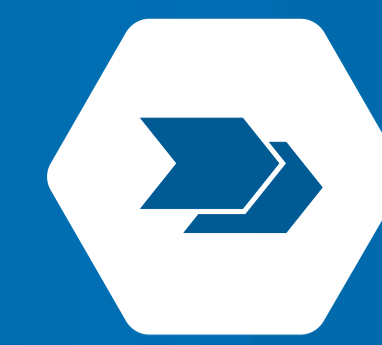# BPMN 2.0 – Business Process Model and Notation

A reference guide to the key BPMN 2.0 elements provided by ADONIS, customer's choice in BPM tools

ADONIS
Business Transformation Suite
by boc-group.com

Basic Modeling Elements of BPMN 2.0

A **Pool** is the graphical representation of a Participant.
A **Lane** is a sub-partition within a Process, sometimes within a Pool, and will extend the entire length of the Process, either vertically or horizontally.

Task

Activity is a generic term for work that company performs in a Process and represents a point in a Process flow where work is performed.

Event

An **Event** is something that "happens" during a process and is either triggered by something external or by the process itself.

Gateway

Gateways are used to control the process flow through Sequence Flows as they converge and diverge within a process.

Sequence Flow

A **Sequence Flow** is used to show the order that Activities will be performed in a process.

Message Flow

A **Message Flow** is used to show the flow of messages between two participants, symbolizes information flow across organizational boundaries.

Data Object

A **Data Object** or a Data Object that is a **Collection** represents information flowing through the process, such as business documents, emails, letters etc.

Message

A **Message** is used to depict the contents of a communication between two participants.

Text Annotation

Text Annotations are a mechanism for a modeller to provide additional text information for the reader of a diagram.

Group

A **Group** object is an artifact that provides a visual mechanism for the grouping of diagram elements that belong in the same category.

Activities/Tasks

Activity is a generic term for work that an organization performs, and activity can be atomic or non-atomic. Task is an atomic activity within a Process flow.

Task

Task is a rounded corner rectangle drawn with a single thin line. In standard ADONIS convention, it is marked with a light blue color and a name of the task in the centre.

Verb + Noun

Each **Task** should be named, and best-practice suggests using a verb in imperative and a noun. For example, an everyday activity of preparing an invoice for a customer would be "Create invoice".

Subprocess

A **Subprocess** is an **activity** whose internal details have been modeled using Activities, Gateways, Events, and Sequence flows.

Task types

Markers indicate execution behavior of tasks. BPMN specifies three types of markers for tasks: a Loop marker or a Multi-Instance marker and a Compensation marker. Multi-instance activity behavior may be parallel or sequential.

- Service task
- Manual task
- User task
- ⊞ Business rule task
- ☑ Receive task
- 📜 Script task
- ☑ Send task

Activity markers

- ↻ Loop
- ‖‖ Parallel Multi-Instance
- ⧏ Compensation
- ≡ Sequential Multi-Instance

Subprocess types

- Subprocess +
- Event Subprocess +
- Ad-hoc Subprocess + ~
- Call Activity
- Transaction +

Gateways

Exclusive Gateway

Non-exclusive Gateway

Gateways are used to control the process flow through Sequence Flows as they converge and diverge within a process. A single Gateway could have multiple input and multiple output flows. **Gateway** is represented as a rhombus (diamond) bordering with a thin single line. In the standard ADONIS convention, it is marked with yellow color and can hold additional symbols within.

Exclusive Gateway (XOR)

Exclusive Gateway / Exclusive Gateway

Represents a decision point in the process flow. This means that at the point of divergence, only one path can be taken.

