# ICT 700
# Introduction To
# Business Information Systems

## LECTURE 9

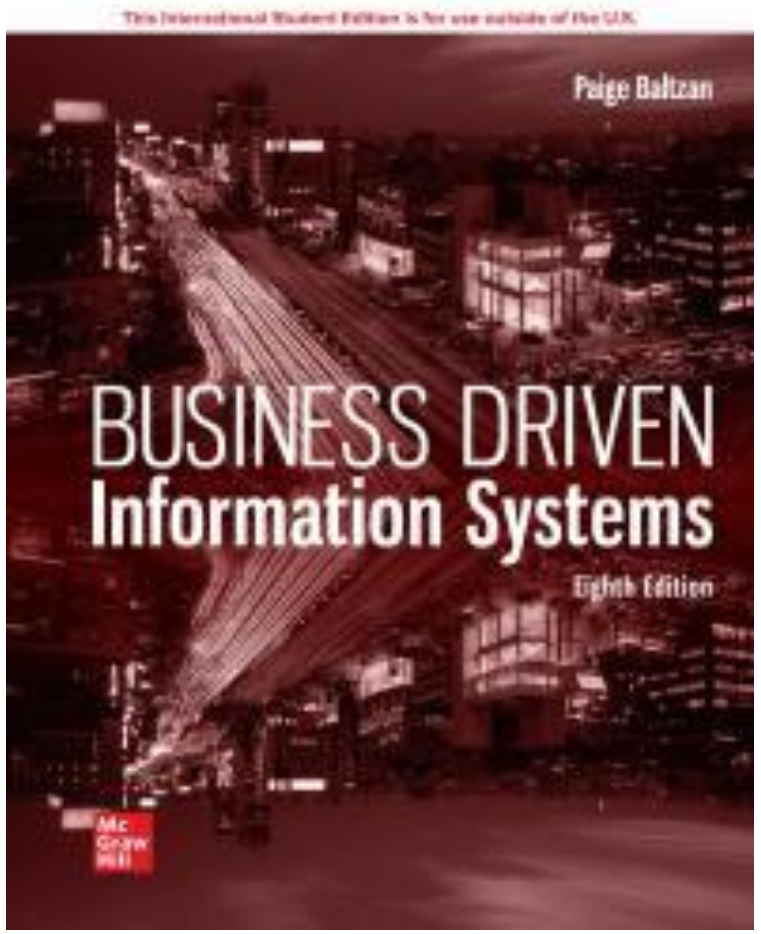
## Business Process Management, Software Development

**Unit Coordinator:**
**Sajad Ghatrehsamani**

King's Own Institute

Reading Chapter:

Chapter 2 – Baltzan



# Learning Objectives

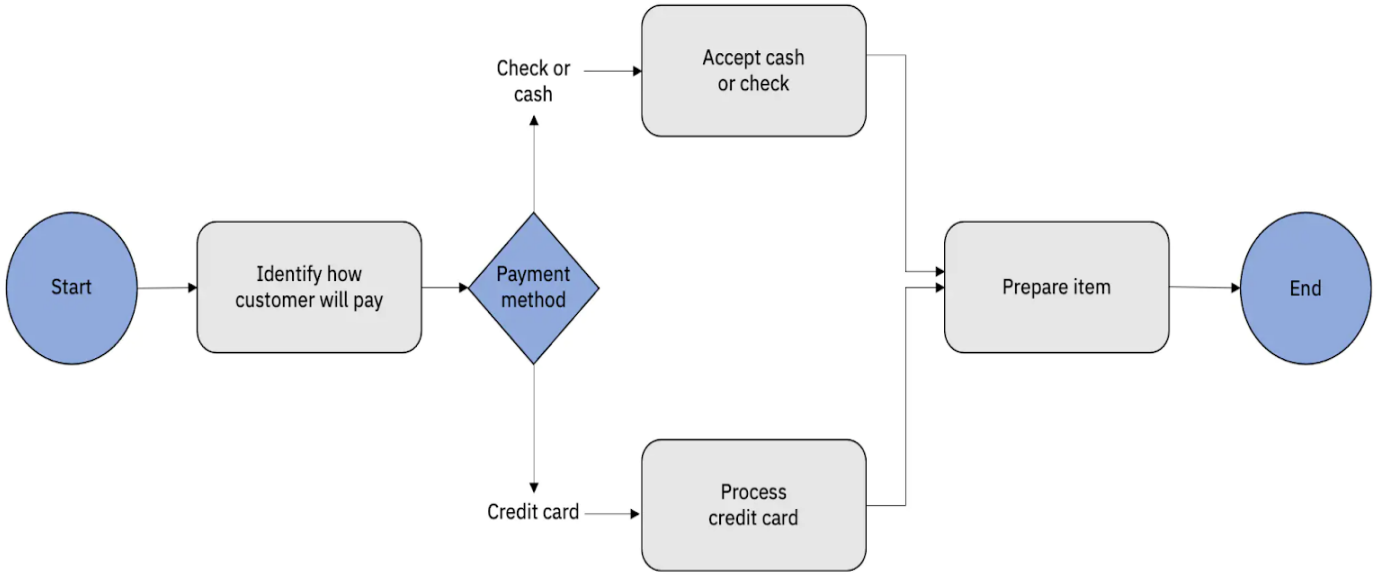
1. Explain the value of business processes for a company and differentiate between customer-facing and business-facing processes.
2. Demonstrate the value of business process modeling and compare As-Is and To-Be models. Differentiate among automation, streamlining, and reengineering.
3. Construct a swimlane Diagram.
4. Understand Software Development Life Cycle.

# Managing Business Processes

1. Business Process transforms a set of inputs into a set of outputs e.g, goods or services for another person or process by using people or tool.
2. Understanding Business Processes helps a manager to envision how the entire company operates.

# Business Process Management

Business Process Management (BPM) is a technique used for optimizing processes to ensure that businesses execute them tasks can perform efficiently and effectively.




