# Development Approach

Designing xUML services with **Scheer PAS** *Designer* is a four-step process:

1. Model your process in BPMN.
2. Design forms that provide and show necessary data.
3. Process the data by adding execution to your BPMN model, and create a service that is ready to deploy.
4. Test your service.

Modeling Your Process

A process is an ordered set of activities performed within a company or organization in a certain flow.
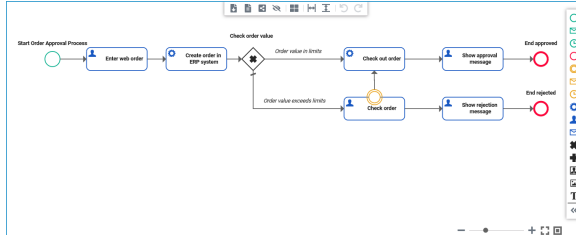
Model your high-level business process with the BPMN Editor in cooperation with the related business department. The collaboration features of the BPMN Editor help you with doing this - even if you and your cooperation partner are not on the same site.

Designing Forms

Processes need data. In BPMN, the process gets data input from the outside by user tasks, receive tasks or message events.
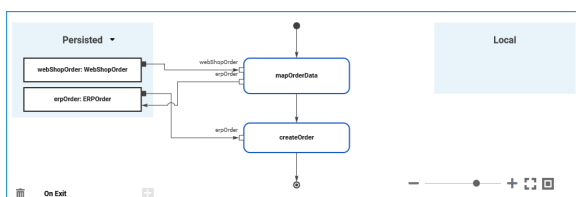**Scheer PAS** *DESIGNER* features a Form Editor to create forms that can be bound to user tasks. Use the Form Editor to create forms matching the needs of your process - again in collaboration with the business department.

The data provided by a form is injected to the process via the user task as a read-only class.

Processing Data

Once you have defined your process and its user interface, you can start with processing the data. Add UML execution to BPMN elements where necessary, and model additional classes in the Data Model or in xUML libraries if you need more.

Data can be processed by mapping diagrams or UML activities. Map data between different classes using the Mapping Editor, process data in UML activities using action script and library operations.
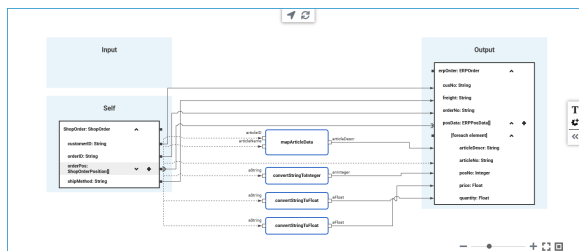

Testing the Service

Testing supplies information about the quality of the service and whether if fulfills the requirements defined during the conceptional phase of the development. For testing purposes, the compiled service provides a REST interface. In this REST interface

- BPMN messages are mapped to REST parameters
- BPMN tasks are mapped to REST resources

The Bridge features a REST Test Tool for documentation and testing purposes. Via a link on the xUML service page, you can access a REST service documentation page where you can inspect the service interface and make HTTP calls to the service.
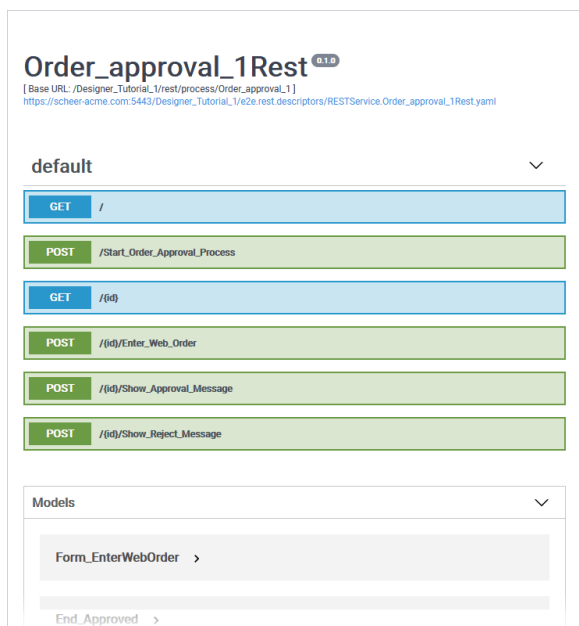
Also, you can use any other tool that provides the means to access an OpenAPI 2.0 Specification.

Automated Tests

You can use an external test tool like Postman to create automated tests of your services.

Also, the **Scheer PAS** *Analyzer* provides means to setup automated testing scenarios. How to do that is described in detail on Performing Regression Tests.