Diverging: it routes the Sequence Flow to exactly one of the outgoing branches. Diverging Gateways (XOR) should be named as an interrogative phrase.
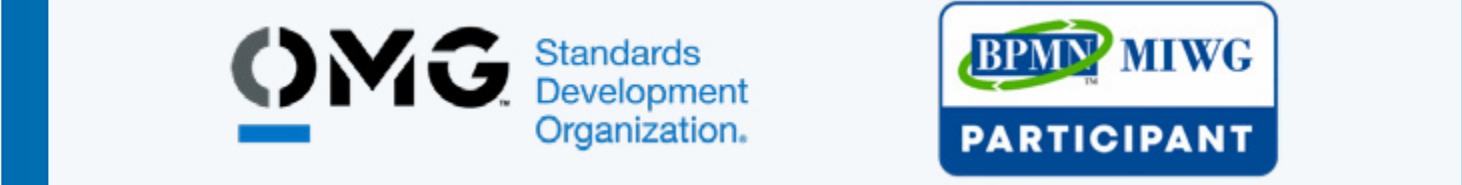
Converging*: it waits for the first incoming branch to complete before activating the outgoing flow. There is no need to name this Gateway.

*ADONIS does not require converging Exclusive Gateways when modeling business processes.

Sequence Flows after XOR Gateway

0.1 yes / 0.9 no

Transition condition on a Sequence Flow presents the probability of the path being taken. These probabilities, or transition conditions, are going to be used in ADONIS process simulation.

Parallel Gateway (AND)

Non-Exclusive Gateway

Represents a split point in the process flow. This means that at the point of divergence, all outgoing branches are activated simultaneously and at convergence, all incoming branches need to be completed before triggering the outgoing flow. Best practices suggests that for Non-exclusive Gateways, a Converging Gateway is also modelled.

Additional Gateway types

- Inclusive Gateway
- Complex Gateway
- Event Based Gateway
- Event Based Gateway (Instantiate)
- Parallel Event Based Gateway (Instantiate)

Events

An **Event** is something that "happens" during a process and is either triggered by something external or by the process itself. Events affect the flow of the process. Examples of events are, e.g., a change of a document status or a message which is received or sent.

	Start			Intermediate				End
	Top-Level	Event Subprocess Interrupting	Event Subprocess Non-Interrupting	Catching	Throwing	Boundary Interrupting	Boundary Non-Interrupting	Standard
Unspecified	Start Event							End Event
Message	Start Event	Start Event	Start Event	Intermediate Event	Intermediate Event	Intermediate Event	Intermediate Event	End Event
Timer	Start Event	Start Event	Start Event	Intermediate Event		Intermediate Event	Intermediate Event	
Error	Start Event			Intermediate Event		Intermediate Event		End Event
Escalation	Start Event	Start Event		Intermediate Event	Intermediate Event	Intermediate Event		
Cancel				Intermediate Event				End Event
Compensation	Start Event			Intermediate Event	Intermediate Event	Intermediate Event		End Event
Conditional	Start Event	Start Event	Start Event	Intermediate Event		Intermediate Event	Intermediate Event	
Link				Intermediate Event	Intermediate Event			
Signal	Start Event	Start Event	Start Event	Intermediate Event	Intermediate Event	Intermediate Event	Intermediate Event	End Event
Terminate								End Event
Multiple	Start Event	Start Event	Start Event	Intermediate Event	Intermediate Event	Intermediate Event	Intermediate Event	End Event
Parallel Multiple	Start Event	Start Event	Start Event	Intermediate Event		Intermediate Event	Intermediate Event	

Data

A **Data Object** or a Data Object that is a **Collection** represents information flowing through the process, such as business documents, emails, letters etc.

A **Data Input** is an external input for the entire process. It can be read by an activity. A **Data Output** is a variable available as result of the entire process.

