PARTNERS TRAINING SESSION 2

Business Process Definition

- **Business Process** [refers to a set of activities or tasks](#), often connected and automated, triggered by an event to carry out a predetermined specific organizational goal such as a service or a product.

- Each activity(e.g., a task), included in a process, is assigned to a specific member of a team or to an entire group of the business.

- Every business should define its processes, analyze and measure the results to ensure that the process is meeting expectations and is getting better.

- Usually, when a process has pre-defined and same steps, these activities can be visualized as a **workflow.** The workflow is the orchestration of connected stages that can be performed in parallel or sequentially depending on specific rules or decisions. That means that every person in the company should follow the exact same steps.

[Find out more here.](#)

Monitor Business Process

- Get an overview of any information relevant to all active Business Processes, Emails, Notifications, and Tasks through the **Workbench.** Find out more here.

- **Enhance collaboration** with discussion boards, files, messages, group and personal assignments in each record
  - Add **comments** inside each process, and all users that have access to it will receive a notification.
  - Upload one or more documents to your process. View, download, view versions and delete options are available for each **attachment**

- Get **real-time** information for each workflow instance. If you open a process record you can get the following information:
  - Process Dashboard: Time spent, Task count, Task workload, (%) completion
  - Any subprocess linked to the current process record
  - **Workflow tasks**: the tasks that are created automatically by the workflow. Monitor here the state of each task, duration, start/end time.
  - **Workflow Run Diagram:** it highlights the active path (completed steps in green and current steps in blue)
  - Related Tasks: all manually created tasks are displayed here.

BPMN 2.0

BPMN (Business Process Modelling Notation) is a graphical notation that captures the logical steps of a business process. The notation established describes the flow sequence while participants collaborating upon process completion.

- BPMN developed by Business Process Management Initiative (BPMI) which was merged with **Object Management Group (OMG)** in 2005.

- BPMN 2.0 released in 2011

- BPMN is internationally accepted

- Processes are standardized in a unique way, understandable by all; from business analyst to any stakeholder

- Business Analysts use **BPD (Business Process Diagrams)** to design, control and manage processes

- BPMN **bridges gap between process design and implementation**, between business and tech professionals

- Each BPMN object layers a defined XML definition, which makes it functional

- Processes require modeler to use some very common objects (events, activities, gateways) and sequence flows.

Source: OMG(2011), Business Process Model and Notation (BPMN) v 2.0

Key BPMN 2.0 diagram elements and symbols

Flow objects: events, activities, gateways

Data: data objects, data inputs, data outputs, data stores

Connecting objects: sequence flow, message flow, association, data association

Swim lanes: pool or lane

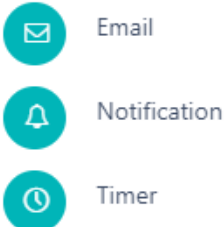**Artifacts**: group, text annotation, annotation

RPA components

AI components

Events in Comidor

- Events <u>affect the process flow</u> and have a **cause** (trigger: process set as running) and an **effect** (impact/result: process set as failed, canceled, completed, paused etc.)

- Something that occurs during the Process/Choreography

- Timer boundary Event, Conditional Events are depicted in Comidor differently

- Throwing Timer is available through Process Scheduling

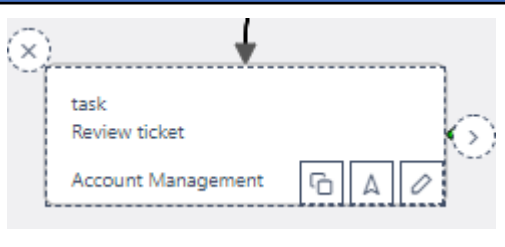| Notation	Element Description
Start	Start: A process/choreography will start
Email Notification Timer	Intermediate: Will not start or (directly) terminate a process/choreography. Examples may be a <u>throwing</u> Message, <u>catching</u> Timer, <u>throwing</u> Notification.
End	End: A process/choreography will end causing process error, canceling, failing, escalation to another parent process.

