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GRob-Laser – vendor-independent and G-code-based robotics for laser-based processing of textile workpieces

Problem / Motivation

- Laser-based textile processing is usually carried out using laser portals on planar surfaces
- Development of a variable robot-assisted laser system for resource-efficient fine-scale spatially selective textile processing
- Reduction in investment costs through:
  - Vendor-independent system components
  - Integration of the system into existing processes
  - Adapted security concept

Solution

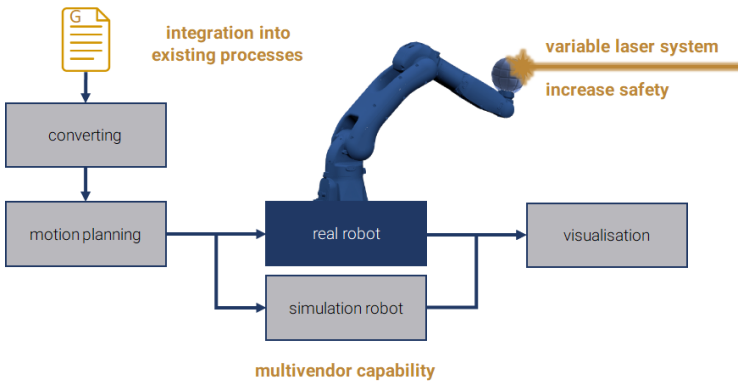
- Data basis G-Code for the use of existing employee competencies and internal processes
- Hardware abstraction of robotics with open source framework ROS 2 to ensure vendor independence
- Assessment of different safety concepts and system settings for the use of laser technology and robotics for the protection of personnel and possible reduction of safety technology costs
- Analysis of the dependencies between laser power input and robot movements on textile surfaces and their parameterisation in the overall system

Project Launch

02/2025

Project Partner

currently none,
open for enquiries



Scheme of the objectives in the project GRob-Laser

INNO-KOM

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