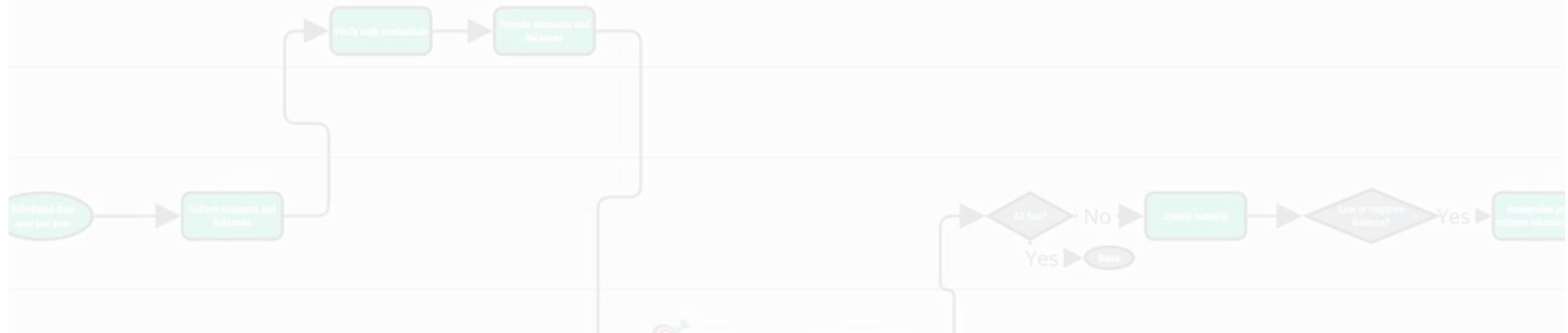
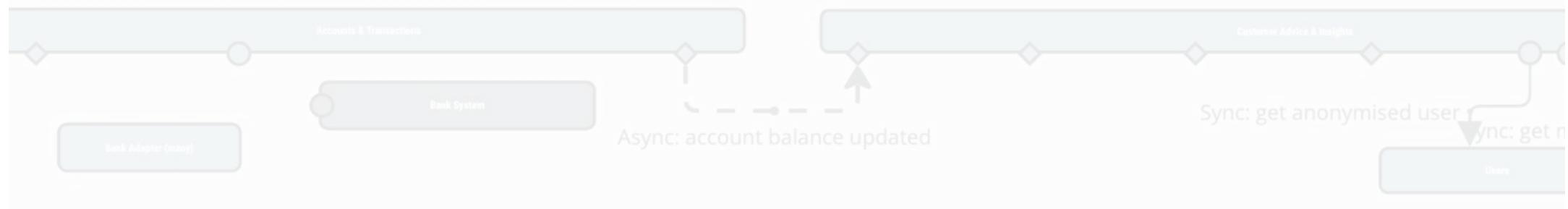


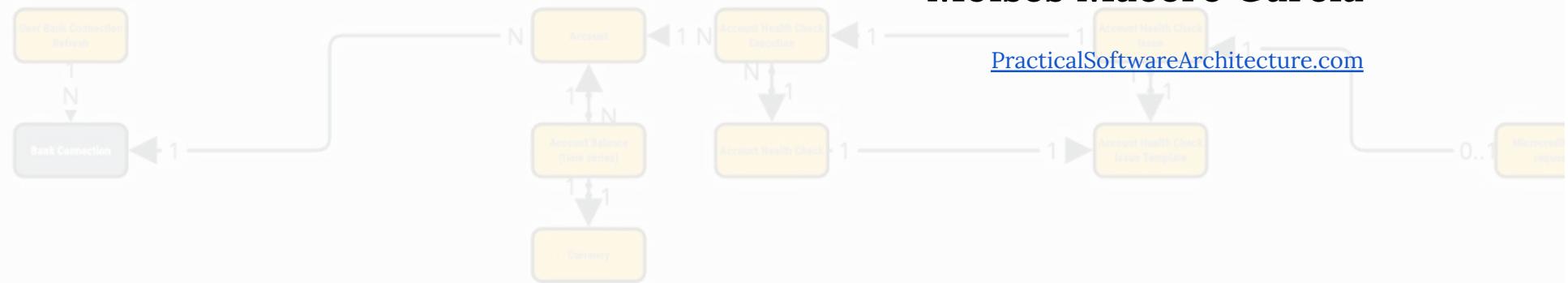
Collect account balances



The MoSy Framework Handbook



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PracticalSoftwareArchitecture.com

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Version History

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Moisés Macero García	2025-01-28	Added more info about system fundamentals
Moisés Macero García	2025-02-04	Changed format to horizontal view
Moisés Macero García	2025-02-14	Added more description to flow diagrams, and changed structure.

