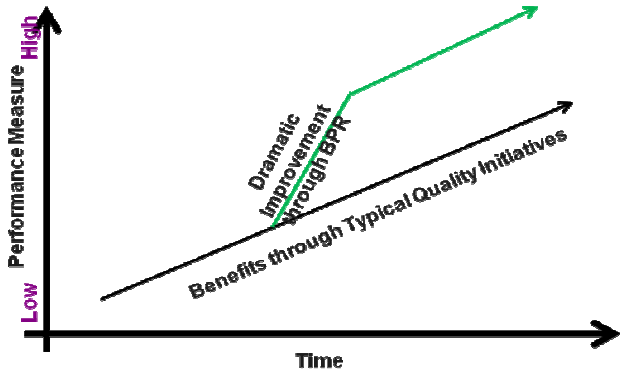
2.4. Business Process Re-engineering (BPR) and GPR

One of the widely accepted definitions[1] of BPR is

"BPR is fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed"

Government Process Re-engineering (GPR) has evolved from applying Business Process Re-engineering (BPR) concepts to Government Services. GPR may address all or some of the service quality attributes identified for the government service.

GPR enables governments to achieve dramatic improvement of performance and application of IT on reengineered processes will yield better results for stakeholders, as indicated in the graph below:



In order to leverage the full advantage of the GPR exercise, suitable IT enablement of the re-engineered processes should also be undertaken.

2.5. Steps involved in GPR

The various stages in the GPR initiative are depicted above. The first step in the GPR process is the identification and statement of the problem in the current process scenario. This is followed by the definition of the vision and objectives of GPR. Before setting out on process re-engineering, the existing processes should be studied and documented. During this phase, data

[1] Michael Hammer and James Champy (1993). Re-engineering the Corporation: A Manifesto for Business Revolution, Harper Business

is also collected from the different processes, to understand the processes better and to obtain baseline metrics.

The processes thus documented are analyzed using various tools and methodologies, to identify improvement opportunities. This will include identification of value adding / non value adding activities, process complexity and process metrics.

During the re-engineering phase, the new processes are designed based on the process re-design drivers. This may involve rework, redesign, outsourcing or replacing of processes / sub processes. The new processes thus defined are implemented, with IT enablement (in most cases). The implementation phase may require changes in the legal framework governing the processes, and change management efforts to smoothen the roll-out.

These stages are discussed in detail in the subsequent chapters.

3. Identification of Problem and Vision Statement

3.1. Importance of Problem Identification

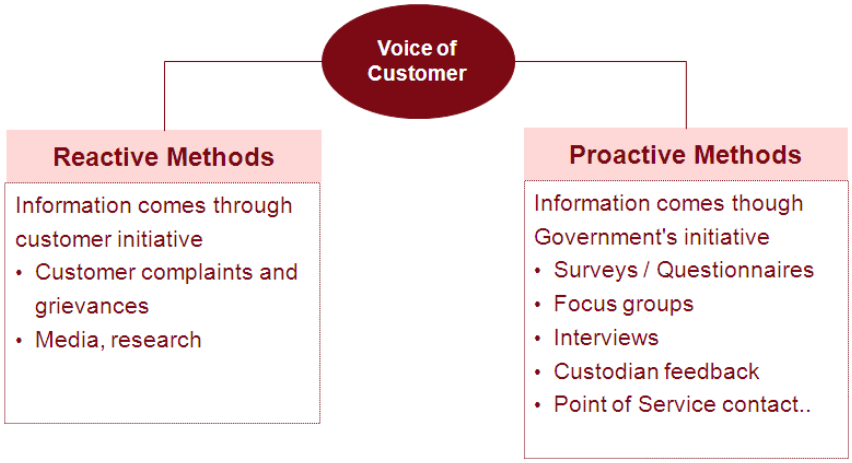
Most organizations undertake GPR / BPR to address 'problems' or 'needs' of the organization or its customers with an objective to improve the overall quality of the services. These initiatives may be:

- To address the specific concerns of the stakeholders (citizens/ businesses/ employees)
- To address the challenges and issues in the services and service delivery
- To improve the quality of the services
- To adopt best practices from similar environments
- To address the changing needs of the customers (citizens and businesses) and the government

Accordingly, the GPR initiative should take inputs from a problem identification exercise. The current needs of the customer should also be gauged. In many cases, the problems in service delivery are understood poorly, leading to stating them incorrectly. Also, the customer needs and expectations change with time, and the organization has to keep in track with changing expectations, and deliver services in accordance to such expectations.

3.2. Methods of Problem Identification

There are various ways by which the problems in a process environment are identified. These include proactive and reactive ways of problem identification. Since these methods reflect the customer's opinion (both internal and external) they are referred to as "Voice of the Customer" (VoC). The major sources of problem identification are depicted below:



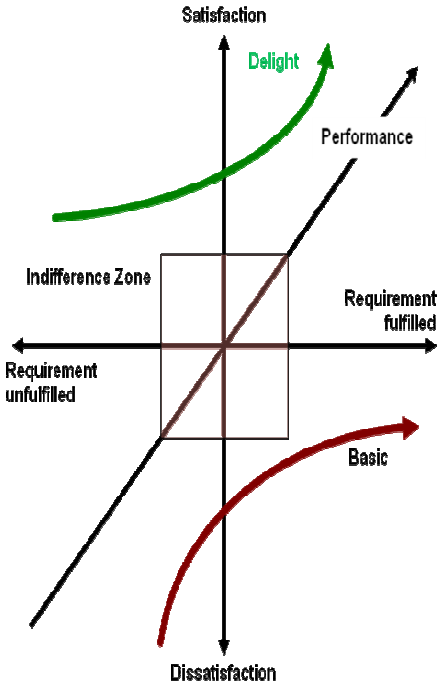
In most government situations the problems are identified by reactive methods. In other words, the problems are identified when something goes wrong and the customer / media seek redressal. Proactive methods are used by successful government/private sector organizations 'listen' to the customers to identify and 'address' their problems and needs at a very early stage.

This helps in building confidence in the customers, enhancing overall image of the organization, and in minimizing the impact of the problems to larger segment of customers.

3.3. Customer Needs and how they evolve

As discussed earlier, proactive methods are essential for organizations to understand and deliver citizen needs and expectations. This follows from the fact that citizen needs do not remain static – they constantly evolve, as is depicted in the Kano's[2] Model below.

The Kano's Model, defines three types of customer needs – Basic, Performance and Delight.



- **Basic** needs are the "must-haves", which when met will not contribute much to customer satisfaction, but if they are not met will lead to customer dissatisfaction. These are unspoken but expected needs.
    - E.g. No error in passport details
- **Performance** needs are the spoken and expected needs, whose fulfillment leads to satisfaction and Non-fulfillment leads to dissatisfaction.
    - E.g. Passport received within promised timeline of 40 – 45 days
- **Delight** needs are the unspoken and unexpected needs, whose fulfillment leads to customer delight. As the customer was not expecting the need to be fulfilled, it does not lead to any dissatisfaction.
    - E.g. Police calls on day of application submission to set up verification appointment

Over a period of time Delight needs become Performance needs and then Basic needs. We will have to constantly sense the Delight needs and service the customer to build a quality organization.

3.4. Components of a good Problem Statement

A *Problem Statement* is a specific description of the current situation of the problem that will be addressed by the organization in measurable terms. They are prepared to develop a shared understanding of the problem that the organization is trying to address.

[2] The Kano model is a theory of product development and customer satisfaction developed in the 80's by Professor Noriaki Kano

A good problem statement:

- States the effect and not the cause (What is wrong & not Why it is wrong)
- Focuses on the gap (between "What Is" & "What should be")
- Is measurable (How often, How much, When)
- Is specific (avoids broad & ambiguous categories)
- Is a statement, not a question
- Focuses on the "Pain Area" (How Customers / Citizens, Employees and the Government are affected)

Some good problem statements (for illustrative purposes only) are given below:

- Only 40% of the ration items distributed through Public Distribution System (PDS) are reaching eligible families
- It takes approximately two months to obtain death certificate
- It requires minimum of ten visits to get the pension amount sanctioned….
- Process for Passport Issuance on Turn Around Time (TAT) metric is operating at only 38% within Service Level Agreement (SLA)
- It takes 2-4 hours to get the railway reservation done in Metro cities in India for reservations across the counter…

In order to prepare good problem statement, the following ground rules may be followed:

- Focus on the following questions
    - Which outputs don't meet expectations?
    - When and where do the problems occur?
    - How big is the problem?
    - What is the impact of the problem?
- Things to be careful of / avoid
    - Avoid pre-determined solutions
    - Do not blame people
    - Ensure that the problem statement is easily understandable by all
    - Avoid including "Why", "lack of", "due to" since they may imply solutions and thus mislead team members

During the next steps, the problem thus defined is converted to a GPR vision.

3.5. Stating the GPR Vision

Vision is a succinct and inspiring statement of what the organization intends to become and to achieve at some point in the future. Before embarking on one or several e-Government projects, government should make sure that there is a vision that provides a roadmap and guidance for institutional change. A vision statement takes into account the current status of the organization, and serves to point the direction of where the organization wishes to go. The vision statement provides the direction for the organization, while not inhibiting the development of the strategy that will allow the organization to reach the desired goal. Is not about 'automation' or 'computerisation'…it is about 'what' will be achieved using IT and should be inline and supportive of organization's business vision. A vision statement should:

- Be clear, intuitive and simple
- Reflect the specific conditions and ambitions of the organization
- State what will be and will not be done
- Consider needs and opportunities
- Be aligned with overall development strategy
- Involve consensus building by stakeholders

Following diagram presents an overview of approach for development of e-Governance vision.

Examples of e-Governance vision include:

a. "Use e-Government solutions as the primary delivery channel to provide a single, easy, integrated, and reliable means of access to Municipal information and services in order to continuously improve the quality of services provided for the residents, businesses and partners, reduce internal operational overhead, enhance revenues and promote Dubai's image as a commercial and tourism hub in the Gulf region."
b. eBiz – Establish One-stop-service delivery centre for G2B Services in India, provide services in simplified and convenient manner and thereby improving the investment climate in the country
c. e-Procurement: Establish common procurement platform for realizing the right value for the goods & services, minimizing the cost of procurement and providing equal opportunities for businesses…
d. NeGP Vision - "Make all Government services accessible to the common man in his locality, through common service delivery outlets and ensure efficiency, transparency & reliability of such services at affordable costs to realize the basic needs of the common man."
e. e-Governance Vision of Canada - Using information and communication technology to enhance Canadians' access to improved citizen-centred, integrated services, anytime, anywhere and in the official language of their choice

3.5.1. e-Governance Objectives

An objective is a specific and usually quantifiable statement of program achievement and is a statement of measurable outcome which can be used to determine program progress towards the goal. Collectively, objectives represent a quantification of the program goal. e-Governance objectives translate the broad values within a vision into more real and tangible outcomes, with stronger operational basis, reflecting actual process, procedures and measurable outputs. Objectives should have measurable criteria for achieving success

e-Government does not differ from any other business endeavor/objectives and e-Governance objectives should flow from e-Governance vision. e-Government should not be considered as a business goal or objective by itself rather, it is a means to achieve business goals or objectives. Accordingly, e-Government objectives should be established along two dimensions (i) Adding benefits to the customers and (ii) Adding benefits to the organisation itself. The most effective business objectives are often generated from your existing business strategy and e-Government business objectives are usually driven by global reach, customer self-service and effective information sharing.

