

# Robotics x 5G x DDS

Keith Leong, *VP Global Delivery*

Kelvin Khoo, *Robotics Engineer*





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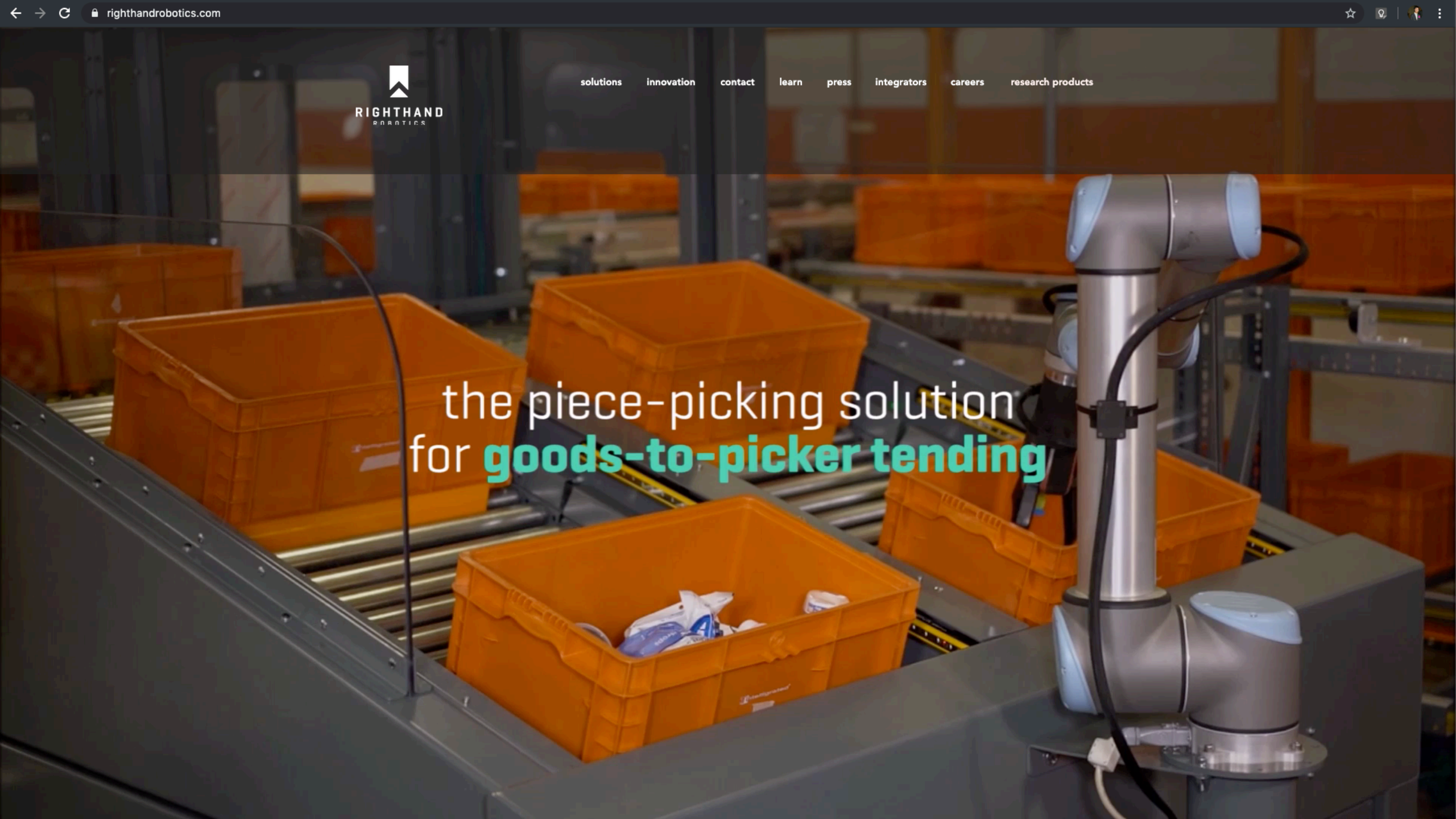
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the piece-picking solution  
for **goods-to-picker tending**







# MEET THE RT-1000

MULTIPLE OUTDOOR TASKS, ONE POWERFUL ROBOT

- Save tens of **thousands** by buying a multi-tasking robot
- Advanced sensor technology for obstacle detection
- Reduce operational risk with **photos, timestamps & reporting**

[SEE YOUR SAVINGS](#)

🔊 [AUG 28, 2019 News: Left Hand Robotics Receives \\$3.6M in New Funding - Read Now](#)

**THE FIRST SELF-DRIVING OUTDOOR ROBOT TRANSFORMS FROM  
COMMERCIAL FIELD MOWER TO SNOW CLEARING ROBOT**



# Building the Future of Robotic Grasping

Ambidextrous is combining  
Artificial Intelligence with Robotic Systems  
to enable the next generation of warehouses.

