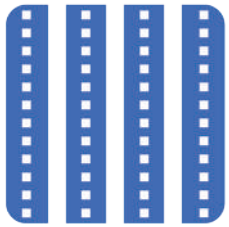
PRECISION AGRICULTURE

Coordination of ground and aerial vehicles, irrigation supervision, crop monitoring and precision treatments

SMART CITY SEARCH & RESCUE

Search and rescue mission support and containment of fires and disasters, surveillance, security and public relations

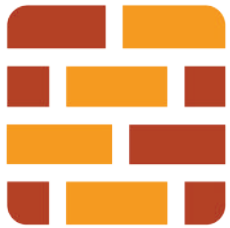


SERVICE ROBOTICS FOR WELLBEING

Support for the elderly and the disabled in emergencies and rehabilitation, assistance and monitoring

CULTURAL HERITAGE

Automated tools and methods for surveying, monitoring and securing cultural heritage and archaeological sites from natural, industrial and anthropic threats



UNDERWATER

Exploration and monitoring of the seabed through the use of specialized underwater ROV, research and data on the biodiversity of the seabed, support for pollution and archeological research

SPACE

Space mission planning, coordination and support for robotics explorations (Moon, Mars) and in-orbit operations. Study and implementation of vehicles (rovers and drones) used for control and inspection of extraterrestrial environments

6 application areas

The **PIC4SeR** research centre proposes a multidisciplinary approach to the design and use of a new generation of robots. A *service robotics* able to support people in an increasing number of innovative applications.

The **PIC4SeR** centre works with enabling technologies in the areas of *control, perception, knowledge and artificial intelligence, locomotion systems, navigation, intelligent mechanical architectures, sensors and embedded systems*. Particular attention is also paid to *human-machine interaction* for occupational safety and for a positive social, economic and ethical impact.

Application areas of the **PIC4SeR** centre are:

- *Precision Agriculture*
- *Smart City / Search & Rescue*
- *Service Robotics for Wellbeing*
- *Cultural Heritage*
- *Underwater*
- *Space*

MISSION

The task of the **PIC4SeR** centre is to support *users* and *companies* that will use robots in their application context.

The **PIC4SeR** centre proposes itself as a contact point for a *shared co-design*, for a technology close to the real needs of its users and that does not impose itself on production methods but supports them and respects the peculiarities of the specific application context. Synergy takes place through collaboration contracts and technology transfer, bringing benefits to the company in terms of know-how, data, services, research and development networks.

PIC4SeR, as a research centre, promotes and supports regional, national and international activities and projects.

The ***PIC4SeR* research centre** born in 2017 at **Politecnico of Turin**, to coordinate the research of five different departments on new applications of service robotics.

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DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATIONS

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DAUIN

DEPARTMENT OF CONTROL AND COMPUTER ENGINEERING

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DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING

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