Defining e-Governance Objectives (illustrative)

For Citizens (General/ambiguous Objectives):	For Citizens (Specific Objectives):
• Streamlined, standardized electronic information gathering and access • Reduce the time to access relevant information • Enable citizens to find benefits and determine eligibility • Reduce the time for citizens to find information on opportunities, schemes, benefits etc. • Electronic delivery of services • Convenient, any time and anywhere services	• Provide Passport to citizens in 3 business days • Instantaneous payments of taxes & bills online through kiosks

For Citizens (General/ambiguous Objectives):	For Citizens (Specific Objectives):
• Convenient & simplified processes for establishment, operations, expansion of businesses • Minimize burden on businesses through online forms/services • Reduce time for filing and complying with regulations • Increased and equal access to business opportunities with Government	• Instantaneous access to Information Services • Business Registration in 5 Working Days • Online Filing of Returns etc..

For Department (Broad Objectives):	For Department (Specific):
• Reduced administrative burden and Increased employee productivity • Information reuse across and within departments • Cost effectiveness in operations	• Minimize direct interaction between department & citizens • Reduce cost of procurement by 50% • Migrate to 75% online service delivery by 2008 • 0% of transactions at Department counters for payment of taxes, duties etc..

Key Considerations for Vision and Objectives Definition:

- To be developed based on extensive interactions with stakeholders, not based on board room discussions
- To be developed from stakeholder needs, not by department thoughts
- Stakeholders include:
  - Customers (citizens, businesses..) served by the government
  - Employees of organization delivering the services..
- To be developed to address the current challenges and future needs
- To take learnings/inputs from similar situations and initiatives in India and world wide…

3.5.2. Identifying Stakeholders/Services/Projects/Delivery Channels

a. Stakeholders

Clear identification of stakeholders and related benefits is a key requirement for a successful implementation of e-Governance projects. Following discusses the typical stakeholders in e-Governance projects.

- Customer Segmentation
  - Citizens
  - Businesses
  - Partners (suppliers and other government agencies)
- Key Customer needs to be considered
  - Easy Access – single & reliable access to information & services
  - Clear Accountability – for delivering the services
  - Integrated view of customers - no longer be required to submit the same information/ documents repeated

Priorities/Benefits sought by various stakeholders (illustrative)

People as Citizens/ service users	Businesses	Public administrators (employees)
• Accessibility • Ease of use	• Cost-effectiveness	• Empowers employees
• Confidentiality • Privacy	• Resource rationalisation • Value for money	• Reduced admin burden
• Transparency, openness • Trustworthiness	• Economic growth • Productivity	• Continuity and stability • Easy to use

b. Services

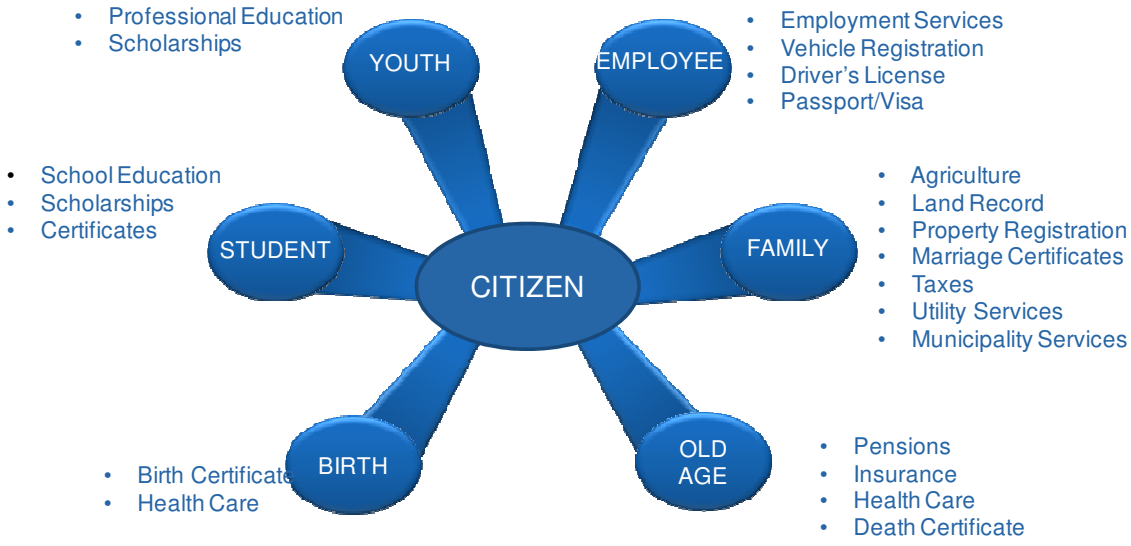
Service is the 'action or process of serving' or 'an act of assistance' or 'a system providing a public need'. Process consisting of a series of intangible activities that normally, but not necessarily always, takes place in interactions between the provider and consumer. Government is into the business of addressing the needs of citizen through the Life Cycle and Governments interact with citizens to provide 'services'. Every government department provides a set of services to its identified customer base. The delivery of such services would develop an image of the government among the customers and so making the delivery of services customer-friendly.

Categories of Government Services:

G2C	Government to Citizen
G2B	Government to Business
G2E	Government to Employee
G2G	Government to Government

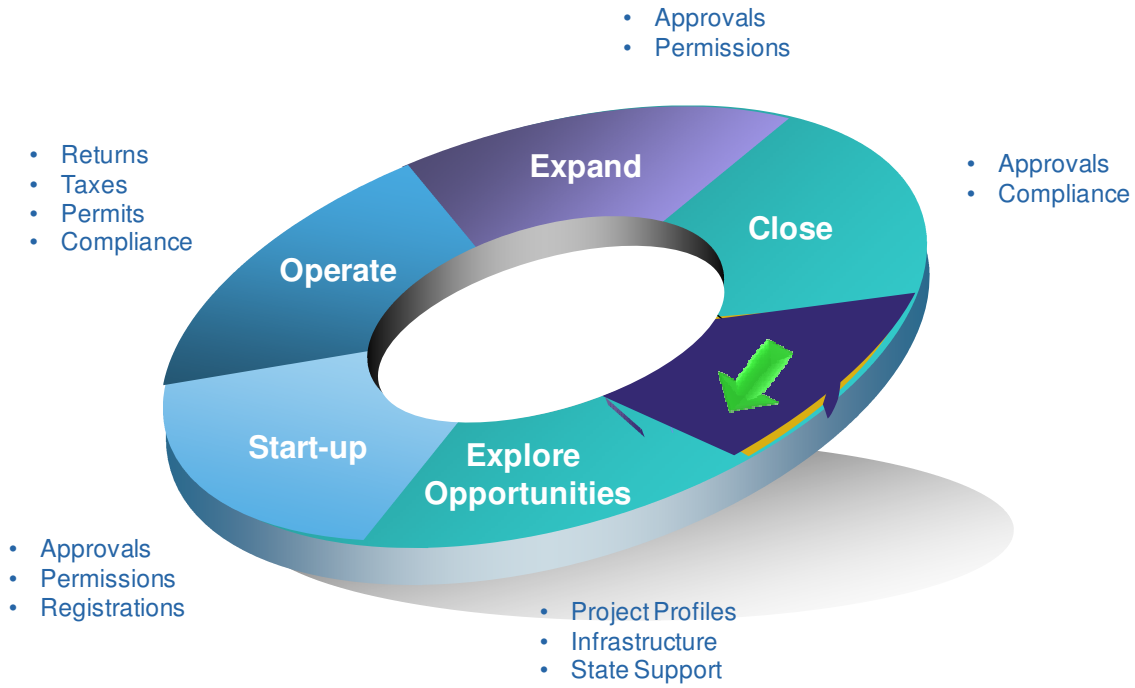
G2C Services:

Diagram below outlines various government services provided across the Life Cycle of a citizen.



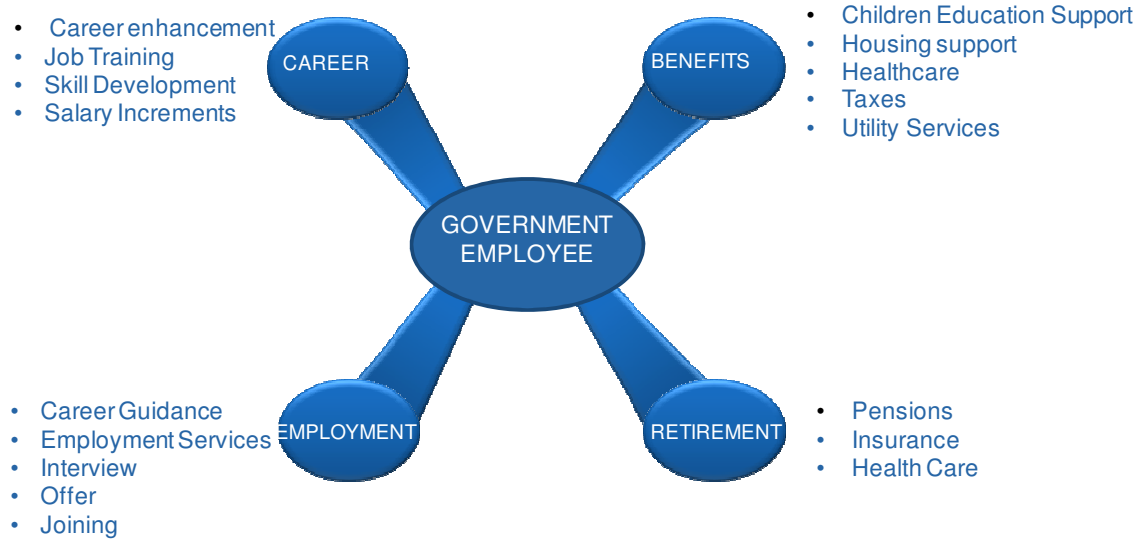
G2B Services:

Diagram below outlines various government services provided across the Life Cycle of a business.



G2E Services:

Diagram below outlines various government services provided across the Life Cycle of employment with government.



The services of the government are generally classified into information and transaction services:

- **Information Services**
  - Includes those services that solely provide 'information' to customers and does not involve processing of any transactions or documents.
  - Information services have relatively simple back-office operations and can be easily be e-Government-enabled
- **Transaction Services**
  - Transactional Services: includes those services where customers require specific actions to be taken by the department.
  - Transactional services mandate a higher degree of customer interaction and more complex delivery operations than informational services.

