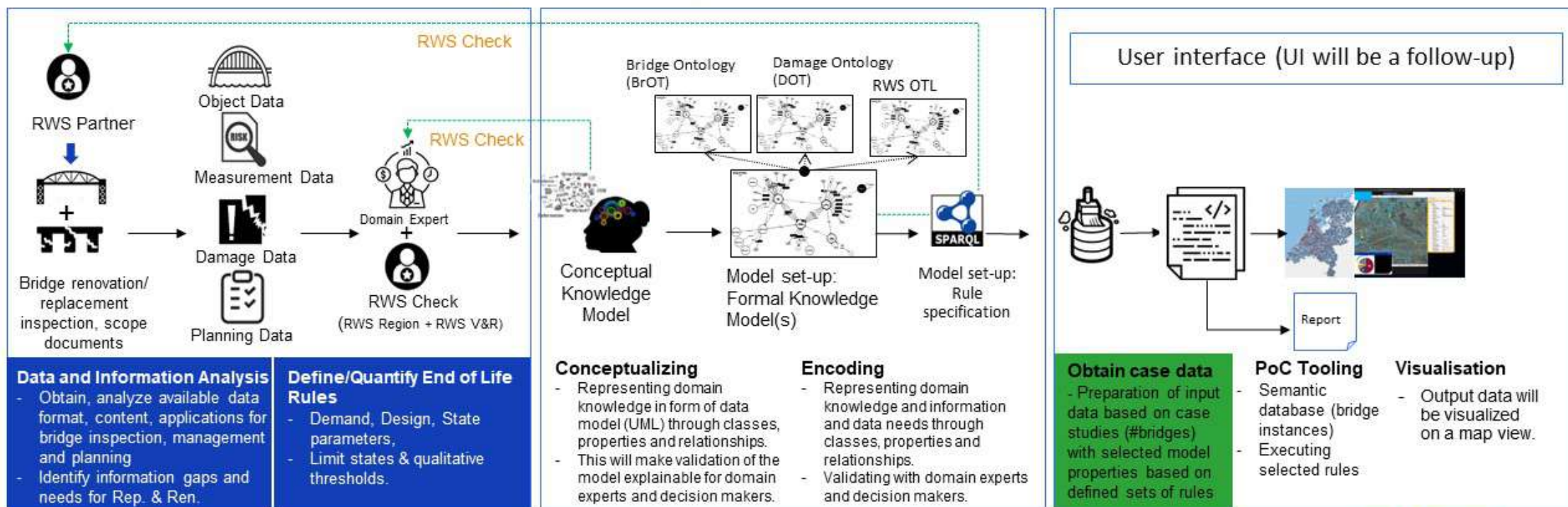# End-of-life rule checking for analyzing and prioritizing the bridge portfolio for public asset managers

In BeProAct, we develop a methodology to identify object-specific major ageing types based on a selected typology, combine various (un)structured data sources, objectify end-of-life decision rules used in the asset management for selected case data.

This methodology is to provide explainable multi-domain analysis and support **informed-decision making** for asset managers as semantic technologies are used.

By that, public asset managers are supported with more objective, accurate and rapid analyses on their asset portfolio to reduce inefficiencies in the current practices.

Data and Information Analysis
- Obtain, analyze available data format, content, applications for bridge inspection, management and planning
- Identify information gaps and needs for Rep. & Ren.

Define/Quantify End of Life Rules
- Demand, Design, State parameters,
- Limit states & qualitative thresholds.

Conceptualizing
- Representing domain knowledge in form of data model (UML) through classes, properties and relationships.
- This will make validation of the model explainable for domain experts and decision makers.

Encoding
- Representing domain knowledge and information and data needs through classes, properties and relationships.
- Validating with domain experts and decision makers.

Obtain case data
- Preparation of input data based on case studies (#bridges) with selected model properties based on defined sets of rules

PoC Tooling
- Semantic database (bridge instances)
- Executing selected rules

Visualisation
- Output data will be visualized on a map view.

Natural Language   Development   Application

TNO innovation for life