We're Hiring!

Co-founded by Dr. Jeff Mahler, Prof. Ken Goldberg,  
Dr. Stephen McKinley, David Gealy, and Matt Matl  
from the [Dex-Net Project at UC Berkeley](#)  
with offices in Berkeley, California.









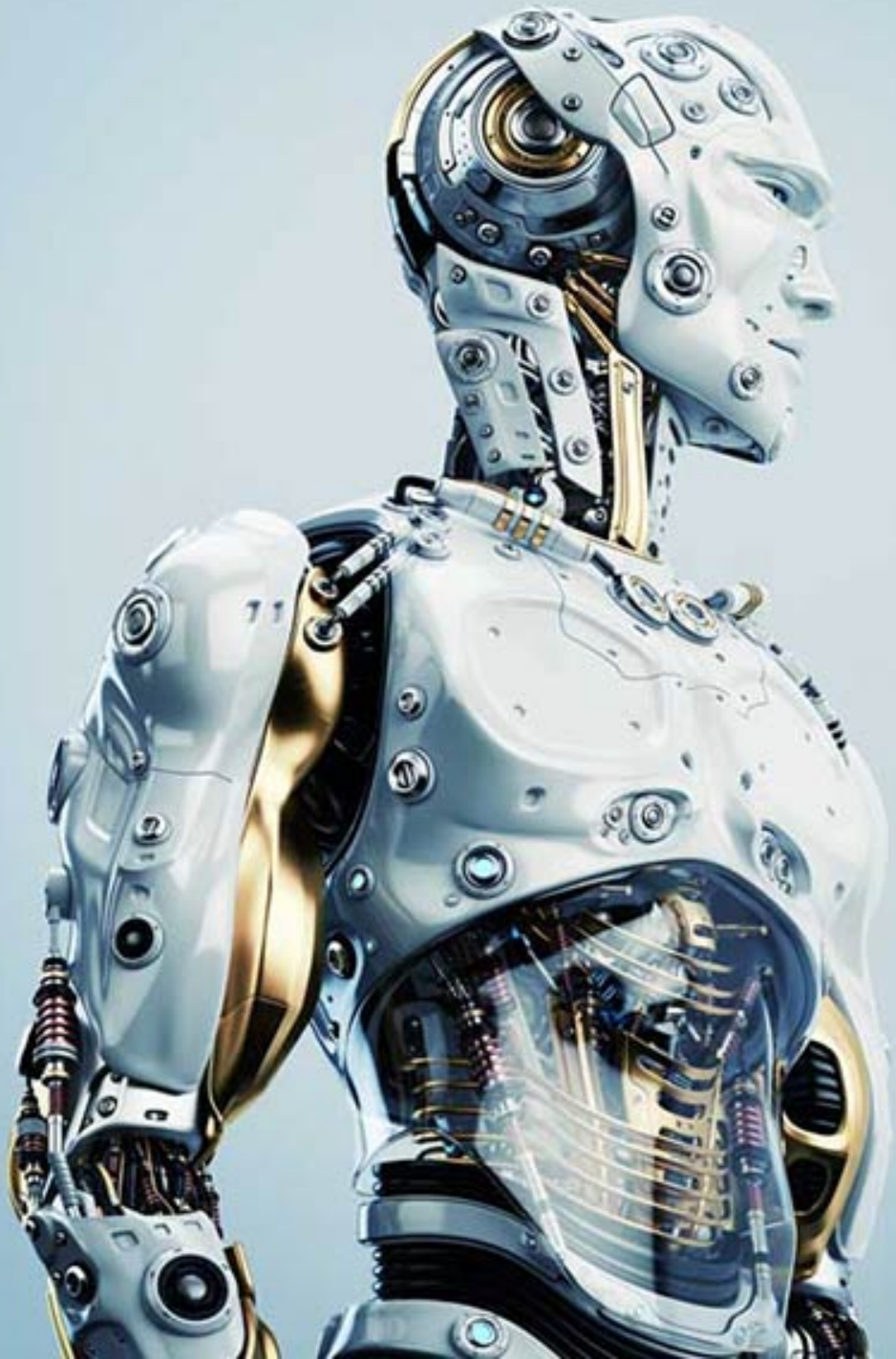












Robotics

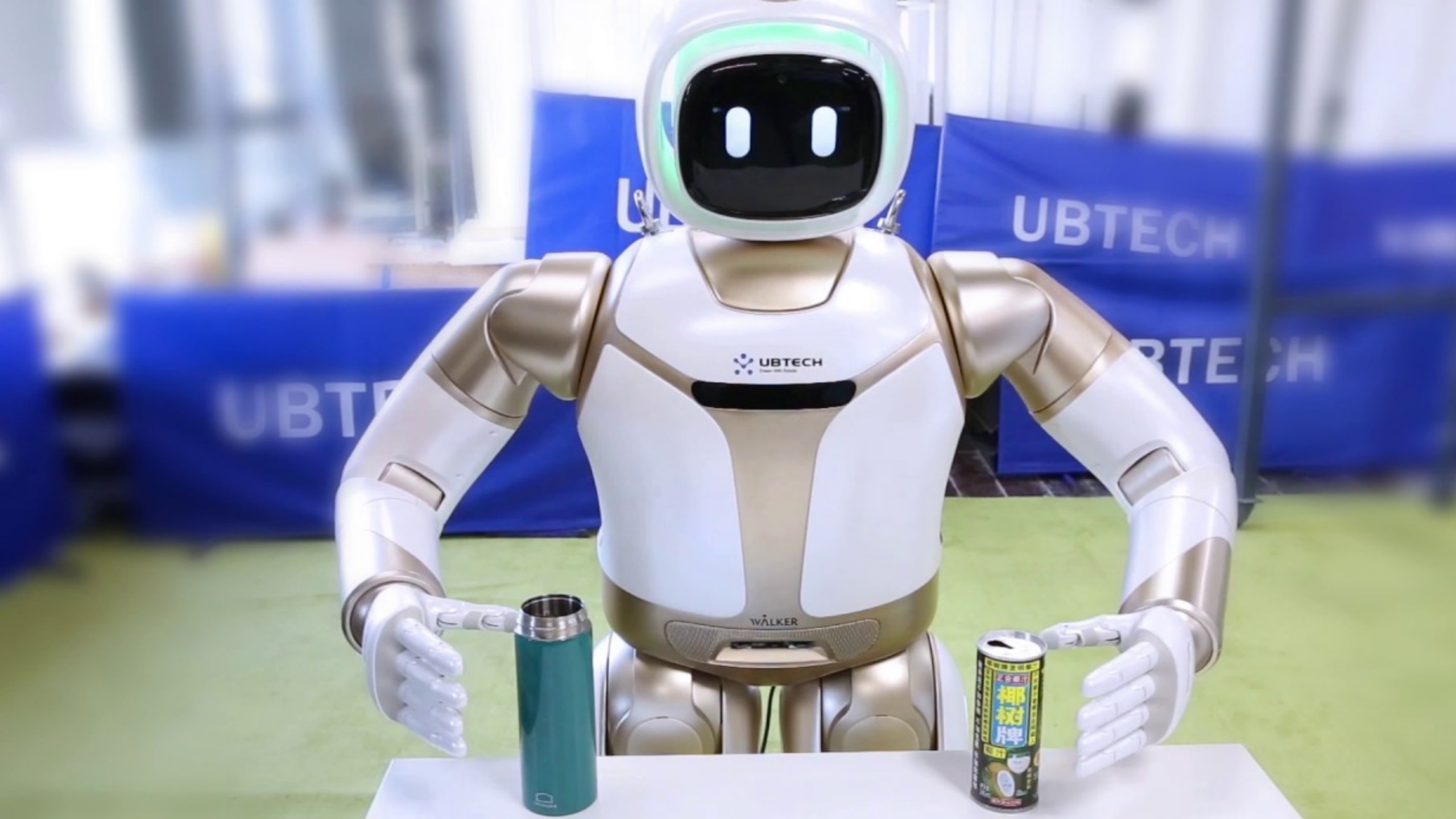
