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European Robotics Challenges

The European manufacturing industry
needs competitive solutions to keep global
leadership in products and services



KUKA



**ASCENDING
TECHNOLOGIES**

**Fraunhofer
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LAAS-CNRS

ETH zürich

**ALSTOM
Inspection Robotics**

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CHALLENGE
1



Reconfigurable Interactive Manufacturing Cell

The motivation for Challenge 1 is to develop a new generation of flexible, adaptable robotic work cells with the perceptive and cognitive skills to use in manufacturing applications involving human-robot collaboration. The applications may involve one-arm, dual-arm or multi-arm setups, where each robotic arm is reconfigurable. Importantly, the safety of the human will have to be guaranteed through appropriate measures.

CHALLENGE
2



Shop Floor Logistics And Manipulation

The motivation for Challenge 2 is to create value beyond the mere logistics of goods for new applications towards the factory of the future. In order to achieve this extremely dynamic manufacturing structure, the use of mobile manipulators as both flexible logistic carriers and dexterous manipulators is a key element. The solutions will include navigation on dynamic shop floor, coping with uncertainties by means of 3D vision and compliant manipulation and grasping using a light-weight arm.

CHALLENGE
3



Plant Inspection And Servicing

The motivation for Challenge 3 is to improve inspection and servicing of large plants and infrastructures through the use of micro aerial vehicles (MAV). In order to avoid the need for expert pilots, this will include highly reliable vision-only navigation, dynamic control of the robot in challenging industrial environments and high-level task allocation.

Participant Benefits

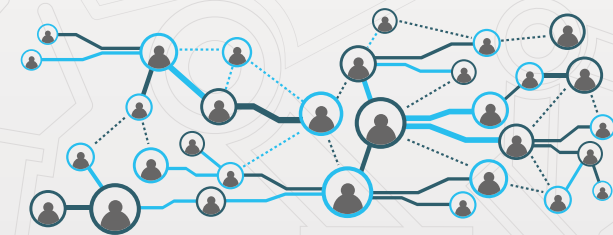
Cumulative sum of grant money in €

7,000,000

Access to latest hardware and end users



Incredible networking and business opportunities



Call Deadlines

Challengers

Start date: **April 1st 2014** End date: **June 30th 2014**

End Users, Technology Developers and System Integrators

Start date: **April 1st 2014** End date: **November 15th 2014**