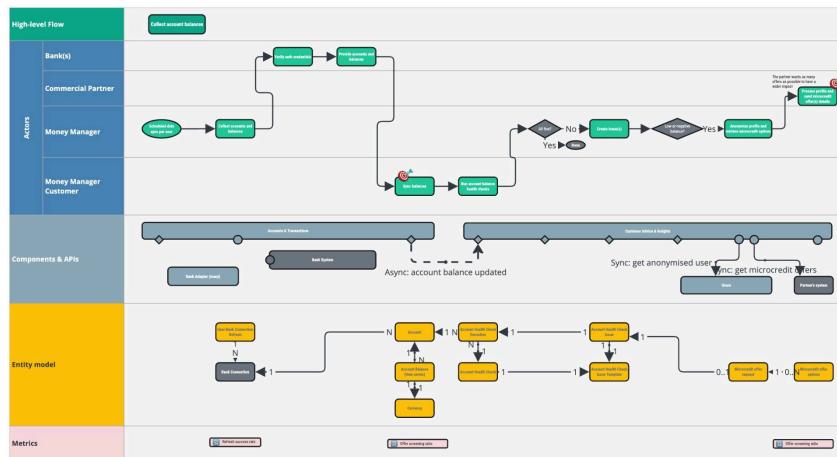
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1. What is MoSy?

MoSy is a new framework inspired by solid and proven tools. It focuses on **visual methods for reasoning about a system and aligning stakeholders and product and development teams**.



A preview of a core MoSy diagram

The framework solves the lack of clarity and shared understanding in technological projects:

- In many organizations, **different parts of the business speak entirely different "languages."** Commercial teams use presentations. Product teams rely on roadmaps and

user stories. In contrast, technical teams use solution-driven diagrams that explain the "how" but don't relate to the "why" or even the "what."

- This diversity of tools and formats makes aligning objectives across organizational layers, from strategic goals to day-to-day implementation, challenging. **Miscommunication leads to inefficiencies, rework, and frustration.**

MoSy facilitates alignment through a common visual language that bridges these gaps. The framework uses two types of visualizations to achieve its goal:

1. The High-Level System View clearly shows the organization's business cases and how actors interact with the system.
2. The Flow Diagram superposes four different modeling views of the business flows, enabling valuable discussions and ensuring alignment across the organization.

2. Framework Fundamentals

Let's describe the framework's principles and how it works before adding more details on why you should use it or who this framework is intended for. Then, you'll learn how it solves common problems in IT organizations better.

The MoSy framework is built on top of five elements that are present in every technical system:

- **Actors:** Who interacts with the system?
- **Flows and Actions:** What activities do these actors perform?
- **System Entities:** What elements do the actions create, consume, or modify?
- **Key Objectives and Metrics:** Why do the actors perform the actions? What are they trying to achieve? And regarding your system, how do you know you achieved your goals?
- **Technical Components:** How does the system technically look? How do components interact, and how do they relate to actions and entities?

Breaking a system down into these five parts gives us a good starting point. When we look at how these parts work together, we get an even better picture of the system. That's what the **framework diagrams** will help us accomplish.

The first step in designing or illustrating an existing system is to create the **High-Level System View**, which incorporates Actors, Flows, and Key Objectives. The next chapter will introduce these fundamentals.

After that, we'll dive into each actor sequence defined in the high-level system view to create **Flow Diagrams** and integrate System Entities, Metrics, and Technical components into the mix.

3. The High-Level System View

The first step of System Modeling with MoSy involves identifying the Actors, Key Objectives, and Flows. Let's describe these elements and their relationships and learn how to visualize them with MoSy.

Actors

Actors are the **people, systems, or external entities** that interact with the system. They can initiate actions, receive outputs, or influence the system's behavior. In MoSy, defining actors is crucial as they represent the **who** in a system, ensuring that all key stakeholder interactions are accounted for.

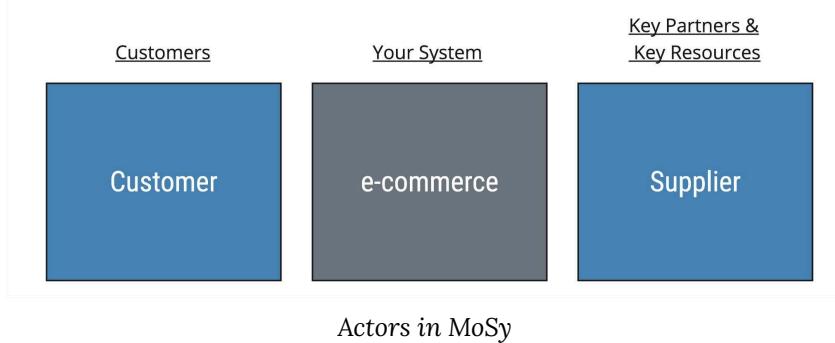
To keep consistency with the business objectives and promote a common language to classify the actors, MoSy uses the same definitions as in a [Business Model Canvas](#) to differentiate between distinct types of actors:

1. **Customers** are typically the most critical actors since they are the ones you aim to serve with your system. Customers are real people who interact with your system, and you can classify them into one or more

segments. In MoSy, you add one actor block per Customer Segment.