https://scribehow.com/library/business-process-management-examples

# Business Processes

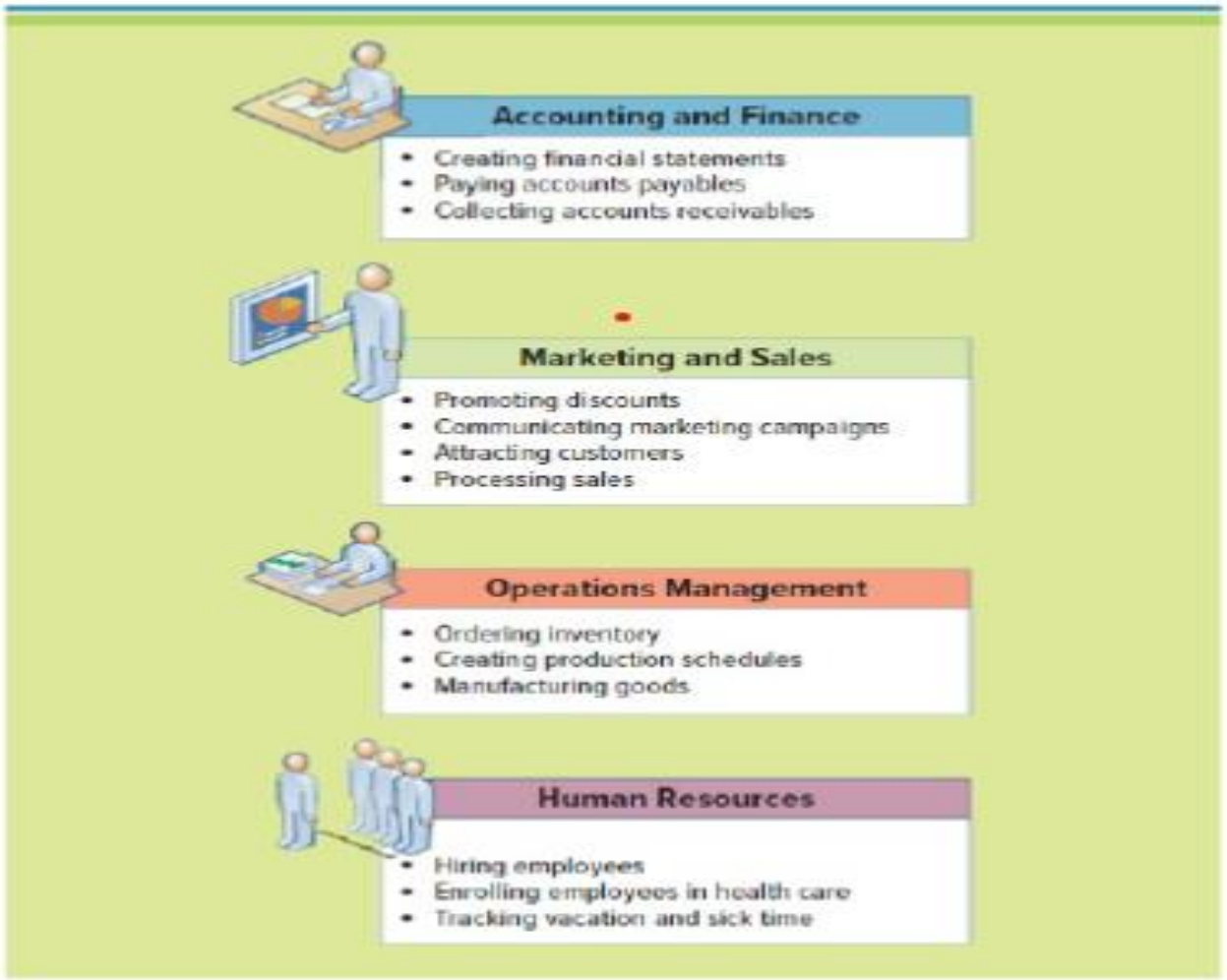
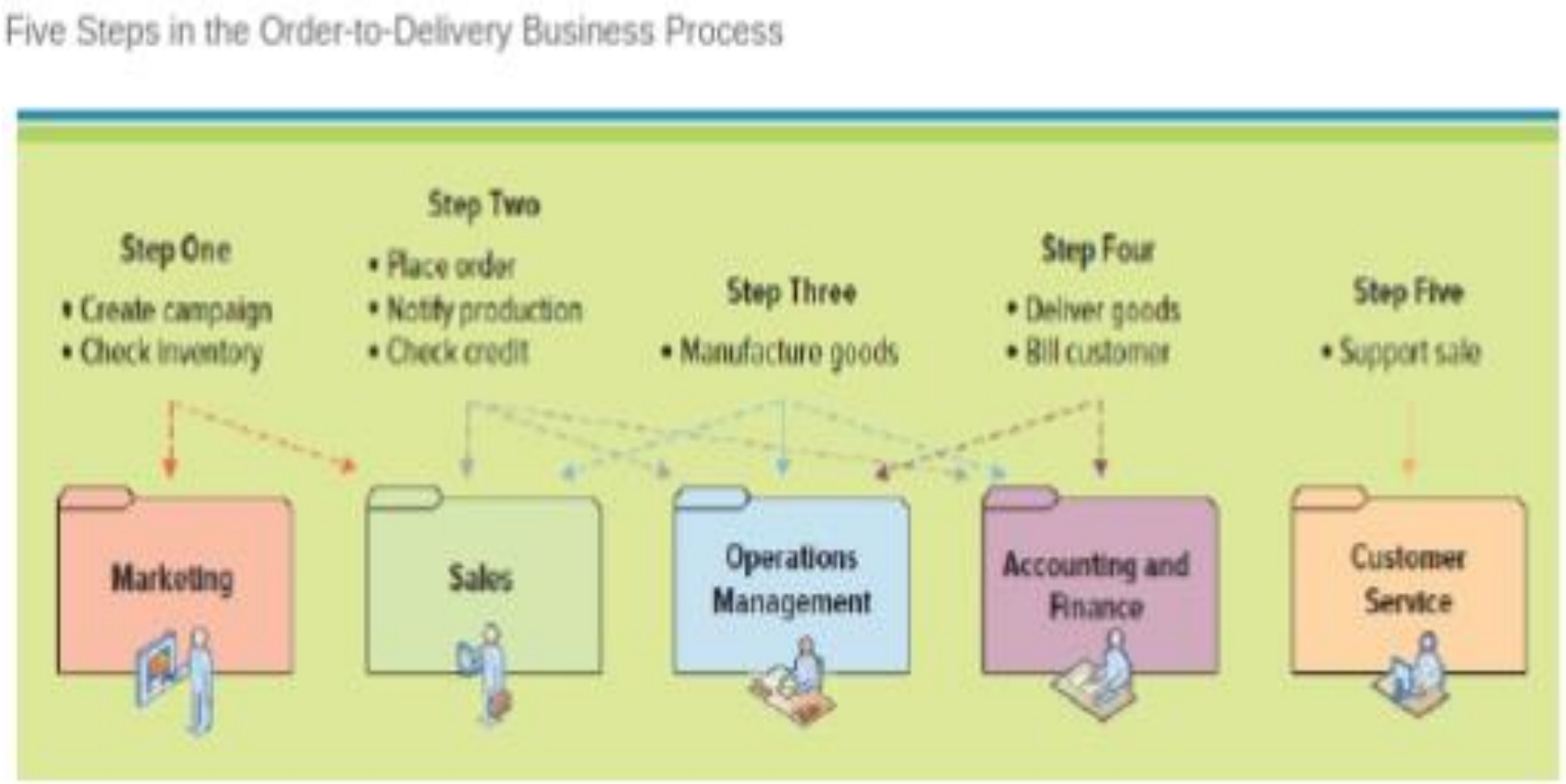



Figure 1 Sample Business Processes

KOI
King's Own Institute

# Steps in the Order To Delivery Business Process




King's Own Institute

# Processes Type

1. **Customer-facing processes** , also called front-office processes, result in a product or service received by an organization's external customer. They include fulfilling orders, communicating with customers, and sending out bills and marketing information.