=

HW + (SW + AI) x Services

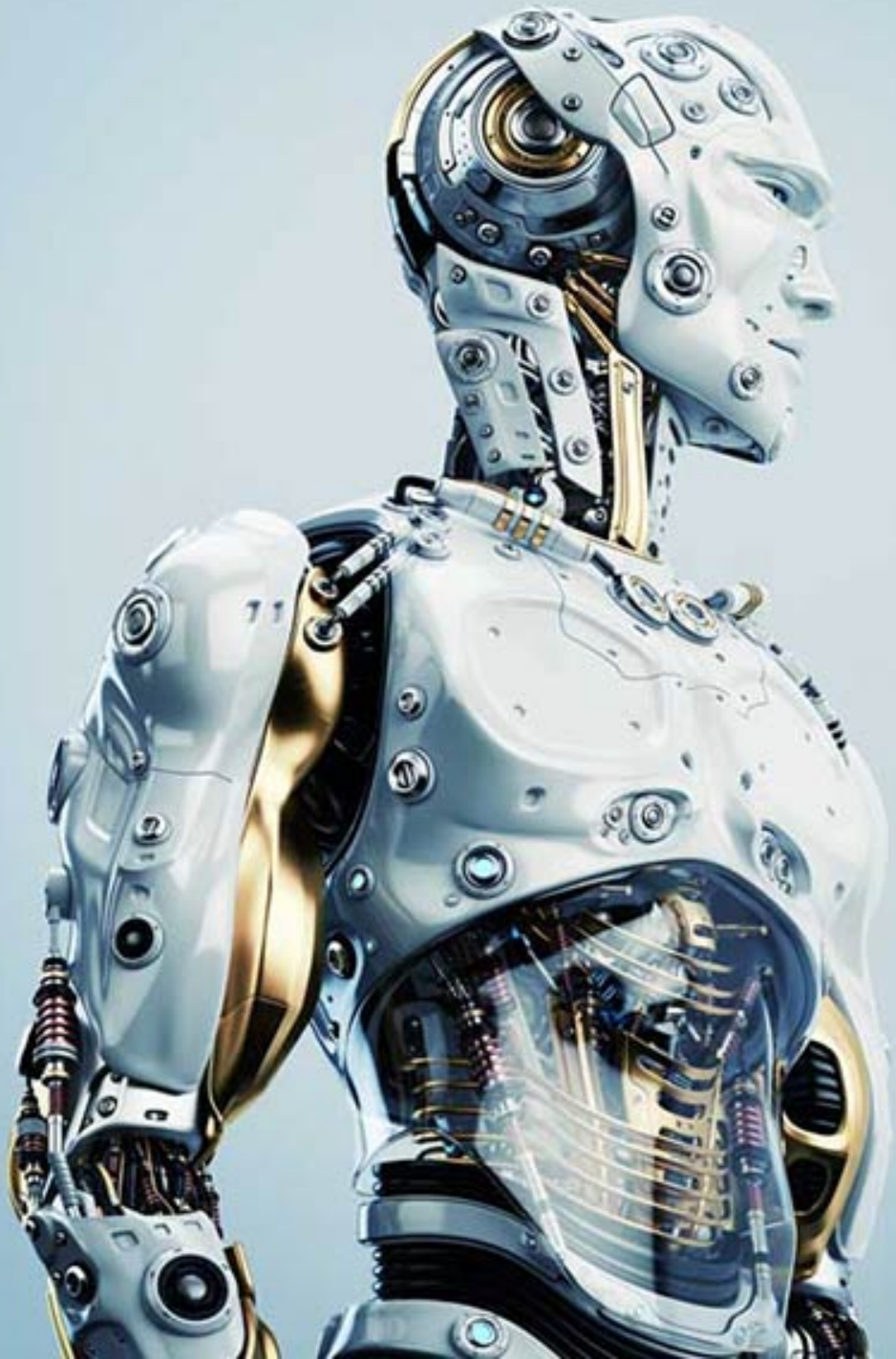












Robotics

=

HW + (SW + AI) x Services





