



Module 3:

Management of Business Analysis process:

Section Learning Objectives

The learning objectives for this section are:

- Approaches to Business Analysis (Agile/Non-Agile)
- Interdisciplinary Approach for having Business analysis
- Communication plan building
- Definition of products from Business Analysis
- Tools and techniques
- BPMN
- Exam questions

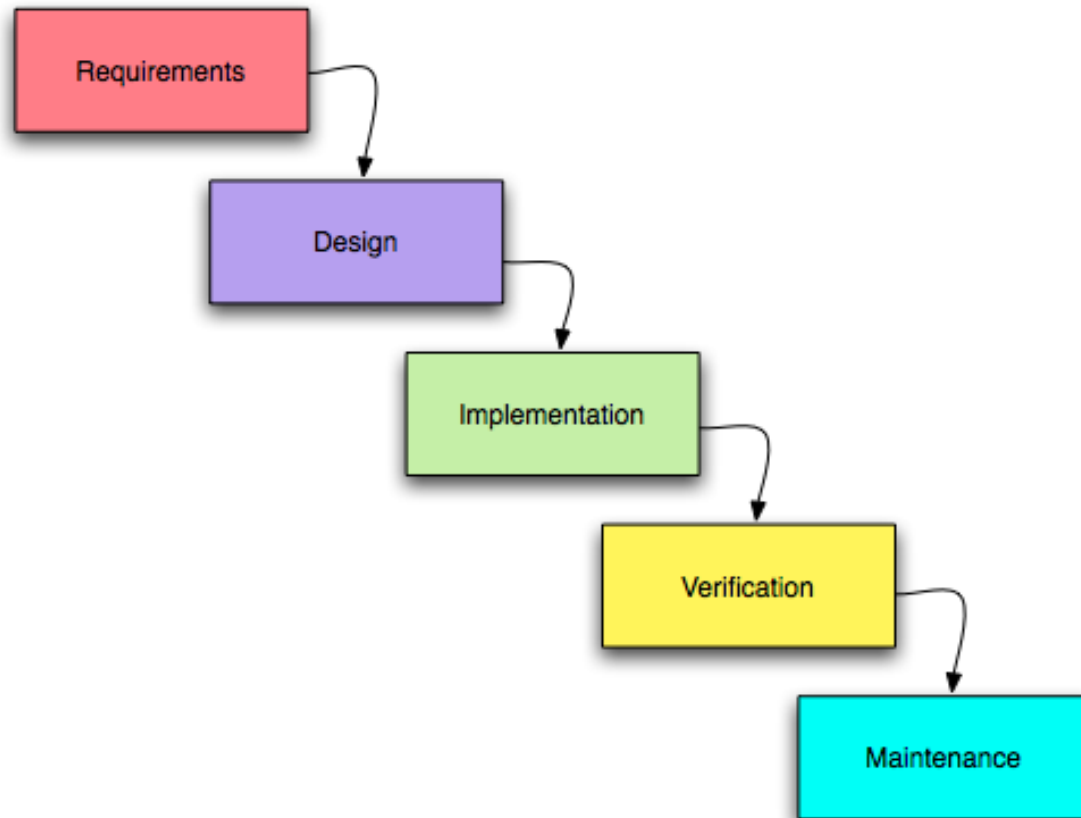
Traditional / Agile approach

- There are two main approaches to solution development and maintenance – traditional and Agile.
- Traditional methods (such as Waterfall, V-Model, Rational Unified Process) are characterized by upfront planning – requirements are collected and documented to the fullest extent, architecture of the solution is designed, then the implementation starts.
- The purpose of agile methodologies is to deliver the right products and deliver small parts of the project frequently as it enables the customers to give feedback for different phases of the project and ask for project changes if needed.

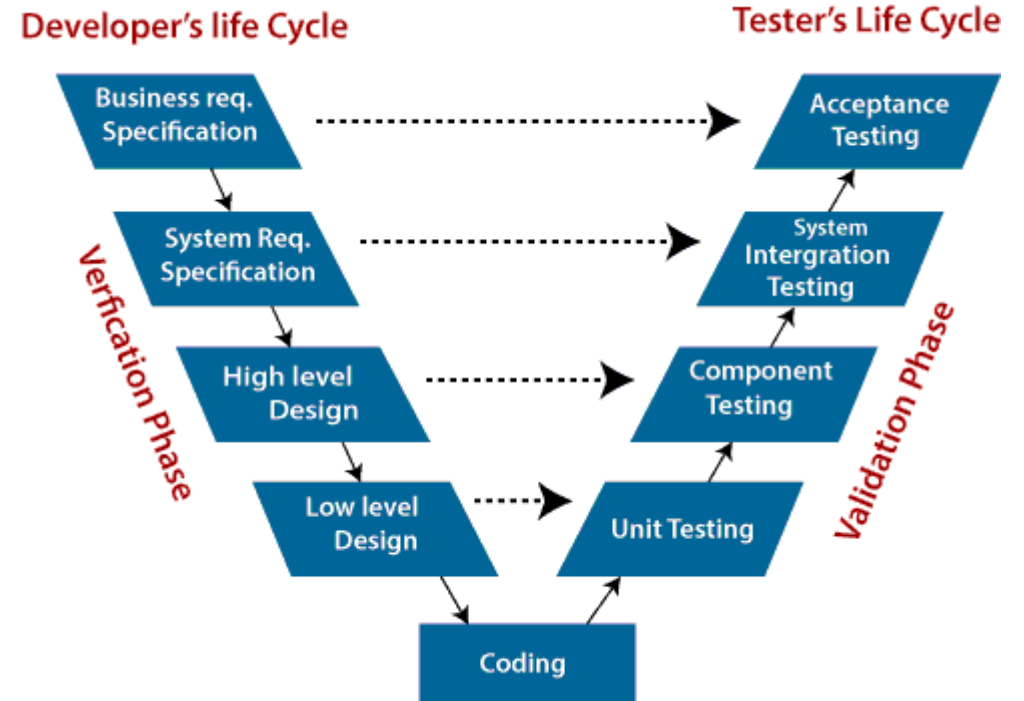


Traditional approaches

Waterfall



V-Model



Business analyst in Traditional frameworks' SDLC

- In a traditional approach a Business Analyst was responsible for elicitation of needs and requirements, upfront planning and proposing solution options.
- Communication with delivery team was rather limited to interactions necessary in a given context.
- The need of having complete documentation of the solution in order to move to the implementation phase is a MUST.
- The main assumption of the traditional approach is that there is a clear picture of the product before implementation works start.

Business analyst in Traditional frameworks' SDLC

Possible solutions for Business Analysis in Traditional approach are:

- Business Analyst is responsible for very clearly documented and create a common understanding with our customers. Those documents will be used by implementation team in order to know what needs to be build.
- Traditional BAs also need those documents to share with the software engineers so that they can build an appropriate solution.
- They need to control change so that the change still remains within the scope of the project and doesn't get out of control.
- In traditional approach some specific document types, tools and techniques will be used.
- Examples include: business requirement document, UML diagrams e.g. Use Case, Use case scenarios,

Agile

Agile is based on the concept of incremental and iterative development with minimal planning. Agile recognizes the fact that business context and requirements may change and provides special practices to support these changes. The main ideas behind Agile:

- “Just in time”
- Adaptability
- Customer involvement during all development/maintenance
- Frequent communication

Business analyst in Agile environment' SDLC

- In Agile, this way of working changes; the Business Analyst should follow the principle of “fit-for-purpose” or “just enough”.
- Stakeholders should be empowered to articulate their needs and assist the delivery team on a daily basis.
- An important consequence of an Agile transformation is rejecting formalities such as collecting and confirming all requirements before starting development or creating detailed requirements documents.
- In Agile, the Business Analyst will work with the customers, stakeholders and the development team in order to create a high-level requirements list.
- The requirements will be detailed and implemented in priority order – they will be refined only when it is a time for developers to start working on them.

Business analyst in Agile environment' SDLC

Possible solutions for Business Analysis in Agile environments are:

- Business Analyst as a Product Owner, responsible for definition and realization of the product
- Business Analyst supporting the Product Owner in more technical tasks, when the Product Owner provides only business knowledge
- Business Analyst competencies in the development team, when the team supports the Product Owner with transforming high-level requirements into specific development tasks
- In Agile, some specific tools and techniques will be used. Examples include: backlog, user story, story mapping, Kanban.