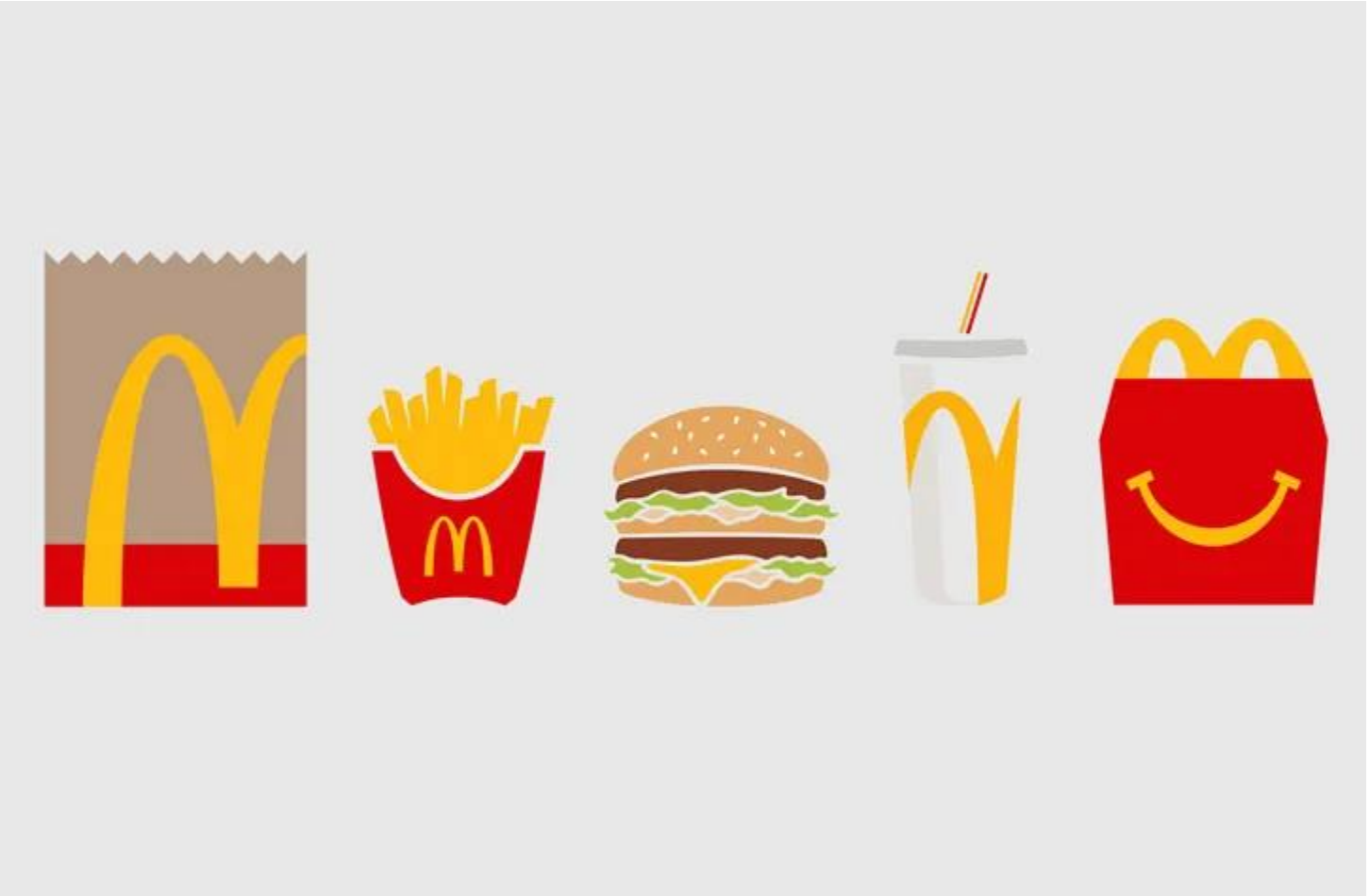
2. **Business-facing processes** , also called back-office processes, are invisible to the external customer but essential to the effective management of the business; they include goal setting, day-to-day planning, giving performance feedback and rewards, and allocating resources.
3. **Industry Specific Facing Processes,** also called organization products based processes to capture customers or users request in terms of booking, purchases etc

# Processes Type


Figure 2 Customer-Facing, Industry-Specific, and Business-Facing Processes

King's Own Institute

# Case Study : MacDonald



King's Own Institute

# Processes Stages

1. **Core processes** : Business processes, such as manufacturing goods, selling products, and providing service, that make up the primary activities in a value chain.

2. **Static process** : Uses a systematic approach in an attempt to improve business effectiveness and efficiency continuously. Managers constantly attempt to optimize static processes. Examples of static processes include running payroll, calculating taxes, and creating financial statements.

3. **Dynamic process** : Continuously changing; provides business solutions to ever page changing business operations. As the business and its strategies change, so do the dynamic processes. Examples of dynamic processes include managing layoffs of due to extreme weather. 75 employees, changing order levels based on currency rates, and canceling business travel

# Business Process Modeling

**Purpose**: Demonstrate the value of business process modeling and compare As-Is and To-Be models.

1. **Business process modeling** , or mapping : The activity of creating a detailed flowchart or process map of a work process that shows its inputs, tasks, and activities in a structured

2. **Business process model** : A graphical description of a process, showing the sequence of process tasks, which is developed for a specific purpose and from a selected viewpoint.

3. **Business Process Model and Notation (BPMN)** : A graphical notation that depicts the steps in a business process.

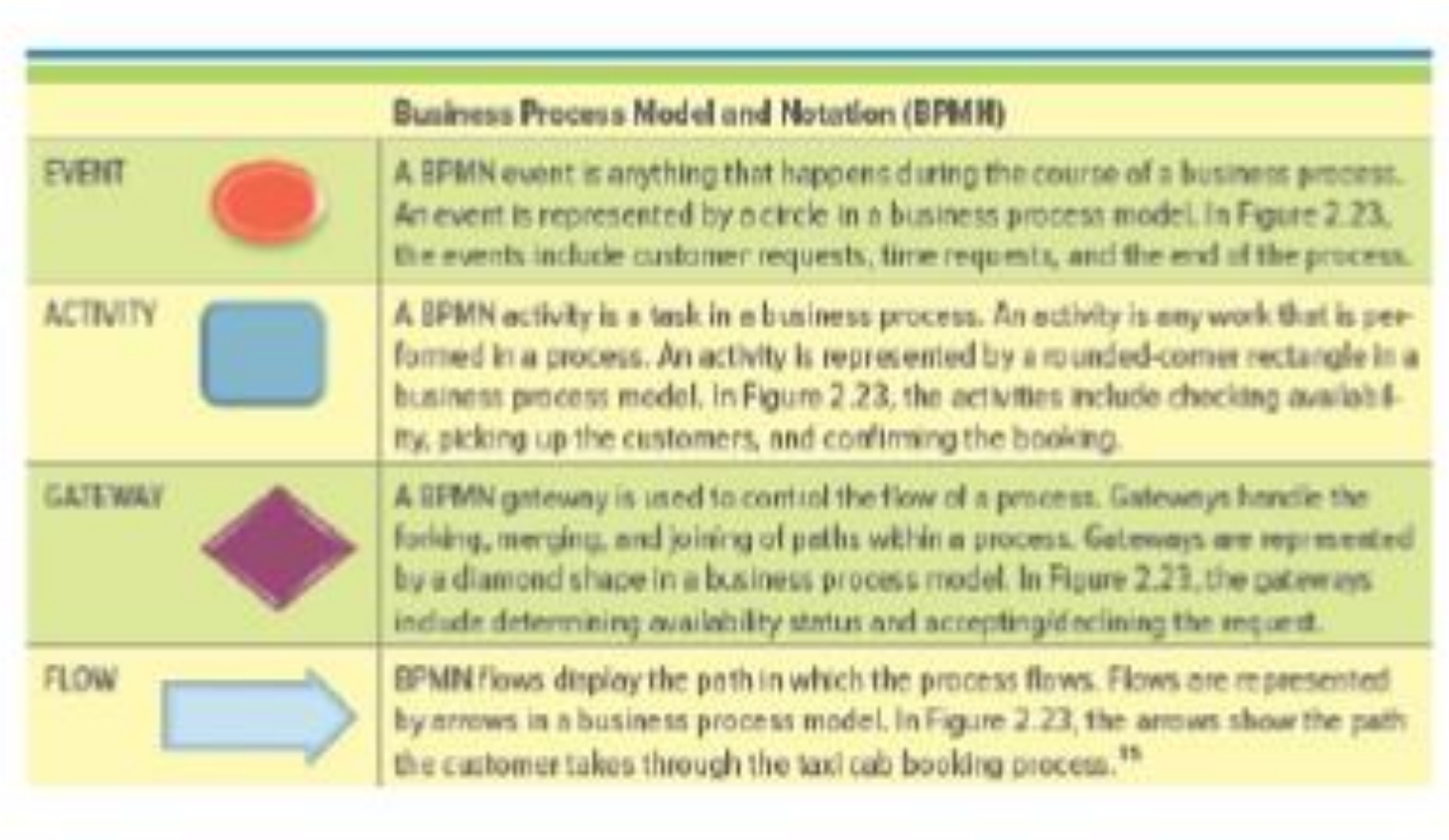
KOI
King's Own Institute

# Rules

A set of one or more process models details the many functions of a system or subject area with graphics and text, and its purpose is to:

1. Expose process detail gradually and in a controlled manner.
2. Encourage conciseness and accuracy in describing the process model.
3. Focus attention on the process model interfaces.
4. Provide a powerful process analysis and consistent design vocabulary. (See the end of the chapter for business process model examples.)