Service Prioritization

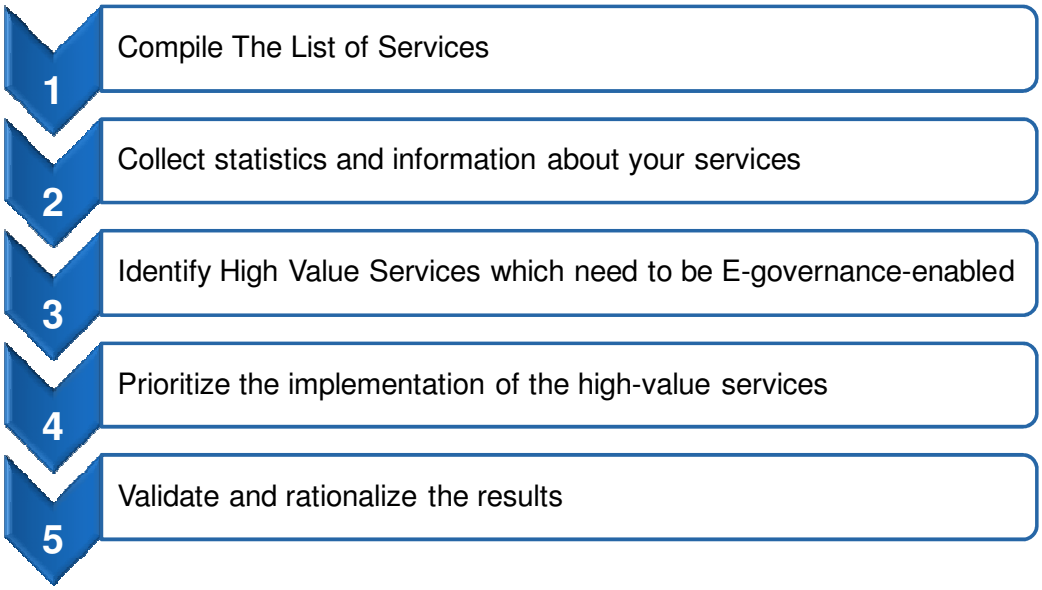
Several e-Governance initiatives at central/state/local government undertaken and significant investments made in IT enablement in various departments along with several years of time and efforts of government and private sector consumed. However, the benefits and results in many of the projects are minimal as the governments have adopted implementation of e-Governance across the functions and services in one go and this approach many a times have failed in achieving the benefits. Key reasons for such failures include:

- Most projects are undertaken as automation of department functions/workflows – lack of services view
- Lack of citizen/customer centricity in projects design/approach
- Lack of 'services' point of view in project design
- Departments have undertaken organization wide computerization at one go – leading to significant efforts with minimum/delayed results
- Project sustainability impacted due to large size and complexity of engagements not delivering results for long durations
- Limited resources, skill sets - lack of capacities and skill sets to manage large and complex IT projects leading to project failures/takeoff

Prioritization of services and ICT enablement of these services in a phased manner can enable the organization to invest the managerial efforts in successful management of implementation and in addressing the risks and issues during the implementation. The need for the service prioritization includes:

- To demonstrate early results
- To minimize the impact and maximise the results
- Limited resources and capacities existing with (funds and skill sets)
- Lack of readiness of stakeholders

Following outlines the approach for service prioritization:



Step 1: Compile the list of services

- Identify the stakeholders addressed/served by the department
    - First level of classification (citizens, businesses, employees, other governments)
    - Sub-classification (e.g. of citizens served by Education Dept) – Parents, Higher education level students, university level students, private college owners…
- Identification of department functions/services to the stakeholder groups
- Identification of list of information and transaction services stakeholder wise

Step 2: Collect information & statistics about the various services

- Collection of various operational information and statistics for the list of services identified in Step 1
- Illustrative Information and statistics for each service include:
    - Transaction volumes
    - Frequency of transactions
    - Transaction processing time
    - Number of customer visits
    - Time spent by the customer for follow-up and track progress

- Illustrative analysis of Municipal Services

`	Transaction volumes (per year)	Frequency	Processing time
Birth registration	10,000	Once in lifetime	1 day
Death registration	4,000	Once in lifetime	1 day
Property tax assessment	3000	Once in lifetime	2 days
Property tax collection	100000	Twice in a year	30 minutes
Issuing building permission	1000	Once in lifetime	10 days
Vacant Land Tax Assessment	10	Once in lifetime	2 days
Vacant Land Collection	100	Once in a year	30 minutes
Court cases	10	NA	
Water tap connection	1000	Once in lifetime	2 days
Water tax payment	250000	Once in a month	30 minutes

Step 3: Identify High Value Services Which Need To Be Transformed Into e-Governance

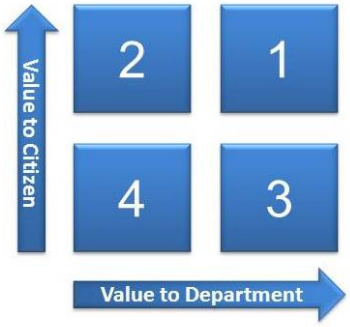
Assessment of services to identify those services that once made e-Governance-enabled will deliver the maximum value to the 'department' and its 'citizens'.

Department Value Measures	Citizen Value Measures
• Enhancing existing revenues; • Setting up new revenue streams; • Reducing cost of processing transactions; and • Delivering intangible benefits (e.g. boosting the image of the department)	• Minimizing the number of customer visits • Reducing the time required for service • Reducing the fees and charges associated with a service; • Reducing the time spent by the customer to follow-up and track the progress • Reducing the time spend by the customer to file complaints, comments and suggestions

Measures for Value to Citizen	Measures for Value to Department
• Minimizing the number of customer visits to the department • Reducing the time required to deliver a service • Reducing the time spent by the customer for follow-up and track progress of the requested service • Reducing the time spent by the customer to file complaints.	• Reducing cost of processing transactions • Delivering intangible benefits • Increase transaction volumes

Identification of high value services:

Diagram below presents the four box model, which can be used for identification of high value services. Services falling in to box 1 are high value services to both citizen and the department and needs ICT enablement on a priority basis followed by others.



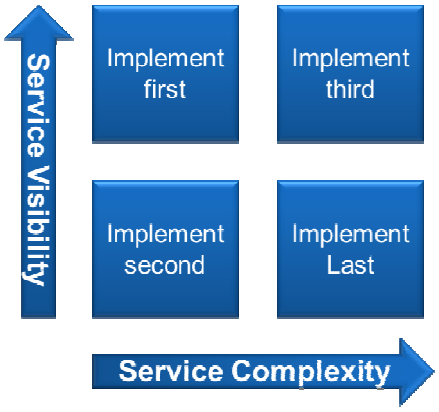
Step 4: Prioritize Implementation of High Value Services

- Identify when to implement each of the high value services identified for the department
- The implementation priority for each high value service is defined based on the analysis of service visibility and service complexity

Service Visibility	Measures for Service visibility
• Describes how significantly and extensively can customers feel and experience the benefits achieved from delivering the service into e-Governance. • Services of high volume of transactions and a large customer base would be more visible to the Department customers than other services with a very limited customer base	• Volume of transactions • Customer base • Intangible benefits

Service Complexity	Measures for Value to Department
• Describes how easy the service can be made e-Governance-enabled. • Depends on a number of factors such as the degree of existing automation, number of external parties involved and the number of customer documents processed	• Degree of existing automations • Number of external agencies involved • Number of customer documents processed

Following diagram provides approach for prioritization of high value services.



Step 5: Validate and Rationalize the Results

- Validate the identified services/projects for e-Governance through department's survey, experience and knowledge of the customers
- Verify whether high-value services *can* deliver benefits through e-Governance.
- Verify the feasibility of the implementation priorities assigned to the high-value services

Benefits of Service Prioritization:

- Identifies the services which are crucial to the stakeholders and which requires immediate IT enablement
- Enables process efficiency to the high priority services
- Increased user value and satisfaction
- Reduced administrative burden
- Strategic Fit with e-Government strategy
- Increased visibility of efforts and benefits…..

Summary of the GPR Visioning Exercise:

The objectives of the visioning exercise include:

- The vision statement provides the direction for the organization, while not inhibiting the approach or strategy to reach the desired goal
- Vision is about 'what' will be achieved through GPR
- To provide direction and guidance to the GPR
- To clearly identify the clear and measurable benefits from performing GPR
- To clearly identify the actionable and measurable initiatives for achieving the stated goals/benefits

In order to arrive at the vision, the following key questions are to be asked:

- Why are we doing this GPR for?
- What are we going to do?
- How will we know that we are successful (at the end of the project)?
- How could we fail (& what must we do to avoid that)?

The vision statement should:

- Be clear, intuitive and simple
- Reflect the specific conditions and ambitions of the organization
- State what will be and will not be done
- Consider needs and opportunities
- Be aligned with overall development strategy
- Involve consensus building by stakeholders

The steps involved in identifying the GPR vision include:

- Identifying and consulting stakeholders
- Allowing stakeholders to present or explain their needs and expectations
- Draft a common vision based on stakeholders needs and expectations
- Aligning vision with more general local development needs and opportunities
- Consolidating and agree on final vision

The vision thus formulated shall provide roadmap and guidance to the GPR process.

