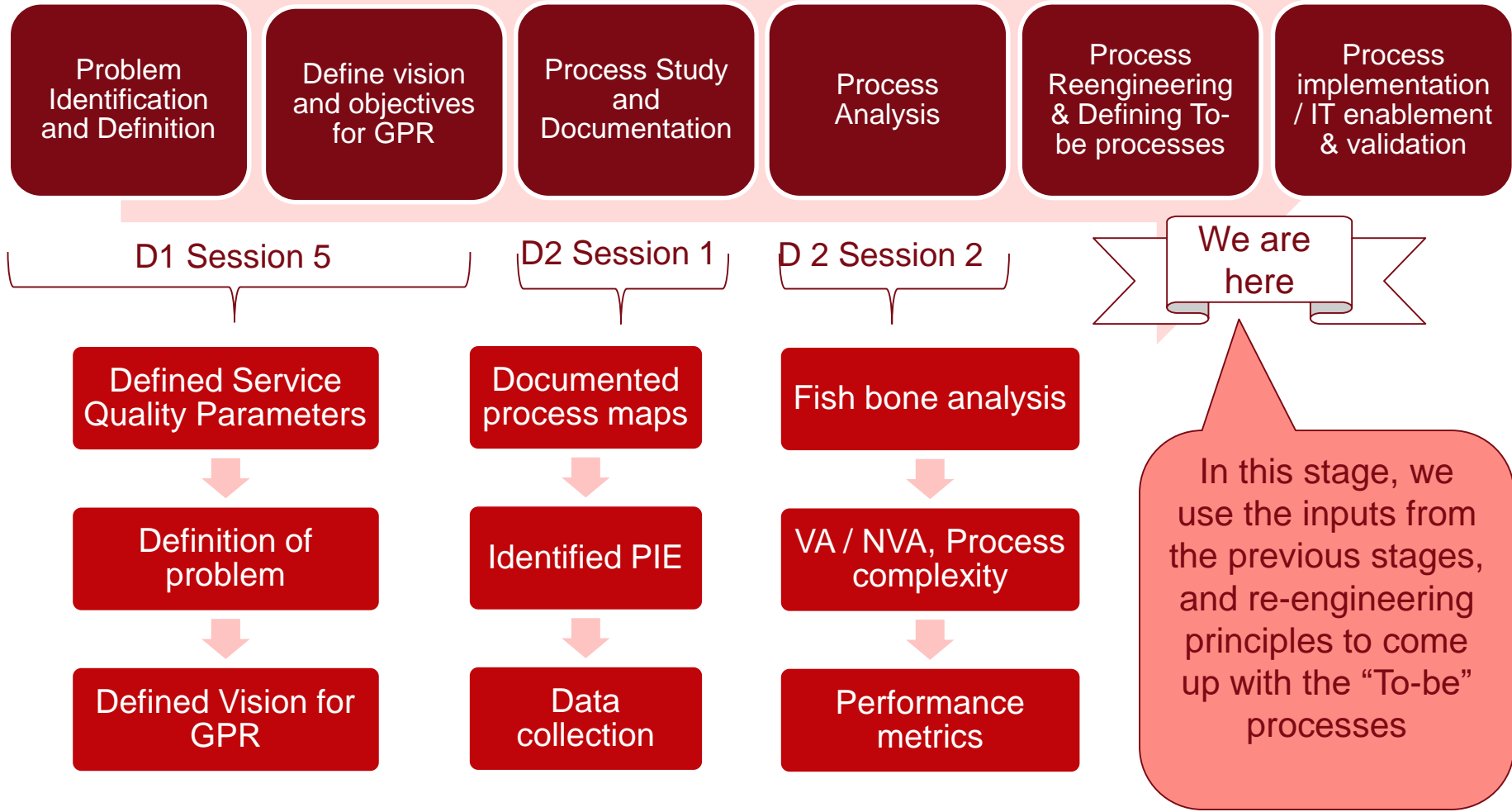Course:

Government Process Re-engineering

Day 3

Session 1: Identifying solutions for the challenges in Government Process Environment and
                        Optimization of the Processes

Recap of previous sessions

| Problem Identification and Definition | Define vision and objectives for GPR | Process Study and Documentation | Process Analysis | Process Reengineering & Defining To-be processes | Process implementation / IT enablement & validation |

We are here

D1 Session 5

- Defined Service Quality Parameters
- Definition of problem
- Defined Vision for GPR

D2 Session 1

- Documented process maps
- Identified PIE
- Data collection

D 2 Session 2

- Fish bone analysis
- VA / NVA, Process complexity
- Performance metrics

In this stage, we use the inputs from the previous stages, and re-engineering principles to come up with the "To-be" processes

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First steps of process re-engineering

- 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

- Solutions may be based on any of the following process design drivers:

  - Redesigning existing processes

  - Fundamentally reworking the way a process is executed

  - Replacing processes completely

  - Removing the process or

  - Outsourcing the process

  - Automation of process

Facilitating Group Thinking

Divergent Thinking

- Spontaneous, free-flowing generation of many ideas in a random, unorganized fashion

- Techniques include:

  ➢ Exploration

  ➢ Brainstorming

  ➢ Out-of-the-Box thinking

- The ideas generated by divergent thinking are organized and structured using divergent thinking

Convergent Thinking

- Follows a particular set of logical steps to arrive at one "correct" solution

- Techniques include:

  ➢ Prioritization

  ➢ Assessment & evaluation

  ➢ Multi-voting

  ➢ PICK charts

  ➢ PUGH matrix

  ➢ 6 Thinking Hats

Divergent Thinking - Brainstorming

Brain-storming is a group exercise to generate, clarify and evaluate a large number of creative ideas & solutions

Phase I – Idea generation phase

- No criticism
- No constraint (allow wild ideas)
- Build on others ideas
- Encourage participation

Phase III – Grouping phase

- Seek clarification on points, if needed
- Group similar ideas & short-list

Phase II – Understanding phase

- Idea originator to describe the idea in detail to develop common understanding

IV – Evaluation phase

- Discuss merits of each idea

Do not forget to appoint a facilitator for the session

Plan sufficient time for the session

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Using brainstorming….

- The Brainstorming technique was developed in 1941 by an advertising executive called Alex Osborn in the US. He originally used the term "think up" which was later modified to "brainstorming".

- Brainstorming is defined as "a conference technique by which a group attempts to find a solution for a specific problem by amassing all the ideas spontaneously by its members".

- Brainstorm means using the **brain** to **storm** a creative problem and to do so in commando fashion, each stormer audaciously attacking the same objective.

- Brainstorming is a tool for generating as many ideas or solutions as possible to a problem or issue

- Creativity is encouraged by not allowing ideas to be evaluated or discussed until everyone has run dry. Any and all ideas are considered legitimate and often the most far-fetched are the most fertile.

Doing a brainstorming session

Step 1: Prepare for the session

Step 2: Agree on ground-rules

Step 3: Conduct the brainstorming session

Step 4: Decide criteria for evaluation of ideas generated

Step 5: Evaluate all ideas generated against criteria

Step 6: Select the best ideas for implementation

Step 1: Preparing for a brainstorming session

- Who will lead or facilitate the brainstorming session?

- Who will participate in the brainstorming session?

- Who can write *very* quickly to record the brainstormed ideas without slowing down the group?

- Where will the brainstorming session be held?

- What materials are needed for brainstorming (easel, paper, white board, pens, etc.)?

- What is the brainstorming session's desired outcome?

Step 2: Agreeing on ground-rules

- Ground-rules are a code of conduct to be followed during a brainstorming session.

- Before beginning a brainstorming session, ground-rules must be set. Ensure that boundaries are not set so tightly that you can't have fun or be creative.