# Business Process Model and Notation (BPMN)

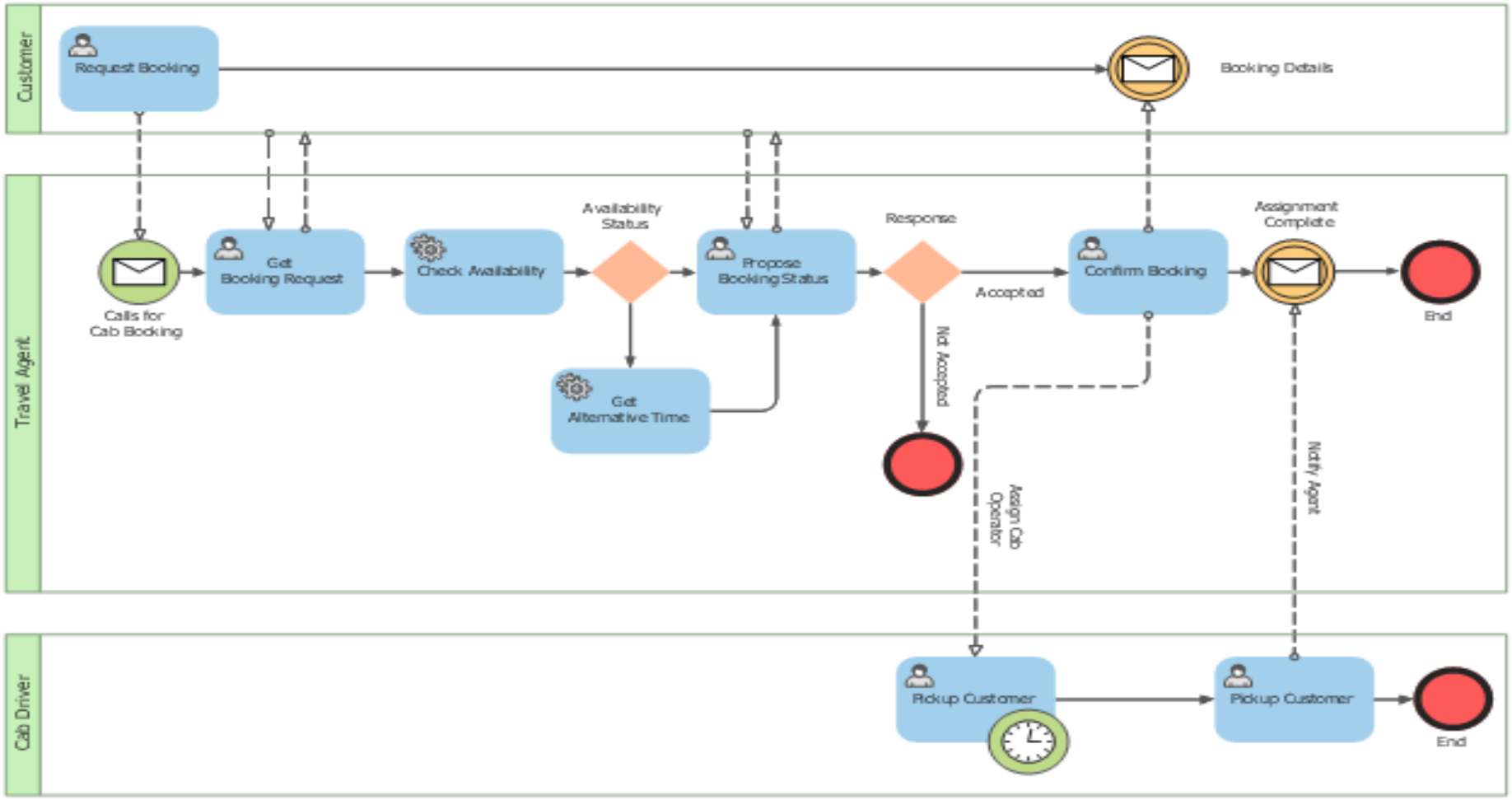


| Business Process Model and Notation (BPMN) | |
|---|---|
| EVENT | A BPMN event is anything that happens during the course of a business process. An event is represented by a circle in a business process model. In Figure 2.23, the events include customer requests, time requests, and the end of the process. |
| ACTIVITY | A BPMN activity is a task in a business process. An activity is any work that is performed in a process. An activity is represented by a rounded-corner rectangle in a business process model. In Figure 2.23, the activities include checking availability, picking up the customers, and confirming the booking. |
| GATEWAY | A BPMN gateway is used to control the flow of a process. Gateways handle the forking, merging, and joining of paths within a process. Gateways are represented by a diamond shape in a business process model. In Figure 2.23, the gateways include determining availability status and accepting/declining the request. |
| FLOW | BPMN flows display the path in which the process flows. Flows are represented by arrows in a business process model. In Figure 2.23, the arrows show the path the customer takes through the taxi cab booking process.[15] |

Figure 3 Business Process Model and Notation (BPMN)

KOI
King's Own Institute

# Cab Booking Process




Source from https://conceptdraw.com/a324c3/preview--Collaboration%20BPMN%202.0%20diagram%20-%20Cab%20booking%20public%20process

# As-Is process models and To-Be process models

**Business process modeling** usually begins with a functional process representation of the process problem, or an As-Is process model. without any specific improvements or changes to existing processes.

**As-Is process models** : Represent the current state of the operation that has been mapped, The next step is to build a To-Be process model that displays how the process problem will be solved or implemented.

**To-Be process models** : Shows the results of applying change improvement opportunities to the current (As-Is) process model.