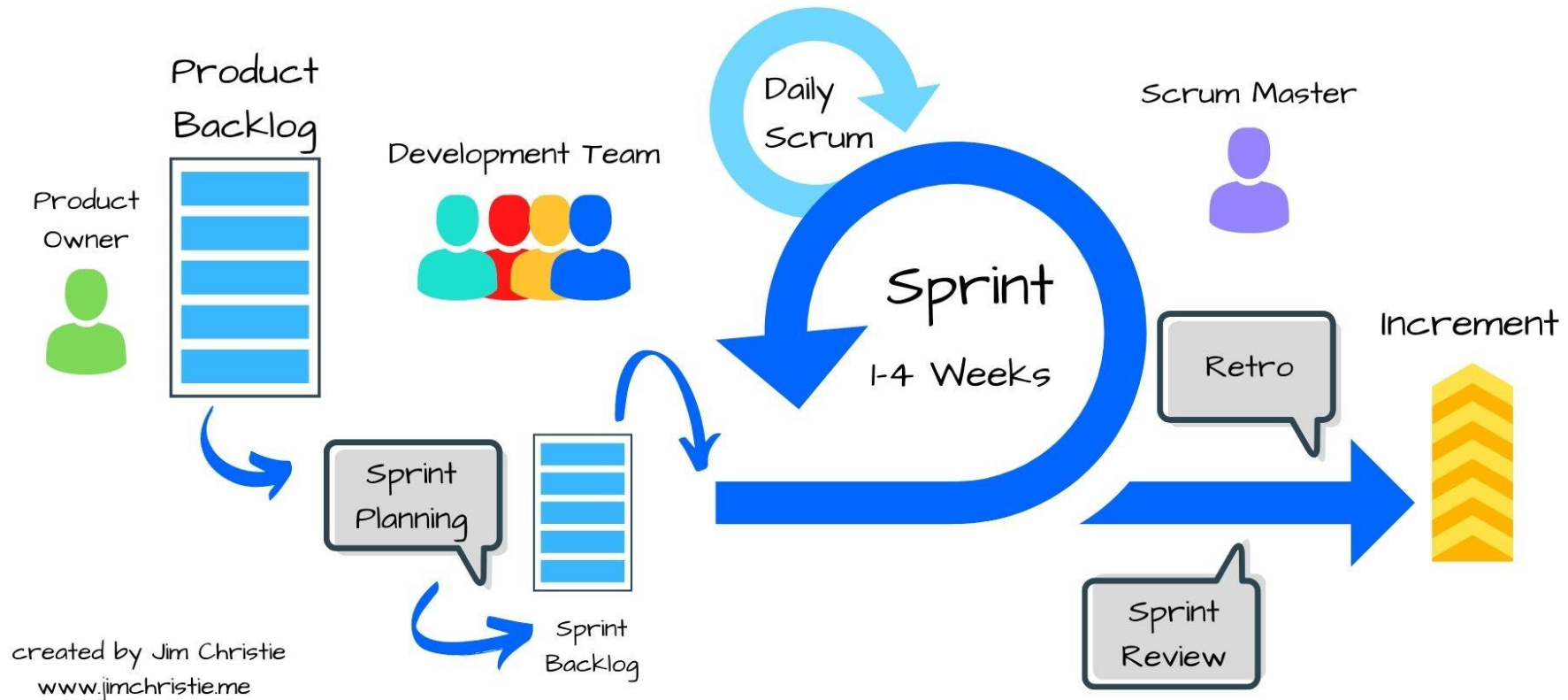
Comparison of the Concepts

- Concepts related to Agile:
 - Fit for purpose
 - Just enough
 - Clear product/project vision
 - Frequent communication
 - Empowering stakeholders to express needs
 - Prioritization of requirements

- Non-Agile concepts:
 - Upfront planning
 - Monitoring and control
 - Clear product/project vision
 - High level of formality
 - Detailed requirements documents

Agile approach

The Scrum Framework



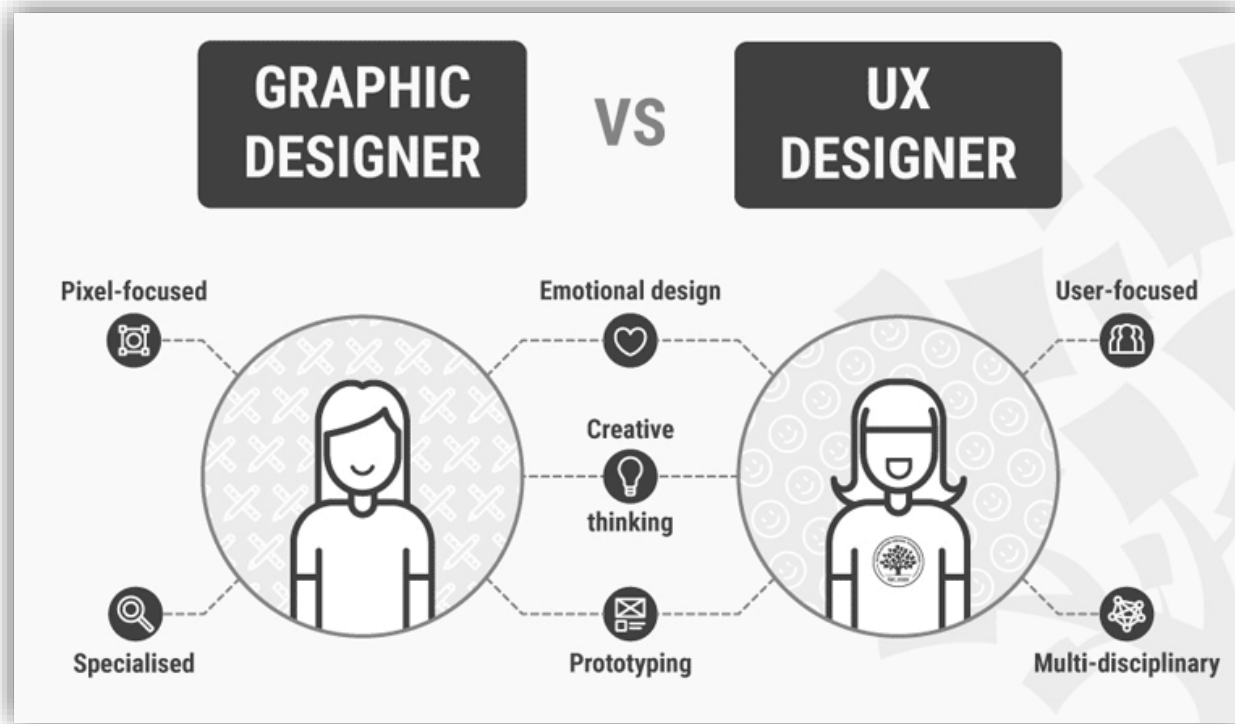
Interdisciplinary Approach

Effective Business Analysis requires adopting knowledge and skills from other disciplines like:

- UX and usability
- Service design
- Design thinking
- Innovation
- Digital design
- Lean startup
- Multidisciplinary Teams
 - teams which members represent different background, skills and experience)
- Enlightened Trial and Error
 - a method invented by IDEO based on the following principle: learning from experience, and then trying again, using lessons learned)

User Experience (UX)

- **User Experience (UX)** – a person's perceptions and responses that result from the use or anticipated use of a product, system or service

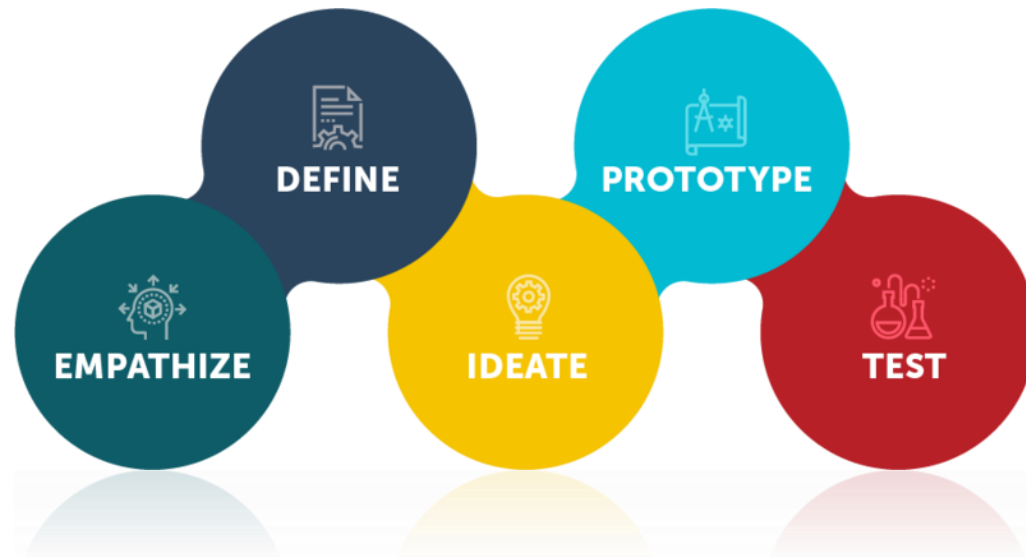


Basic principles of UI/UX design

	UI	UX		
	Keep users in control	Make it comfortable to use	Reduce cognitive load	Keep design consistent
	Focus on the user	Make it accessible	Design for different contexts	Focus on simplicity

