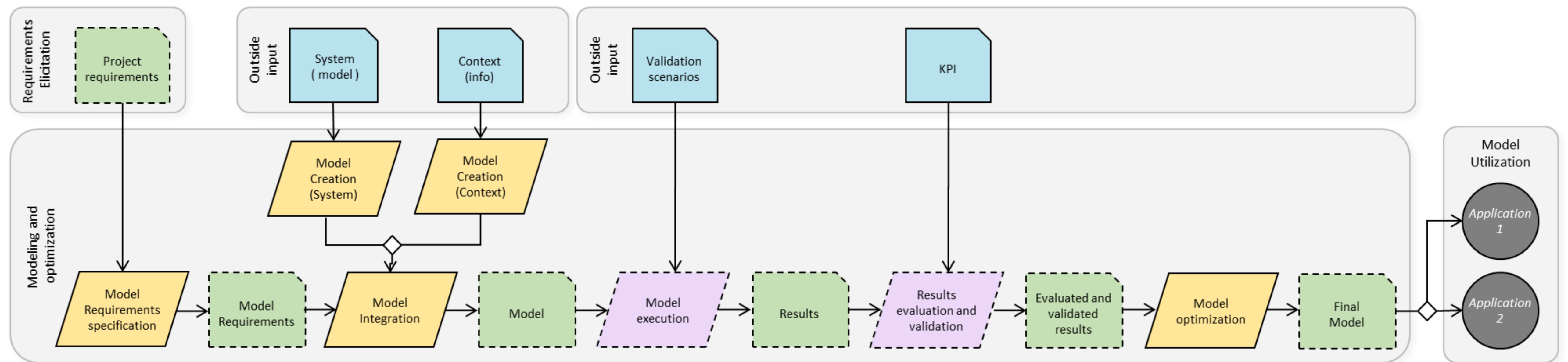


Model Generation for Embedded Systems with Changing Context

Idea

Automatic Model Generation in Engineering and Operation

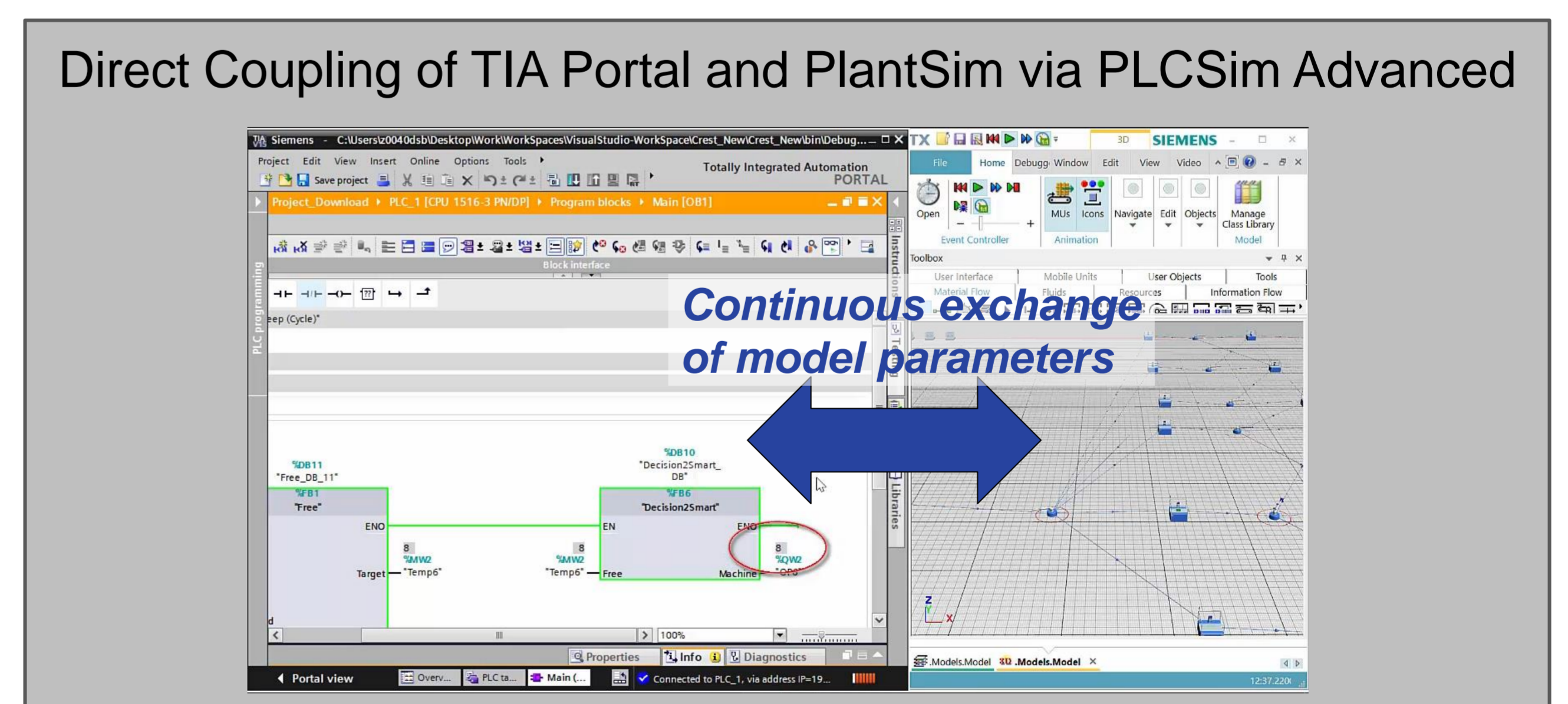
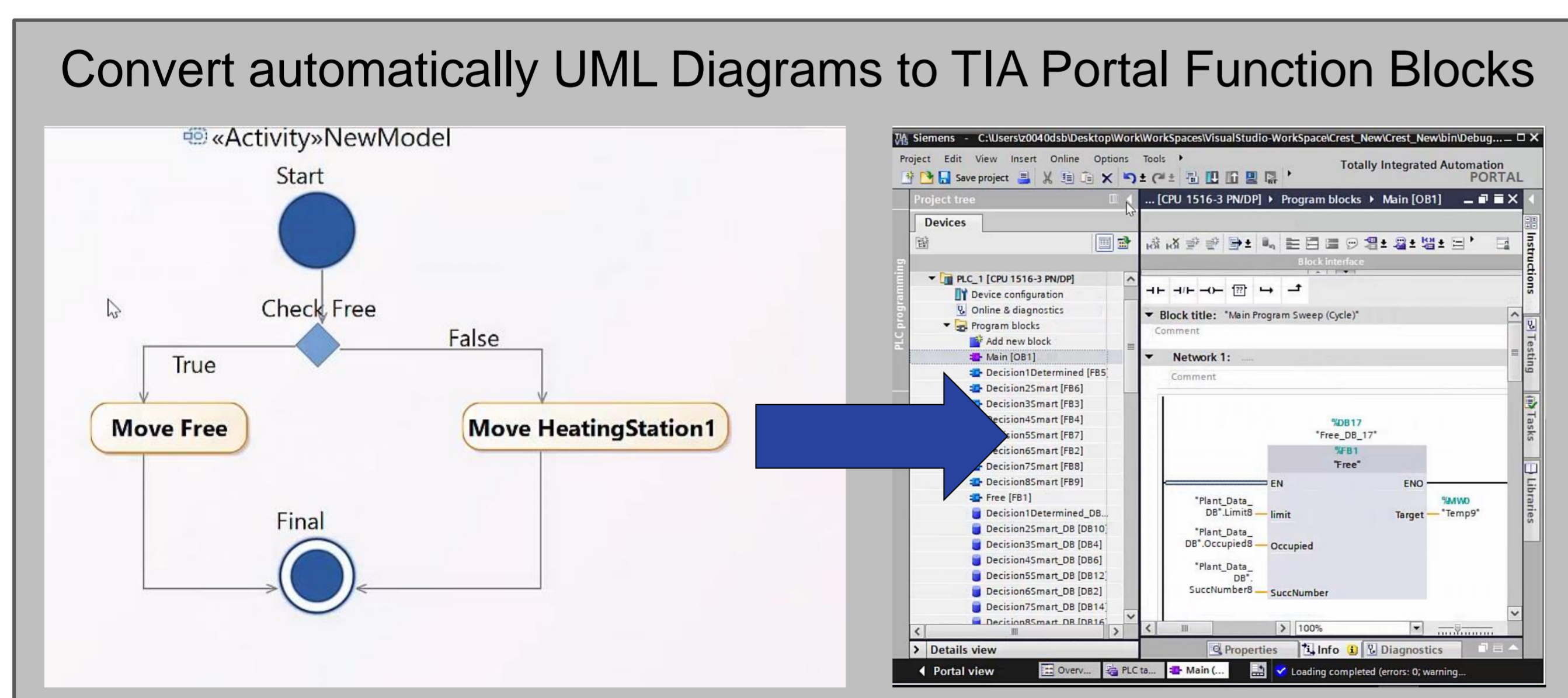
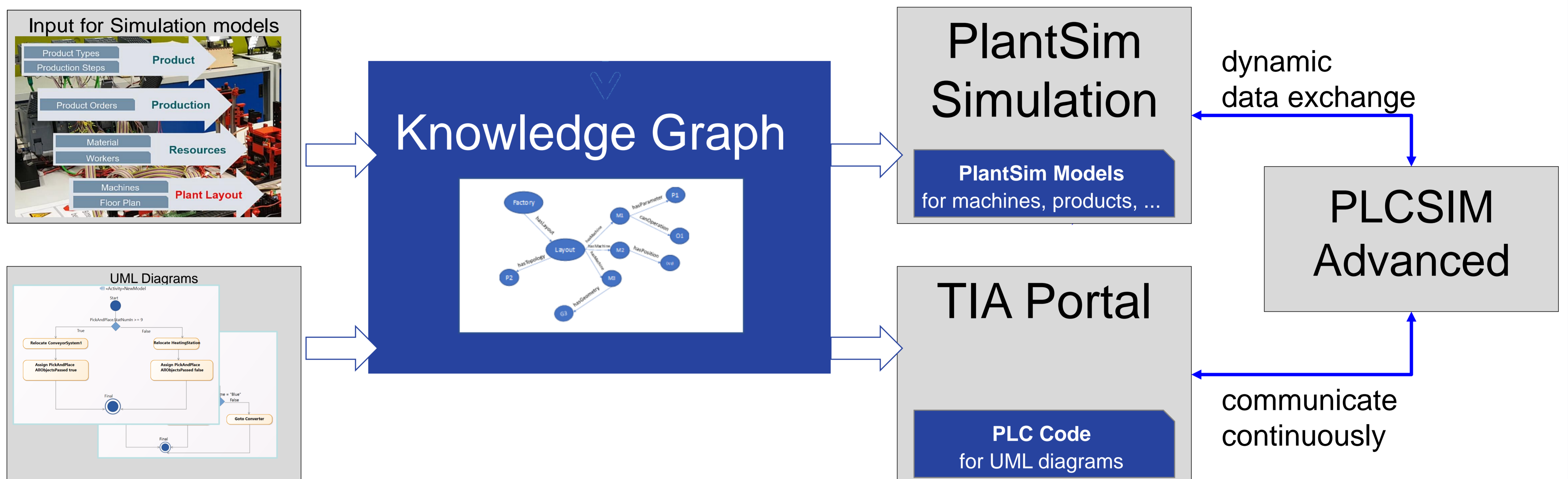
- Generate simulation models based on engineering data, context models and online data
- Reduction of modelling effort and errors for better integration into engineering and parallel to operation phase
- Evaluate simulation model to find
 - Best design in engineering
 - Best operation strategy during operation



Realization

Coupling of Different Tools as Proof of Concept

- Coupling of Excel, Visio, ... with Knowledge Graph to generate models for PlantSim, TIA Portal, Process Simulate



Results

- Generic methodical approach for system and context
- Several prototypes for automatic code generation
- Integration in online assist application
- Independence of tools environment

Future Work

- Human Machine Interaction
- Artificial Intelligence for real-time parameter adaption
- Integration of standardized ontologies for plants and production