KOI
King's Own Institute

# Ordering A Hamburger: Using As Is and To Be Model

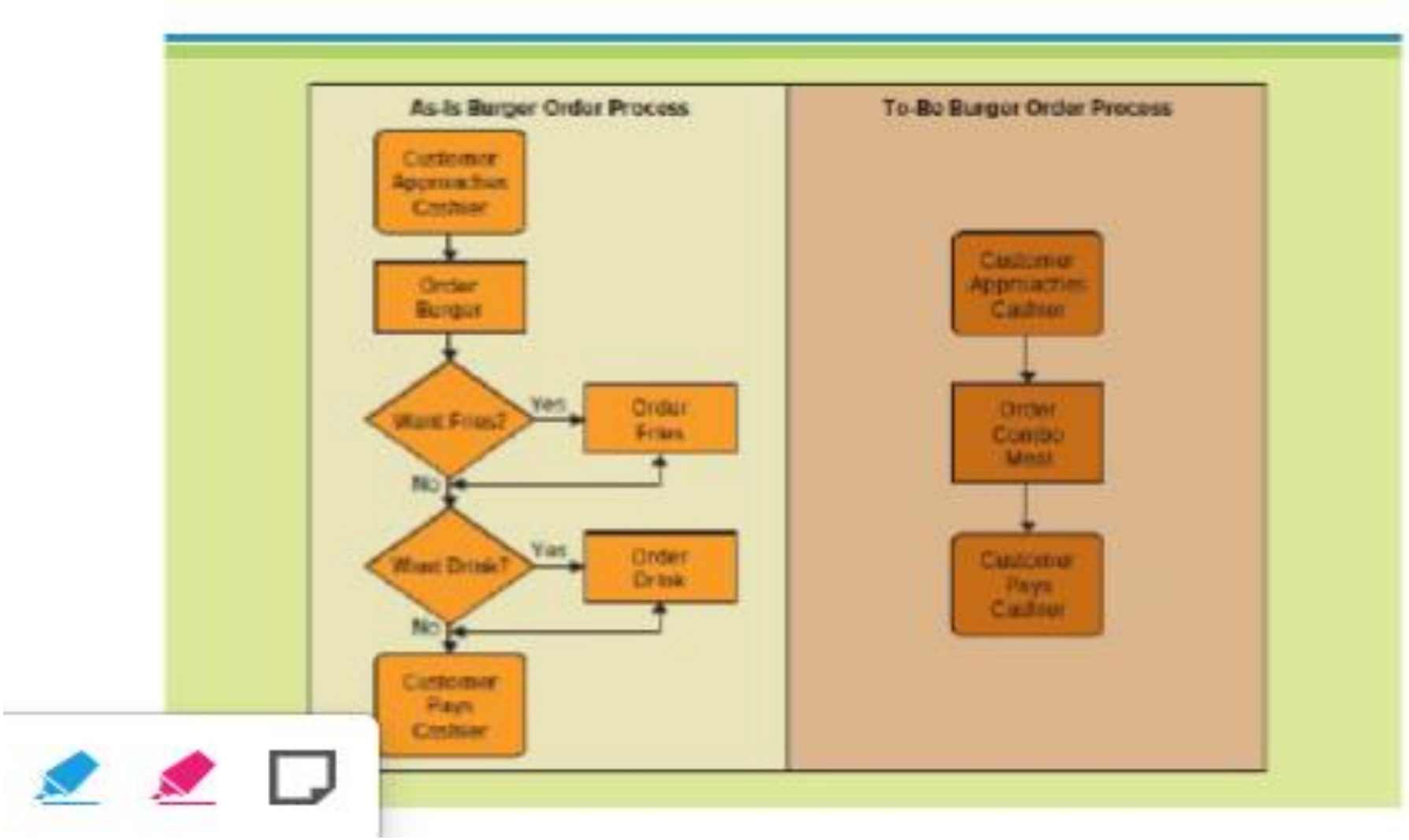



Figure 4 displays the As-Is and To-Be process models for ordering a hamburger.

King's Own Institute

# Case Study : MacDonald Self Ordering Kisok

King's Own Institute

# A Swimlane Diagram

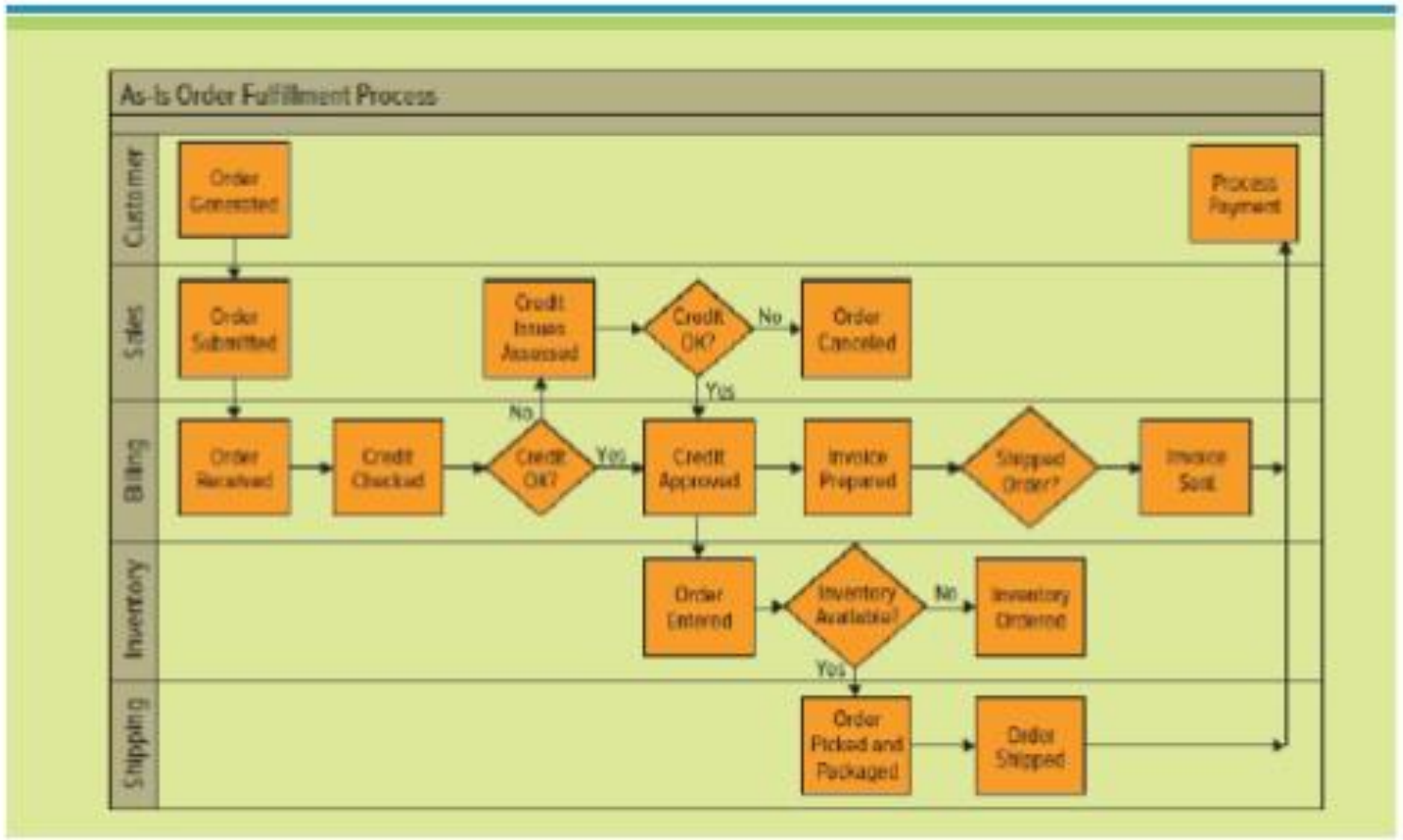
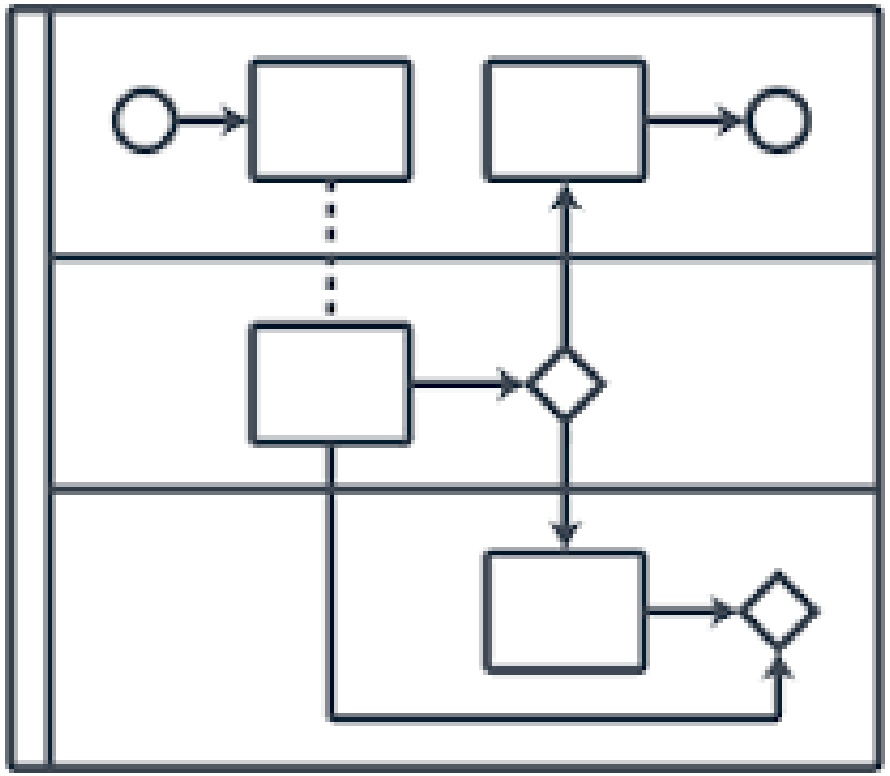