- Have the team create their ground-rules. Try performing a mini-brainstorming session around creating brainstorming ground-rules. This allows the team to take ownership of acceptable and unacceptable behaviors

- Once the ground-rules list is generated, gain consensus that the session will be conducted according to them

- Post them in a highly visible location in the room.

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Step 2: Some ground rules for a brainstorming session

- There are no dumb ideas. Period. It's a brainstorming session, not a serious matter that requires only serious solutions. Remember, this is one of the more fun tools of quality, so keep the entire team involved!

- Don't criticize other people's ideas. This isn't a debate, discussion or forum for one person to display superiority over another.

- Build on other people's ideas. Often an idea suggested by one person can trigger a bigger and/or better idea or a variation of an idea by another person. It is this building of ideas that leads to out of the box thinking and fantastic ideas.

- Reverse the thought of 'quality over quantity.' Here we want quantity; the more creative ideas the better.

Step 3: Conduct the brainstorming session

- Define the problem/phenomenon/issue concisely and make sure that everyone understands the problem and is in agreement with the way it is worded. There is no need to put a lot of restrictions on the problem at this time

- Give everyone a few seconds to jot down a few ideas before getting started

- Begin by going around the table or room, giving everyone a chance to voice their ideas or pass. After a few rounds, open the floor

- Note down all ideas exactly as they are being said

- Don't stop until ideas become sparse. Allow for late-coming ideas.

- Remove duplicate ideas

Step 4: Decide criteria for evaluation of ideas

- Criteria should start with the word "should", for example,

  - "it should be cost effective",

  - "it should be legal",

  - "it should be possible to finish before March 31", etc.

- Criteria can be qualitative as well as quantitative

- Choose the top 9 criteria for evaluation of various ideas

Step 5: Evaluate the ideas and prioritize for execution

- Each idea can be prioritize based on criteria on varied scales
  - High – 9
  - Medium – 3
  - Low – 1

	Criteria 1	Criteria 2	Criteria 3	Score
Weights	30%	50%	20%	
Idea 1	9	3	1	4.4
Idea 2	1	1	3	1.4
Idea 3	9	9	3	7.8

Convergent thinking technique – PICK Chart

- **PICK charts**

  - A PICK chart helps a team to organize & prioritize its ideas & solutions by separating them into four categories in 2 x 2 matrix on the basis of expected benefits and ease of implementation