A **Data Store** is a place where the process can read or write stored data, e.g. a database or a filing cabinet.
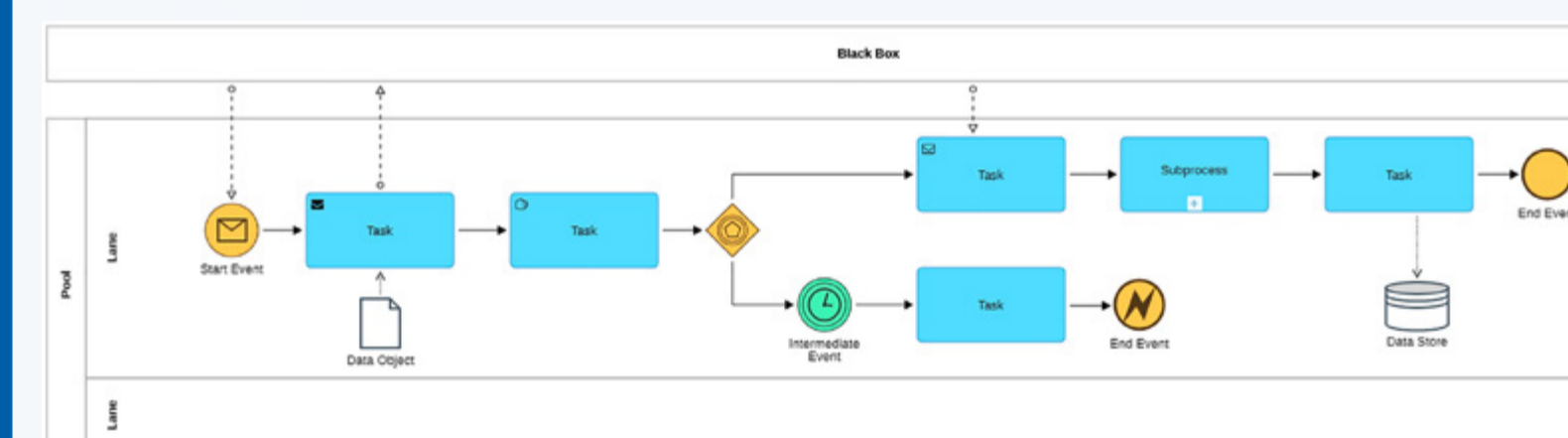
- Data Object
- Data Collection
- Data Input → Task → Data Output
- Data Store

Choreography

Choreography in BPMN is a way to formalize interactions between business **Participants** and the focus is on exchange of **Messages**. **Choreography** is basically a procedural business contract.

Choreography Task

Choreography Task is an atomic activity in a **Choreography Process.** It represents an Interaction between participants, which is depicted as two pools with a Message Flow. To simplify, in Choreography diagram it is represented as a collapsed object with two *participants* bands and a *Task name* band.

- ↻ Loop
- ‖‖ Parallel Multi-Instance
- ≡ Sequential Multi-Instance

Collaboration Diagram & Conversations

Collaboration depicts the interaction between two or more Participants, graphically represented by **Pools**. These participants are communicating via **Messages**, depicted by a **Message flow**. Pools may be empty or show a process within. Empty pools are known as "**black box**". **Collaboration diagram** is basically a graphical representation of choreography, processes and interaction between two participants. **Conversations** are simplified versions of **Collaborations** which introduce two additional graphical elements.
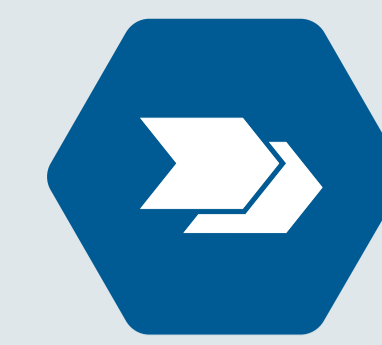
Conversation