Design Thinking

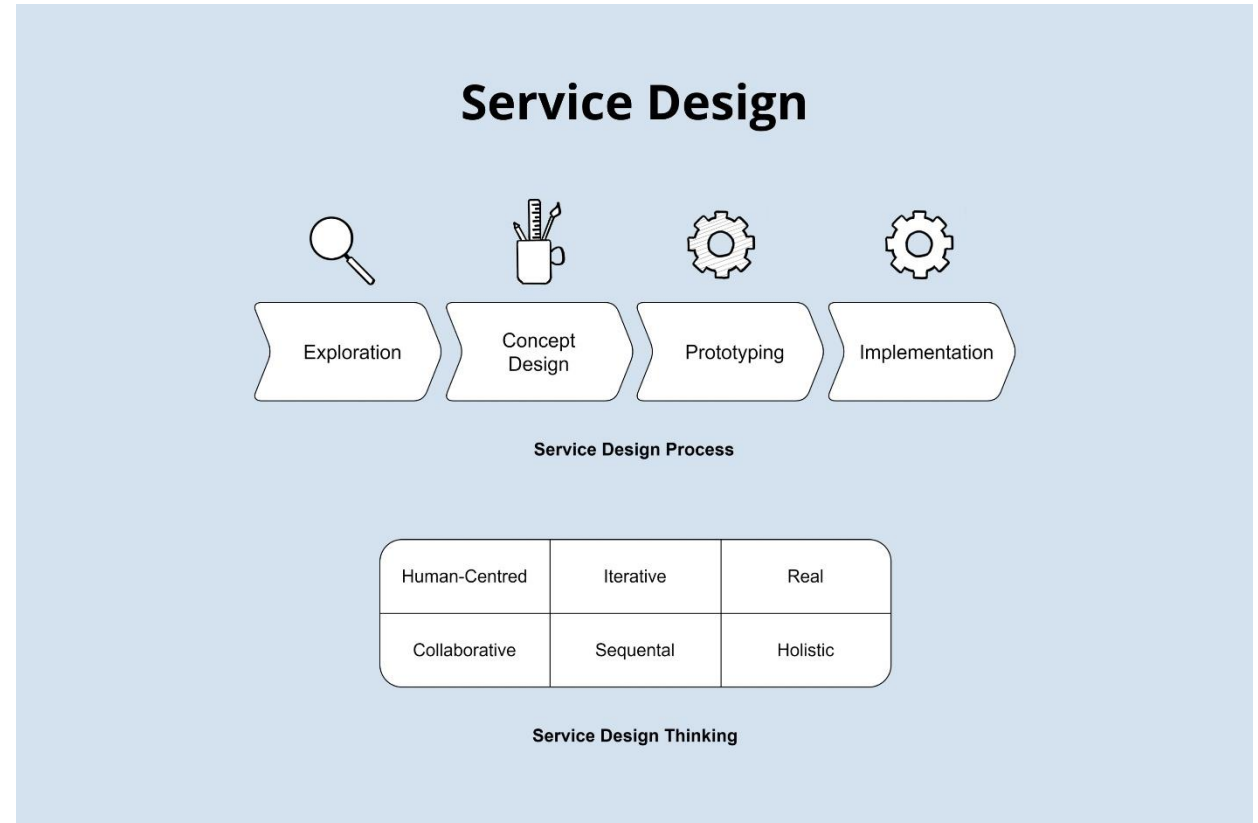
- **Design Thinking** – a collaborative process by which the designer’s sensibilities and methods are employed to match people’s needs with what is technically feasible and a viable business strategy. In short, design thinking converts need into demand. The process is described in three major phases: inspiration, ideation, and implementation.



Service design

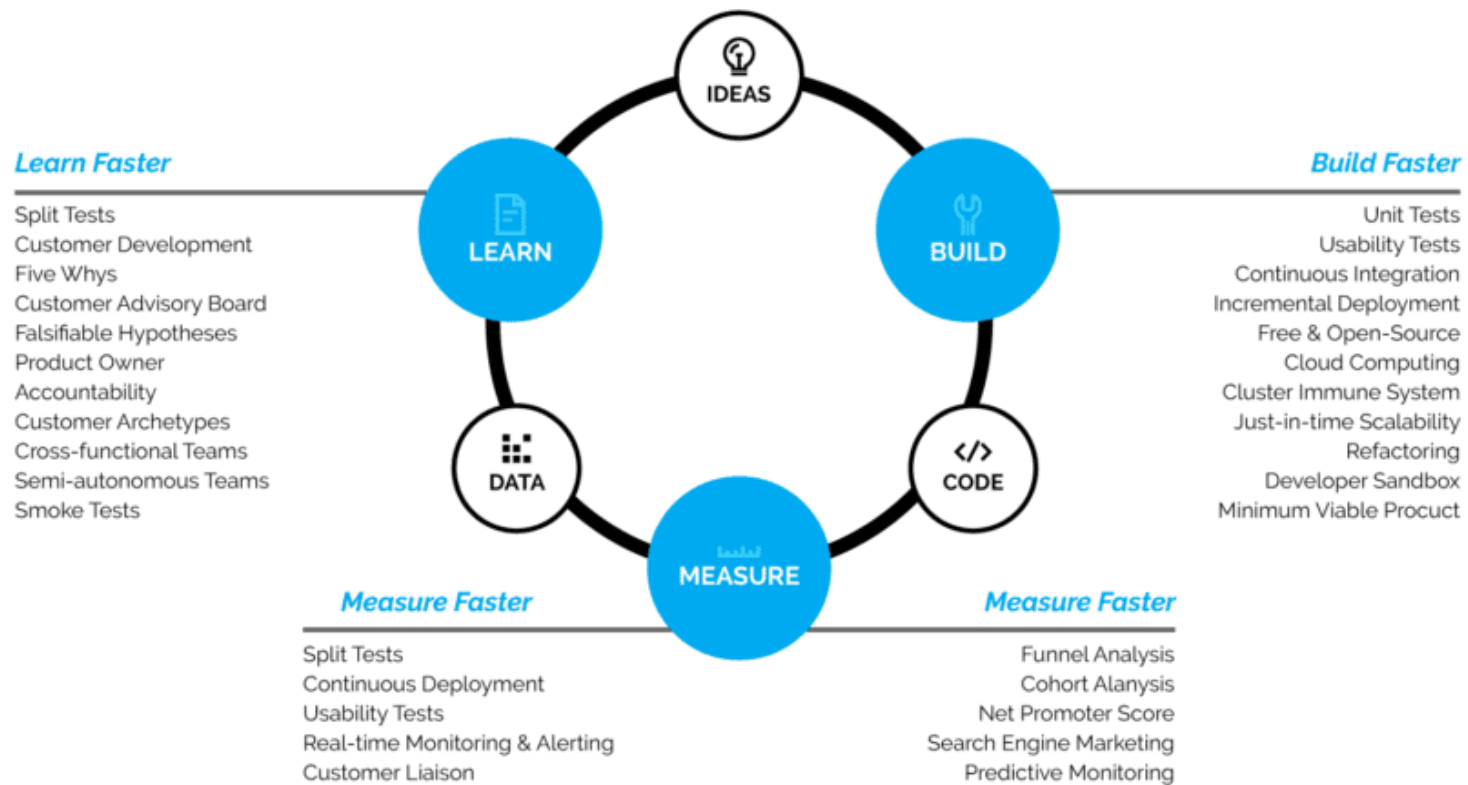
Service design is the activity of planning and organizing a business's resources (people, props, and processes) in order to:

- (1) directly improve the employee's experience
- (2) indirectly, the customer's experience.



Lean startup

There's much more...



Discussion – Responsibility for Communication



- Who is responsible for communicating business analysis information including requirements in your organization?
- What are their responsibilities?
- Why is this important for the success of the project?
- Do you think you are always clearly communicating requirements?

Business Analysis Communication

- Broader than requirements communication. Includes communication of various types of information e.g. assumptions, issues, risks, status etc. (obtained while performing business analysis)
- Performed to ensure a shared understanding of the information obtained during elicitation and throughout the business analysis process.
- The business analyst is responsible for all communication pertaining to the business analysis information.

Requirements Communication

- A part of business analysis communication that is focused only on communicating requirements
- Requirements communication is the process of providing clear, concise and timely updates to stakeholders regarding the state of requirements.
- Communicating requirements helps to bring the stakeholders to a common understanding of the requirements.

Communication Skills

A business analyst must demonstrate competency in both verbal and written communications as demonstrated in:

- Conversations and discussions led
- Documentation produced
- Presentations given
- Notes taken and distributed
- Resolutions attained
- Decisions reached with stakeholders

Timing for Communication

- Communication is ongoing and iterative.
- When communication is limited, misinformation and speculation increase, causing dissatisfaction among stakeholders.
- Business analysts plan how best to communicate and the timing for communicating, during business analysis planning.

Plan for Communication

- Not all communication can be planned for but some can be, and therefore in business analysis planning the business analyst should begin to think about their stakeholders and their communication preferences.
 - Who needs to receive information about the requirements and business analysis process?
 - What type of information do they need?
 - How do they want to review requirements?
 - How often should they be communicated to?