- a. Examples: e-commerce website visitor, social network user.
2. **Key Resources** in a business model can be physical, financial, intellectual, or human. They enable you to offer value to your customers. In MoSy, we'll focus only on human key resources since they typically interact with your system and become actors in MoSy.
 - a. Examples: technical support employee, social network's internal moderator.
3. **Key Partners**, in Mosy's scope, are typically other organizations that manage part of the system flows by providing functional or technical services.
 - a. Examples: email marketing platform, payment gateway.

There is a fourth type of actor not listed above: **your system**. In MoSy, the system is depicted as a central single actor with which the rest interact.



Customers, Key Resources, and Key Partners interact with the system at two granular levels: flows and actions.

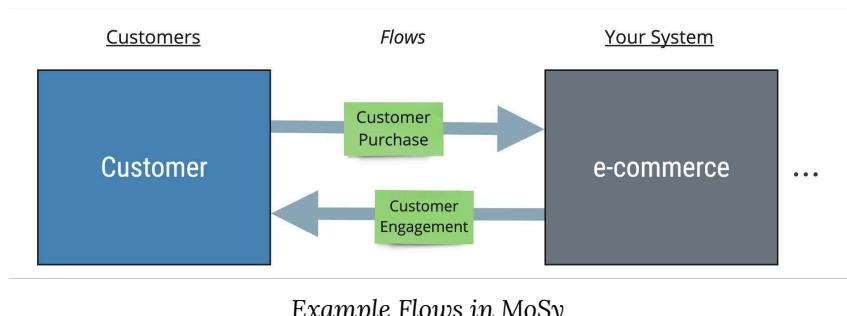
Flows and Actions

Flows in MoSy represent the **sequence of actions between actors and the system**, showing how these interactions progress to achieve specific goals. Flows illustrate **who does what, when, and how system elements respond**, ensuring a structured, step-by-step visualization of processes. Examples of flows in an e-commerce system are *Customer Checkout* and *Order Cancellation*.

Flows help achieve **business or system objectives**, influencing key metrics. We'll cover this in more detail.

The High-Level System View in MoSy does not yet zoom into Flows to detail the actions that compose them. Later, you will see how these are illustrated in the Flow Diagram.

You can use sticky notes if you're doing this exercise in person (the best option) or little boxes in a diagramming tool. Add flow names between each pair of actors on top of an arrow representing who initiates the flow. For example, the customer initiates the Customer Purchase. The flow might involve these two and other actors, but this is a simple visualization that helps align who initiates the process and gives an overall picture of the different actors and interactions in the system.



Example Flows in MoSy

Key Objectives

Key objectives represent the goals of each actor when interacting with the system and performing the flows and actions. Together with the Actors, they are the most critical elements in MoSy since they drive the design of the rest: Flows, Actions, Metrics, and Technical Components.

Each Actor type has its objectives defined in different sources:

- For **Customer Actors**, Key Objectives must be exact representations of **Value Propositions** from the business plan. For example, for an e-commerce platform, a Key Objective for the Shopper is to "Easily discover and buy products with tailored recommendations."
- For **Key Partners** (e.g., logistics providers, payment processors, suppliers), the objectives come from Business agreements, SLAs (Service Level Agreements), partnership contracts, etc. For an e-commerce platform, a Key Objective for a Stock Supplier is to have a "*Reliable and efficient product supply to fast stock replenishment*." Your system should track this objective since the value you deliver to the customer often depends on your partners.
- For **Key Resources** (e.g., internal teams like Operations and marketing), the objectives come from internal KPIs, operational goals, efficiency targets, etc. For an e-commerce

platform, a Key Objective of Customer Support is to "Respond to customer inquiries in under five minutes."

- Your **System**, another Actor in MoSy, also has Key Objectives. These objectives come from operational goals and non-functional requirements, such as performance. For an e-commerce platform, a Key Objective is to "Process 1,000 orders per second while maintaining sub-100ms response times."

Actor	Key Objective	Value Proposition
Customer (Shopper)	" <i>Tailored recommendations</i> " "Fast checkout"	" <i>Tailored recommendations</i> " "Fast checkout"
Stock Supplier (Key Partner)	" <i>Reliable and efficient product supply to fast stock replenishment</i> "	-
System (e-commerce platform)	" <i>Process 1,000 orders per second while maintaining sub-100ms response times.</i> "	-

Key Objectives in MoSy are placed under each actor box and can have one or more. You can use an emoji with some text in a diagramming tool, or a different sticky note color using a physical board.

Bringing Everything Together

Now, we can connect Actors, Flows, and Key Objectives into the **MoSy's High-Level System View**. Basically, **actors interact with the system through flows that allow them to achieve their key objectives**. It's a structured view that mixes and connect business goals with operational processes.

The diagram depicts the system at the center as the core value facilitator for the customers. On the right side, you place the

customer actors along with their key objectives (which must directly map to the value propositions outlined in the business plan). On the left, you illustrate the key partners and resources (each associated with operational objectives). Then, you connect the system to the rest of the actors in pairs, using big arrows that serve as the baseline to add the different flows in your business.