- Conversation
- Sub-Conversation +
- Call Conversation

A **Conversation** is used to depict the logically related exchanges of messages between two Participants. **Call Conversation** calls a globally defined conversation.
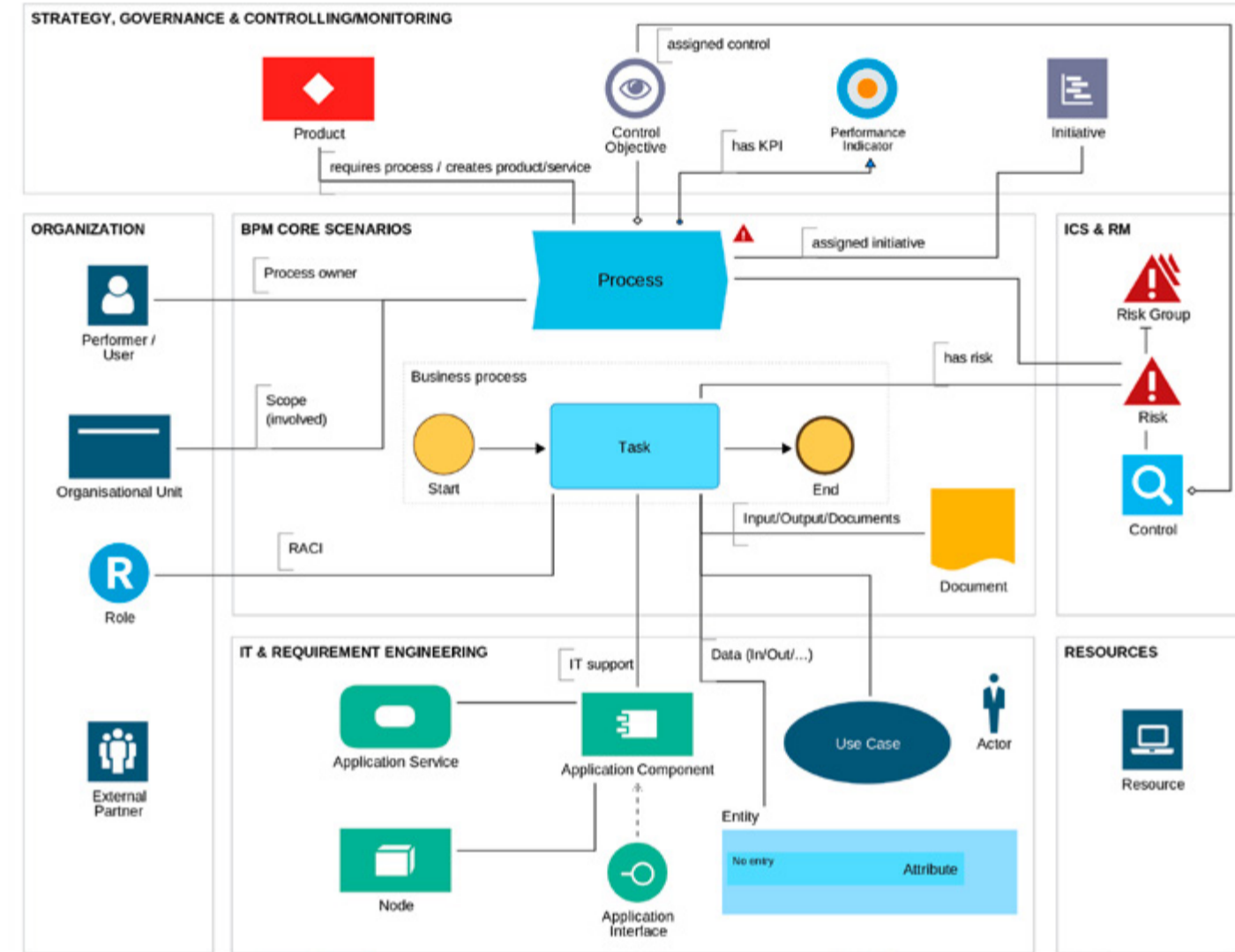
- Participant A
- Conversation
- Participant B