  - The ideas can be categorized into Implement, Challenge, Possible & Kill

HIGH

EASE OF IMPLEMENTATION

POSSIBLE

IMPLEMENT

KILL

CHALLENGE

LOW

EXPECTED BENEFITS
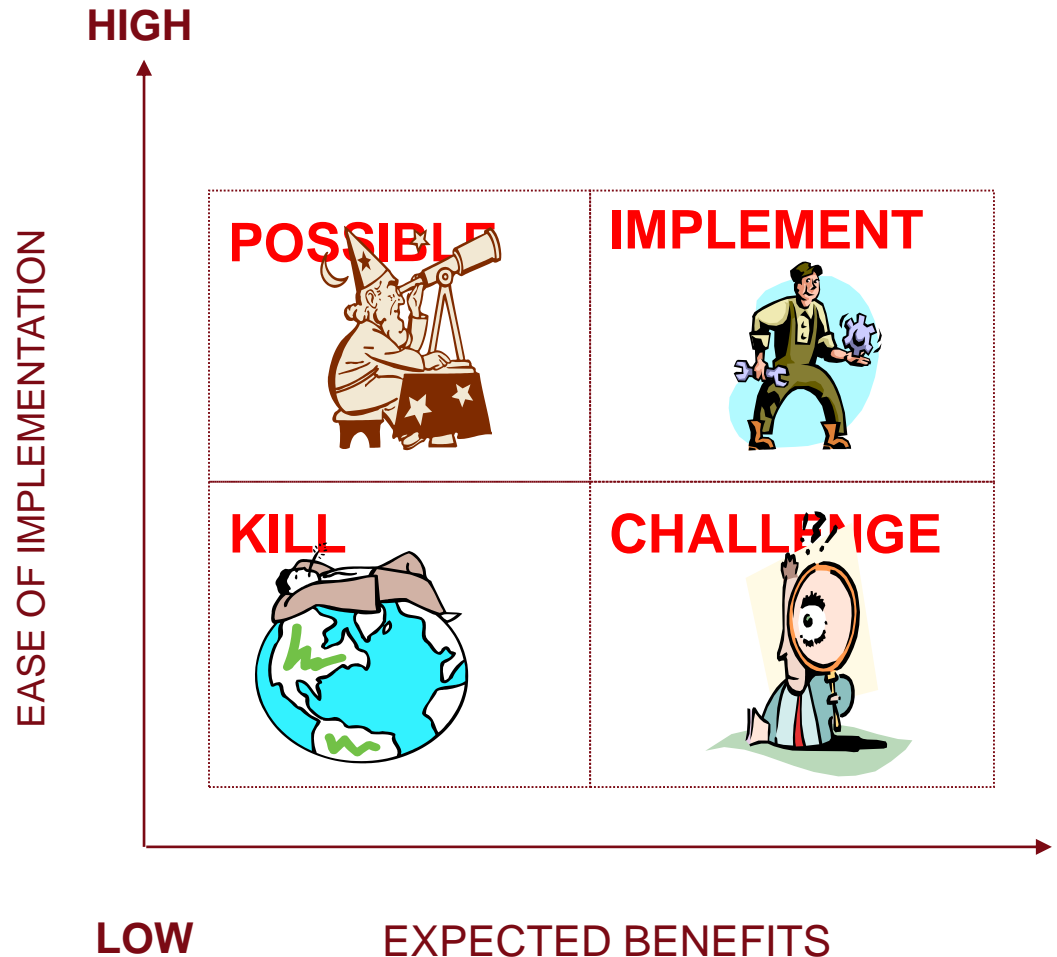
Convergent thinking technique – PUGH Matrix

- PUGH matrix

  - The PUGH matrix is a technique to select an appropriate solution from a set of ideas or solutions based on given criteria

  - Each potential idea or solution is given "+", "-" or "S" depending on whether it is better, worse or same as the base-line situation… the solution having the highest net Score is selected

The PUGH Matrix is a technique to select a candidate solution from a set of solutions based on a given criteria

Criteria	Weight	Baseline "As Is"	"To Be" option 1	"To Be" option 2	"To Be" option 3
Customer satisfaction	50	S	+	+	-
Cost	30	S	S	-	S
Manpower flexibility	10	S	+	S	+
Training difficulty	10	S	-	+	+
Counts					
Count of + ves		0	2	2	2
Count of "S"		4	1	1	1
Count of - ves		0	1	1	1
Totals					
Sum of weighted + ves			60	60	20
Sum of weighted – ves			10	30	50
NET SCORE			50	30	-30

Each candidate is given +, - or S depending on whether it is better, worse or same as the base line solution. The solution having the highest Net Score is selected

Convergent Thinking Technique – 6 Thinking Hats

- 6 Thinking Hats
  - This technique promotes parallel thinking to assess each alternative from various dimensions
    - White Hat
    - Yellow Hat
    - Black Hat
    - Red Hat
    - Green Hat
    - Blue Hat

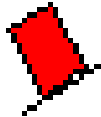# Parallel thinking is often superior than spaghetti thinking….

White Hat — search for information related to the subject.

Yellow Hat — search for benefits, values, and reasons to be optimistic about the subject.

Black Hat — search for faults, problems, and dangers related to the subject.

Red Hat — signify feelings, hunches, and intuitions about the subject.

Green Hat — search for creative alternatives and solutions related to the subject.

Blue Hat — organize and summarize.