Activities in Comidor

- Work performed by user(s)/group(s) (atomic or non-atomic) which can be a Task, Sub-Process, Event Sub-Process

- Service Task, Send Task, Receive Task and Script Task are executed based on conditional flow.

Notation	Element Description
Task	Task (atomic or choreography) – task is used when the work is not broken into a finer level, while choreography task is used any time we have more than 1 participants, who need to exchange messages
Subprocess	Sub-Process – process that can be broken down in a set of smaller activities (other workflow with tasks and sub-processes) and can involve 1 or more participants

Events-based Activities (Escalation)

- Escalation Event is depicted and can be used from Activity element

Notation	Element Description
	Escalation () can be conditional (e.g. if Delayed for 2 h) and can trigger throwing Emails, Notifications or Actions.

Gateways in Comidor

- A gateway is used to determine branching, forking, merging and joining of paths drew by sequence flow

- In Comidor we have exclusive, inclusive and parallel gateways

Inclusive (OR)	OR Gateway – Inclusive Gate refers to activating one or more flows when dividing. For incoming, all paths may be taken/fulfilled, from one to all.
Parallel (AND)	AND Gateway (Fork/Join) – Parallel Gate refers to dividing of paths into two or more flows (fork). For incoming flows, parallel gateway will wait for all incoming flows before continues (join).
Exclusive (XOR)	XOR Gateway – Exclusive Gate refers to choosing "either/or" and will limit outcome to one single path but in exactly one of the output branches

Gateways Examples

- Parallel Gate (AND) is used here join three activities in a time. In the 1st gate, when all three tasks that follow the AND gateway will be created simultaneously. In the 2nd gate, when all three activities are met(completed), process will proceed to the next step.
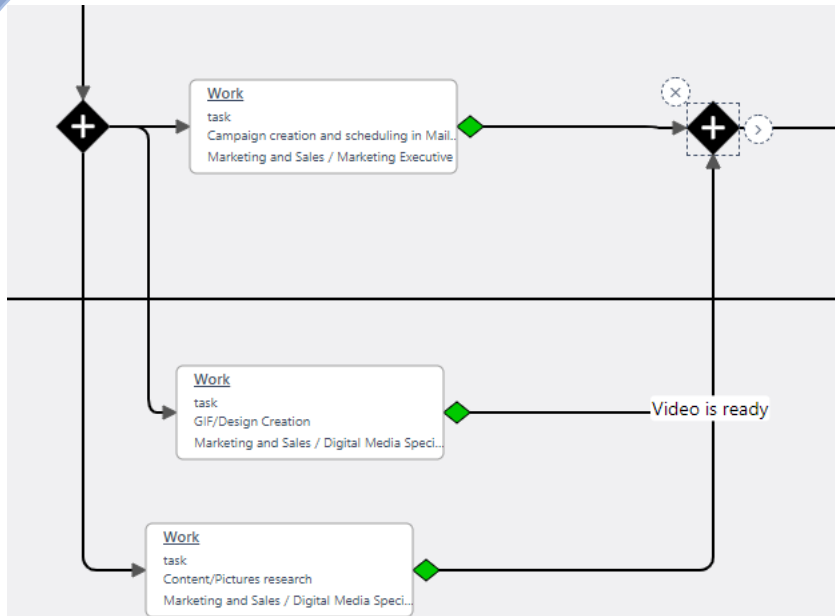
Gateways Examples (2)

