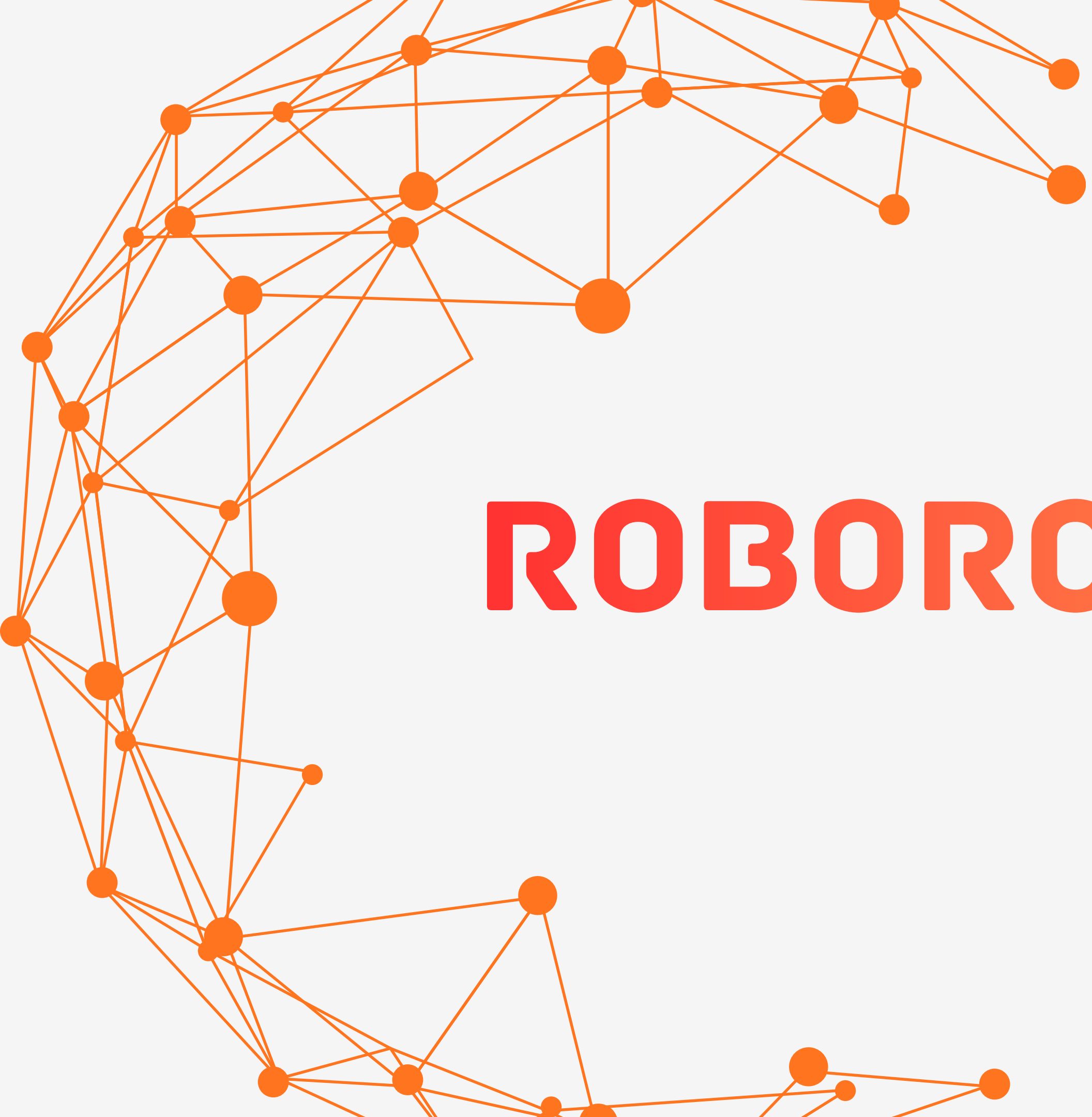


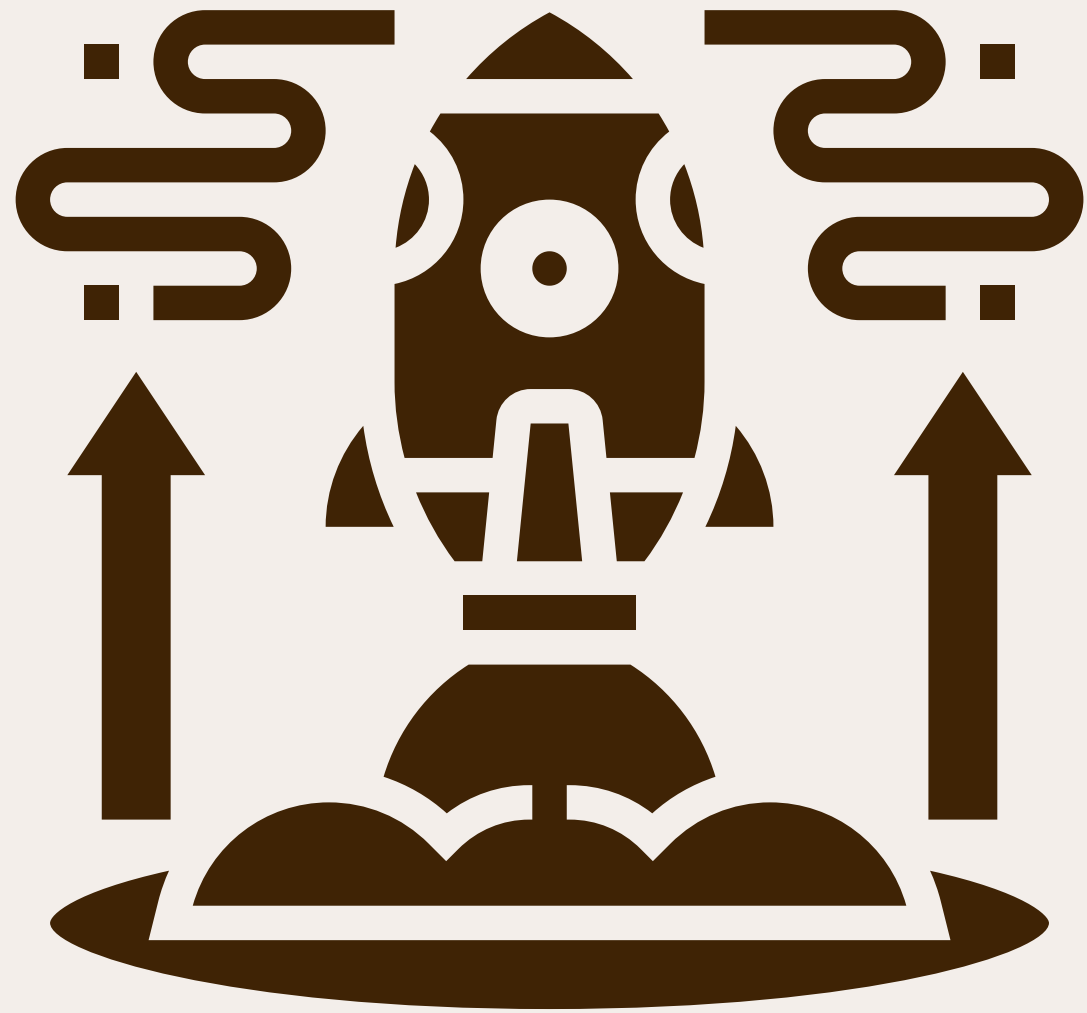


NPT TEAM

ROBOROUTE

TELMEKOM
CHALLENGE





