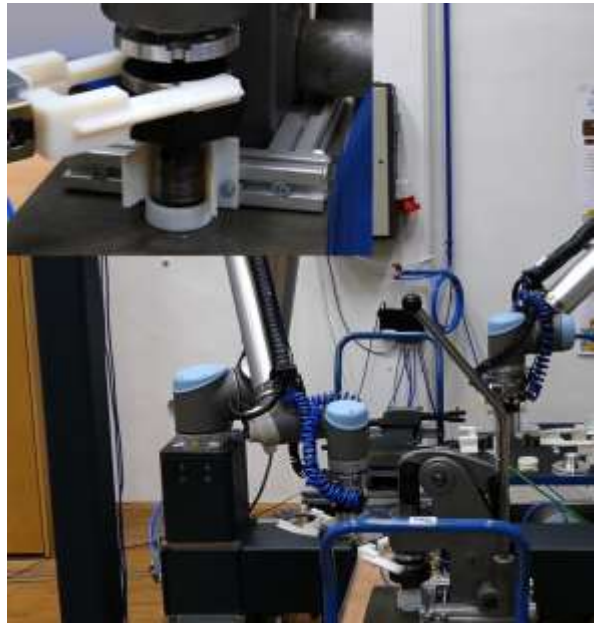
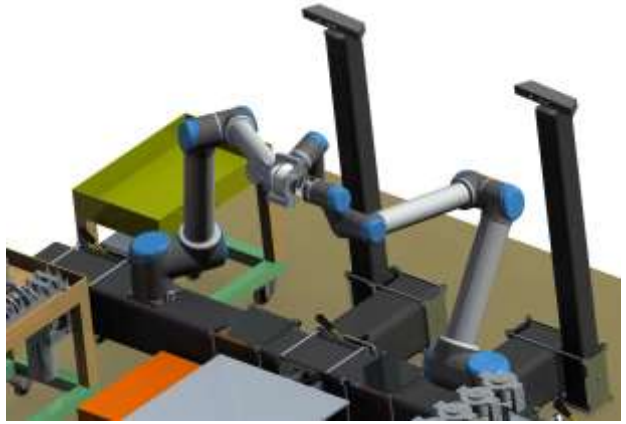
Use case 7: Robot workcell reconfiguration

Problem/goal	Partly autonomous reconfiguration of a robotic workcell for automated robot assembly.
Potential users	Manufacturing companies that need to automate their assembly production processes
NACE	C26.1 Manufacture of electronic components and boards, C27.1 Manufacture of electric motors, … 29.3 Manufacture of parts and accessories for motor vehicles
Description	Demonstration of quick robot workcell reconfiguration for automated assembly of parts in different manufacturing industries. This is accomplished using innovative technologies such as passively reconfigurable fixtures, passive linear units, plug-and-produce trolleys, 3-D printing for gripper and fixture design, tool changers, etc.
Hardware	2 Universal Robots (UR10), DESTACO tool changers, reconfigurable passive hardware (linear guides, hexapods), 3-D printing of gripper fingers and fixtures
Software	Open source software (ROS), MATLAB Simulink
Standards	Considered: ISO/TS 15066:2016, ISO 10218-1/2
Possible benefits	Minimize the time needed to change production from one product to another with a minimum amount of human intervention. The aim is to provide to manufacturing companies (including SMEs) a reconfigurable robot workcell, which is attractive for small batch production.
Partners	JSI – Jožef Stefan Institute, Slovenia
More info	https://www.dropbox.com/s/b0kcjcsdfi1rg9o/housing_assembly.mp4?dl=0, Igor Kovač, igor.kovac@ijs.si





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