

# Use case 2: Collaborative disassembly with augmented reality interaction

Problem/goal	Utilization of human-robot collaboration with larger robots
Potential users	SMEs for augmented reality interaction and industrial disassembly
NACE	33.1 Repair of fabricated metal products, machinery and equipment
Description	Disassembly of an industrial product. The vision system scans the product and recognizes its type, position and orientation. The cell control system will make a task allocation between robot and operator. Operator can see the instructions to disassembly and the robot safety zones in 3D with a MS HoloLens AR headset . The operator notifies the robot via gestures. The sensor system is supervising the work space.
Hardware	ABB IRB4600, Kinect, Intel Realsense, DLP projector, MS HoloLens
Software	Open source software (ROS, MoveIt)
Standards	Considered: ISO/TS 15066:2016
Possible benefits	Applications with large robots for disassembly and AR interaction. Object and pose recognition of complex objects (engine block components)
Partners	Tampere University (Finland), LMS (Greece), EDI (Latvia)
More info	



3D Diesel engine model for disassembly



MS hololens for augmented reality interaction