New HMI Interface

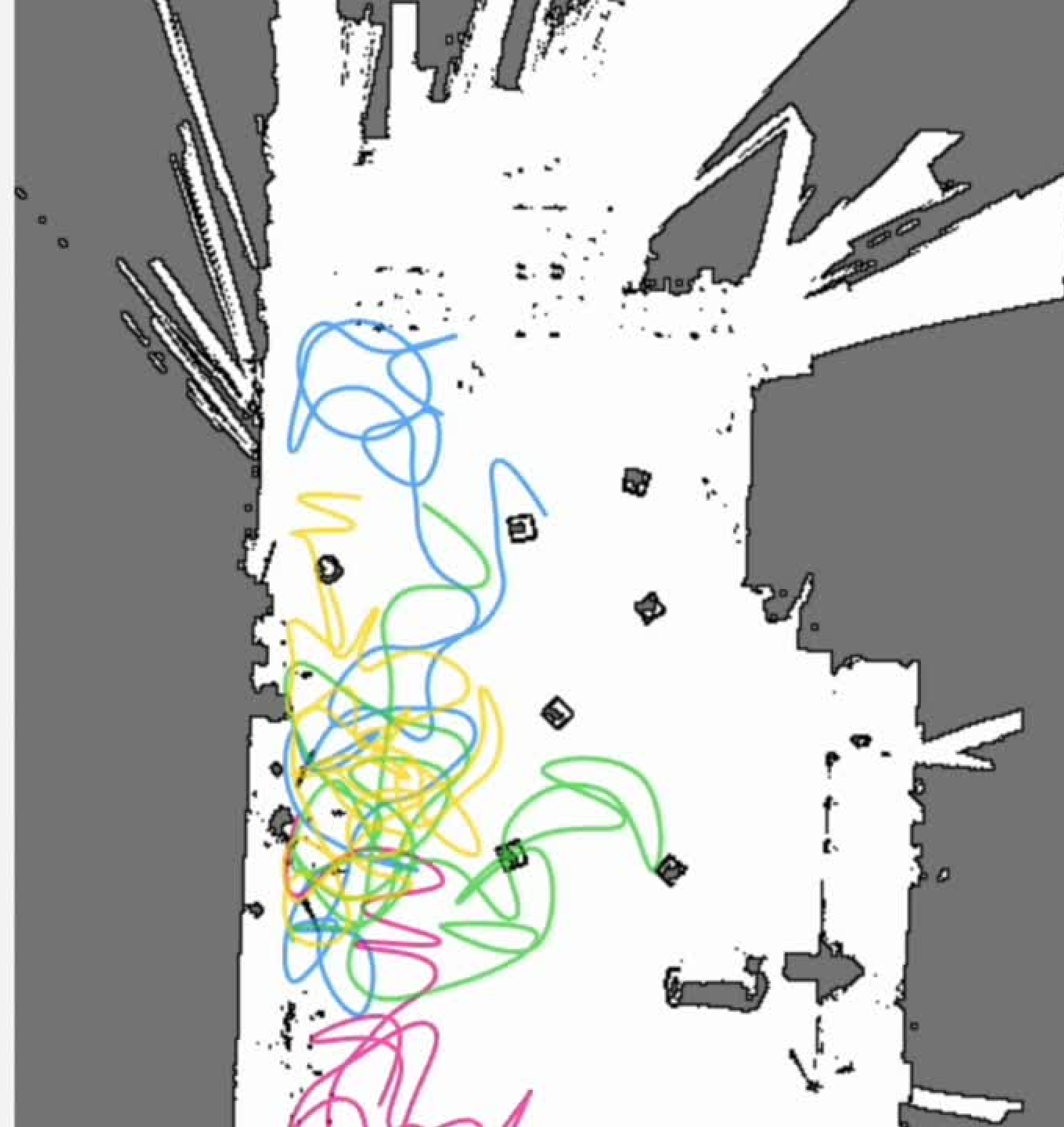


Improve Customer Experience



Bridging Human-Robot Gap

PROBLEM STATEMENT



