



Implementation of Cognitive Digital Twins towards the realization of Resilient Production

- **Challenge:**
Realization of Resilient Factory – agility, adaptively, redundancy, decentralization, optimum workload and capacity.
- **Technical solution:**
Internet of Cognitive Digital Twins.
- **Research prototype:**
Planning methodology for Exoskeleton coupling to the Digital Human Model and realization of the Digital Twin of Hybrid worker.
- **Employed Technologies:**
 - **Hardware:**
 - **Industrial Robotics** – KUKA KR360;
 - **Autonomous Mobile Robotics** – MIR 100;
 - **Wearable Robotics** – Cray X;
 - **Motion Capturing Technology** – Xsens;
 - **3D Scanning Technologies** – FARO DMVS;
 - **Condition Monitoring Sensor** – BALLUFF;
 - **Software:**
 - **Digital Manufacturing Technologies** – Siemens (Classic Jack, Process Simulate, Plant Simulation, NX);
 - **3D Point Cloud** – FARO BuildIT;
 - **FARO Scene;**
 - **Internet of Things** – FARO Cloud.