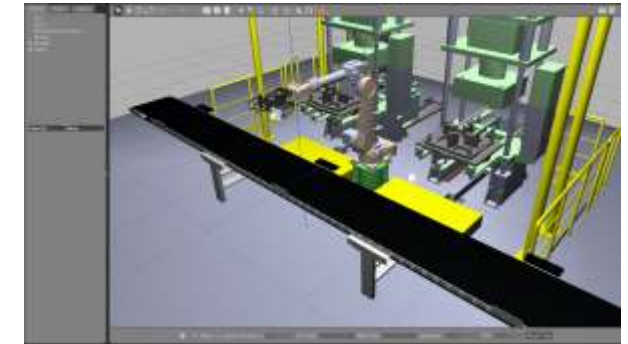


Use case 6: Production flow simulation/supervision

Problem/goal	Visualization of production, along with distant monitoring/control of production flow
Potential users	SMEs who are carrying out commissioning, system integration
NACE	33.20 Installation of industrial machinery and equipment
Description	Factories of the future will face increasing demands for a non-stop production, accompanied with high flexibility and safety requirements. This implies an important future market for instant services dealing with support, error diagnostics and reconfiguration of industrial robot systems. These advances can be achieved by utilizing IoT in every stage of the production process in a factory. Based on the collected data, decisions can be made even from distant locations.
Hardware	Raspberry Pi, PLCs, Industrial robots
Software	Open source software (ROS, MoveIt, Gazebo) and commercial (FlexGUI, VisualComponents)
Standards	Considered: ISO 10303
Possible benefits	This use-case demonstrates the usability of IoT (PLCs, robot cells, sensors, actuators) in a production flow, where data is continuously monitored, collected and actions can be carried out through a simulation environment (e.g. Gazebo) or automatically. Transmission of data amongst various components, increases the number of specific security issues that could be derive. The data is distributed with ROS components.
Partners	UiT The Arctic University of Norway (Norway), LSEC (Belgium)



Supervision in Gazebo



Factory setup