Importance of Best Practices

- A ***best practice*** is a technique, method, process, activity or any other process attribute that is believed to be more effective at delivering a particular outcome than any other technique, method, process, etc. when applied to a particular condition or circumstance

- Best practices from similar environments are a major source for solution ideas during process re-engineering…

- The steps involved in identifying best practices include the following:

  ➢ Identify globally and nationally accepted systems in the domain under consideration

  ➢ Identify the key factors contributing to the success of those initiatives

  ➢ Identify potential opportunities and generate ideas based on them

  ➢ Shortlist the best practices that are applicable in the current context, directly or after appropriate modifications

Best Practices Illustrative Example

- In case of Land Records Management, the best practice systems included:

  - New Zealand - Land Information Online
  - Canada - Land Title & Survey Authority
  - Singapore - Singapore Land Authority
  - Australia - Land Victoria

- All these systems are similar environments, as they are all governed by the underlying commonwealth land management laws…

- The best practices identified included:

  - Single authority for delivering all land record related services
  - Central data repository and direct updating of database
  - Interlinking of Title information with Survey maps and geodetic control data
  - Addition of new delivery channels to provide hassle free service to citizens

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Process design can be carried out through…

- **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

What may drive process design

- Processes are rarely derived "in a vacuum". Some 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

**Processes are not everything - remember
Policies, Technology, Organisation and Facilities as well**

Checklist for evaluating the process design..

- Check that the process design:
    - Resolves the business issues
    - Achieves performance targets
    - Meets relevant legal & policy legal requirements
    - Achieves planned benefits
    - Is cost-effective
    - Is capable of being implemented

The different process design approaches will be discussed in the subsequent sessions

Redesigning existing processes

- 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 principles of process re-design

- 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

Simple Process Redesign Example: Bank Account Opening

Existing Process
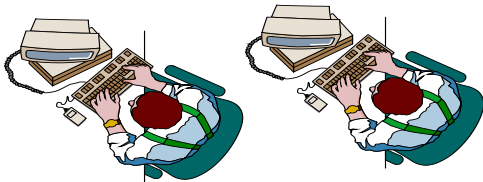
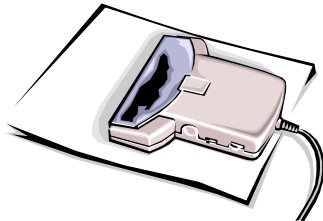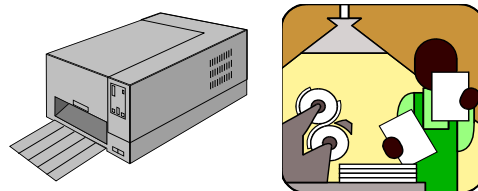| Customer Visits Bank Branch	Customer fills up form & hands over all documents	Form & documents are dispatched to centralized data entry team
Centralized data entry team enters customer data in database	Data is verified by Bank's officers	Data is uploaded in the Bank's software
Signatures of customers are scanned	ATM Cards & Cheque Books are printed	ATM Cards & Cheque books are dispatched by post
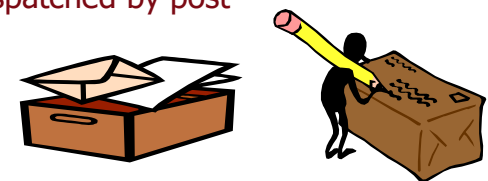
Discuss opportunities to have the wastes eliminated

Types of wastes	Waste metric
Motion	Distance travelled
Waiting	Wait time
Over production	Productivity per person per day
Unnecessary processing	Cost per transaction
	No of hand off points
	No of data entry points
	No of iterations
Defect	Sigma
	Errors
	Yield
Inventory	WIP
Transportation	Distance traveled per file