Figure 5 A Swimlane Diagram.

# How To Draw A Swimlane Diagram

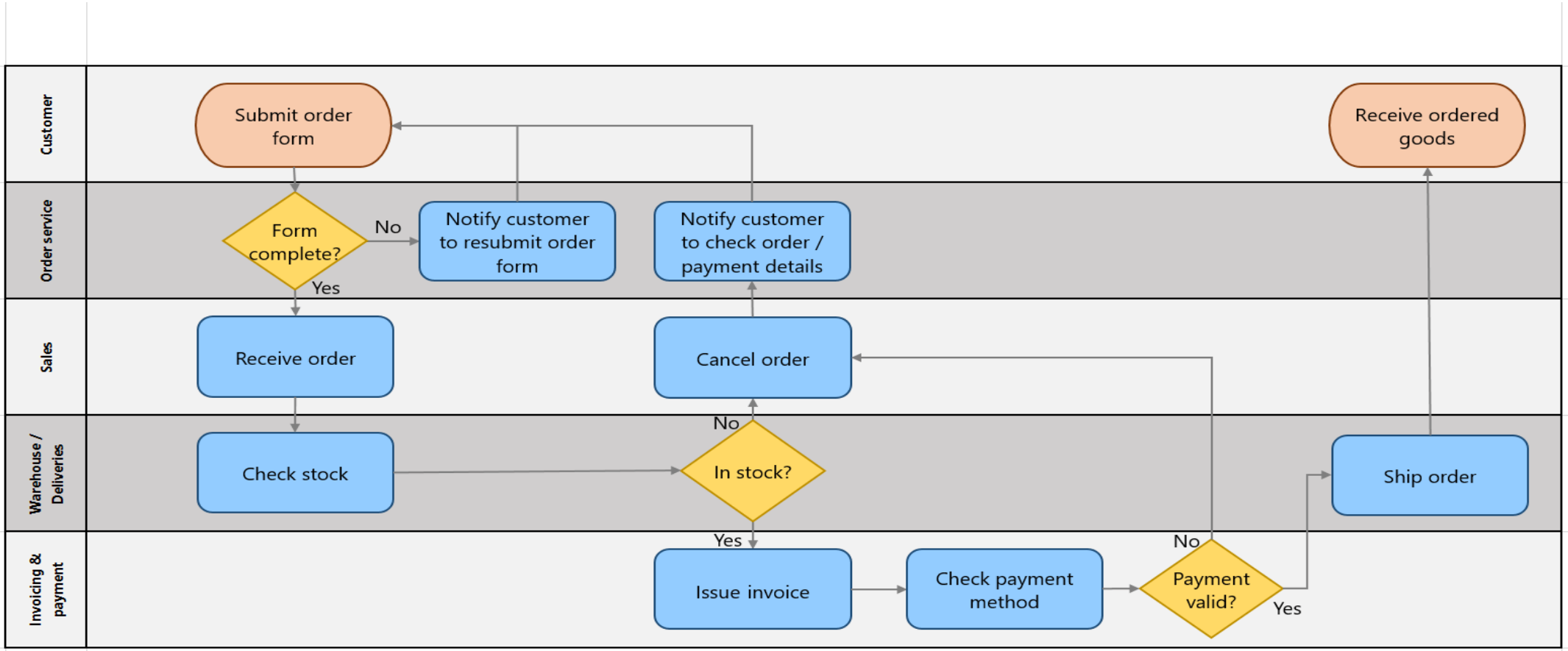
Step #1: Identify players
Step #2: Divide the page into swimlanes
Step #3: Update each task each stakeholder must involve

# Case Study :
# LucidChart for a Swimlane Diagram



King's Own Institute

# An Ordering Swimlane Diagram




Source adopted from https://www.officetimeline.com/swimlane-diagram/how-to-make/excel

# Group Discussion

1. Each group (4 or 5) chooses one topic.
2. Each group uses a Luidchart software (https://www.lucidchart.com)
3. Construct two swimlane diagrams. The first diagram you must show an existing process. We called it as a As Is model and the second diagram is based on a proposed idea to show what are the modified processes on the first diagram. We called it as a To be Model.
4. Copy and paste them onto a PowerPoint
5. A 3 minutes presentation in the class.

