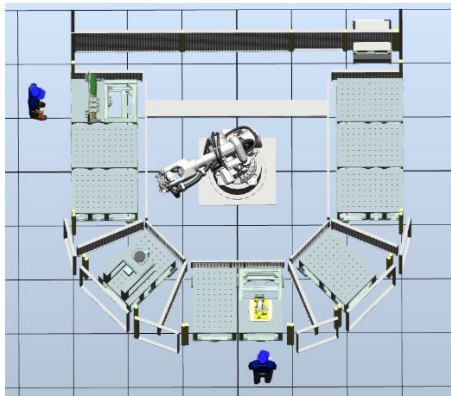


## Master Thesis - “Production flow simulation of future factories with flexible automation cells” (30 credits/20 weeks – 1 or 2 student)

### Project Background

Development of communication and computing technologies are enabling development of smart production systems that can adapt to the production needs. Flexible automation cells that are capable of performing multiple operations in one workcenter and adapt to the production needs is a concept that could help reduce the lead times and costs in the aerospace manufacturing. Aerospace manufacturing has smaller batch size and production volumes that makes the functional layout suitable but it increase the logistics requirements and investments. A flexible automation which could balance flexibility from functional layout and productivity of assembly line is our goal.

The thesis goal is to assess the usefulness of Flexible automation cells in our factories and identify the configurations that could best suit the production needs.



### Assignment Description

- Gather data from the shop floor by following the process and business systems.
- Create a discrete event flow model of the system
- Perform a usefulness analysis (simulation)
- Propose and evaluate improvement potentials to the concept.
- Document and present results

### Qualifications

Student in the final year of their M.Sc. studies in the field Production Engineering, System Control Mechatronics, Robotics, Automation, Advanced Manufacturing, Mechanical Engineering or similar with a strong interest in manufacturing and automation.

Knowledge of Discrete Event Simulations and skill in Siemens Plant Simulation software would be a plus.

Send your CV and cover letter to [andreas.ae.engdahl@gknaerospace.com](mailto:andreas.ae.engdahl@gknaerospace.com) and [swathanandan.janardhanan@gknaerospace.com](mailto:swathanandan.janardhanan@gknaerospace.com)

Interviews will be held continuously.