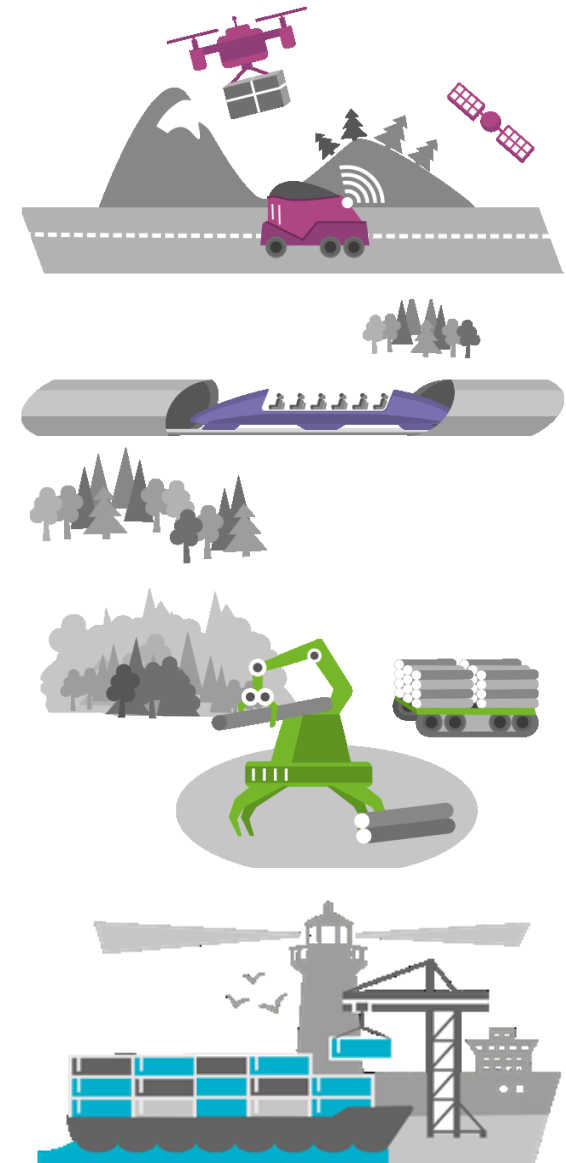


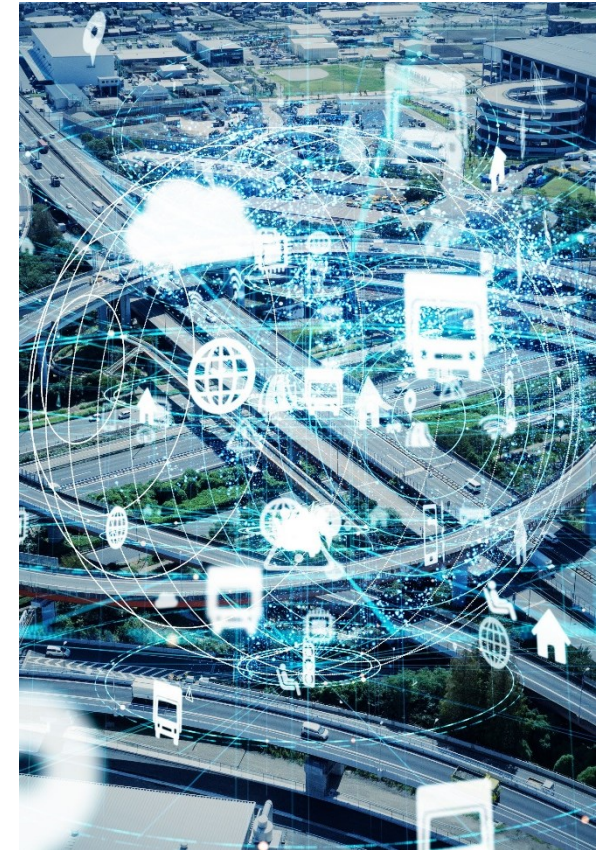
# Research Alliance for Autonomous Systems (RAAS)

- **The leading interdisciplinary innovation ecosystem** and service platform for autonomous systems R&D
- **Multi-domain approach:** 1) Marine and port operations, 2) Land transport, 3) Mobile machinery, and 4) Drones
- **One-Stop-Shop access** to world-class research talent
- **More information:** [www.autonomous.fi](http://www.autonomous.fi)



# RAAS Research Task Force (RTF): Connectivity

- **RAAS Connectivity RTF** studies and develops autonomous and remotely operated systems' data communications solutions
- **Future vision:** Global connectivity solution with automated connectivity management combining seamlessly high-capacity and low-latency satellite and terrestrial technologies
- RTF work includes **1) project acceleration, 2) roadmap definition, 3) publication, and 4) standardization activities in global forums** for different RAAS focus domain areas
- Are you interested in joining the work? Contact RTF Leader:  
**Dr. Tuomo Hänninen**  
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# Connectivity and 5G in Maritime and Ports in RAAS

## Connectivity in autonomous ships:

1. Ships' internal data communications
2. Ship-to-ship and ship-remote operation centre data communications
3. Connectivity management in multi-network systems

## Connectivity in automated ports:

1. Port equipment M2M
  2. Port area surveillance (video + other sensors)
  3. Remote monitoring and operation
  4. Condition-based monitoring and maintenance
- **Safe and efficient operation sets requirements particularly for high capacity and low latency**
    - 5G technologies are in an important role in these operative solutions in the future

