

igm works with Selmo on the commissioning of a new plant

How the Selmo Solution provides igm with new possibilities

About igm

igm Robotersysteme AG has been a leading welding automation company for over 50 years. More than 4000 robot systems are operating in industrial sectors worldwide.

As a market leader, igm explored the company's digitization potential to shorten the commissioning times of new machines and create a uniform standard for the business.

Services

Virtual Commissioning
Project Support with Selmo



Objectives

For igm, creating a standardized strategy for all projects was essential. The processes should be documented and easy to understand.

01

Solve the complex challenge of converting the process of a machine into a software through manual programming

02

Shorten the long hours needed for commissioning a new machines

03

Reduce the dependency on experts

The Facts

Conveyance for a robot welding plant

8 Conveyor belts

165 PLC in- and outputs

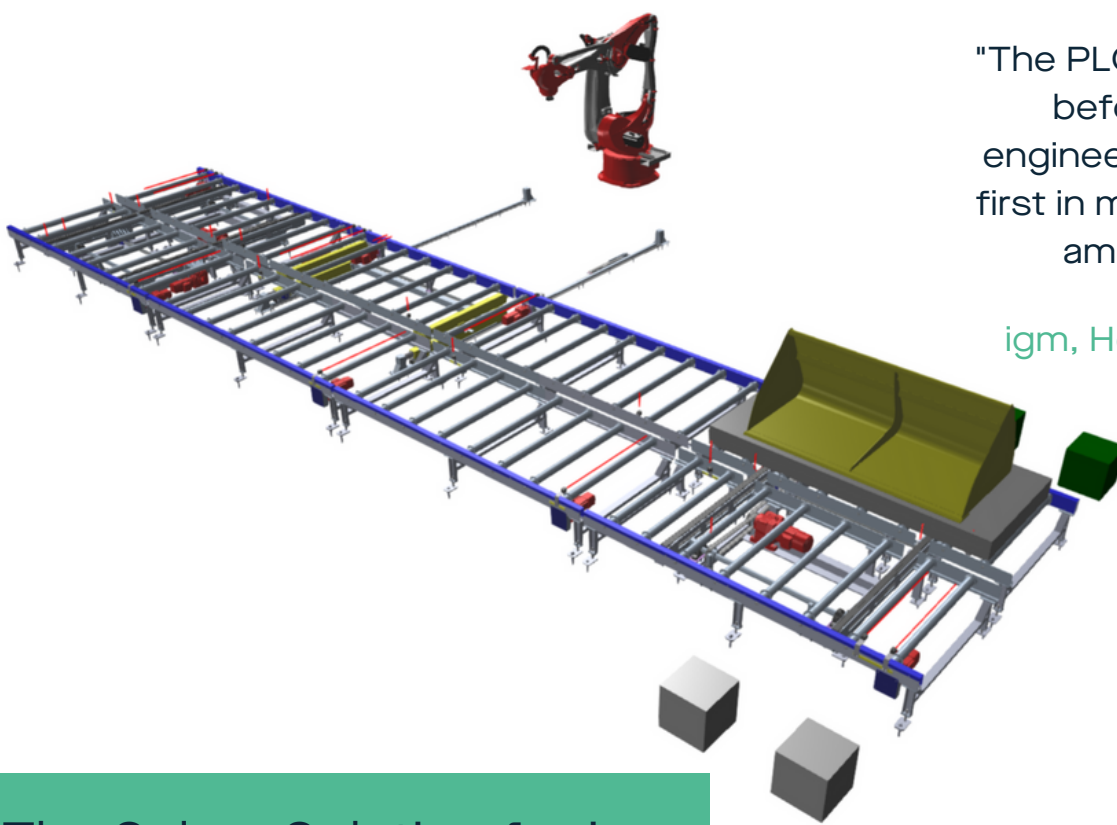
11 Sequences with 218 Steps modeled in Selmo Studio

380 zones defined

12 Constantly Monitored Zones

82 Drivers

22700 Lines of Code



"The PLC program was ready before the electrical engineering plan. This was a first in my career, for which I am very proud of."

Otto Auer
igm, Head of Engineering

igm

The Selmo Solution for igm

Initially, the client provided the required functionality of the machine. Together with Selmo, igm then defined the process. Once done, Selmo Studio converted the process into a model. igm received the clearly, documented process model.

Selmo Studio generated the PLC Code as a next step, and an HMI was directly included. igm provided the 3D model of the conveyor belt. An accurate simulation of the 3D model was conducted, and the link to the target system was established. The model was implemented into the target system, and the virtual commissioning was successfully taken care of.

Only now, igm built the actual conveyor belt, and the electrician executed the I/O check. Upon quality assurance, igm activated the plant.

When a sensor-cylinder-related error occurred during the commissioning, we knew, thanks to the initial virtual commissioning and the constant monitoring of all machine states in the Selmo Studio, that the error could not be in the program but the hardware. Signal interruptions occurred due to vibrations when the cylinder was extended. This could be solved very quickly.

The Results

It took two weeks to finalize the process model and one week to virtual commission the machine instead of the usual three man-months.

01

igm was able to work hardware independently and knew what was missing before building the machine, respectively before the commissioning of the machine.

02

The team was able to work autonomously

03

A uniform project structure was created and the process is clearly documented.

04

Software is now standardized