Symptoms of Information Overload

- Costly Mistakes
- Poor Compliance
- Failed or Delayed Audits
- Inefficiency (People, Process, Technology)
- High Translation Costs
- Ineffective Documentation and/or Training
- Poor Quality/Best Practices
- Low Customer Satisfaction/High Support Costs
- Lack of Standards
- Incomplete or Expensive Technology Adoption
- Poor Product Knowledge

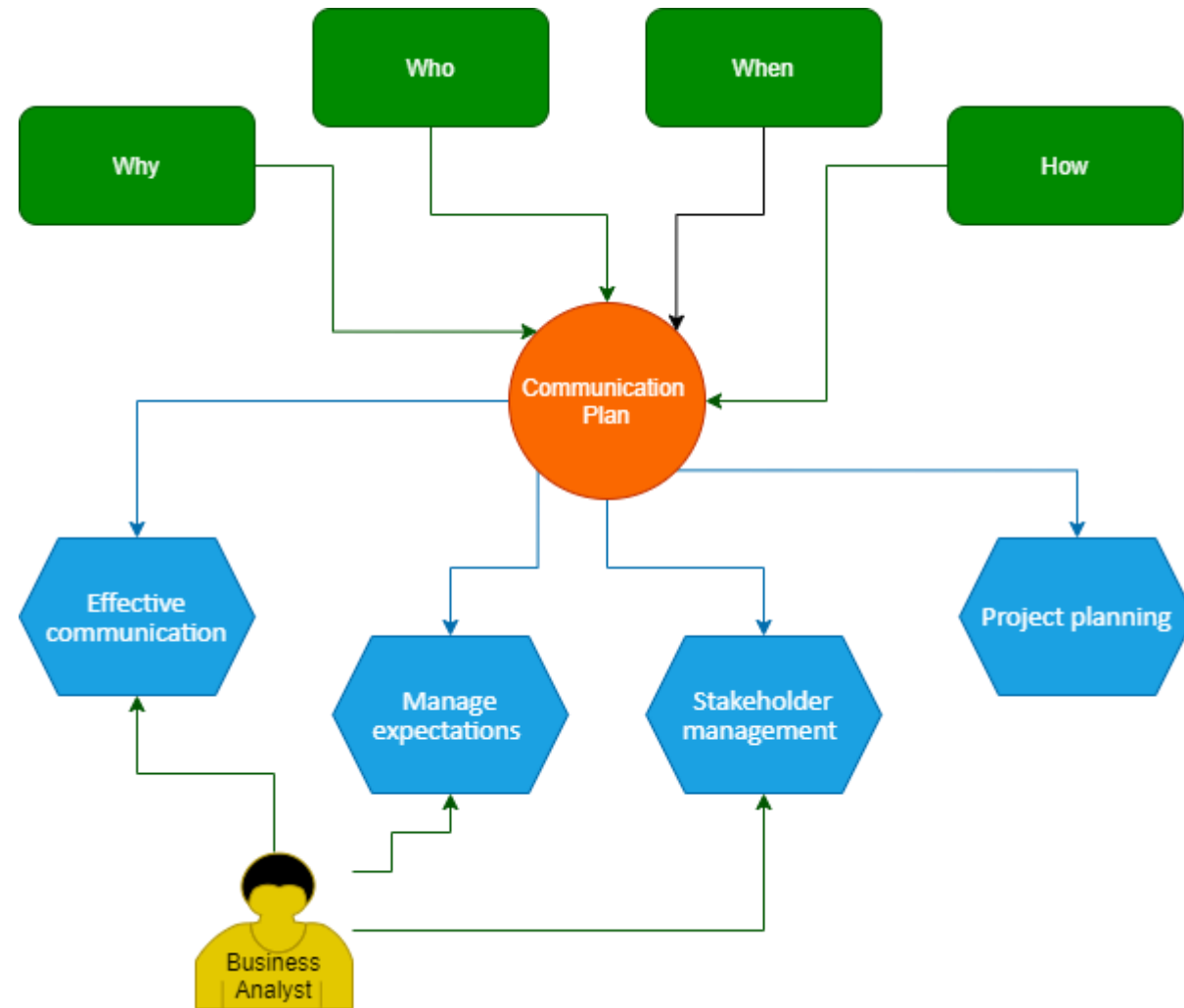
Workshop: Communicating Requirements

- Using the case study, identify at least 3 different communication channels you would use to ensure that your stakeholders clearly understand the requirements?
- What is the most effective communication channel? Why?

Communication plan

- Plan formally defining the audience of given, specific information, the timetable for information delivery and communication channels to be used.
- Explains rules of communication with the key stakeholders.
- Consist of:
 - Subject of communication (work product, task, etc.)
 - Stakeholders involved (audience)
 - Frequency of communication
 - Medium of communication
 - Person responsible for communication
- The communication plan is often supported by a RACI matrix – a responsibility assignment matrix – allowing the definition of responsibilities of the different roles involved in completing tasks or deliverables for a given initiative.

Purpose of communication plan



Purpose of communication plan

When planning stakeholder communication, analysts consider:

- that stakeholder communications inherently iterative.
- the formality and the level of detail may vary amongst stakeholders
- the level of expertise required by stakeholders to interpret analytics results
- the level of privacy and confidentiality to be maintained
- keeping stakeholders informed about the progress and the approaches taken throughout the course of the initiative
- maintaining an appropriate level of communication during the initiative
- recording the responses and feedback from stakeholders for further action and follow-up

Communication plan factors

- Type of initiative or business problem
 - Formal communication in case of safety critical projects
 - Less formal and direct communication in case of Agile projects
- Stakeholders' requirements
 - Stakeholders who expect direct communication
 - Stakeholders who expect written communication and formal channels of communication
- Required level of communication formality
 - Formal communication in case of communicating requirements, changes, risks, etc.
 - Less formal communication for daily team communication

Communication plan factors (cont.)

○ Communication frequency

- More frequent communication with business stakeholders in the beginning of a project/initiative
- More frequent communication with the team during solution development

○ Geographical location

- Different time zones may make the communication difficult
- Face to face meetings may be difficult to organize and quite expensive

○ Culture

- Culture of an organization, including maturity level, may impact communication style and rules
- Different cultures have different communication styles

Best practices for developing communication plans

- 1. Determine your communication goals
- 2. Consider your audience
- 3. Pay attention to frequency
- 4. Use visuals to deliver your communication

COMMUNICATION PLAN

Stakeholder name	Engagement action *	Owner	Channel	Frequency
Eddie Murphy	Manage closely	Project manager	Personal check-in meetings, email notifications from software	Daily
Iliza Shlesinger	Keep informed	Project manager	Memos + agenda summaries	Weekly
Bill Burr	Keep satisfied	Product manager	Top of the line emails about the overall budget/timeline progress	Monthly
Dave Chapelle	Monitor	Project manager	Newsletter	Monthly

Remember:

- The communication has its “GOAL”
- Communication has its method/channel
- Communication frequency is important
- Last but not least - audience

Homework 2: Communication plan



Create a communication plan for the business analysis activities based on case study provided information for:

- Stakeholders;
- Communication needs, if any
- Try to divide the information in two directions:
 - business analysis status
 - requirements communication

Communication	Frequency	Goal	Owner
Project team			
Project status report	Weekly	Review project status and discuss potential issues or delays	Project manager
Team standup	Daily	Discuss what each team member did yesterday, what they'll do today, and any blockers	Project manager
Task progress updates	Daily	Share daily progress made on project tasks	Project manager
Project review	At milestones	Present project deliverables, gather feedback, and discuss next steps	Project manager
Post-mortem meeting	At end of project	Assess what worked and what did not work and discuss actionable takeaways	Project manager
Project sponsor			
Project status report	Weekly	Review project status and discuss potential issues or delays	Project manager
Project review	At milestones	Present project deliverables, gather feedback, and discuss next steps	Project manager

Use Active Listening

Active listening is a communication technique that requires the listener to understand, interpret, and evaluate what they hear.

- Active listening is a structured way of listening and responding to others, focusing attention on the speaker.
- Suspending one's own frame of reference and suspending judgment are important to fully attend to the speaker.
- The three main degrees of active listening are: **Repeating, Paraphrasing and Reflecting.**

Work products of Business Analysis activities

○ Strategy definition

- List of stakeholders
- Business processes
- Gaps
- Market research results
- Business needs
- Business requirements
- Solution options
- List of business risks
- Opportunities
- Business constraints
- Business case

○ Management of the Business Analysis process

- Business Analysis approach
- Communication plan
- Business Analysis assets (templates, etc.)
- Quality gates for requirements and/or solution design



Work products of Business Analysis activities (Cont.)