LostBattery

Robot: Robot_A

Cleaning

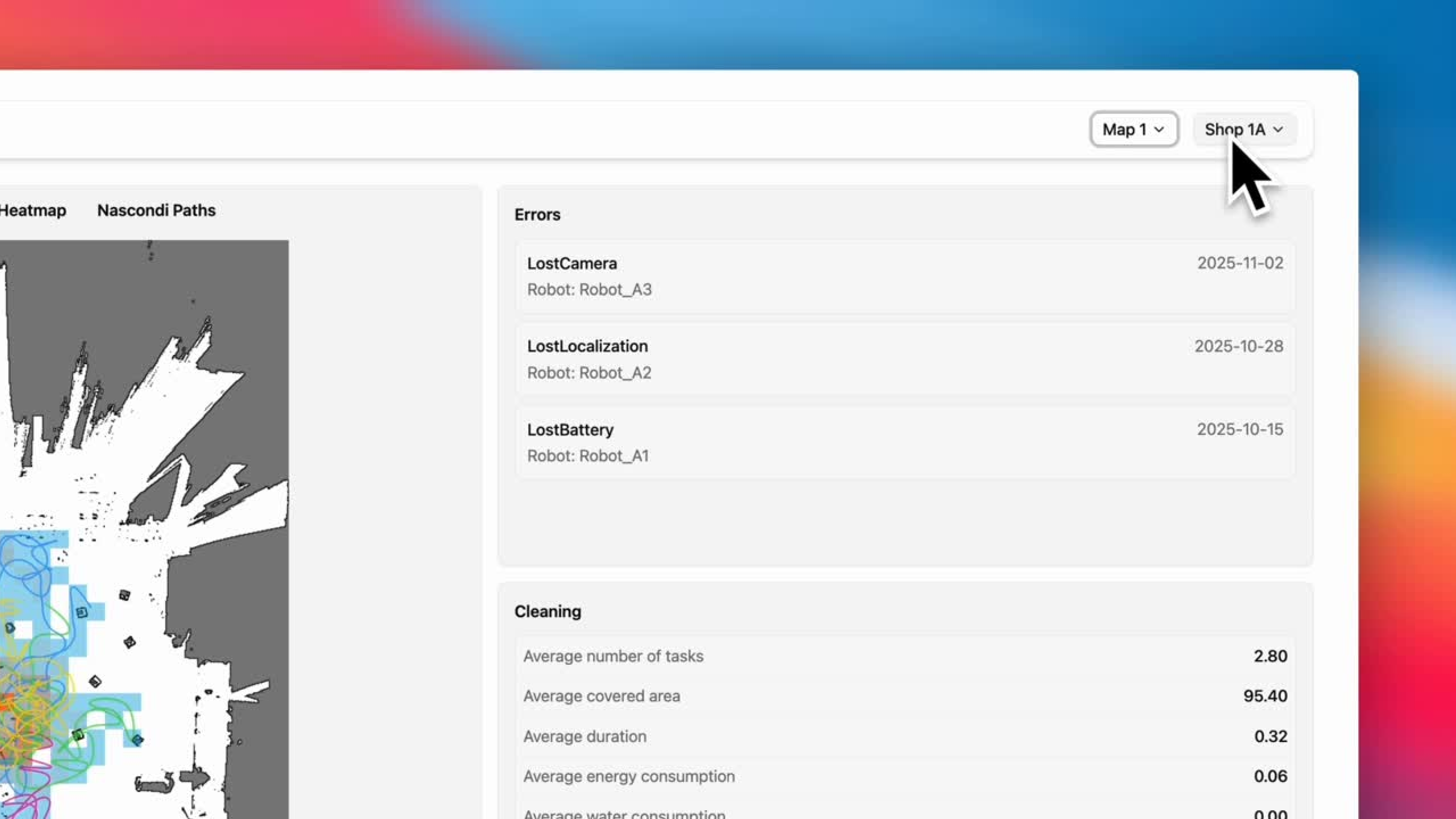
Average number

Average covered

Average duration