- Here after the 1ˢᵗ task is completed, we have an XOR gateway. So, based on conditions(e.g. a drop-down field to choose the ticket type) only one of the next 4 tasks will be triggered. Since, we need only one of the 4 tasks to be completed, for the workflow to proceed we added again XOR gateway.(no condition needed here)
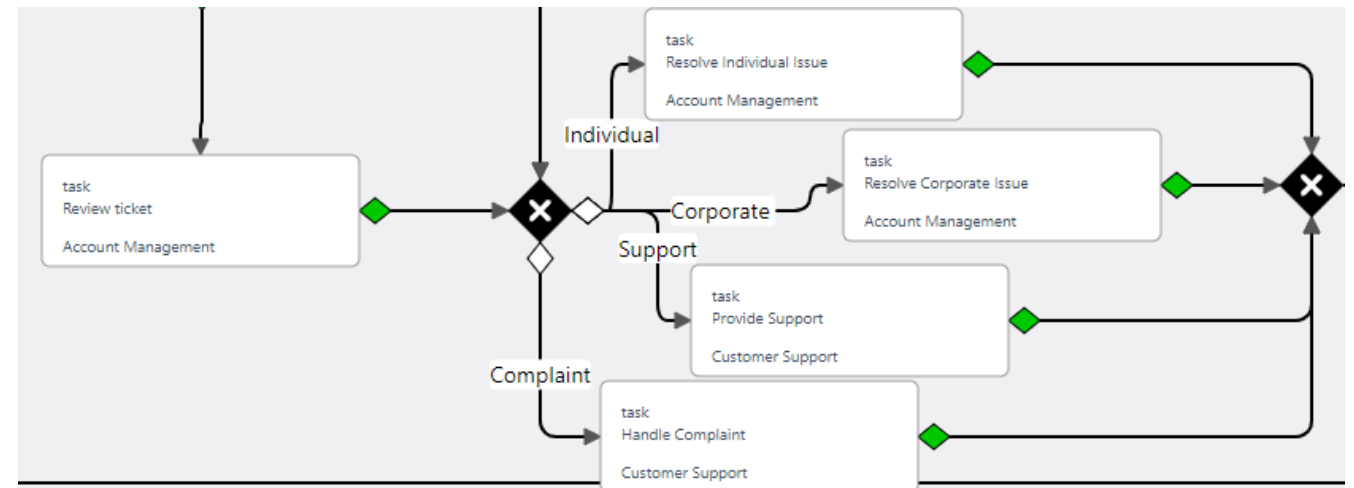
Gateways Examples (3)

- Here Exclusive Gate(XOR) is used to activate only one path based on conditions. The Inclusive Gate (OR) refers to activating one or more flows based on conditions(e.g. checkboxes to determine one or more departments to escalate the query). Then, the 2nd Inclusive Gate (OR) will await all the active tasks to be completed (one, any two, or all three) to move to the next step.
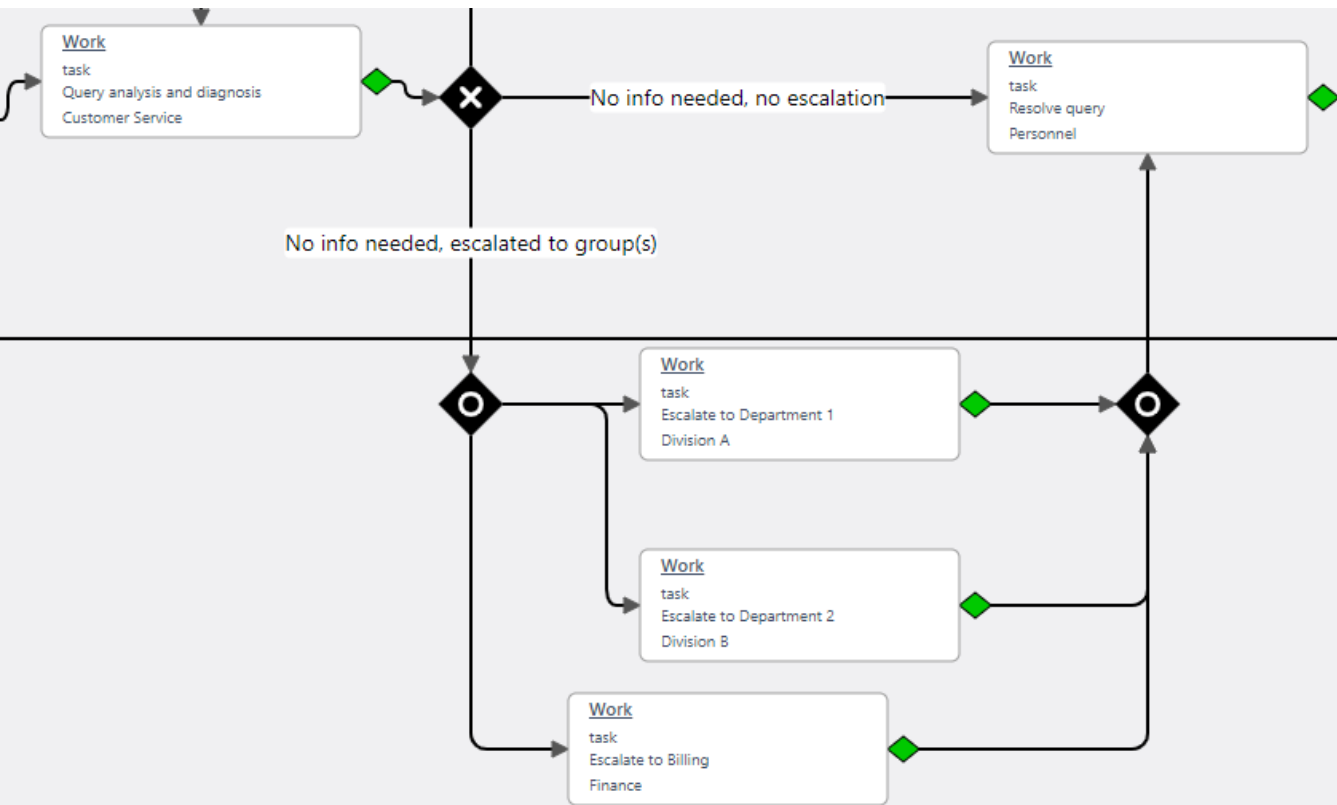
Connectors in Comidor