4. Documenting "As-is" Processes

4.1. Why Process Mapping?

Process Mapping is the process of documenting various aspects of business processes with the intention of developing a correct understanding of how things happen "actually". Process Mapping is necessitated in the government scenario due to the following reasons:

- Government service delivery evolves over time
- First a good process is established for a small set-up; it is usually efficient and responsive
- As the demand for the service grows, more people, functions and hierarchies are involved in a process
- Government needs from time to time gradually change the process
- Some changes are not always for the better
- Everyone tries to do their best but the process evolves over a period of time to the current state (in some cases these are person-specific)
- Rich experiences of people are lost when they leave the organization / function

Additionally, government processes have certain unique attributes, which need to be kept in mind while documenting the processes:

- Processes are usually derived from the underlying set of laws and regulations
- Compliance and control requirements are higher than in business processes, due to increased levels of accountability and need for transparency
- Changing processes radically might take longer timeframe than in business processed, as it may require legal & regulatory changes

4.2. Objectives of Process Mapping

Following are the objectives behind undertaking the activity of process mapping:

- To understand "how do we actually work" as opposed to "how are we supposed to work"
- To understand the four attributes of process:
    - Players
    - Process flow
    - Policies, Standards and Responsibilities
    - Phases with clear start & end-points and process time-lines
- To identify the Critical to Process metrics
- To identify "Quick Wins" in the process
- To understand response time & cycle time

- To determine process efficiency
    - Value-added activities and Non value-added activities
- To estimate the cost of the process
    - The concept of waste

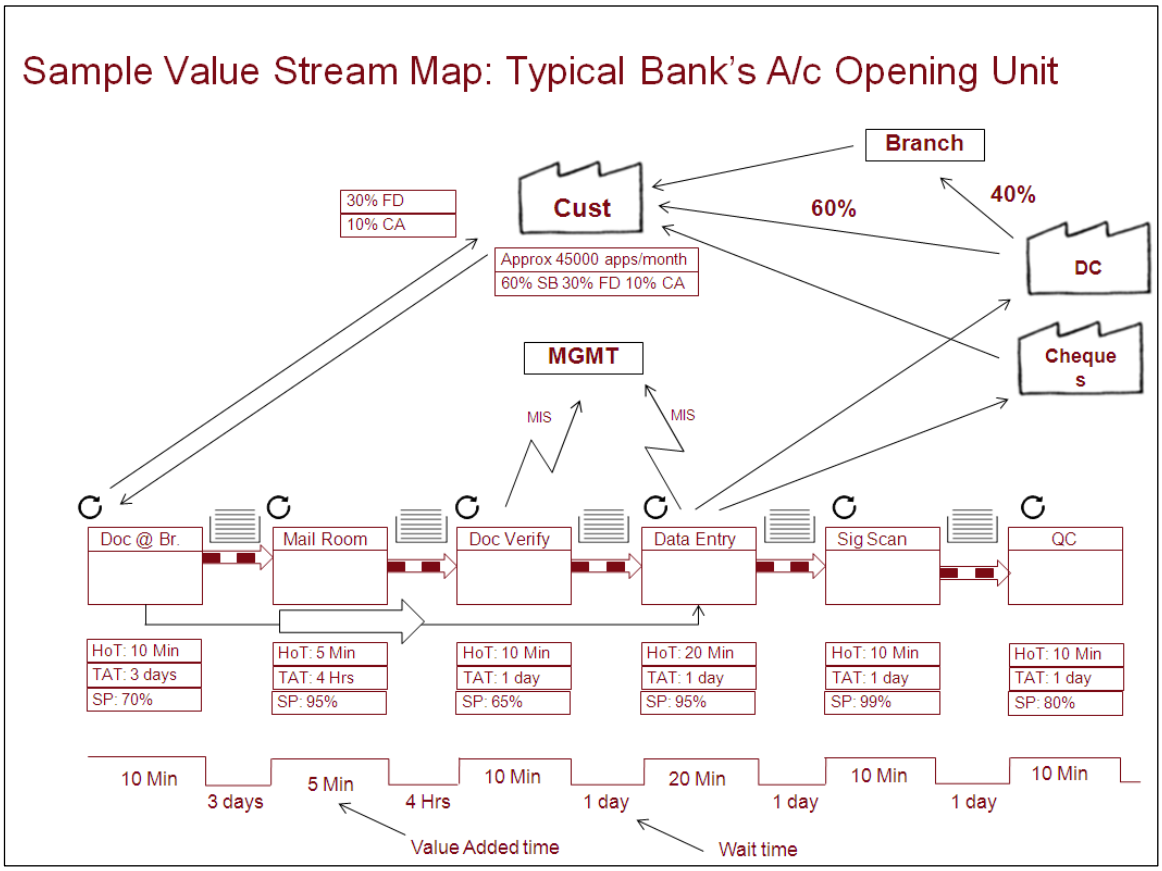
Thus process mapping provides a holistic view of the process. Different types of process mapping are used, based on the level of detail required. The common types of process mapping are:

- Value Stream Mapping
    - Mapping the entire value stream of the process on a single page
- Supplier - Input - Process - Output - Customer (SIPOC) Map
    - Mapping the key constituents of the process and their interactions
- Flowcharting
    - Detailed activity / task level graphical representation of the process

These techniques are described in detail in the following sections.

4.3. Value Stream Mapping

Value Stream Mapping represents the entire business in one page. The Map is used to analyze the flow of materials and information required to bring a product or service to a consumer. It does not delve into details of the sub processes. An illustrative Value Stream Map is given below.



The Map shows the different steps which happen in the overall business process, with the actual Hands on Time (HoT) and waiting time before the next step. The total Turn Around Time (TAT) for the sub process is the sum of HoT and wait time.

The sub processes in Value Stream Map are further drilled down using flow charting techniques.

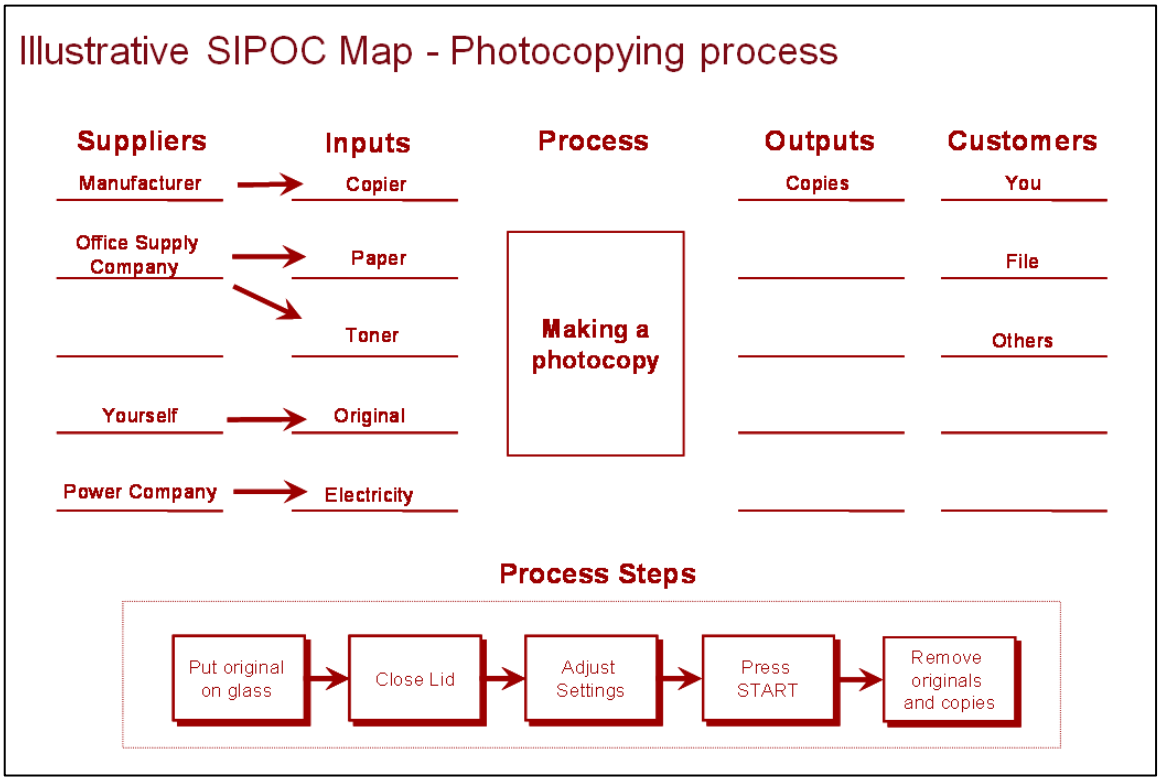
4.4. SIPOC Map

A SIPOC map helps in creating common understanding of the scope of the focused improvement project from an end to end perspective. It provides visual depiction of how a business works and all players & processes involved.

The SIPOC Map lists the following:

- The suppliers of these inputs (S)
- The inputs required to these processes (I)
- The processes that deliver these outputs (P)
- The outputs provided to them (O)
- All the customers (C)

A sample SIPOC Map for the photocopying process is given below:



The Sample SIPOC Map illustrates the various components of S-I-P-O-C and lists the sub processes. The steps involved in the SIPOC Map preparation are the following:

i. Agree on the Name for the Process
   - Use a verb + noun format (e.g. making a photocopy)

ii. Define Outputs of the process – tangible things that the process produces
    - e.g. a document, a railway ticket
iii. Define the Customers of the process – people who receive outputs
iv. Define the Inputs of the process – things that trigger the process and goes into making the output
    - e.g. filled application form, pre-printed stationery
v. Define the Suppliers of the process – people who supply the various inputs
vi. Define the sub processes that make up the process – activities that are carried out in converting the inputs to outputs

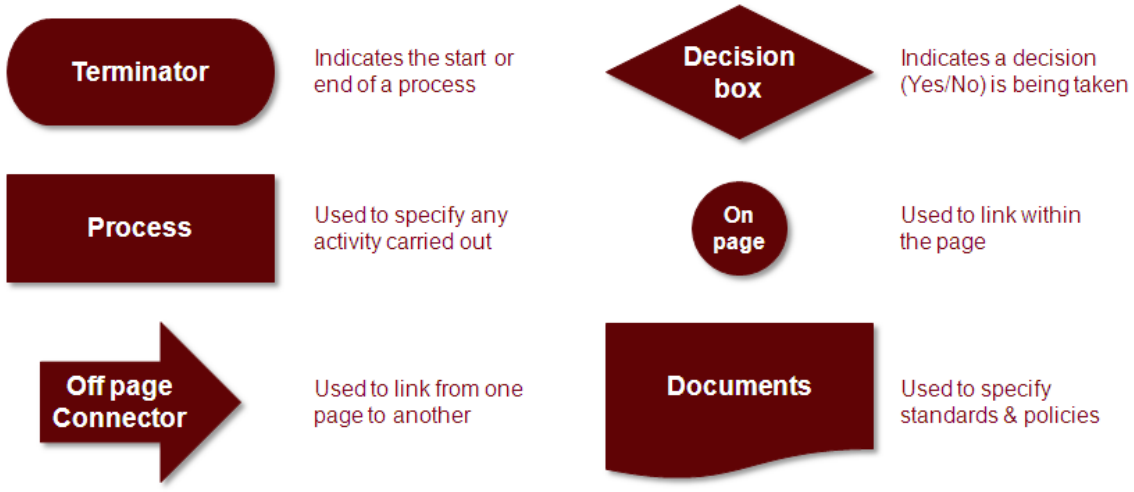
SIPOC Maps are used for obtaining a high level understanding of the process. The Map helps process owners and those working on the process to agree on the boundaries of the process. It also provides a structured way to discuss the process and get consensus on what it involves before rushing off and drawing process maps.

In the next step, the sub processes identified in the SIPOC are developed into process maps.

4.5. Flow Charting

Flowcharts are used to represent the process steps graphically, using common agreed upon symbols. Flowcharts are prepared based on process walkthroughs with the teams involved in the process.