Average energy

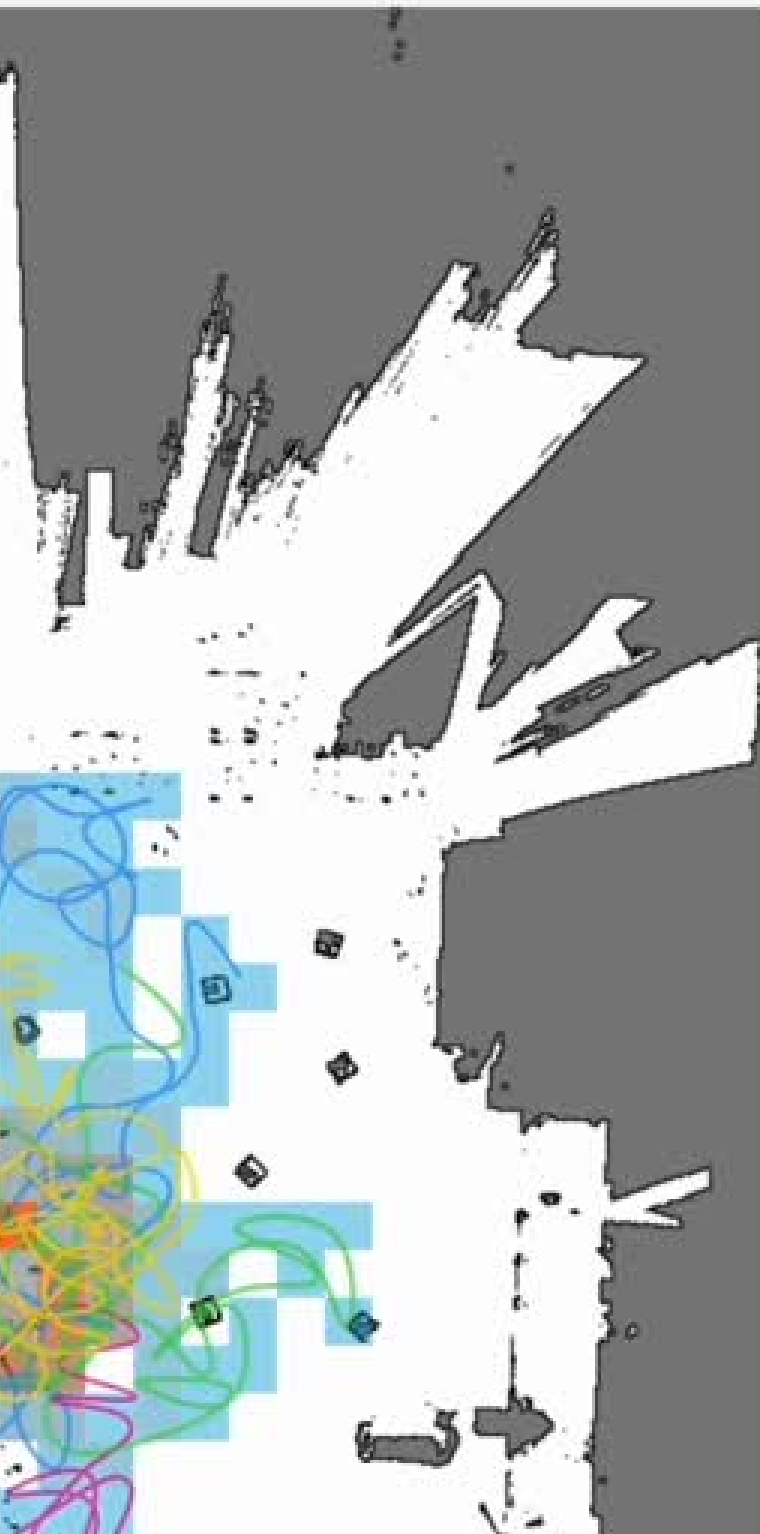
Average water c



Map 1 ▾

Shop 1A ▾

Heatmap Nascondi Paths



Errors

LostCamera	2025-11-02
Robot: Robot_A3	
LostLocalization	2025-10-28
Robot: Robot_A2	
LostBattery	2025-10-15
Robot: Robot_A1	