BPMN 2.0 – Business Process Model and Notation

More than modelling with BPMN fit for business in ADONIS

CORE ELEMENTS OF THE ADONIS BPM METAMODEL

ADONIS BPM Model extends BPMN to fit your business needs. It is based on almost 30 years of experience in the field and on dynamically changing needs of our customers.
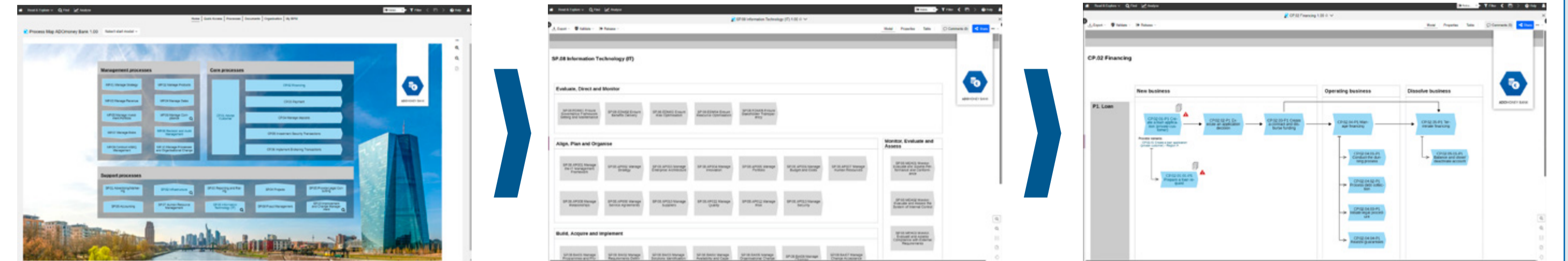
BPMN Certified

ADONIS provides comprehensive support for defining processes, collaborations, and diagrams using BPMN, a widely-used standard in process modeling. ADONIS covers all BPMN concepts and attributes in detail, which allows for precise and accurate technical specifications of your workflows. With ADONIS, you can seamlessly integrate with workflow and execution engines through a proven BPMN DI interface, providing a full roundtrip experience. BOC Group, the creator of ADONIS, is an active member of OMG BPMN MIWG, which ensures the ongoing development and improvement of the BPMN standard.
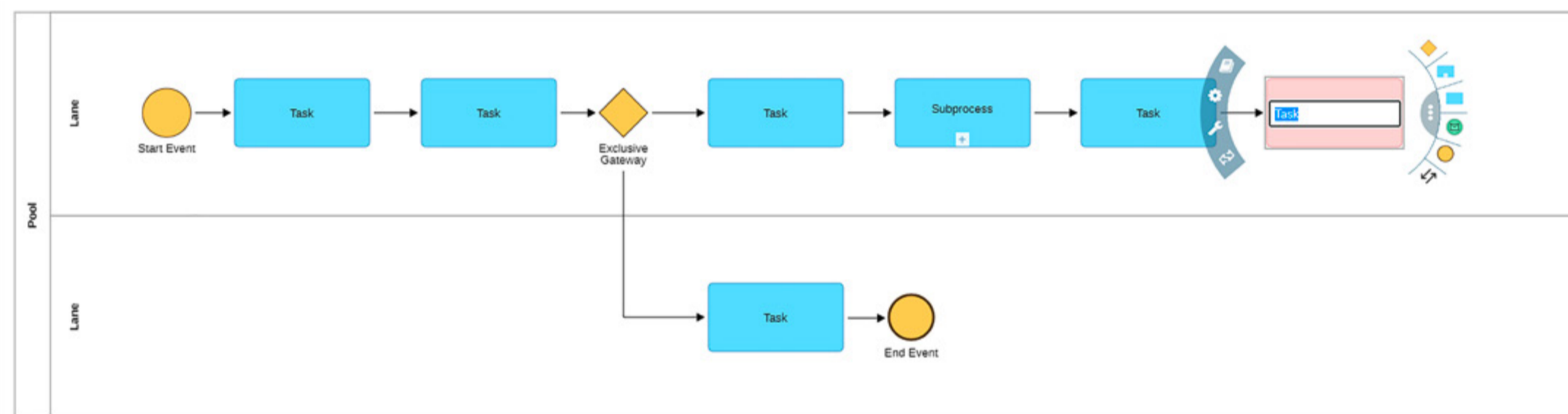
BPMN fit for business