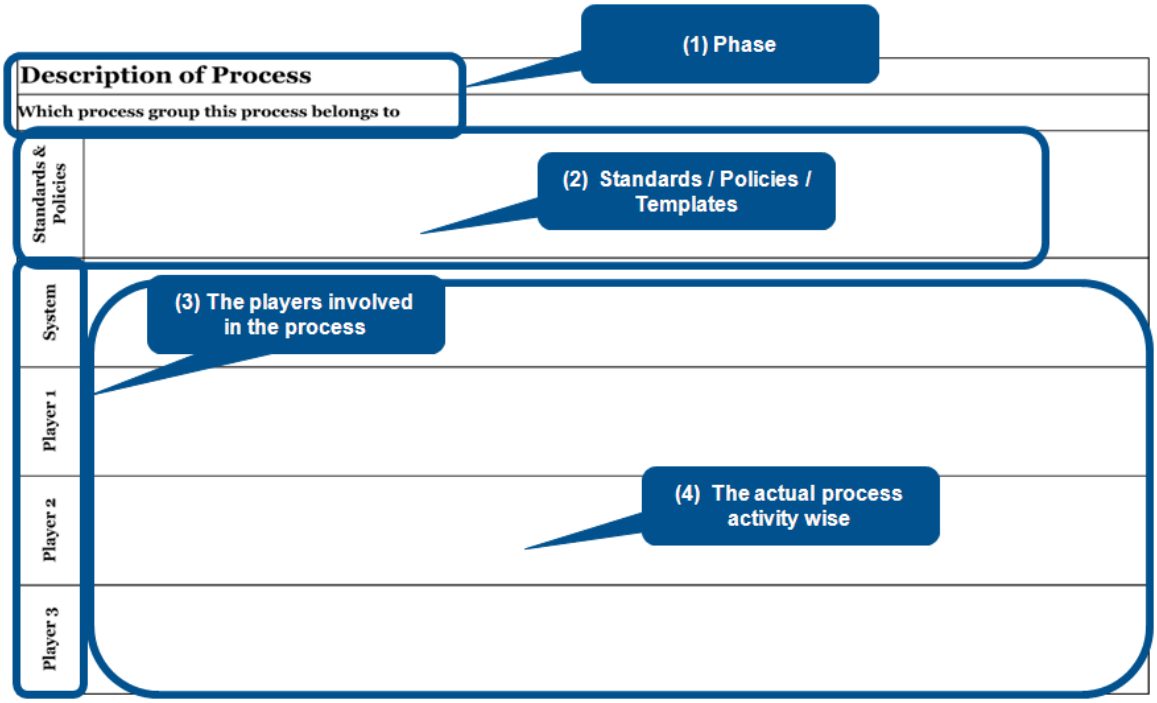
The common symbols used in flowcharting are shown below:



A number of other symbols are also used, to depict input / output, wait time, manual operation etc. Flow Charts are usually prepared using Computer Tools, using the four field mapping template. The template as shown below captures the following:

- Phase / which process group the current process belongs to
- Standards / Policies and Templates
- Players involved in the Process
- Actual Process Flow

The four field mapping template is shown below:



The steps involved in the preparation of process maps are listed below:

i. Get a cross-functional team of all front-line process players to participate
ii. Discuss & define the start and end-points accurately
iii. List all the players in field 1
iv. Start mapping the process activities one after the other clearly marking the flow of the activities with arrows in field 2
    - What happens next?
    - Why?
    - Decisions (yes/ no, if possible)
    - Identify/ emphasize wait times
v. Ground rule – The activity is not an exception & occurs at least in 20% cases

vi. Note down the relevant policies (rules governing the process activity), the standards (formats, templates used for the process activity) and any responsibility for the particular process activity in field 3

vii. Keep building the time-line in field 4 and finish with end-point; mark completion of any phase with distinct end-points

viii. Allocate time for each process activity on the map

- All team members must agree on time

ix. Total the time of each activity

x. Do a "reality check" – does it make sense?

xi. At the end of each phase, discuss & affix the appropriate process mapping notation

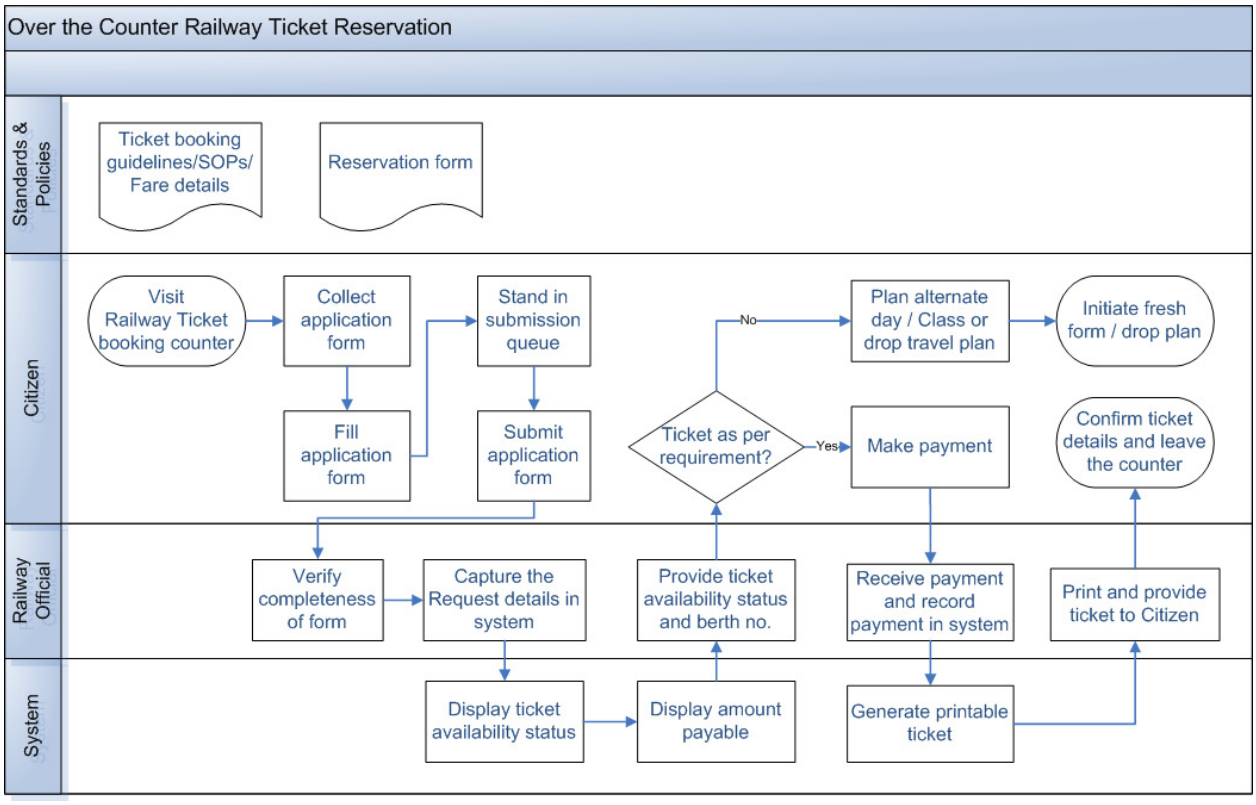
xii. Discuss & map process Problems, Issues and Expectations (PIEs)

xiii. Locate process hand-offs & disconnects

xiv. Review the process map with peers, management and other players involved

- Is the map a true reflection of the As Is process?
- Are there additional issues?

A sample process map, developed for the Railway Reservation system (manual) is provided below:



The following supplementary information shall also be captured along with the flow chart:

- Time taken for each step (including hands on time and wait time)
- Process owner (one person responsible for entire process)
- Actors in the process, and their roles
- Pre-conditions, if any (e.g. applicant should be an Indian, residing in a specific jurisdiction etc)
- Business Rules, if any (If a previous passport application was rejected, period of time for which the citizen has to wait till next application)
- Alternate flows, if any

Once the flowcharting is completed accurately, the team should be able to undertake the following from the process depiction:

- Identify time lags and non-value-adding steps.
- Identify responsibility for each step.
- Brainstorm for problems in the process.
- Determine major and minor inputs into the process with a cause & effect diagram.
- Choose the most likely trouble spots with the consensus builder.

The next step after process mapping is the identification of Problems, Issues and Expectations (PIE).

- **Problems** are non-conformance to defined processes and procedures due to skill gaps, lack of common understanding, resource constraints, etc.
    - E.g. documentation not completed as per checklist
- **Issues** are systemic gaps where processes and procedures are not defined or are ill-defined
    - E.g. giving a loan to 5 family members
- **Expectations** are the expectations of that process owners, users and other stakeholders have from world-class best practices
    - E.g. loan should be given in 2 days

Once the PIEs are identified, they are logically grouped. The next step is to brain-storm 'Quick Wins' & change possibilities in the process. Key PIEs, especially related to process, are analyzed for root causes in the Analyze phase. Other PIEs are reviewed in the process design phase to ensure that the new process addresses all or most of them.

4.6. Data Collection for Process Re-engineering

During the "As-is" process mapping exercise, it is essential to study and document the relevant data and metrics. Data thus collected is used in

What gets Focused gets Measured
What gets Measured gets Achieved
What gets Achieved gets Recognised
What gets Recognised gets Institutionalised

the process analysis phase, and also for monitoring and evaluation at a later stage.

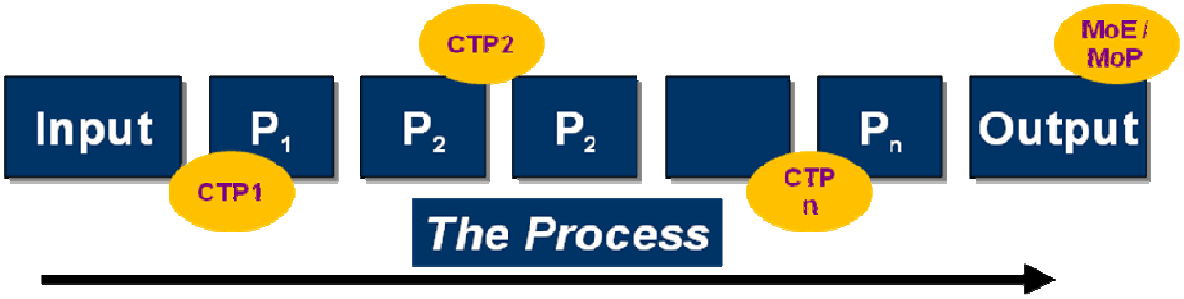
In order to decide which data to collect, it is essential to define the relevant "Measures of Excellence" and "Measures of Performance".

Measures of Excellence (MoE) are those metrics which are Customer centric and measures the effectiveness of the process. These measures include Critical to Quality (CTQ) and Critical to Time (CTT) metrics.

Measures of Performance (MoP) those metrics which are Stakeholder centric and measures the efficiency of the process. These measures include Critical to Cost (CTC) and Critical to Revenue (CTR) metrics.

Critical to Process (CTP) metrics are the parameters from the various phases of the process which drive the MoE / MoPs. CTPs are not end to end but are specific to sub-processes and need to be measured & streamlined in order to improve the MoE/MoPs. In other words, CTPs act as design variable – the specifications for CTPs get dictated by the MoE / MoPs targets which in turn influence the associated sub-process.