Cleaning

Average number of tasks	2.80
Average covered area	95.40
Average duration	0.32
Average energy consumption	0.06
Average water consumption	0.00

NEXT IMPROVEMENTS



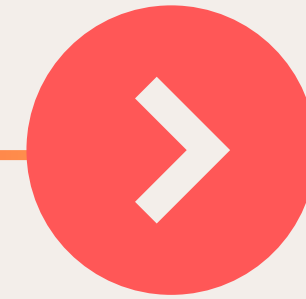
Present

What we accomplished



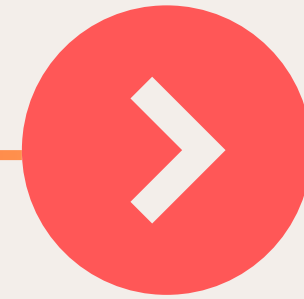
Near Future

Add more refined features, such as telemetry



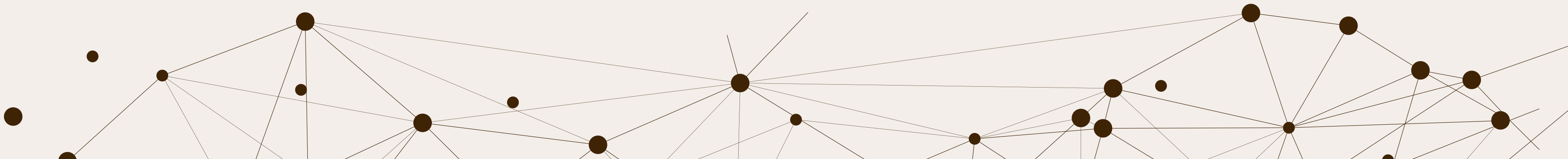
Mid-Term Future

Enable command sending to the robots

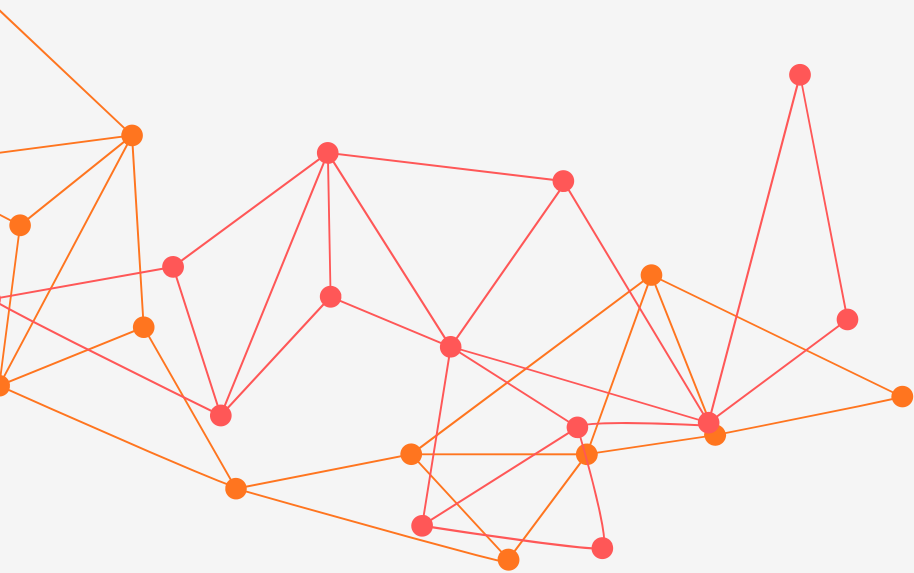


Long-Term Vision

Integrate the HMI into the robots' tablets



MEET THE TEAM



Alessio Prato

Operations



Alessio Ganzarolli

Frontend



Anouar El Kihal

Full Stack



NPT TEAM

THANK YOU

FOR YOUR TIME AND ATTENTION

