

Use Case 16: Flexible automation for agile production

Problem/goal	Plan, design and test flexible devices for fixing, grasping and assembling
Potential users	Integrators of wireless networks in IIoT environments, IIoT manufacturers, researcher
NACE	C26.1 Manufacture of electronic components and boards
Description	Highly flexible solutions for handling and clamping parts during the assembly process are needed to realize small lot sizes with a high variety. Flexible grippers and jigs are a possible solution. Requirements of different product types must be considered while planning, designing and constructing such systems. The main idea is to develop methods for planning and designing such tools and jigs. The use case is demonstrated for the LED-lamp production.
Hardware	Industrial robot arm, vision system (hardware), gripper
Software	Vision system (software)
Standards	C# (ISO/IEC 23270:2006); Computer graphics and image processing - The Virtual Reality Modeling Language (ISO/IEC 14772-1:1997; ISO/IEC 14772-2:2004)
Possible benefits	method to identify and rate automation potential of different work places, solution for creating a highly flexible production system for products in small lot sizes and high variety will be shown, summary of design rules for manual work place design
Partners	Fraunhofer IWU, LP-Montagetechnik (Germany), LSEC (Belgium)
More info	



Use case at LED-lamp producer

