



**AGiR**

**Autonomously Guided  
Industrial Robots**

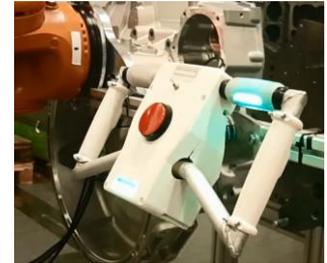
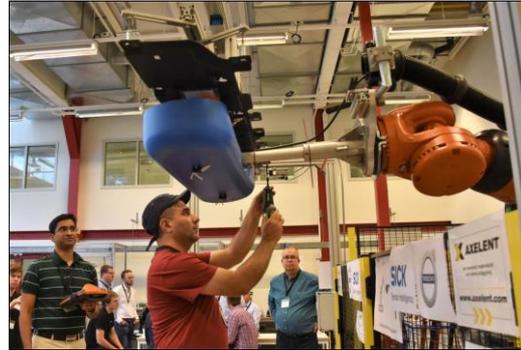


smart

advanced manufacturing

## ORGANISATION PROFILE

The mission of the Division of Machine Design at Linköping University, Sweden, is to create and disseminate knowledge and research in the areas of machine design, design engineering and product development.



# PROPOSAL INTRODUCTION (I)

**Vision:** main project goal

The project aims to develop technologies that enable industrial robots to be used as movable automation resources. Mobility is considered a key parameter to improve efficiency in terms flexibility as well as resource utilization. The goal is to demonstrate planning and executing a task(s) by a mobile industrial robot in order to showcases the feasibility and performance of an industrial robot mounted on a mobile base.

**Motivation:** why the project is necessary

The motivation for having an industrial robot as a movable resource that services separate workstation is to increase resource utilization of purchased equipment. The expectation is that this could benefit SME's that aims to maximize their investments in automation equipment.

**Content:** which are the developments to be made in the project

Several key technologies have to developed such as:

1. Active Safety system that move the robot within a planned facility
2. Tests to ensure that the system standard compliant.
3. ERP system that communivates with the robot.
4. Systems to move the robot within the facility.

## PROPOSAL INTRODUCTION (II)

**Expected outcome:** descriptions of the results to be obtained in the project

The ambition to have demonstrators developed at high TRLs that showcase how an industrial robots that moves around can be moved around enables flexibility as well as maximize resource utilization.

**Impacts:** what will be the expected market impact of the project

A recognizable impact is for companies to quickly reconfigure their manufacturing layout and reuse of currently operational equipment such as industrial robot.

**Schedule:** start and end dates for the project. Duration.  
October 2021 - September 2024

## PARTNERS

**Current Consortium:** list of partners already involved

1. Opiflex AB (Sweden)
2. Linköping University (Sweden)
3. RISE IVF (Sweden)



**Partner search:** type of partner searched and countries of origin (if necessary).

Equipment manufacturers, system suppliers, knowledge supplier

1. Systems that provides mobility for the mobile robot. E.g. fork truck
2. Methods for testing safety of mobile robots.
3. Power and control system for mobile machines
4. Enterprise Resource Planning system vendor
5. Virtual simulation and verification vendor

## CONTACT INFO

**Contact info:** of the person coordinating the project proposal  
[Varun.Gopinath@liu.se](mailto:Varun.Gopinath@liu.se)  
+46 (0)13 282510