Identify broad functional definitions for groups of activities

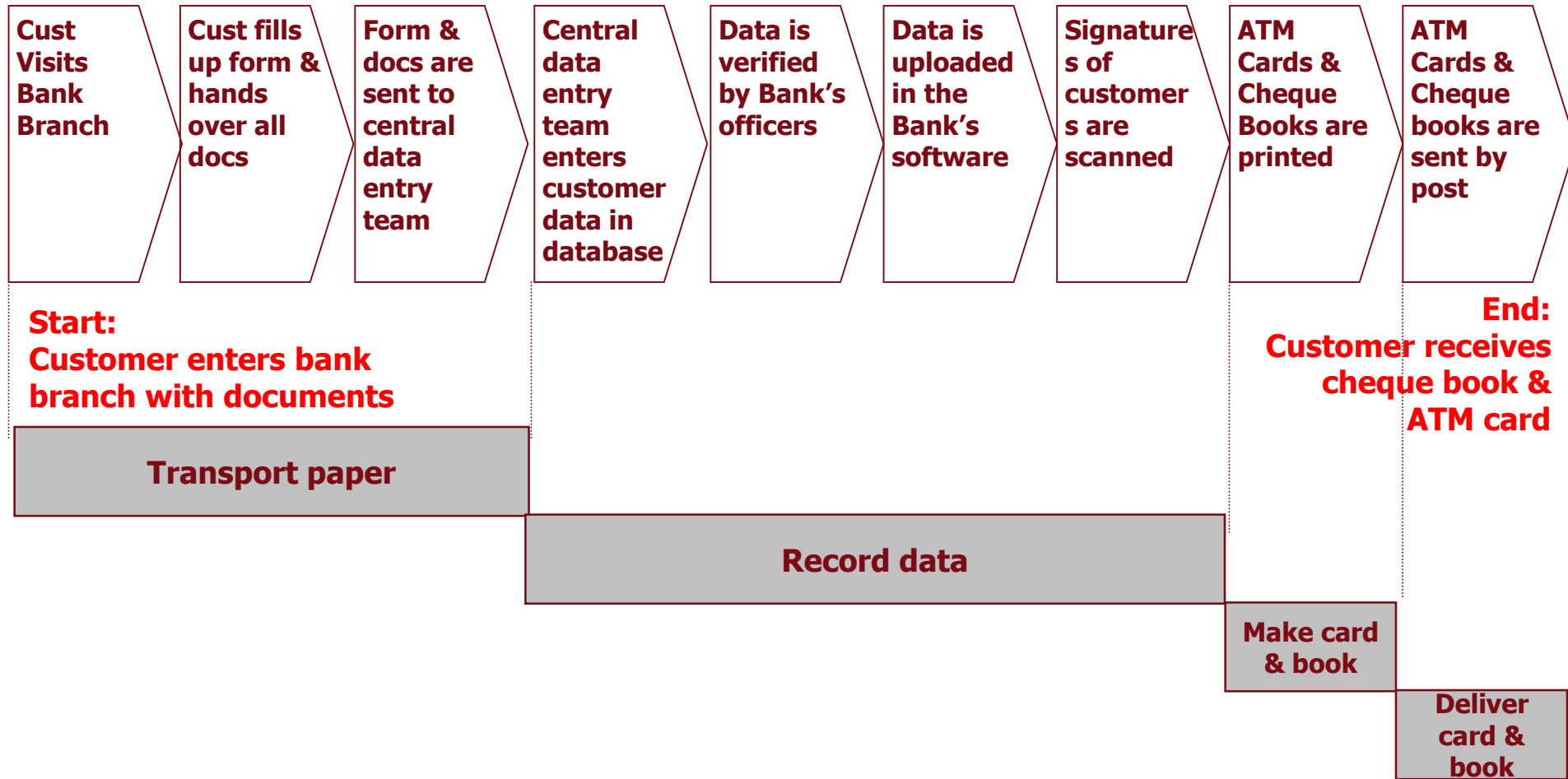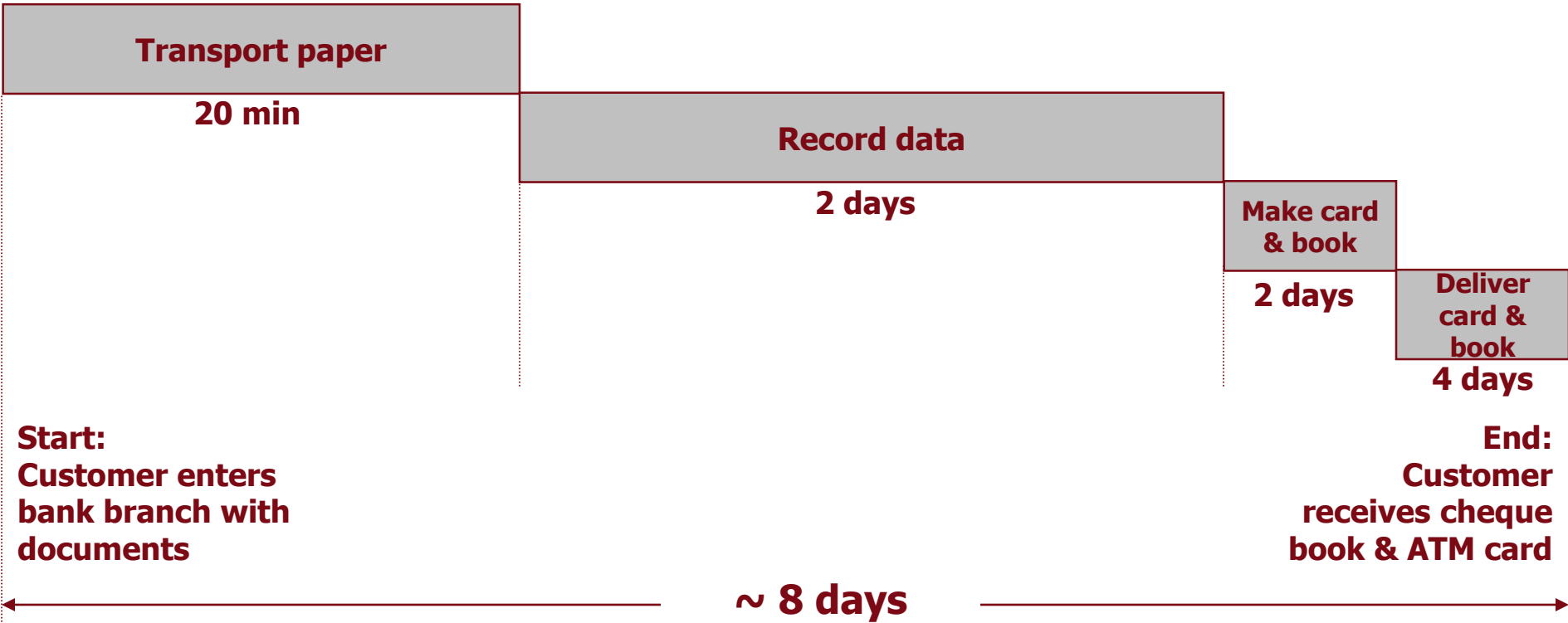| Cust Visits Bank Branch | Cust fills up form & hands over all docs | Form & docs are sent to central data entry team | Central data entry team enters customer data in database | Data is verified by Bank's officers | Data is uploaded in the Bank's software | Signatures of customers are scanned | ATM Cards & Cheque Books are printed | ATM Cards & Cheque books are sent by post |