ADONIS enhances the widely-used BPMN standard with crucial concepts to support Enterprise Business Process Analysis (EBPA), making it ideal for business-driven scenarios such as Quality Management (QM), Document Management Systems (DMS), Business Process Analysis (BPA), Internal Control Systems (ICS), Governance, Risk Management, and Compliance (GRC), and requirements analysis.
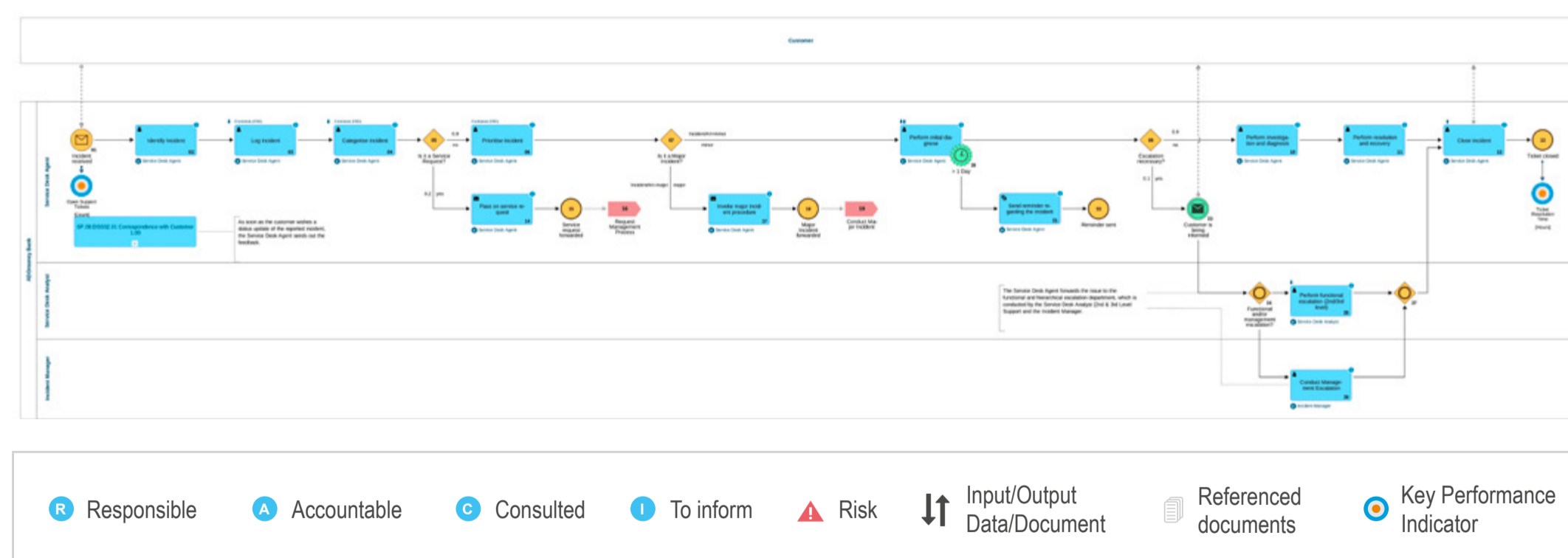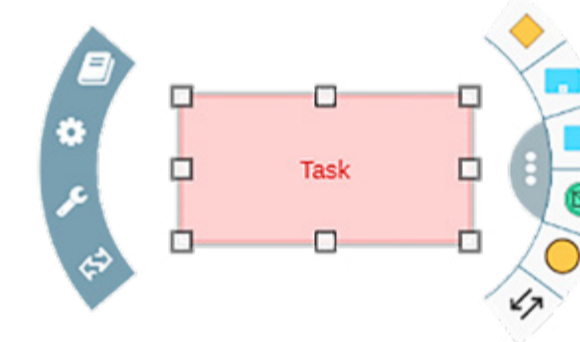
Modeling and Documenting Processes in ADONIS