- **Connecting objects:** sequence flow, message flow, association, data association
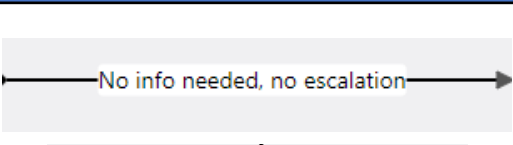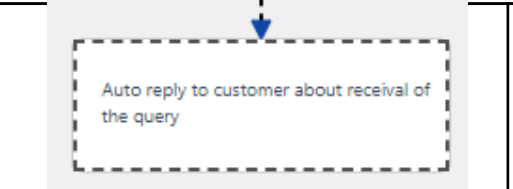
Notation	Element Description
	Conditional Flow –shows the order of activities; it may hold a condition (**conditional flow**) or stand as default flow. It connects activities/events/gateways with each other. In Exclusive/Inclusive Gates holds a white diamond, but in Activities will be colored based on source state. They connect elements being in the same pool/lane. You can add advanced conditions (custom fields criteria)
	Default flow – it is useful in Inclusive Gateways.

Data and Artifacts in Comidor

- **Data:** data objects, data inputs, data outputs, data stores

- Data objects(fields): something that is necessary for any activity; we have them stored inside the activities
    - Input and Output are achieved via user forms with database or custom user fields
    - Data can be stored inside an automated process not only inside each activity, but also in the bigger process

Notation	Element Description
Comidor DATA (Insert / Update / Delete)	Comidor Data (Insert/Update/Delete) – ability to insert/update/delete Personnel/Contact/Account/Project Requirement or any non-process enabled app fields

- **Artifacts**: group, text annotation, Annotations
    - **Grouping** of activities can be achieved with sub-processes with smaller workflows
    - Text annotation are somehow comments