*Telasuit & Avatr VR gloves*





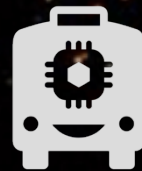






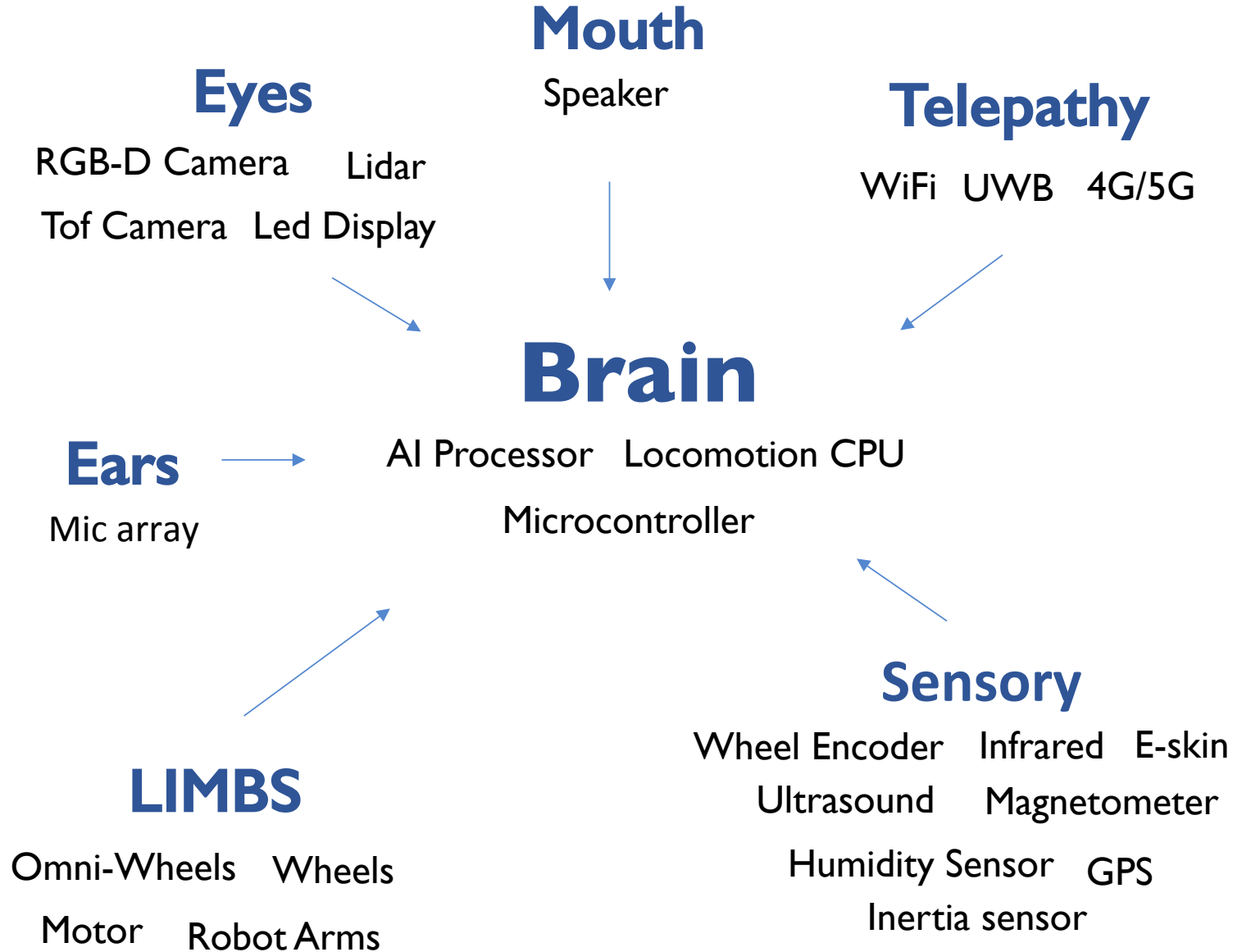
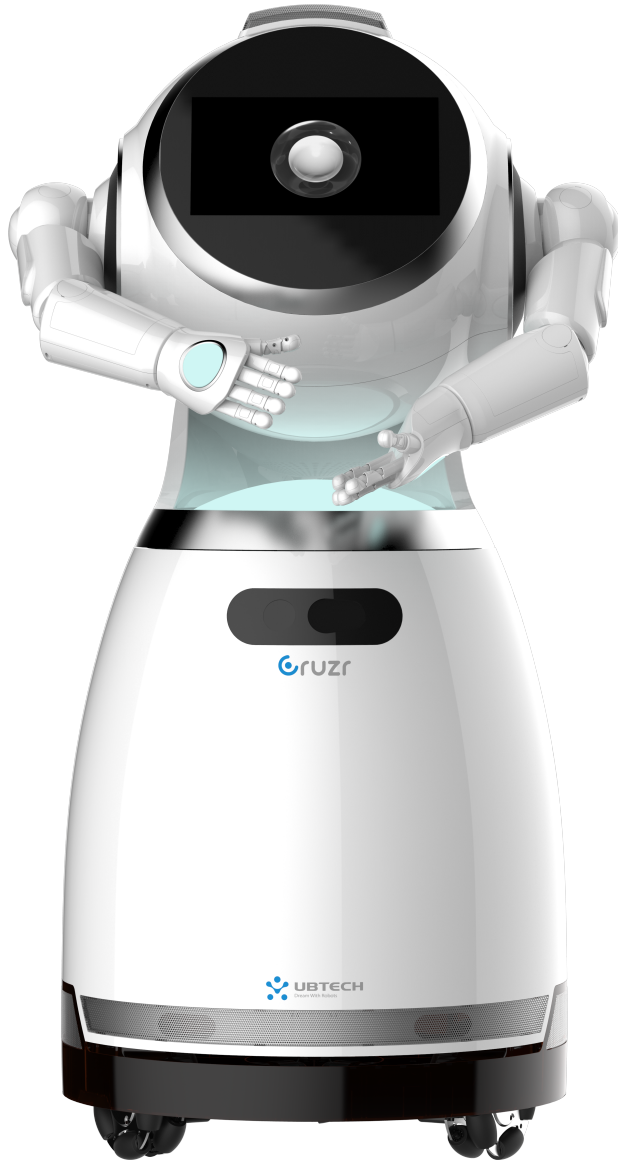


