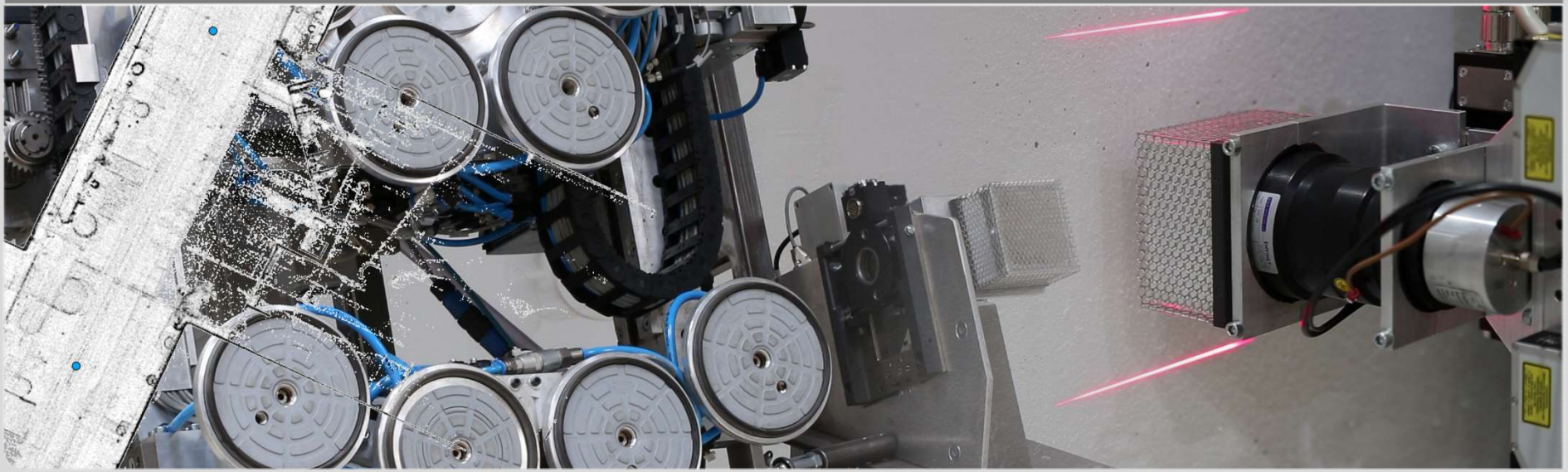
Karlsruhe Institute of Technology

Robotic systems for decontamination in hazardous environments (ROBDEKON)

Institute of Technology and Management in Construction (TMB)
Department of Deconstruction and Decommissioning of Conventional and Nuclear Buildings (RKKB)



Robotic systems for decontamination in hazardous environments (ROBDEKON)

- Goal: Creation of an innovation laboratory / competence center (nationwide, a maximum of two projects are funded)
- Budget: **12 Mio. €** (thereof € 1.2 million at KIT-TMB) by the BMBF (13N14678)
- Duration of 4 years with possible follow-up funding (Start: 15.06.2018)
- Project network of IOSB, KIT, DFKI and FZI, as well as outstanding research infrastructure and living labs for students, scientists and representatives of the industry
- Partner:

Fraunhofer IOSB, DFKI, KIT Karlsruher Institut für Technologie, FZI, GÖTTING, Kraftanlagen Heidelberg, KHG Kerntechnische Hilfsdienst GmbH, ICP