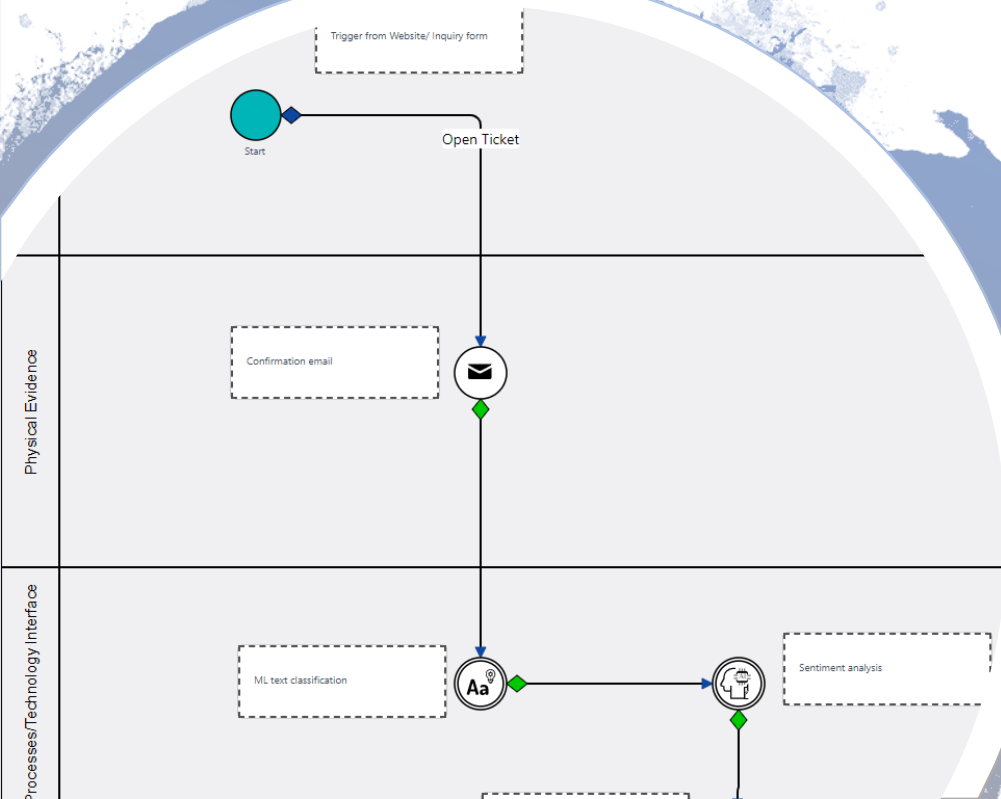| Notation	Element Description
No info needed, no escalation	Comments can be added above the Connectors to provide insights referring to the execution of Activities or explanation of certain paths.
Auto reply to customer about receival of the query	Add comments inside your design in Annotation element. This allows you to explain in detail what is the use of certain tasks or apply a description.

Custom Forms and Fields

- **Custom Forms:** Forms can be used as Main forms in a Process (Workflow-driven or not) or as forms inside the Activities.
  - Multiple Columns, Blocks and Components may be added inside a Form
  - Forms may have its own view and change rights
  - Fields added inside forms may be "read only" or "read/write" per form
  - Fields added inside forms may be compulsory or not per form
  - Forms may be supported with scripts

- **Custom Fields**: All User Fields should be a part of a User Form. To create Workflow custom fields, need to have access on BPM package of Comidor.
  - **Custom fields types:** Text, Memo (Paragraph), Number, Binary File, Drop-down list (Key|Value or Comidor Database lists),Excel, Currency, Checkbox, Date, more.

- **Field Rules**:
  - The field rules functionality enables you to hide or show fields inside forms when certain conditions are met.
  - Create custom condition scenarios for fields and select in which scenario the fields are going to be shown or hidden.

Swim Lanes in Comidor

- **Pool and Lane** define the responsibility for activities (tasks/subprocesses)

- Lanes exist inside a Pool and pool boundaries represent the process which is automated with the workflow

- We may have a pool with different Lanes (participants such as user(s)/group(s) for a process automation or have different pools with 1 lane for different subprocesses of an automated mother process

- A Lane name is free text – you may add a name of a person or a department name of a role name

Comidor for integration

Notation	Element Description
RESTful Web Service	REST – Representational state transfer (REST) is an architecture that runs over HTTP. It can be used to connect with other Website, Mobile apps, tools etc.
	SOAP – Simple Object Access Protocol (SOAP)-based Web Services is the most usual implementation of SOA (Service-oriented architecture). Comidor connects with external application or system in order to exchange information.