To illustrate this, consider the diagram below:



The MoE / MoP are defined for the entire process (e.g. time taken in passport issuance, quality of product etc). But for each sub process, CTPs can be defined, which are critical in that sub process (e.g. time taken for police verification, wait time in queue for submitting application etc). By improving individual CTPs, the overall MoE / MoP can be improved. In other words, CTPs are the levers for delivering on the MoE / MoPs.

The steps in the identification of variables for data collection are listed below:

i. Broadly identify the universal set of independent variables (CTP) impacting the CTQ under consideration
   - Y = f(X1, X2, X3… Xn) where Y is the CTQ (dependent variable) and Xis are the independent variables (CTPs)

ii. Use a structured process for short-listing the CTPs for which data collection needs to be done.

The Cause & Effect matrix is a tool used for finalizing the variables for data collection. The steps in the Cause & Effect Matrix creation and identification of the key CTPs are discussed below:

i. List the CTQs across the top of a matrix

ii. Rank and assign scores to each CTQ according to its importance to the customer.

iii. List the CTPs on the left side of the matrix.

iv. Determine correlation scores between each cause and CTQ based on the strength of their relationship (E.g. 1 – weak, 3 – some, 9 – strong)

v. Cross multiply correlation scores with priority scores and add across for each cause

	Imp	CTP1	CTP2	CTP3	CTP4
CTQ1	0.5	9	1	9	1
CTQ2	0.3	3	1	3	3
CTQ3	0.2	1	3	3	3
Score		5.6	1.4	6	2

The CTPs with the highest scores should be selected for data collection.

4.7. Data Collection Methodology

The types of data collected in the government process environment include the following:

- Time – value added, cycle, waiting, productive / non-productive
- Volumes – transactions / day, units / hour, % of each category
- Rates or Costs - computed, fixed, per unit
- Equipment Used - cost
- Value Added - real value, business value, no-value

The Data Collection Methodology involves 3 major steps:

- Step 1: Design the data collection plan
    - What data needs to be collected – Design appropriate template (include desired data formats)
    - What is the period/ sample size for data – clearly specify what will qualify as a valid sample
    - Who will collect the data – assign clear responsibilities
    - What are the valid data sources – seek agreement from stakeholders
- Step 2: Deploy
    - Clearly articulate the expectations and requirements to the data collector
    - Give sample data formats, if required
    - Review the first few data points collected to ensure data collection is as per the requirements
- Step 3: Review
    - Check the data for integrity, accuracy and sufficiency

In many cases, a sampling approach may be necessitated for data collection. Sampling is a process of collecting only a portion of the data that is available or could be available and using the data in sample to draw conclusions (statistical inference).

Sampling may be necessitated due to the following reasons:

- It is often impractical or too costly to collect the data
- Sound conclusion can often be made from a relatively small amount of data
- Some time data collection is a destructive process
- Sampling provides a ”snapshot” of the process or population at a given point of time

The data collected during this phase forms input to the process analysis and monitoring and evaluation at later stages.

5. Process Analysis

5.1. Analyzing “as-is” processes

Once current processes have been documented along with the data (relevant CTPs) it is useful to identify the root causes of problems and non-value adding activities in processes.

Identifying the root cause of process dysfunction enables you to ensure that the process redesign solves the root cause, rather than simply addressing a symptom of a problem that will occur again. It also allows determination of how many processes are affected by a single root cause. The more process problems a root cause creates, the higher priority it is for being addresses quickly and effectively.

Once the root causes are identified, the next step in process analysis is the identification of Value Added / Non Value Added tasks, process complexity, and process metrics.

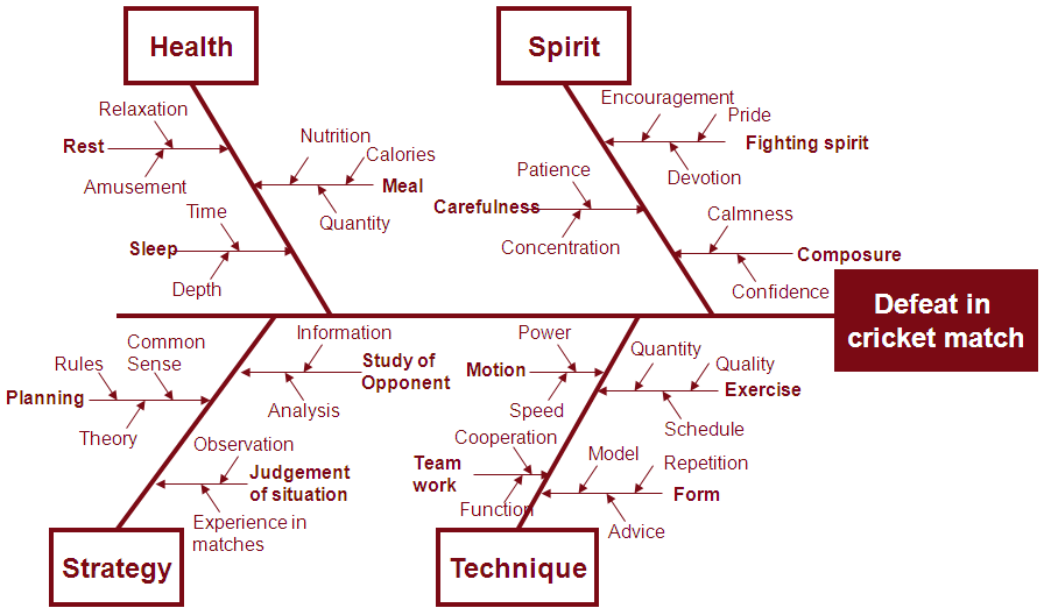
5.2. Cause – Effect / Fishbone Analysis

The cause-effect or fishbone diagram is a tool used for identifying the root causes, associated with process dysfunction. The technique was first proposed in the 1960s, by Kaoru Ishikawa who pioneered quality management processes in the Kawasaki shipyards, and in the process became one of the founding fathers of modern management. They are considered one of the seven basic tools of quality control

The technique helps the team organize and graphically display all the knowledge it has about the problem. Besides, fishbone diagram helps in:

- Unearthing all possible causes for the problem at hand by capturing views of all members
- Creating a consensus around the problem and builds support for resulting solutions
- It focuses the team on causes rather than symptoms
- Organizing data serves as a guide for discussion and inspires more ideas

A sample fishbone diagram for the problem – India's defeat in cricket match, is given below:



In order to prepare the fishbone diagram, the steps detailed below are followed:

i. Take the problem as the end effect
ii. Take a large sheet of paper and write the effect in the right hand middle in a block
iii. Draw the center bone / line
iv. Begin by using the *5-Why methodology* & build the bones of the diagram
v. Lines should flow towards the "effect" and touch with the arrow heads
vi. Start from right with a main "Why" category bone and add sub-categories bones to the main line
vii. At every level ask "Why" this is caused / "What" causes this?
viii. Keep asking this question and build the fishbone until the causes are specific enough to verify – Be sure to work from the level of symptom to cause
ix. General thumb rule is to ask "Why" five times to reach to a verifiable cause
x. For every cause that is not a sub-category to the earlier "Why" and is a distinct family/ category of cause, add a new bone to the diagram
xi. Build the major categories/ families (bones) towards the left
xii. Brain storm to collect all the possible causes that the team knows
xiii. Build the diagram by linking the brainstormed causes under appropriate categories
xiv. Refine categories where necessary

xv. It is a good practice to bring-in more and more people to look at the Fishbone diagram to add to the cause

xvi. Circle the causes that seem most probable

xvii. Some of these causes can be taken up for measurement & verification

The causes which have the most number of arrows going into it are the root causes. The 5 Whys methodology which is used for identifying causes, involve asking "Why" till one arrives at a root cause, which cannot be further attributed down to a more elementary cause.

The root causes identified in this stage, are to be revisited during process design, to ensure they are addressed.

5.3. Value Added & Non Value Added Analysis

In this stage, the activities in the process are divided into Value Added (VA) and Non Value Added (NVA).

An activity is classified as **Customer Value Added** activity (CVA) if:

- The activity adds a form or feature to the end-product or service, and
- The customer is willing to pay for it
- The task enables a competitive advantage (reduce price, faster delivery, fewer defects)
- e.g.: printing of passport, issue of food grains under PDS etc

An activity is classified as **Business Value Added** (BVA) if:

- The customer may not want to pay for it but are required for some reason
- The task required by law or regulation
- The task reduces financial risk?
- The process breaks-down if the task were removed
- e.g.: quality testing, attestation / authorization of copies of documents etc

An activity that provides the process with no competitive advantage and which can be discarded without influencing the final outcome is a **Non Value Added** activity:

- It includes any of the following activities – rework, multiple signatures, counting, handling, checking, inspecting, transporting, down-time, delaying, storing
- e.g.: Standing in queue to submit an application form

Process activities may be classified as VA / NVA with the intention of eliminating Non Value Added activities.

Symbol	Notation	Usage	Example
	VA Activity	Changes the state of the product	Sanction of loan, Dispatch of passport
	Inspect	Checking	Scrutiny of file against checklist
	Transport	File movement from desk to desk (within or across departments)	File sent from Verification team to Data Entry team
	Storage	Data entry in Excel or System, writing on paper	Data Entry of file into system
	Delay	File waiting for processing, or user waiting for file	Files piled up on desk / wait for file to come from verification
	Decision	Yes / No decision	Allow deviation / is file complete as per checklist

It may be noted that not all NVA can be eliminated. Some NVA may be critical in ensuring certain compliance requirements.

The Value Added Ratio (VAR) of a process gives the percentage of total time spent on VA activities.

VAR = (Sum of Active Time Spent on Value Added Activities / Total Elapsed Time) * 100

Example:

- Sum of Active Time Spent on Value Added Activities = 1.5 hours
- Total Elapsed Time = 2 days = 48 hours
- VAR = (1.5 hours / 48 hours) x 100 = 3.1%

5.4. Process Complexity Analysis

Process Complexity analysis facilitates identification of those elements in the process that can be eliminated. Process Complexity Analysis documents the following:

- Number of data entry points (DEP)
    - Shows the number of times data is being captured
    - Identifies areas where duplication of work is taking place
- Number of hand-off points (HOP)
    - Shows how many hands the file passes through for processing
    - Indicates areas where handoffs can be eliminated for speedier processing through elimination of unnecessary activities & waiting time
- Number of systems used
    - Shows the number of systems and excel sheets / registers where data is entered

- Allows us to identify areas where duplicate data entry is taking place and helps eliminate un-necessary work

More the DEPs, HOPs and systems, more complex are the processes. Re-design should aim to reduce the complexity.

5.5. HOT / TAT Analysis

This stage analyses the Hand Over Time (HOT) and Turn Around Time (TAT). These are defined as below:

- HANDS ON TIME (HOT)
  - The time during which material or information is actually handled or action is taken on them in a process for changing its shape or form
- Turnaround time (TAT)
  - The total time taken for material or information to move across in a process from the start point to the end point
- TAT = HOT+ Queue time + Changeover time (if any) + transportation time

Time other than HOT can be focused upon for improvement, during the process design phase.