- Requirements Engineering in Business Analysis
 - Stakeholder requirements
 - Solution/product requirements
 - Solution constraints
 - Solution design options
 - RTM (Requirements Traceability Matrix)
 - Requirements configuration
- Solution evaluation and optimization
 - Solution performance assessment
 - Improvement plan



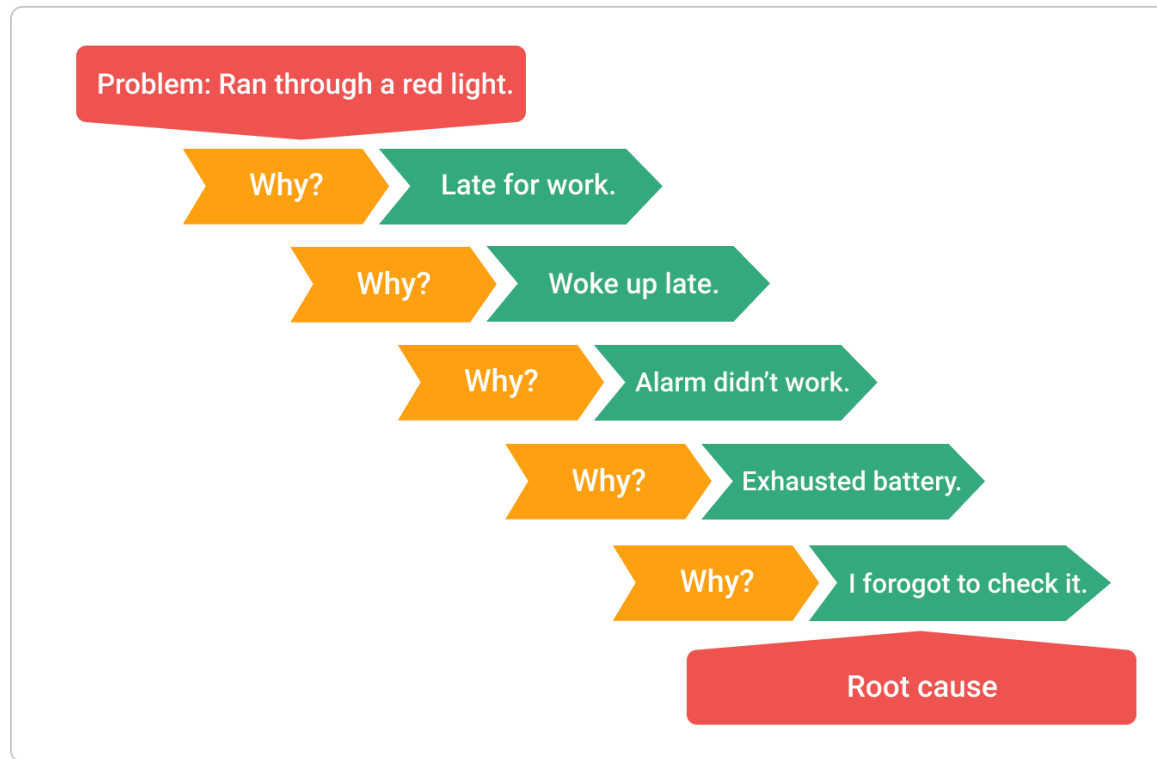
Tools and Techniques

- Tools supporting Business Analysis activities:
 - Problem analysis and solving tools
 - Modeling tools
 - Documentation tools
 - Communication and team collaboration tools
 - Knowledge base tools

Tools and Techniques

- Types of techniques supporting Business Analysis activities:
 - Documentation techniques
 - Communication and team collaboration techniques
 - (Stakeholder) collaboration techniques
 - Problem analysis techniques
 - Problem modeling techniques
 - Information elicitation techniques
- Examples:
 - SWOT Analysis
 - MoSCoW, interview, survey and workshops
 - SMART
 - Gap Analysis
 - Process Modeling

5 Why's



What is Business Process Modeling Notation (BPMN)

- **Business Process Modeling Notation**
- Graphical notation for drawing business processes
- An industry standard developed by the OMG consortium, a not-for-profit industry group
- Provides businesses with the capability of defining and understanding their procedures through Business Process Diagrams (BPDs)

Benefits of BPMN

- Enable a **common and shared** understanding among different stakeholders across all levels of the enterprise.
- **Standard notation** will create a common vocabulary that everyone will be using.

Audience Poll

- Who has used BPMN before today?
- Is there anything that you want to specifically address about BPMN?

BPMN Aims

- To provide a standard notation that is readily understandable by all business stakeholders
- To bridge the communication gap that frequently occurs between business process design and implementation
- To create a common business language understood by all

Why use BPMN?

- Have become widely accepted
- Replaces numerous process modeling languages, notations and methods
- Simple to learn yet powerful enough to depict the potential complexities of a business process
- Vendor neutral with wide tool support (over 45 vendors now officially support the standard)
- BPMN notation is based on a flowcharting technique and is dedicated to support modeling and communication for both technical users and business users.

Graphical Notation Standard

- BPMN (Business Process Modeling Notation) = diagramming standard for drawing **business** processes
- Method of communicating processes:
 - **Understandable** by business users and unambiguous – This is **important**
 - Reduces translation errors between business and IT
- Easy transition between tools

When do you use BPMN?

- Utilize a defined set of diagram elements (objects)
- Draw each step in the process
- Make use of the relevant diagram elements to document events, activities and decision points
- Show the complete end-to-end process flow from start to finish

BPMN 2.0 Full notation elements

BPMN 2.0 - Business Process Model and Notation http://bpmb.de/poster

Activities

- Task**: A Task is a unit of work, the job to be performed. When marked with a [] symbol it indicates a Sub-Process, an activity that can be refined.
- Transaction**: A Transaction is a set of activities that logically belong together; it might follow a specified transaction protocol.
- Event Sub-Process**: An Event Sub-Process is placed into a Process or Sub-Process. It is activated when the start event gets triggered and can interrupt the higher level process context or run in parallel (non-interrupting) depending on the start event.
- Call Activity**: A Call Activity is a wrapper for a globally defined Sub-Process or Task that is reused in the current process.

Activity Markers

Markers indicate execution behavior of activities:

- Sub-Process Marker
- Loop Marker
- Parallel MI Marker
- Sequential MI Marker
- Ad Hoc Marker
- Compensation Marker

Task Types

Types specify the nature of the action to be performed:

- Send Task
- Receive Task
- User Task
- Manual Task
- Business Rule Task
- Service Task
- Script Task

Sequence Flow

defines the execution order of activities.

- Default Flow**: to the default branch to be chosen if all other conditions evaluate to false.
- Conditional Flow**: has a condition assigned that defines whether or not the flow is used.

Conversations

- Communication**: A Communication defines a set of logically related message exchanges. When marked with a [] symbol it indicates a Sub-Conversation, a compound conversation element.
- Conversation Link**: A Conversation Link connects Communications and Participants.
- Forked Conversation Link**: A Forked Conversation Link connects Communications and multiple Participants.

Conversation Diagram

Choreographies

- Choreography Task**: A Choreography Task represents an Interaction (Message Exchange) between two Participants.
- Multiple Participants Marker**: denotes a set of Participants of the same kind.
- Choreography Sub-Process**: A Choreography Sub-Process contains a refined choreography with several interactions.

Choreography Diagram

Events

None: Untyped events, indicate start point, state changes or final states.	Start	Intermediate	End
Event Sub-Process Interrupting	Event Sub-Process Non-Interrupting	Catching	Throwing
Message: Receiving and sending messages.	Timer: Cyclic timer events, points in time, time spans or timeouts.	Escalation: Escalating to a higher level of responsibility.	Conditional: Reacting to changed business conditions or integrating business rules.
Link: Off-page connector. Two corresponding link events equal a sequence flow.	Error: Catching or throwing named errors.	Cancel: Reacting to cancelled transactions or triggering cancellation.	Compensation: Handling or triggering compensation.
Signal: Signaling across different processes. A signal thrown can be caught multiple times.	Multiple: Catching one out of a set of events. Throwing all events defined.	Parallel Multiple: Catching all out of a set of parallel events.	Terminate: Triggering the immediate termination of a process.

Collaboration Diagram

Gateways

- Exclusive Gateway**: When splitting, it routes the sequence flow to exactly one of the outgoing branches. When merging, it awaits one incoming branch to complete before triggering the outgoing flow.
- Event-based Gateway**: It is always followed by catching events or receive tasks. Sequence flow is routed to the subsequent event/task which happens first.
- Parallel Gateway**: When used to split the sequence flow, all outgoing branches are activated simultaneously. When merging parallel branches it waits for all incoming branches to complete before triggering the outgoing flow.
- Inclusive Gateway**: When splitting, one or more branches are activated. All active incoming branches must complete before merging.
- Exclusive Event-based Gateway (instanlate)**: Each occurrence of a subsequent event starts a new process instance.
- Complex Gateway**: Complex merging and branching behavior that is not captured by other gateways.
- Parallel Event-based Gateway (instanlate)**: The occurrence of all subsequent events starts a new process instance.

Swimlanes

Pools (Participants) and Lanes represent responsibilities for activities in a process. A pool or a lane can be an organization, a role, or a system. Lanes subdivide pools or other lanes hierarchically.