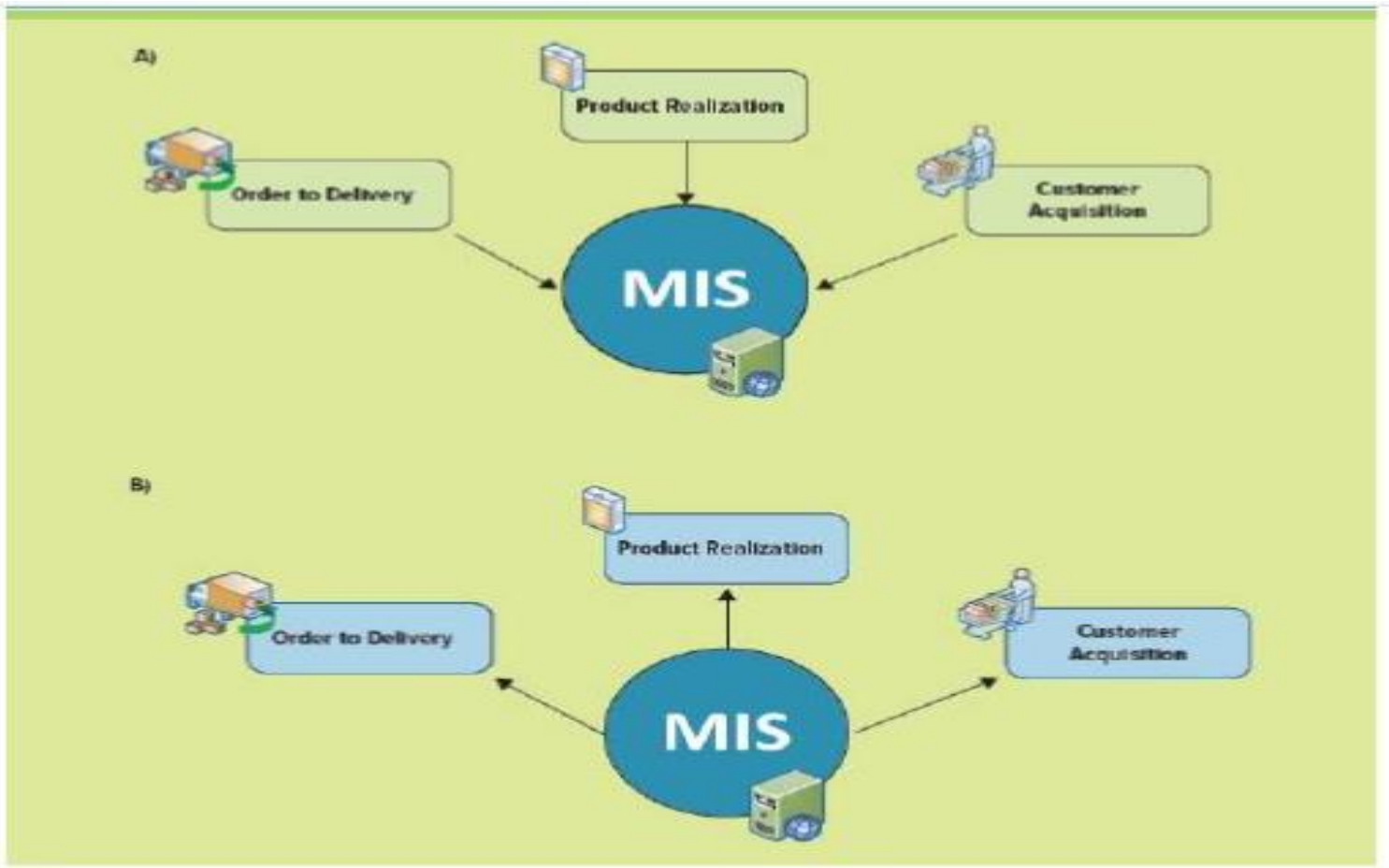
KOI
King's Own Institute

# Group Discussion Topics. Choose one topic below

1. A registration process swimlane diagram
2. A refund item swimlane process flow diagram
3. A recruitment swimlane diagram
4. A payroll swimlane diagram
5. A training swimlane diagram
6. A transport logistics swimlane diagram
7. A warehouse swim lane diagram – stock in, stock out, order settlement.
8. A finance swimlane diagram

KOI
King's Own Institute

# Using MIS To Improve Business Processes



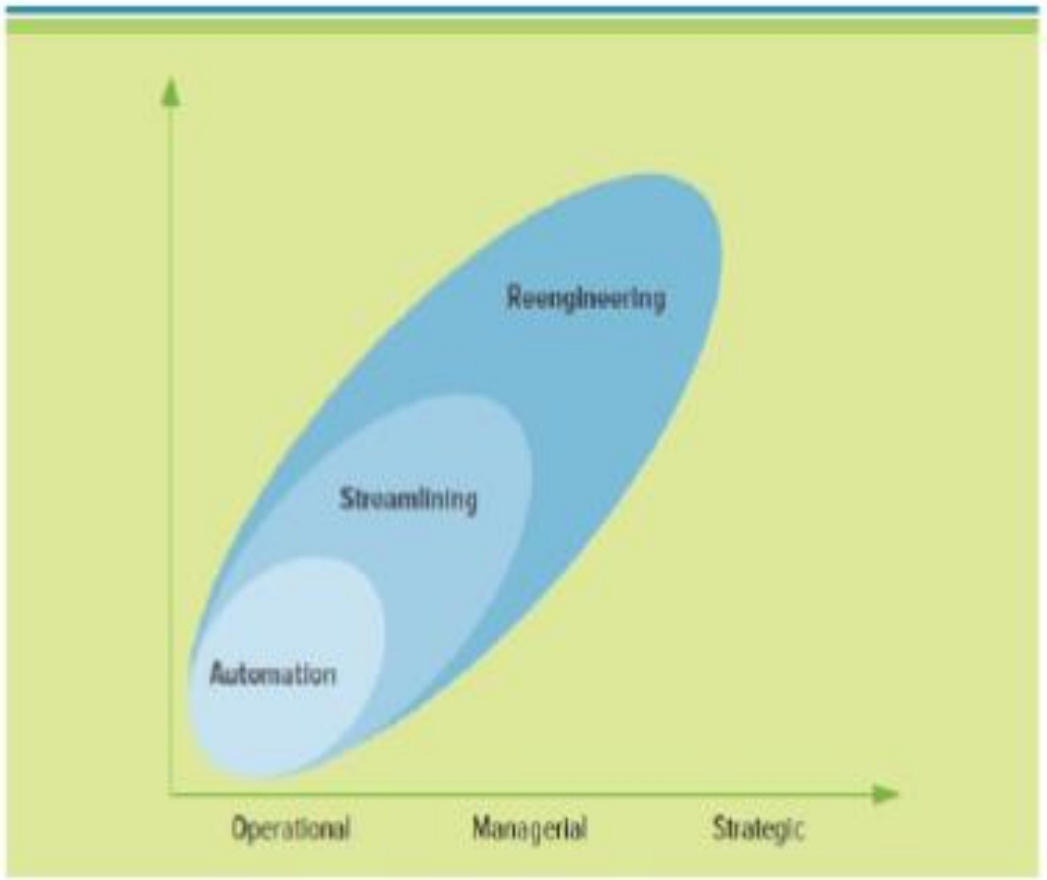

KOI
King's Own Institute

1. **Differentiate among automation, streamlining, and reengineering.**

**Workflow** : Includes the tasks, activities, and responsibilities required to execute each step in a business process.

**Digitization** : The automation of existing manual and paper-based processes and workflows to a digital format.

# Primary Types of Business Process Change




King's Own Institute

# Software Development

1. Stage 1 Identify the Current Problems
2. Stage 2 Plan
3. Stage 3 Design
4. Stage 4 Build
5. Stage 5 Code Test
6. Stage 6 Software Deployment

# Stage 1
# Identify the Current Problems

1. Asking the right questions

2. Getting feedback from key stakeholders (Users, Customers, Vendors, Suppliers, Developers, Staff etc)

Source https://stackify.com/sdlc-phases-identify-problems/

KOI
King's Own Institute

# Stage 2 Plan

1. “What do we want?” In this stage of the SDLC, the team determines the cost and resources required for implementing the analyzed requirements.
2. It also details the risks involved and provides sub-plans for softening those risks.
3. In other words, the team should determine the feasibility of the project and how they can implement the project successfully with the lowest risk in mind.

Source https://stackify.com/sdlc-phases-identify-problems/

KOI
King's Own Institute

# Stage 3 Design

1. “How will we get what we want?” This phase of the SDLC starts by turning the software specifications into a design plan called the Design Specification.
2. All stakeholders then review this plan and offer feedback and suggestions.
3. It’s crucial to have a plan for collecting and incorporating stakeholder input into this document. Failure at this stage will almost certainly result in cost overruns at best and the total collapse of the project at worst.

Source https://stackify.com/sdlc-phases-identify-problems/

# Stage 4 Build

1. “Let’s create what we want.”
2. At this stage, the actual development starts. It’s important that every developer sticks to the agreed blueprint. Also, make sure you have proper guidelines in place about the code style and practices.
3. For example, define a nomenclature for files or define a variable naming style such as camelCase. This will help your team to produce organized and consistent code that is easier to understand but also to test during the next phase.

Source https://stackify.com/sdlc-phases-identify-problems/

KOI
King's Own Institute

# Stage 5 Code Test

1. “Did we get what we want?” In this stage, we test for defects and deficiencies.
2. We fix those issues until the product meets the original specifications.
3. In short, we want to verify if the code meets the defined requirements.
4. Try Stackify’s free code profiler, Prefix, to write better code on your workstation. Prefix works with .NET, Java, PHP, Node.js, Ruby, and Python.