SPONSORED BY THE
Federal Ministry of Education and Research

Main topics in ROBDEKON

Decommissioning of nuclear power plants

Decontamination of landfills and contaminated sites

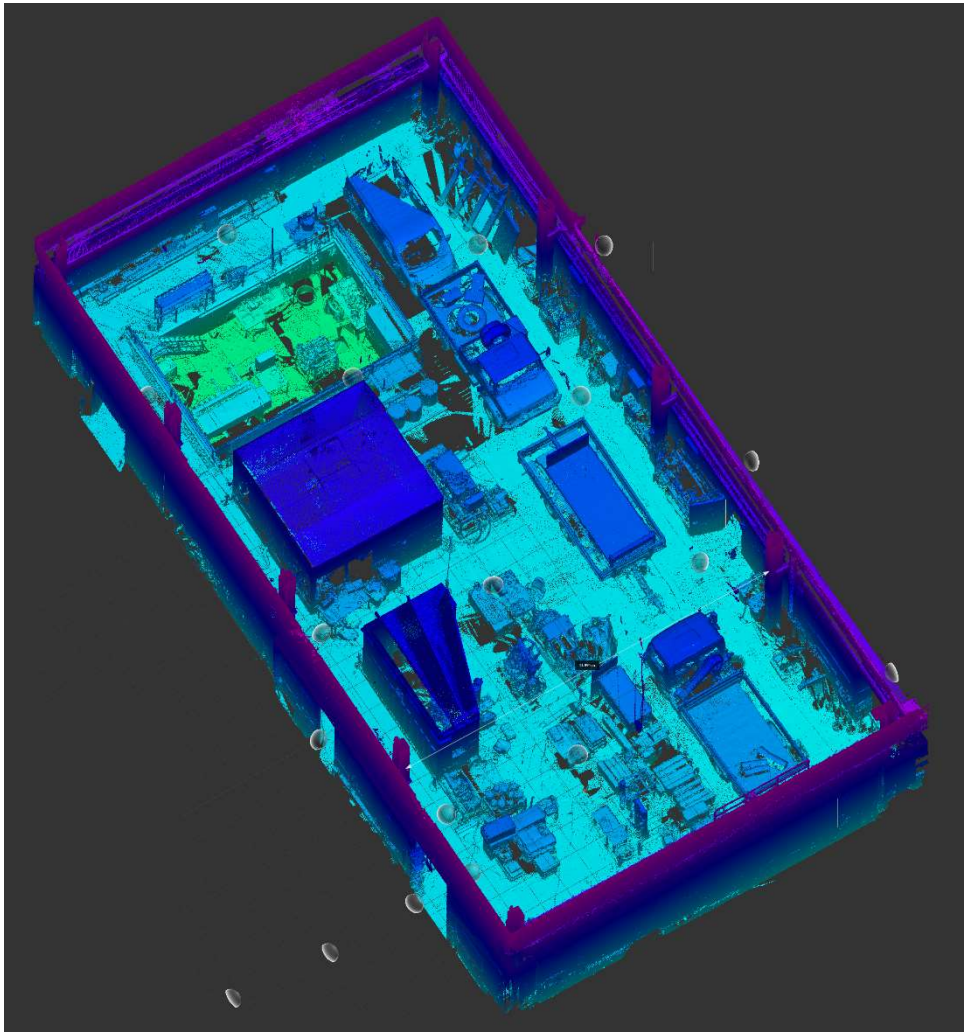
Motivation and goals

- **Motivation**
  - Automate hazardous decontamination work
  - Transfer modern robot technologies into practical systems
  - Combine the scientific and technological competencies of the Federal Republic of Germany in a competence network
- **Goals**
  - Building an innovation framework
  - Strong cooperation with partners from industry and users
  - Open for cooperation with other partners
  - Central contact point for questions on the topic

Goals at TMB:

- Development of robot systems for mapping nuclear facilities and planning of the decommissioning strategy based on the collected data
- Defining the autonomous, semi-autonomous and remote-controlled functions of the robot system, selection and transition between the functional modes
- Selective removal of contaminated wall surfaces using a milling tool
- Success measurement to check compliance with the release values
- Construction of a Living Lab to test the functionality of the robot systems in a realistic environment

3D room scanning in the Living Lab



The ROBDEKON-Team at TMB

- Ansprechpartner
  - M.Sc. Chang Li
  - M.Sc. Daniel Boser
  - M.Sc. Alena Wernke
- Links
  - robdekon-tmb@lists.kit.edu
  - www.robdekon.de