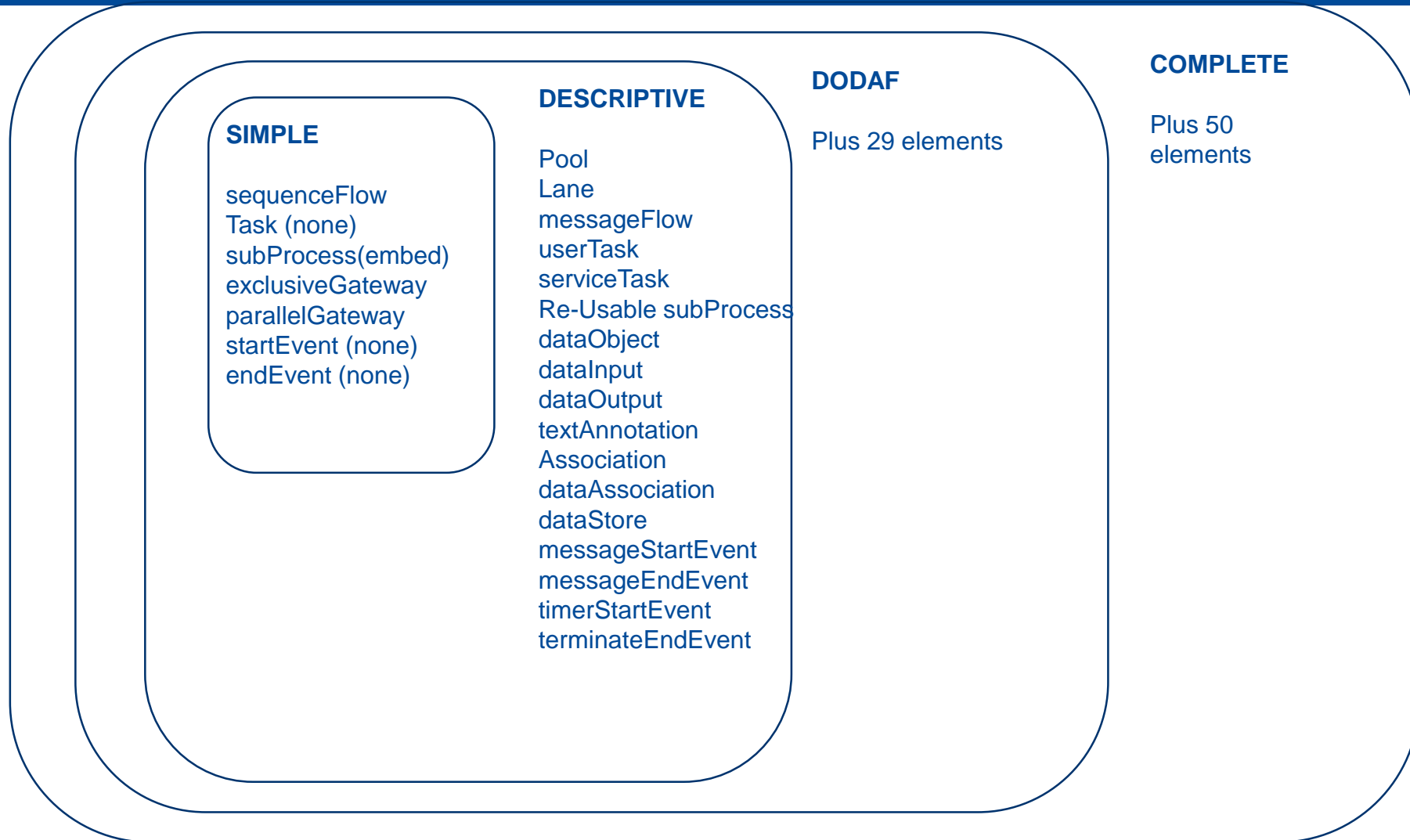
Message Flow symbolizes information flow across organizational boundaries. Message flow can be attached to pools, activities, or message events.

The order of message exchanges can be specified by combining message flow and sequence flow.

Data

- Data Input**: A Data Input is an external input for the entire process. It can be read by an activity.
- Data Output**: A Data Output is a variable available as result of the entire process.
- Data Object**: A Data Object represents information flowing through the process, such as business documents, e-mails, or letters.
- Collection Data Object**: A Collection Data Object represents a collection of information, e.g., a list of order items.
- Data Store**: A Data Store is a place where the process can read or write data, e.g., a database or a filing cabinet. It persists beyond the lifetime of the process instance.
- Message**: A Message is used to depict the contents of a communication between two Participants.

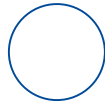
BPMN Subclasses



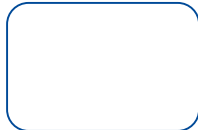
What is Simple BPMN Structure

- SequenceFlow
- Task (none)
- SubProcess(embed)
- ExclusiveGateway
- ParallelGateway
- StartEvent (none)
- EndEvent (none)

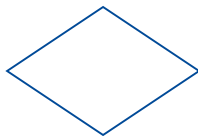
Flow objects



Event - A trigger or a result that “happens” during the course of a business process and which affect the flow of the Process



Activity – the work that is performed within a business process



Gateways - are decisions points that are used to control how sequence flows interact as they converge and diverge within a process.

Connecting objects

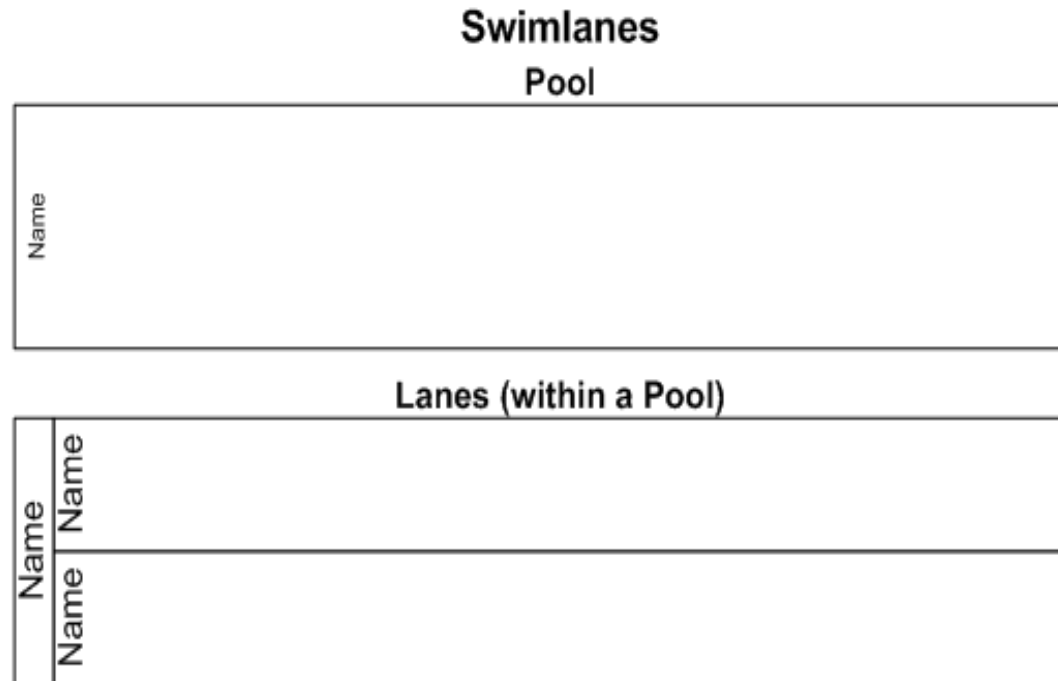


A Sequence Flow is used to show the order that activities will be performed in a Process.

A Message Flow is used to show the flow of messages between two entities that are prepared to send and receive them.

An Association is used to associate information and artifacts with flow objects.