Source https://stackify.com/sdlc-phases-identify-problems/

# Stage 6 Software Deployment

1. “Let’s start using what we got.”
2. At this stage, the goal is to deploy the software to the production environment so users can start using the product. However, many organizations choose to move the product through different deployment environments such as a testing or staging environment.
3. This allows any stakeholders to safely play with the product before releasing it to the market. Besides, this allows any final mistakes to be caught before releasing the product.

Source https://stackify.com/sdlc-phases-identify-problems/

KOI
King's Own Institute

# Software Development Life Cycle

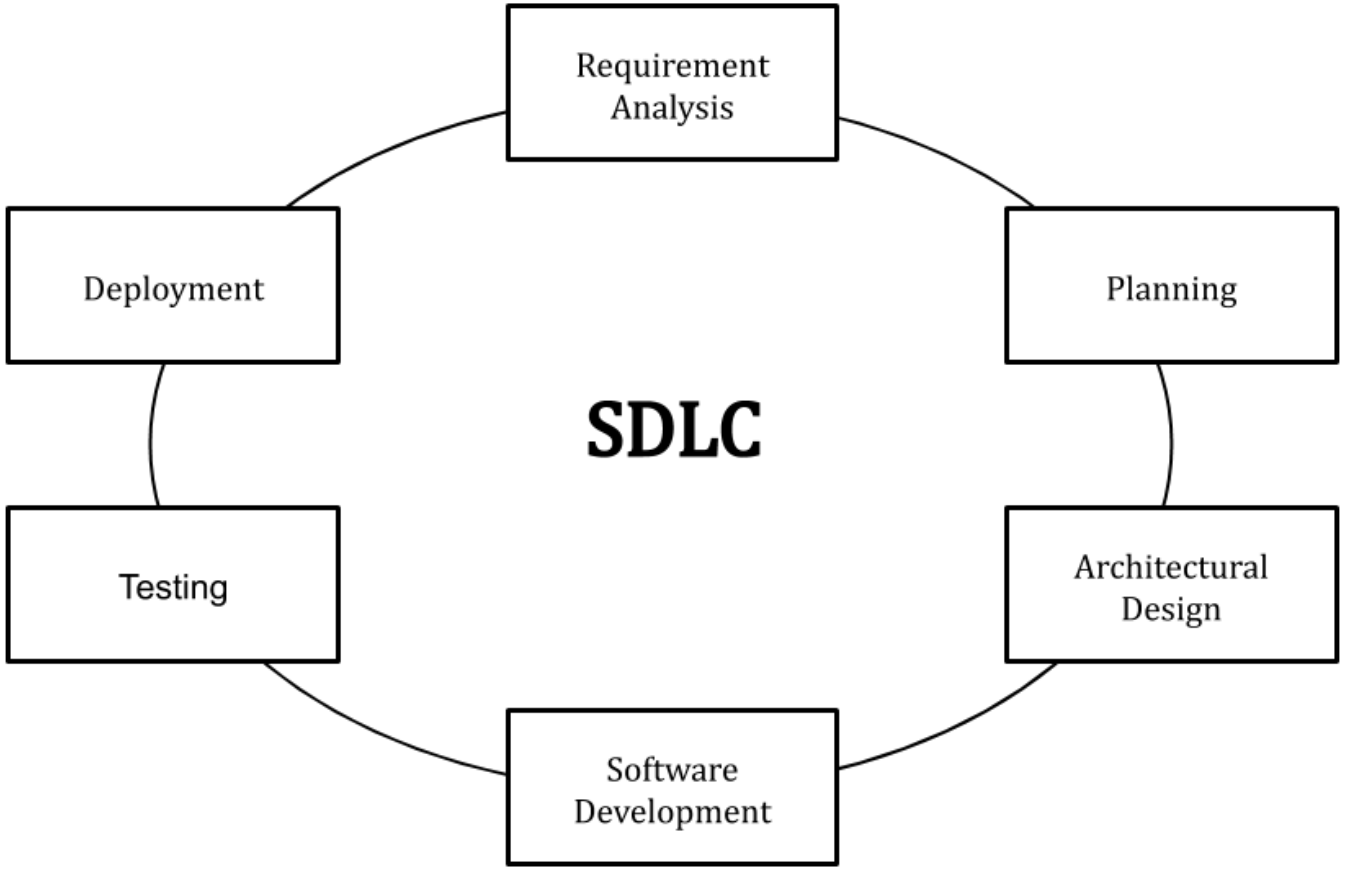
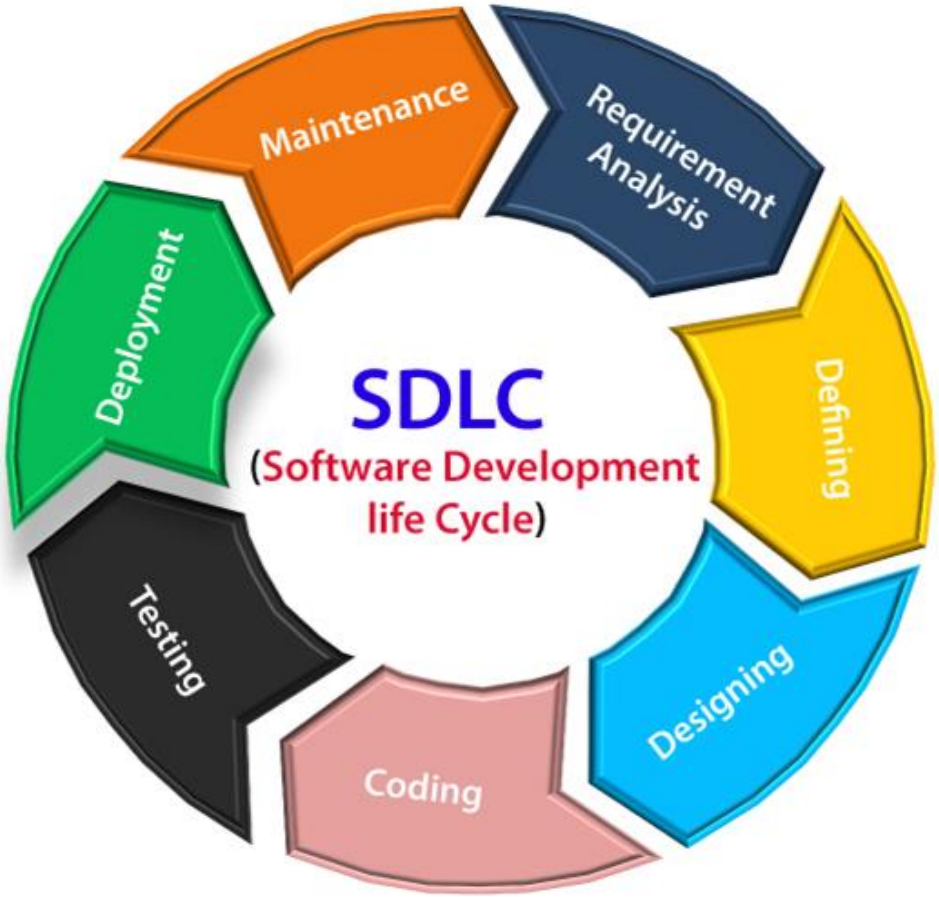



Figure 5. Software Development Life Cycle

Adopted from https://stackify.com/what-is-sdlc/

KOI
King's Own Institute

# Case Study: Software Development Life Cycle



# Any Questions?


KOI
King's Own Institute