# 5G

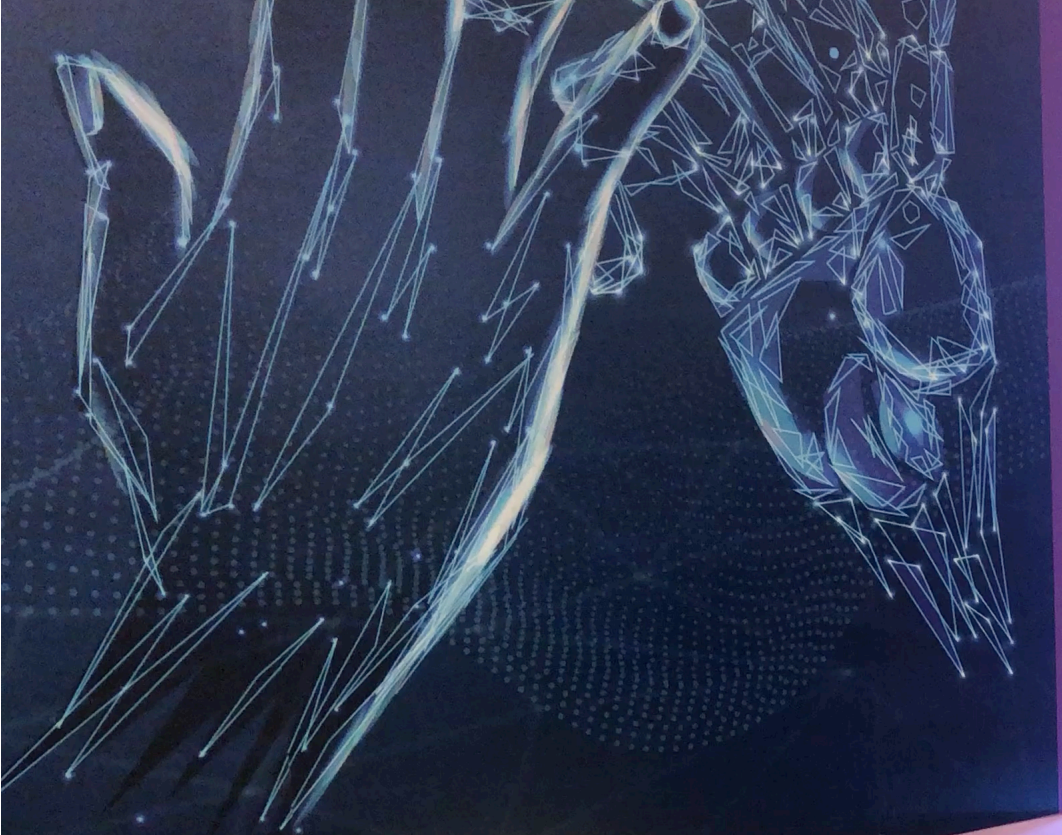




# Robot Anatomy