Start:
Customer enters bank branch with documents

End:
Customer receives cheque book & ATM card

Transport paper

Record data

Make card & book

Deliver card & book

The old process took ~ 8 days

Identify alternate ways of achieving each function

Transport paper

20 min

- Pick up from home
- Courier agency
- Post
- Drop box & pick up
- …

Record data

2 days

- Scan documents
- Photograph documents
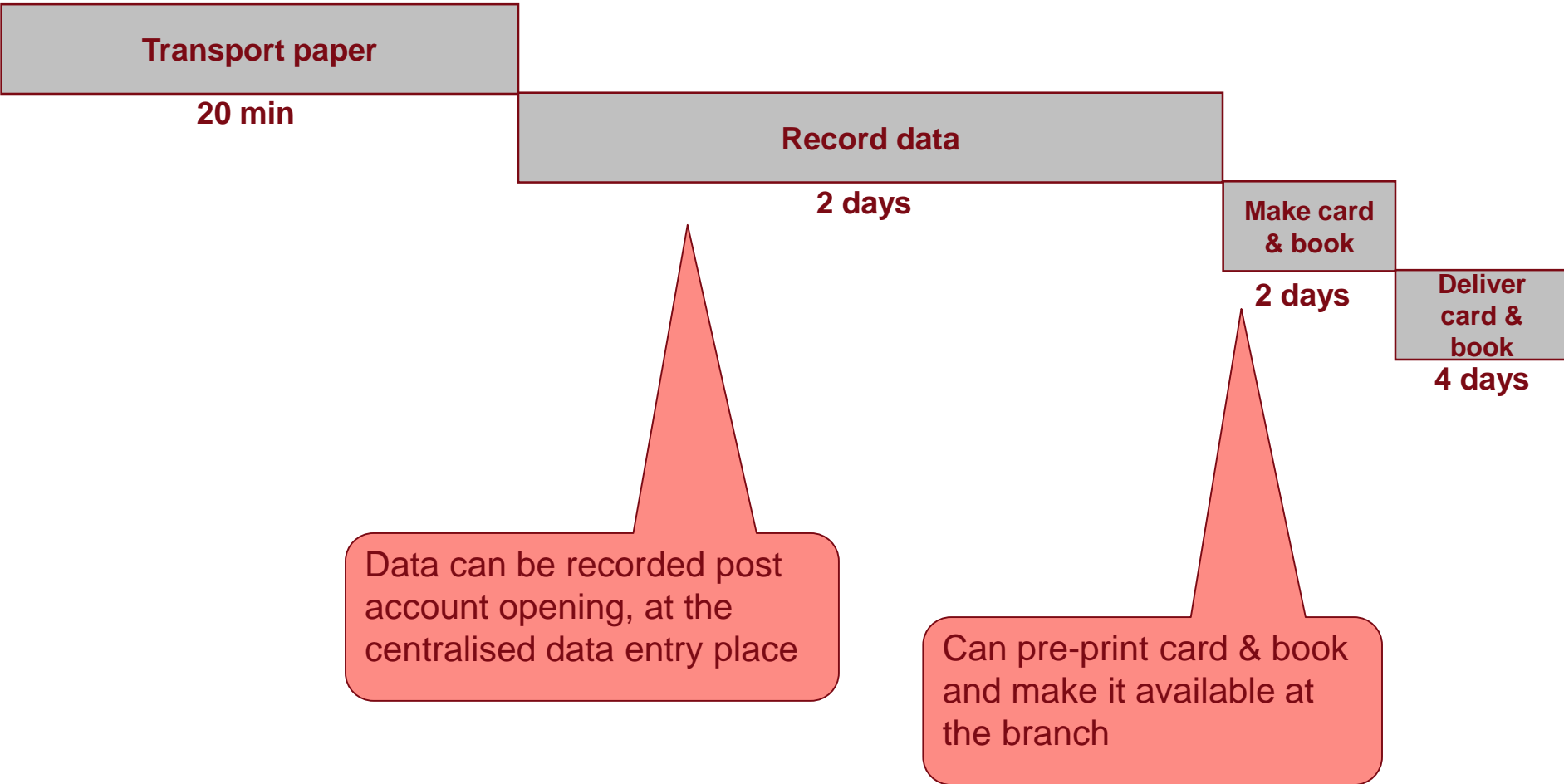- Data entry at branch
- Audio tape
- …

Make card & book

2 days

Deliver card & book

4 days

- Pre-printing
- Courier agency
- Post
- …

Look for options for waste elimination / parallel processing

Transport paper

20 min

Record data

2 days

Make card & book

2 days

Deliver card & book

4 days

Data can be recorded post account opening, at the centralised data entry place

Can pre-print card & book and make it available at the branch

End of Session