Pools and Swimlanes



- A **Pool** is a graphical container for partitioning a set of activities from other pools.
- A **Lane** is a sub-partition within a Pool
- They can be used to represent, for example, roles, departments, locations or different organisations

BPMN Artifacts

Artifacts

Data Object



Name
[State]

Text Annotation

Text Annotation Allows
a Modeler to provide
additional Information

Group

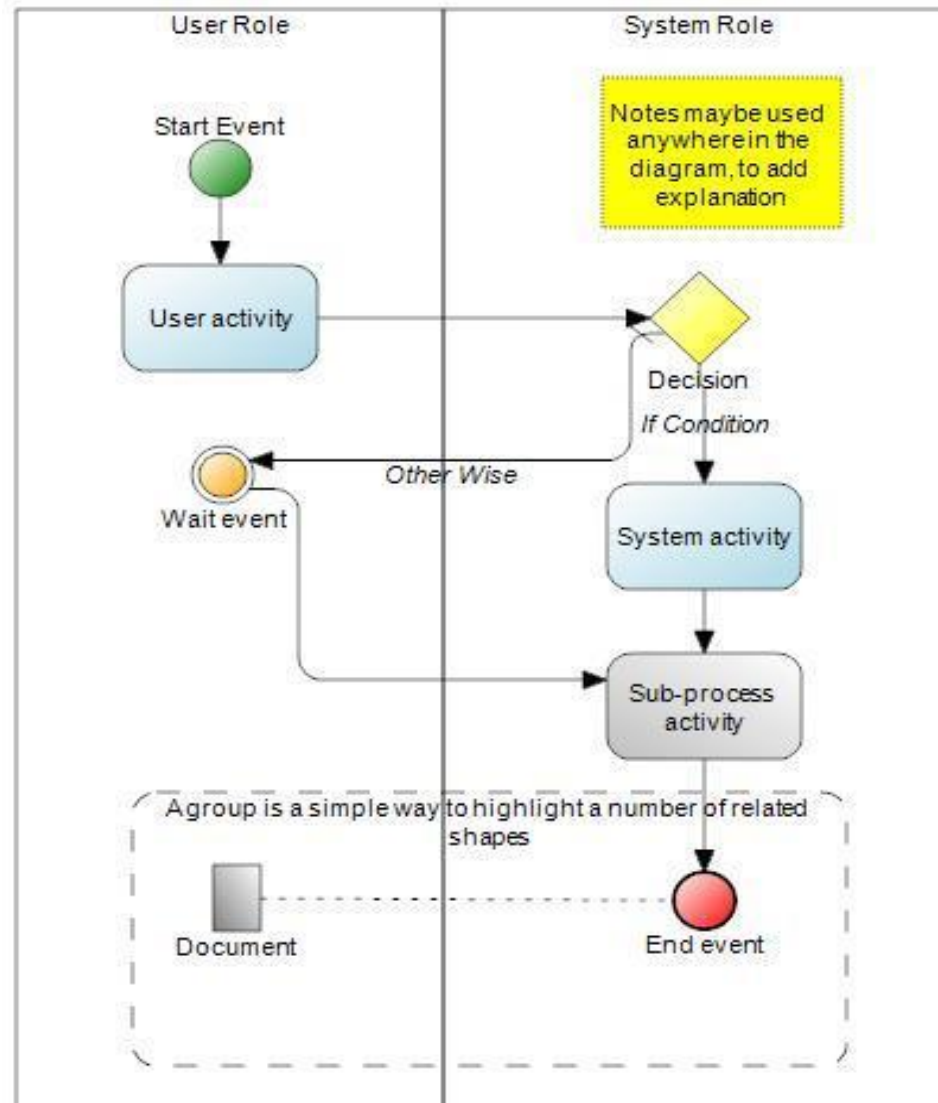


Data Objects

Text Annotations

Groups

Example



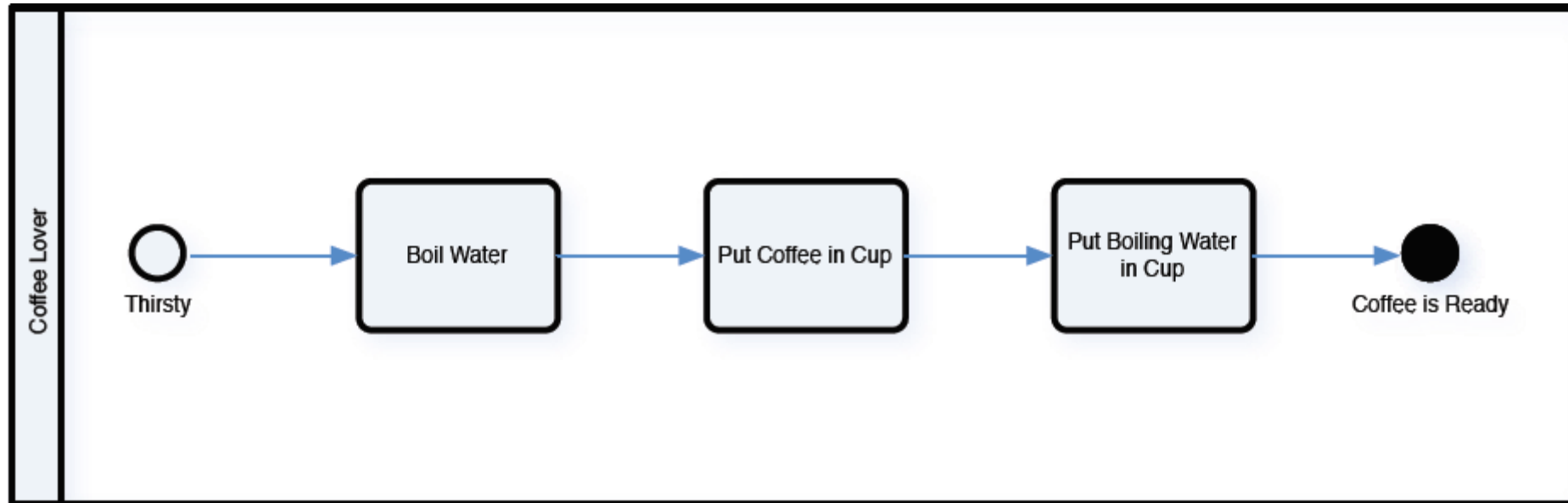
Identifying Poor Process Models

- Inconsistent/nonsensical notation
- Ambiguity, especially split/merge
- Improper use of roles
- Too many words
- Inappropriate tools
- Just plain wrong

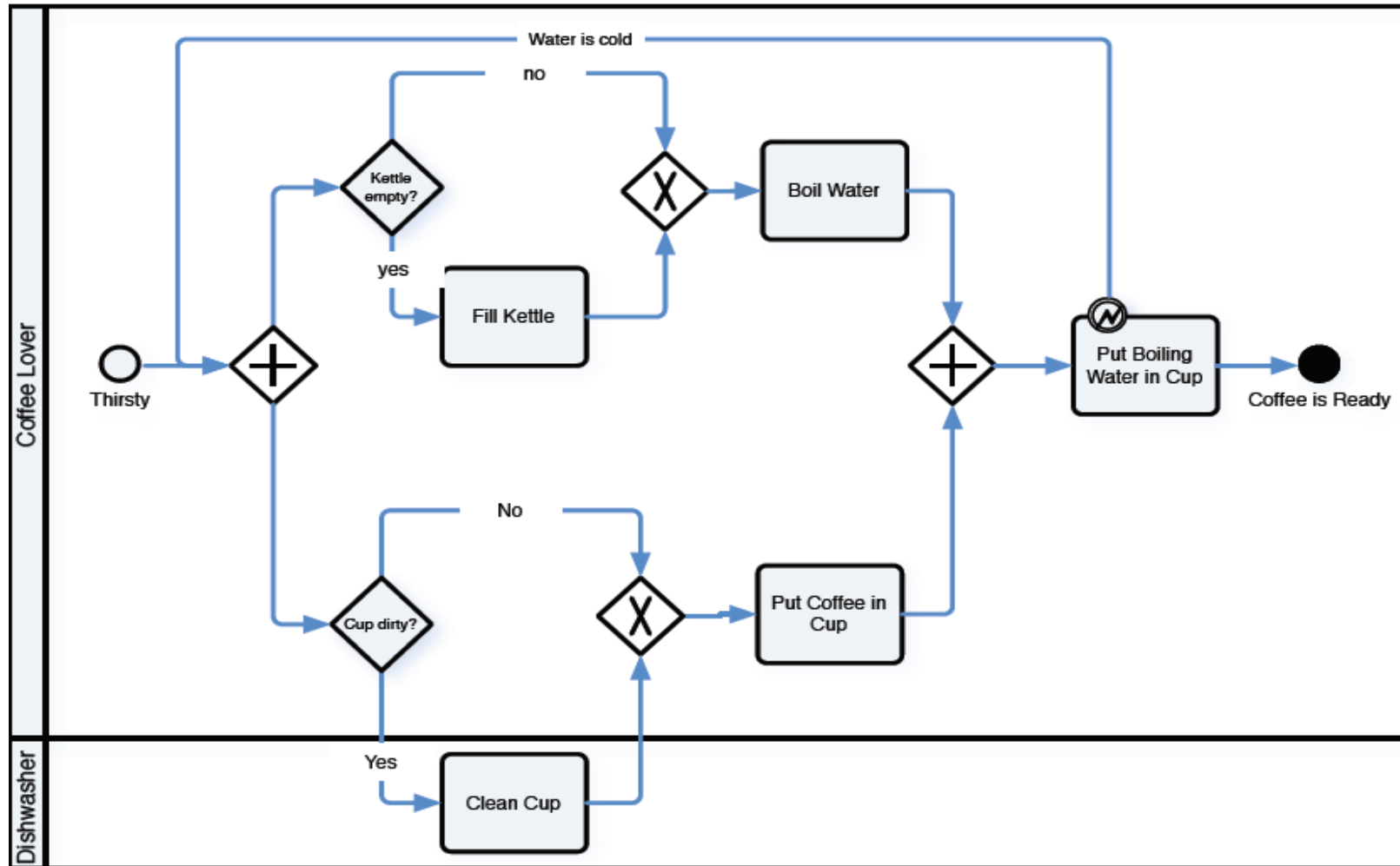
BPMN Example: How do you make a cup of Coffee?