Other Data Components

	Shell Command	Add scripts in your workflow design. The Shell Type can be Unix (sh), Windows (cmd), Windows (Powershell), Platon script
	File Reader	1. check the existence of a file in a particular path and store it in a binary file. 2. import data from a file either from a specific path or from a binary field. 3. read text from a File and store it to a field.
	Export Data	Export any data from a workflow to a CSV file and make their own reporting.
	Convert data	Comidor Convert data component enables you to convert an excel file that is stored in a binary field to a .csv format and store it to another field of the workflow.
	Digital Signature	Include the signature component in your workflow and link it with a signature model. When you execute the workflow, the system will place the user's signature in the part of the document you want.
	Document Creator	Create invoices, reports, or other types of documents by combining a file template format and fields of the workflow. ***Purchase Order application example***
	Table Extractor	Scans a pdf file and finds all tables included and creates an excel file as response with all those tables, separated in different tabs.
	Excel Processor	Parse a big excel file or part of it and capture values of certain cells into user fields or a whole area and depict them in an excel type user field
	Create graph	Add one or more Graph Creator elements to your workflow design to produce interactive graphs based on workflow data. Pie or bar chart produced in jpg
	SQL Creator	Use the SQL creator component in your workflow to create easily statements with no-code. Choose the SQL type you would like to create between Select, Insert, Update, Delete. Define the name of the table, the column names, and correlate your column names with the values of workflow fields. Apply conditions and ordering according to each statement.
	Message Queue	Read and write message queues (MQ) within a process. Specify MQ details (host, port, routing key), the type (read or write), and the message. Values from workflow fields can be included in the MQ message.

RPA Components

comidor

RPA Caller / **RPA Receiver**	Add an RPA Caller in various steps of the workflow design, to send data from the workflow and perform a series of repetitive actions in the 3rd party system, or an RPA Receiver to receive data from other systems and perform actions in Comidor workflow fields. *Sales Order & Supplier evaluation videos*
Sentiment Analysis	Identify and categorize opinions expressed in a text field of a workflow, and determine whether the writer's attitude is positive, negative, or neutral. *(Customer request management application example &* *video)*
Document Analyzer	Scan documents like invoices and create digital copies. In particular, the text that is extracted from the document is saved in a text field and can be used within simple or more advanced workflows. *(Compare pdfs application example)*
Text Classification	Assign tags or categories to **text** according to the field content. Train your model with previous entries to fetch more accurate results. *(Customer request management application example &* *video)*
Predictive ML	Use existing data to train your **ML Models** and get predictions on specified user fields. *(Job application & Loan request examples &* *video)*
Selenium RPA	Use an **RPA Selenium** in your workflow to replicate repetitive manual steps of a web interface. Use unique CSS Selectors for specifying each element.
Image Classification	Specify images to be found within documents *(Compare pdfs application example)*
Web Scraper	Use an RPA Web Scraper in your workflow to first find information in a selected area of a website and then store it in user fields. *(Customer verification Case study & Stock Product Values workflow example)*

RPA Components

How it works

A computer works as an agent that emulates and integrates the actions of a human, interacting within a platform to perform a variety of repetitive tasks

The Results

• Automation of administrative, rule-based and time-consuming repetitive tasks
• High employee productivity in value-added tasks and activities

AI/ML Components

How it works

Algorithms, using historical process transactional data, are trained to optimise and automate existing processes

The Results

Learn from historical data, human actions and experiences to enable end-to-end process automation

View here: AI/ML Application Cases, AI-enabled Automation video

Training Objectives

- How a Business Analyst can use BPMN in Comidor with no-code

- Understand how to map process diagrams

- Learn about technologies and capabilities used in Workflows

- Learn how Comidor Process Manager can adapt to Workflow Modeler

Thank you!