ADONIS Smart Modelling Assistant helps you model quickly. Use the basic elements of BPMN to lay out the ground work for your process documentation.
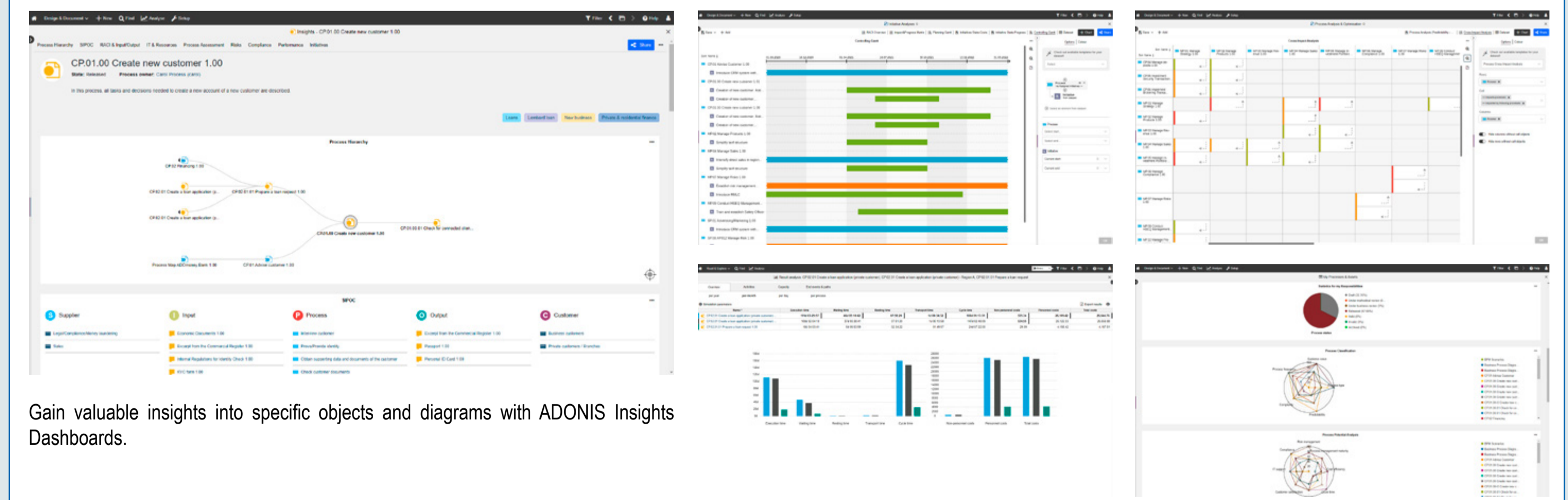
With ADONIS, users can define relationships to roles, documents, risks, applications, and more, and conduct comprehensive business-driven analysis. ADONIS also offers powerful graphical analysis features that support business analysis and digital transformation.
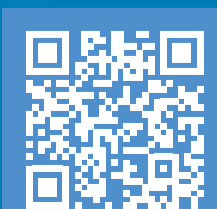

Ⓡ Responsible	Ⓐ Accountable	Ⓒ Consulted	Ⓘ To inform
⚠ Risk	⇅ Input/Output Data/Document	🗎 Referenced documents	◎ Key Performance Indicator

MORE THAN A PROCESS DIAGRAM

Company Maps & Value Chains

Analysis and Views that are *fit for business*

1. Identify processes that are critical to the business: By analyzing the business process portfolio, you can identify processes that are essential to the organization's success. This helps ensure that you prioritize the right processes for optimization.

2. Understand process interdependencies: Analyzing the portfolio can help you understand how different processes are interconnected and how changes to one process can affect others. This can help you avoid unintended consequences and optimize processes holistically.

3. Quantify the impact of process improvements: Analyzing the business process portfolio can help you identify the potential benefits of process improvements. This can help you make informed decisions about which processes to prioritize and how much resources to allocate.
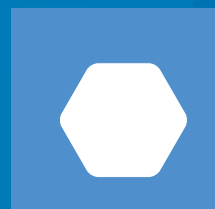
Analyzing the business process portfolio is a critical step in optimizing business processes as it provides important insights that help you prioritize and make informed decisions about process improvement initiatives.

Gain valuable insights into specific objects and diagrams with ADONIS Insights Dashboards.