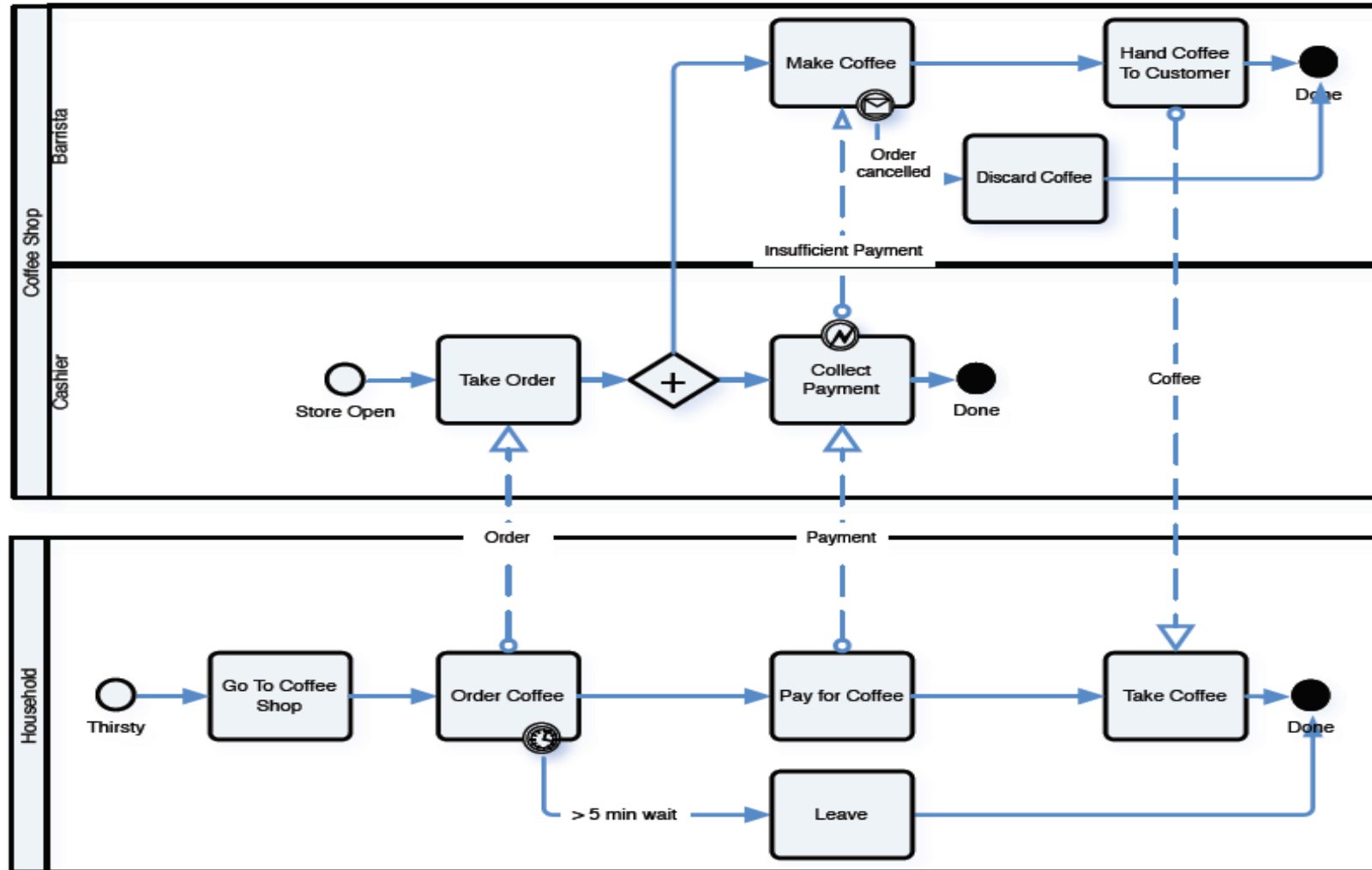
Example #1: Instant Coffee Process



Example #2: The Espresso Machine Process

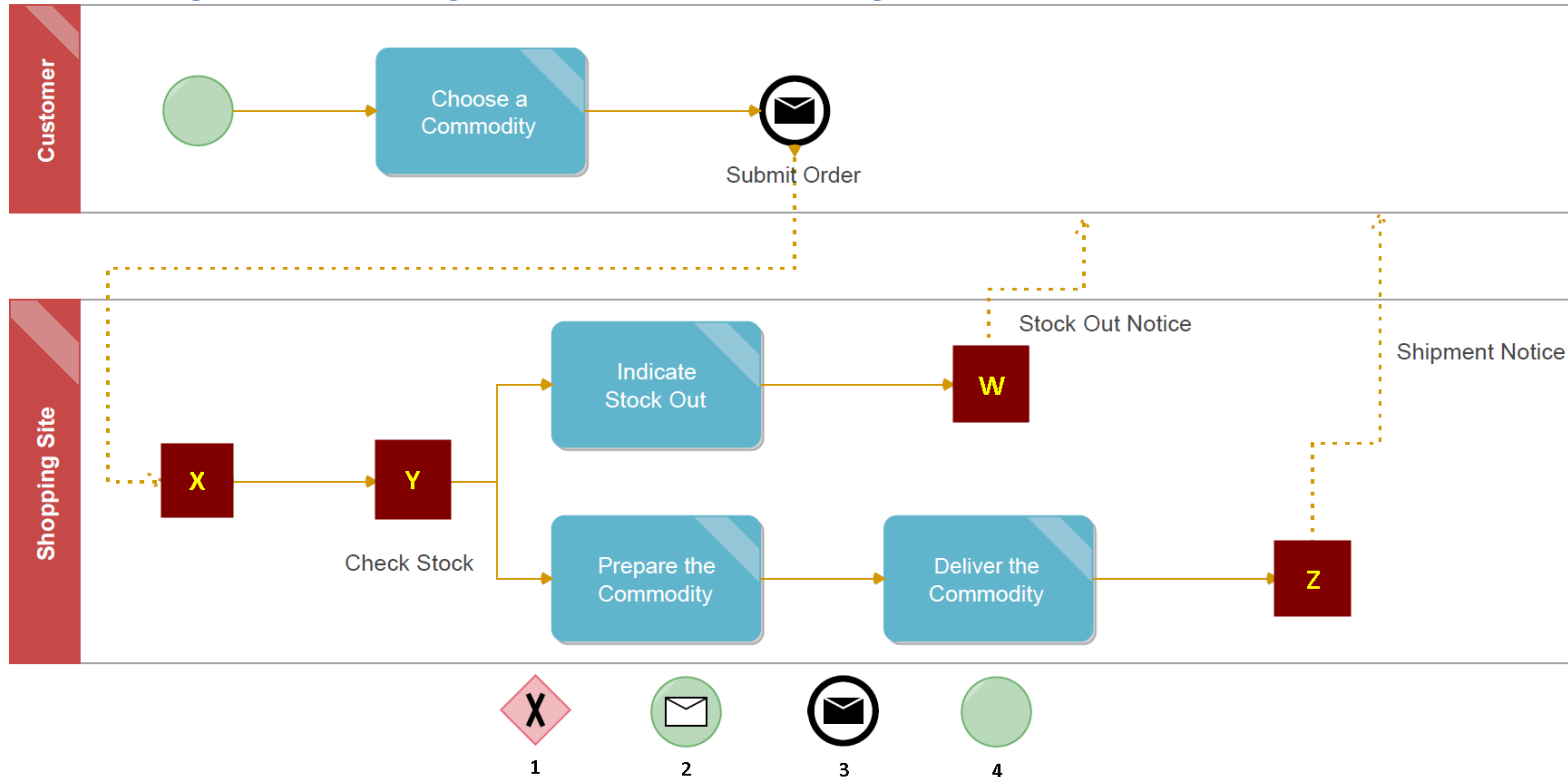


Example #3: The Starbucks Process



Question

Consider the following BPMN diagram of a purchasing process in an online store:



Which, among the elements of the BPMN notation indicated above with 1,2,3 and 4, would you use instead of the X, Y, W and Z blocks of the diagram to have a correct representation of the process?

- A. X-> 4; Y-> 3; W-> 2; Z-> 1
- B. X-> 2; Y-> 1; W-> 3; Z-> 3
- C. X-> 2; Y-> 1; W-> 1; Z-> 4
- D. X-> 4; Y-> 2; W-> 1; Z-> 3

Exercise: Create a simple AS-IS Process Diagram

As a group:

- Using your scenario, create a simple process diagram that captures the current state based on the AS-IS environment with one of the key processes – ticket selling.

Section Learning Objectives Reflection

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- BPMN
- Exam questions