5.6. Definition of Key Metrics

The key metrics (CTQs & CTPs) of the process acts as indicators of how the process has improved post GPR. From the data collected on the CTQs and CTPs, the baseline metrics can be obtained.

Metrics can be of the following types:

- Business Metrics
  - E.g.: No of passports issued
  - Growth in passport issuance

- Effectiveness metrics
    - E.g.: TAT for passport issuance
    - Number and type of citizen grievances
- Efficiency metrics
    - E.g.: Percentage of passports issued with errors
    - Real time tracking of forms

Post roll-out of GPR, these metrics can be tracked for continuous improvement using Process Quality Information Systems (PQIS).

6. "To-Be" Process Definition

6.1. Preparing for Process Design

Process design phase requires a lot of brainstorming to arrive at possible solutions. This stage may include:

- Focused stakeholder discussions using group thinking techniques facilitate identification of solutions and alternate ideas
- Best practices studies from similar environments provide inputs to possible solutions

Different group thinking approaches are used to arrive at possible solutions.

Divergent thinking techniques involve spontaneous, free-flowing generation of many ideas in a random, unorganized fashion. The ideas generated by divergent thinking are organized and structured using convergent thinking. Divergent thinking techniques include brainstorming, out-of-the-box thinking and exploration.

Convergent thinking follows a particular set of logical steps to arrive at one "correct" solution. These techniques include:

- Prioritization
- Assessment & evaluation
- Multi-voting
- PICK charts
- PUGH matrix
- 6 Thinking Hats

The new process may be designed using a variety of process drivers. These process design drivers include:

- **Redesign** existing processes - combine activities, remove redundancies, duplications, obsolescence, disconnects, inappropriate timing, costs…
- **Rework** the way (how and where) that the process is executed
    - E.g. co-locating all of the functions in one area or tasks that were formerly divided between 6 people are now undertaken by 1 person
- **Remove** the process or sub-processes
    - E.g. police verification process completely waived off for certain cases in passport process, based on certain business rules
- **Replace** processes / sub processes completely either by automation or by alternate processes
    - E.g. a manual system replaced by a computer system
- **Outsource** the process or components of the process

The drivers affecting the process content, boundaries and structure may include:

- Legal & Regulatory requirements that govern the process
- Changing the way work is performed e.g.: Filling of the application form by citizen online, to prevent data entry at department
- Possibility of outsourcing components of a process e.g.: Facilitation Centres for submission of passport application, 24x7 call centre
- The use of specific technologies e.g., barcode readers, computer simulation, computer-aided design and manufacturing
- The use of specific software packages with rich functionality enabling many alternative solutions

The various methods for process design are detailed later in this chapter.

6.2. Process Redesign

The main objective of redesign is to improve performance measures – CTPs and CTQs identified during the process mapping phase. Redesign can be carried out by looking at the following items identified during process analysis:

- Redundancies
- Duplications
- Inefficiencies
- Bottlenecks
- Unnecessary activities
- Non value-adding activities

Redesign should take into account legal issues, IT / Technology opportunities and organizational constraints of the process. Some of the key principles of process re-design include:

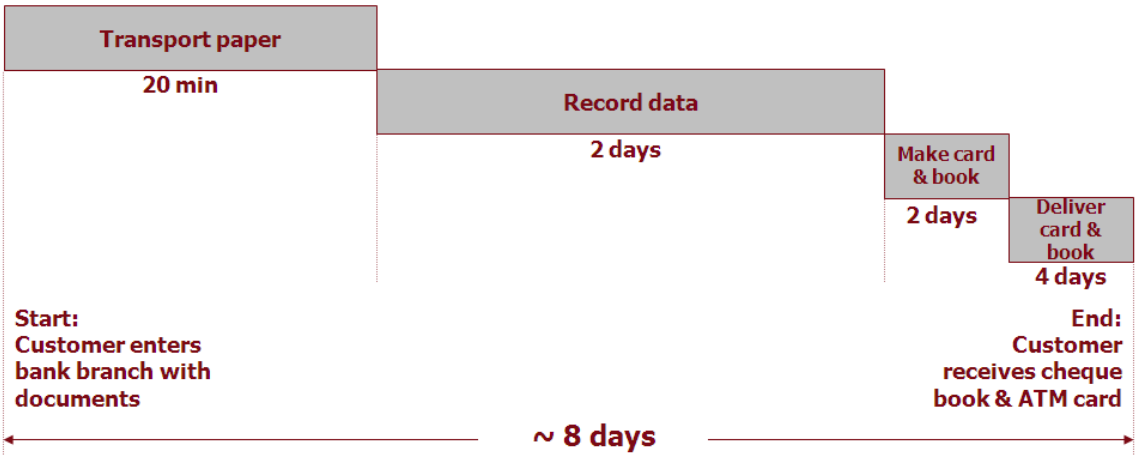
- Eliminate waste or non-value added activities as much as possible
- Organise around outcomes - treat geographically dispersed resources as though centrally located
- Build quality in at the source - mistake proof the process, standardize on best practices, capture information in digital form at the source
- Find opportunities to cross train and use multifunctional workers
- Reduce preparation and waiting times
- Use parallel processing
- Apply automation and appropriate technologies
- Use visual process control systems
- Establish a continuous improvement capability and mindset

A simple example of process re-design is given below.

A typical Bank Account Opening process takes about 8 days. The steps involved are the following:

- Customer visits Bank Branch and submits application form (20 minutes)
- Application sent to Central Data entry team which enters customer data in the software (2 days)
- Intimation sent to vendor for printing of card & book, and the vendor prepares card & book (2 days)
- Card & Book sent by post to customer (4 days)

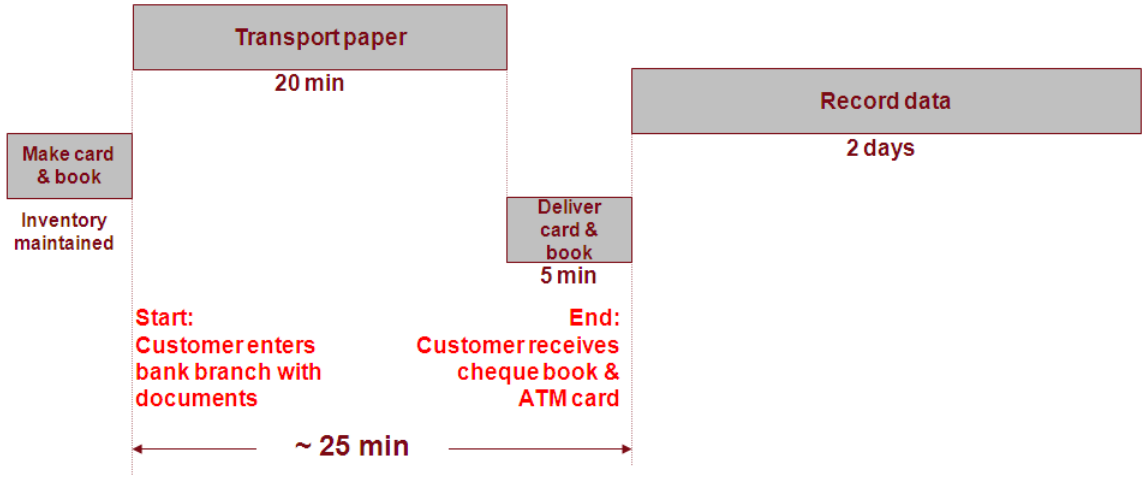
The process is depicted below:



As can be seen, the total TAT for the process is 8 days. But by slightly redesigning the process, the TAT can be significantly brought down.

- Recording of data can be carried out after the customer is issued card & book
- By making pre-printed cards and books available at the bank branch, the delay in having to print the card & book individually can be eliminated
- By giving the card & book to the customer upfront, the delay in postal delivery can be eliminated

The revised process is depicted below:



The process redesign has brought down the TAT from 8 days to 25 minutes.

6.3. Process Re-work and Self Services

In process re-work the focus is on changing the way a process is executed (where and how) rather than changing the process itself. Thus process re-work may take one or more of the following approaches:

- Converting services which required visits to department offices, to self services which the citizen can avail anywhere / anytime
- Standardizing and simplifying the processes and process tools (forms, documents, checklists etc)
- Changing responsibilities / tasks that were completed by several personnel so that now one person completes all of the tasks
- Co-locating together personnel who complete different tasks within a process rather than having them in different locations
- Separating a task formerly completed by one individual into several logically grouped or specialist steps

Typical examples of converting services delivered at the department premises to self-services include:

- Online reservation of train tickets
- Online income tax filing
- Online filing of company compliance requirements (MCA21)

The benefits of self services are listed below:

- Anywhere / anytime service delivery at the place and time of convenience to the customer
- Lower costs to the department on office space, consumables, manpower etc
- Reduced queues at department offices
- Officials can concentrate more on value added service delivery, as they are relieved from no value added tasks
- Opportunity to explore new channels of service delivery – like railway reservation through Common Service Centres (CSC)

Not all services may be amenable to conversion to self services. The following are the services most amenable to conversion:

- Any service which does not require the citizen to be physically present at the service delivery point
    - Information services – e.g.: checking status of passport application, looking up past transactions on a particular property (encumbrance)
    - Compliance services – e.g.: Filing of returns, Filing of company information (MCA21)
    - Payments – payment of property tax, self assessment Income Tax etc
- In cases where there is requirement of physical presence of the beneficiary, part of the processing can be made self service:
    - e.g.: Physical verification of the originals of supporting documents is a mandatory requirement in case of passports. The citizen should produce these documents physically at the RPO / Facilitation counter
    - Process re-engineered to allow citizen to upload scanned documents, do basic data entry and book an appointment for physical verification. This reduces the total time taken for physical verification

Another approach in process re-work is the standardization work processes, process inputs and outputs. Standardization avoids different regions, units, and people delivering the same service working on their own agenda. Standards also help in detecting anomalies and reducing wastes in processes.