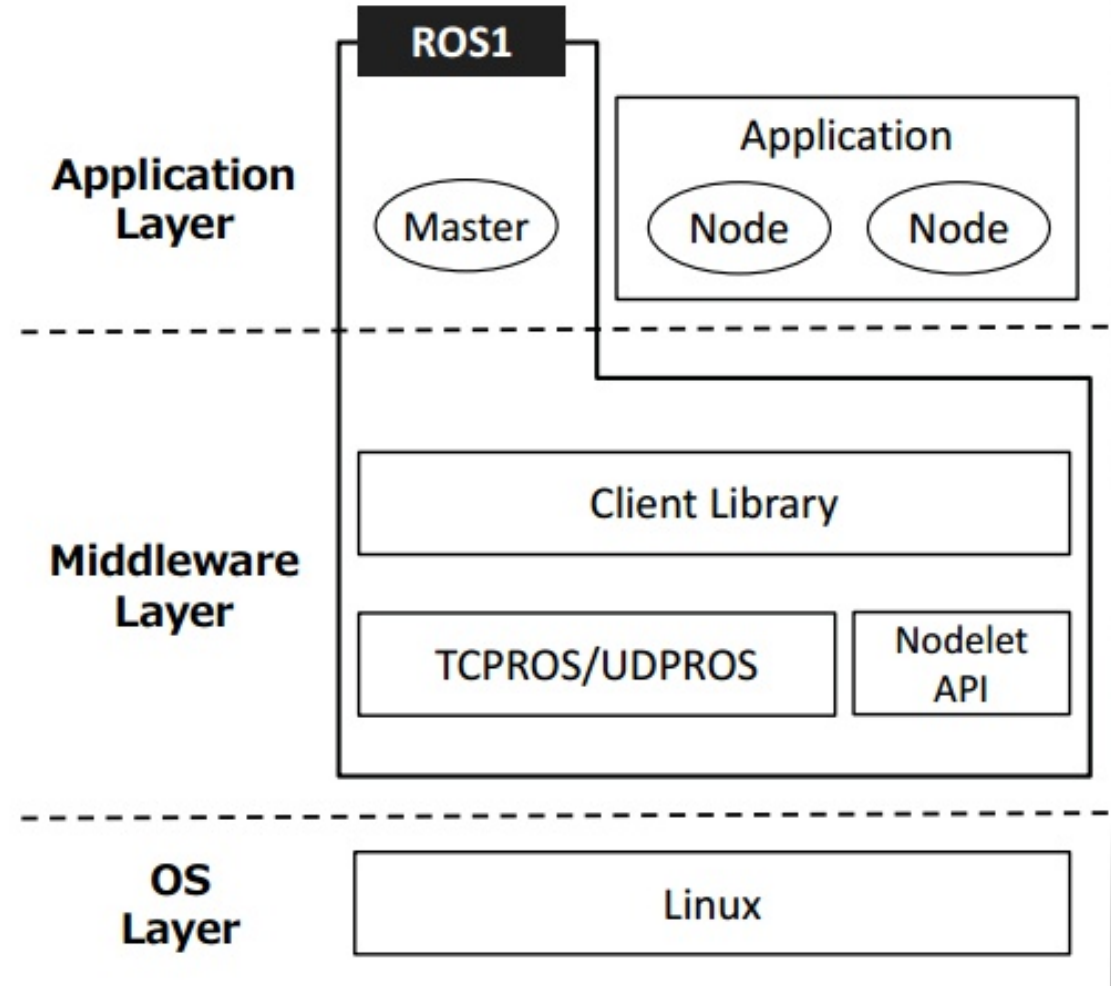


Human Robot Inter



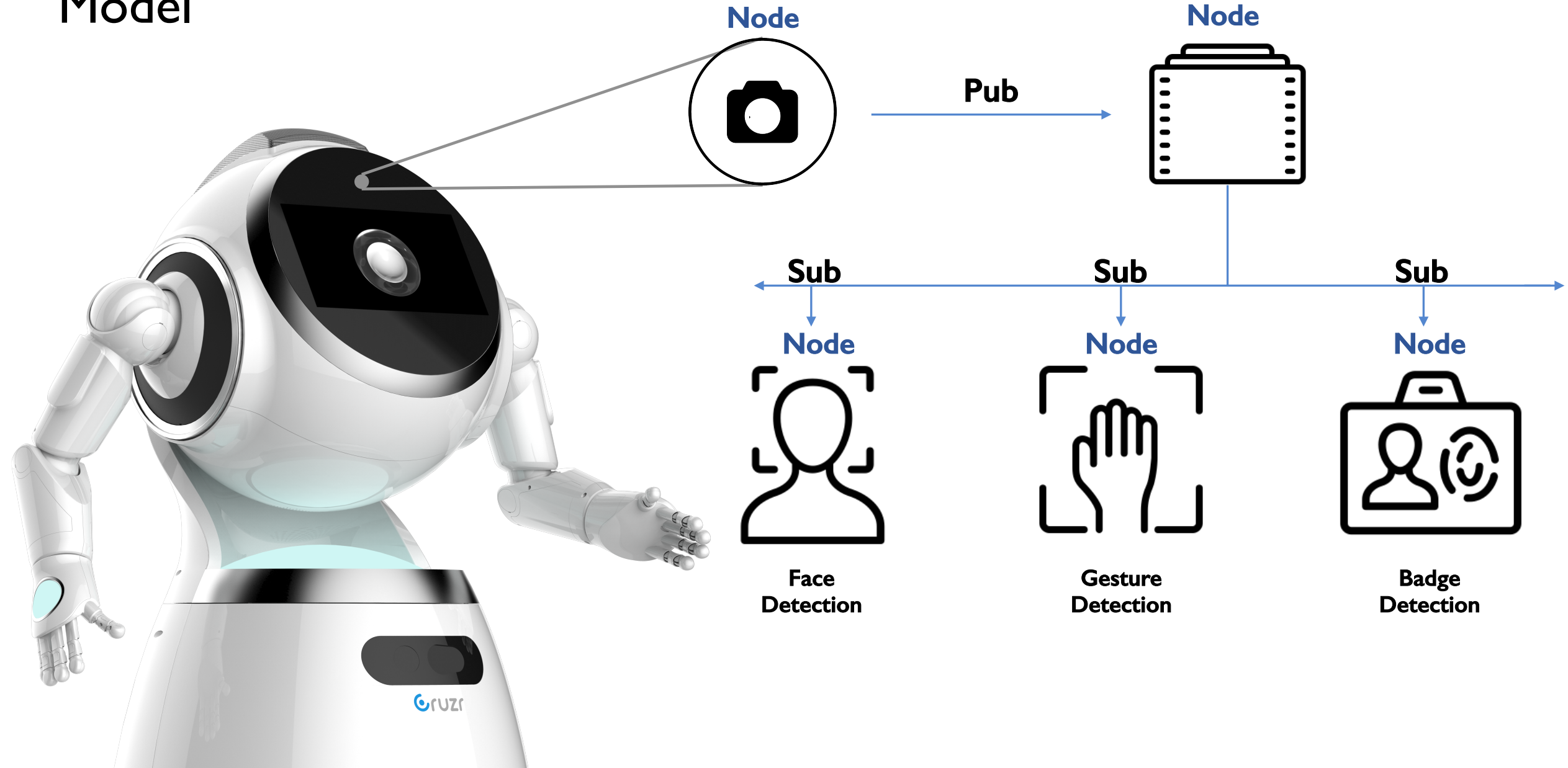


