



Thesis proposal: Digitalization Concept of personalized Assembly Instructions at Volvo Cars

Background

To ensure production excellence in final assembly, as well as creating attractive workplaces for the future, the digitalization of assembly instructions has the capability to support shop-floor operators to better perform their daily work tasks. Several initiatives have been investigated and evaluated. There are some demos partially implemented. At Volvo Cars, we see the value of further developing this concept towards implementation.

Scope

Investigate the current beta developed instruction platform and identify further improvements that fulfills the business needs and supports the operators in an efficiency way to produce products in a quality assured way.

Main focus areas within this project are, predictive quality and data driven personalized instructions that are dynamically visualized and presented on the best hardware solution for the station or line in focus.

The solution should be based on scientific research and the business own empirical data.

Description

The purpose for the digitalization of assembly instructions is to provide the operators with personalized and focused digital instructions to facilitate faultless execution of the work-tasks.

The results of this project will contribute to a future implementation that will include further integration of current and new IT systems.

Project Information

Education background: Production Engineering, or similar.

Duration: 1 semester, 30 ECTS points.

Project start: January 2022.

Number of students: Two students.

Supervisors: Mohamad Abosh, mohamad.abosh@volvocars.com
Dan Li, dan.li@chalmers.se

Examiner: Åsa Fast-Berglund, asa.fasth@chalmers.se

Send your application to Mohamad Abosh.