

Need/Challenge

Proposed Solution

Team

- **Objective:** Perform inspection, mapping, and retrofitting tasks in hard-to-reach areas
- Improve efficiency, reduce cost, improve work conditions, open new high-tech jobs
- Affordable, portable, lightweight mobile robot platform
- Navigate complex environments
- Integrated perception and communication system
- Intuitive user interface

- Modular, redundant architecture
- Simultaneous localization and mapping (SLAM)
- Extremum seeking control to find thermal hot/cold spots
- Supervised autonomy



- **Multidisciplinary expertise:** Robotics, Mechanical Engineering, Electrical and Computer Engineering, Computer Science, Civil and Environmental Engineering, Business School, User Experience
- Research track record in Future of Work and Interaction of Robots with Workers
- User Experience Driven Innovation (UXDI) framework
- Innovation and commercialization experience