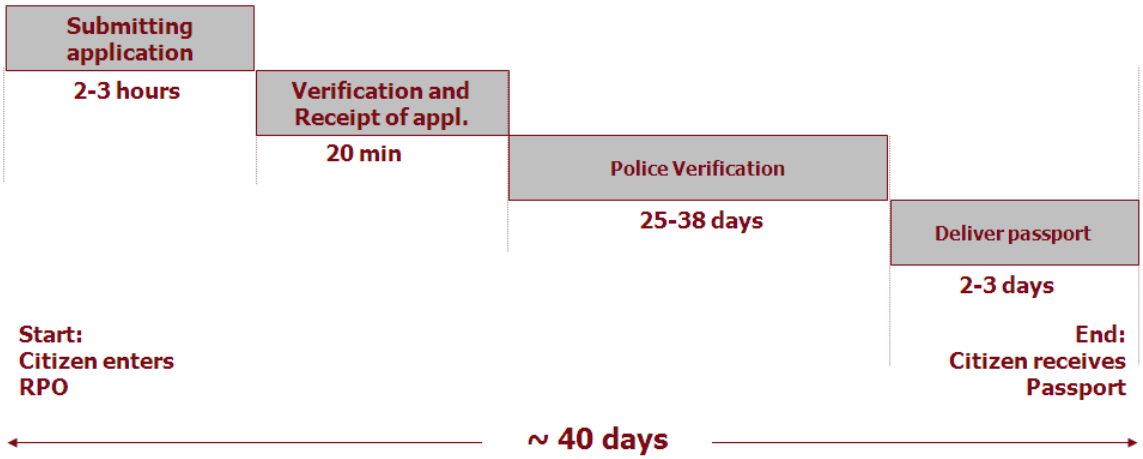
6.4. Removing Process Steps

In some circumstances, re-examination of the drivers behind initial process design or comparison with best practices within and external to an industry may drive the design of the process through:

- Elimination of steps that do not contribute much to the final work product or the policy / legal constraints governing it

- Comparing an agency's performance to internal and/or external peers, competitors or world class organizations
- Determining potential opportunities for improvement through application of leading / best practices
- Generating ideas for improving performance
- Comparing roles - function, mission and structure of an organization
- Comparing processes and practices
- Benchmarks and performance measures

To illustrate the removal of process steps, consider the passport issuance process:

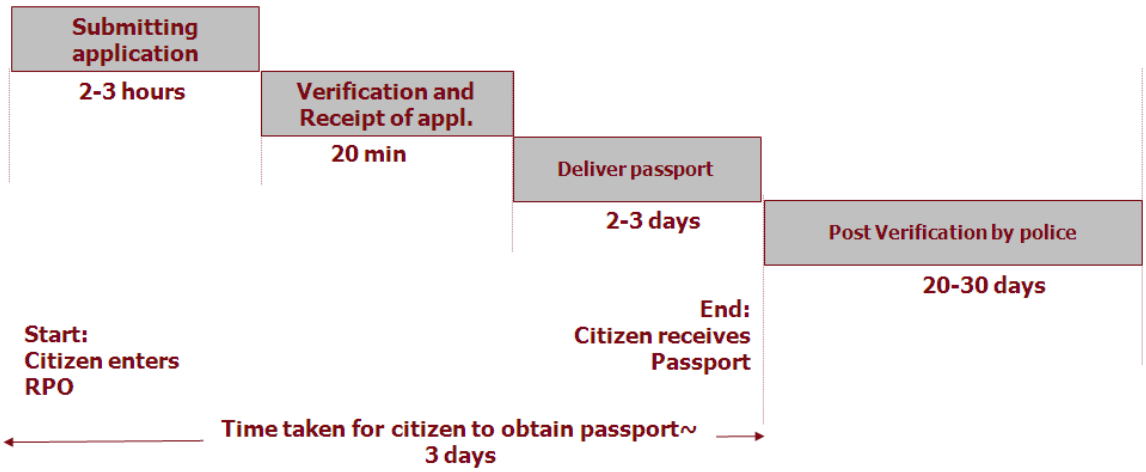


As can be seen, the major part of the delay in passport issuance is in the Police Verification process, which is completely outside the control of the passport department. As the police verification cannot be wholly done away with, the option of removing the sub process from the critical path of the process was explored.

The process was designed for removing the police verification from the critical path:

- Pre-verification (verification before passport issue) is carried out only in certain cases. Post verification done in other cases, after passport issue
- If the applicant presents three of the fourteen documents, passport granted on post verification basis
- Minors with both parents holding valid passport require only post verification

The new process is depicted below:



The TAT was improved to 3 days for majority of the passport applications.

6.5. Outsourcing of Government process components

Outsourcing is an arrangement in which one organization provides services for another organization that were originally provided in-house - services that have usually been regarded as intrinsic to the organization's business. Not all services can be outsourced. In deciding which services to outsource, the following questions are important:

- Why would you outsource?
- What would you outsource?
- What would you NOT outsource?
- What are some risks of outsourcing?

The decision to outsource is usually driven by the following considerations:

- Capacity constraints within the government (skills, manpower, technology etc), which can only be bridged by outsourcing some part of processes
- To put in place additional service delivery channels (24*7 channels)
- Non value added process steps (collecting forms, data entry etc) can be done with much lower costs to citizen and department if outsourced
- Ability to provide better service levels, as it is easier to have formal Service Level Parameters governing the outsourcing relationship
- Improving the 8P's of service delivery for citizen
- Bringing in the focus on professionalism and quality of the private sector

The services which are more amenable to outsourcing include non value added, but incidental services like collection of forms, data entry, scanning documents etc and non-strategic and administrative functions (facilities management, helpdesk support, network management etc). At the same time strategic functions and services involving confidential data and legal implications may not be outsourced.

The overall outsourcing approach should address the process related issues that may come up once a process / sub process is outsourced, and may include:

- Definition of inputs and outputs to and from the outsourced processes
- Changes to process boundaries
- Roles and responsibilities for managing the outsourcer relationships
- Monitoring, reviewing and paying the outsourcer
- Ongoing changes to outsourced processes
- Impact of cessation or removal of outsourced processes

Service Levels for the outsourced services should be defined, and the Service Level Agreement should have penalties / incentives based on non achievement / exceeding of the service levels.

Examples of outsourcing include e-Seva of Government of Andhra Pradesh, and Common Service Centres.

6.6. Replacing / Automating Processes

The existing process / sub process may be replaced completely by another process / sub process. In many cases, this would imply complete automation of the process / sub process. Automation facilitates the government to derive the following benefits:

- Most of the automated systems incorporate accepted best practices from across the world, which becomes part of the new process by default (e.g. Finance and Accounting ERP modules, e-Procurement)
- Significant reduction in turnaround times due to automated processing
- Ability to enforce greater controls (automated error checking, validations at source etc)
- Reduction in costs (manpower costs, cost of service delivery)

Process design for automated process should take into account:

- Selecting transaction types to be automated
- Deciding on using off the shelf system and tailoring inputs and outputs, or customizing the system
- Following the system and transaction flow
- Determining data sources, availability and timing
- Understanding how calculations are performed
- Selecting validation options for data quality
- Tailoring screens and reports
- Creating input documents to meet input needs
- Creating a pilot (or "sandbox") system to understand how various types of functionality work
- Designing, balancing and reconciling

Automation of processes would imply the use of advanced technologies. Process re-design should take into account the latest technology aids, which can reduce time and cost parameters significantly. These technology aids include:

- Handheld devices: Collection of data at remote location, digitizing data at source
- Shared databases: Real time updating of data by multiple systems, one stop service delivery possibilities
- GPS Technologies: Allows remote tracking
- Biometric Technologies: Authentication, Identification of duplicates, de-duplication
- Smart Card / RFID Technologies: Authentication, tracking, account management

6.7. Documenting the "To-be" Process and Taking Stock

Once the process design is completed, the re-engineered process should be documented in the form of "to-be" process maps. The documentation of "to-be" process should include the related changes and implications in:

- Policies and Procedures
- Technology
- Organization
- Facilities
- Data
- Target metrics for key parameters
- Performance Measurement
- Benefits
- Security and Controls

Before finalizing the process design, one should look back to ascertain whether all the problem areas identified in the previous stages have been addressed adequately:

- Is the new process in line with the vision defined for GPR and overall organization vision?
- Does the process design address the service quality parameters that we had set out to achieve?
- Does it address the Problems, Issues and Expectations?
- Does it address the root causes identified in the cause-effect analysis adequately?
- Has the process become less complex, with lesser "waste"?

If any of these parameters are not met, the process design should be refined accordingly.

7. Implementing the Re-engineered Processes

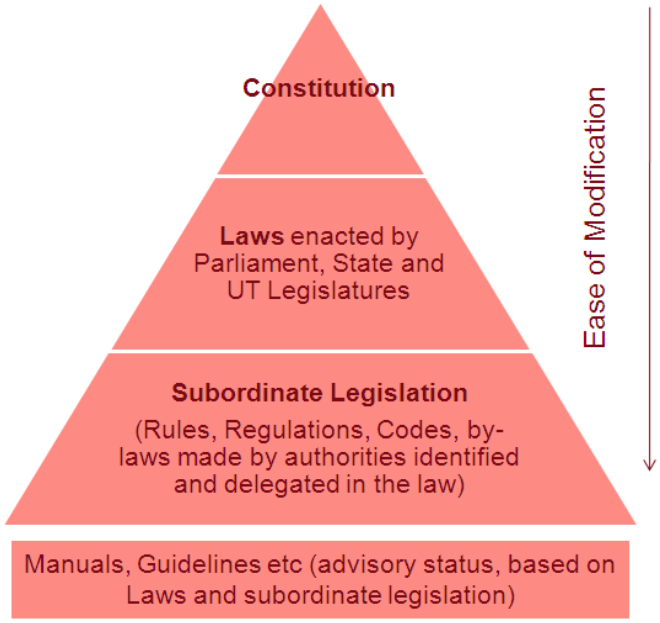
7.1. Legal Aspects of GPR Implementation

As already discussed, processes are usually derived from the underlying legislation. Hence, changing processes may require change to the legal framework, to legalize the process changes, and give them enough legal backing.

Some of the changes that may result from GPR, which requires legal changes include:

- Organizational Structures change (e.g. change in designated agency to handle a particular task / process)
- Jurisdictions change (anytime / anywhere services)
- Statutory powers change (who is the authority for delivery of a certain service)

To understand the legal changes required for GPR, it is important to understand the hierarchy of Legislations as given below:



At the top of the Legal hierarchy is the Constitution. Laws are enacted by Central or State government depending on whether State / Central subject.

Subordinate legislation enacted by authorities identified under the law. At the lowest level are the manuals and guidelines, which have only advisory status.

While the laws need ratification by the Parliament / State / UT Legislatures, Subordinate legislation can be amended by executive orders. Accordingly, the practice followed in legislation is to delegate the procedural issues to subordinate legislations, while the Laws provide only a high level direction.

Thus, in GPR exercises, any changes which have a legal impact should be incorporated into the Laws and Subordinate legislation.

7.2. Recognition of Electronic Transactions

Another important legal aspect in IT ennablement and GPR is the legal recognition of the resulting IT enabled processes. They issues that arise include the following (to name a few):

- Legal recognition of electronic transactions
- Legal recognition of electronic records
- Equivalence of Electronic and Manual Signatures
- Electronic Contracts

In India, such legal recognition is provided by the following legislations:

- Information Technology Act, 2000
- Information Technology Act Amendments, 2008
- Rules under the IT Act

More details of the legislations can be obtained from http://mit.gov.in/content/acts-policies.

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Ministry of Communications & Information Technology
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