# ROS1



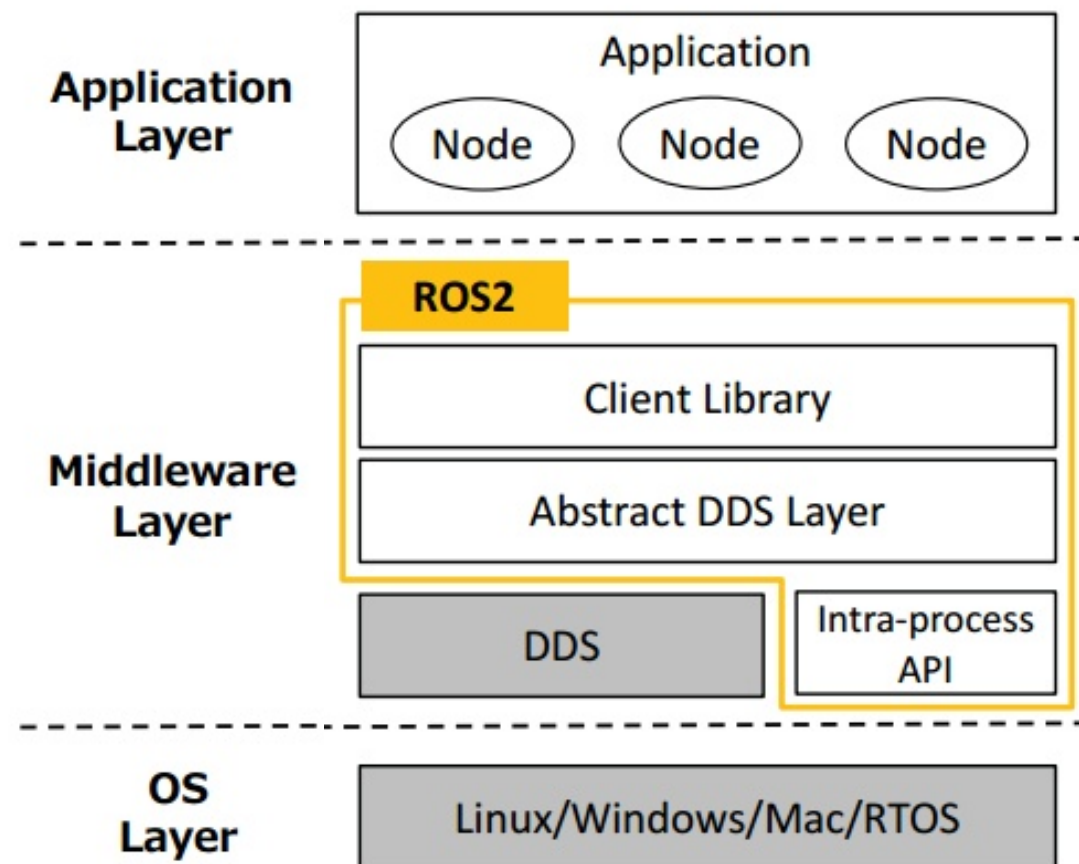


# Robot Pub-Sub Model



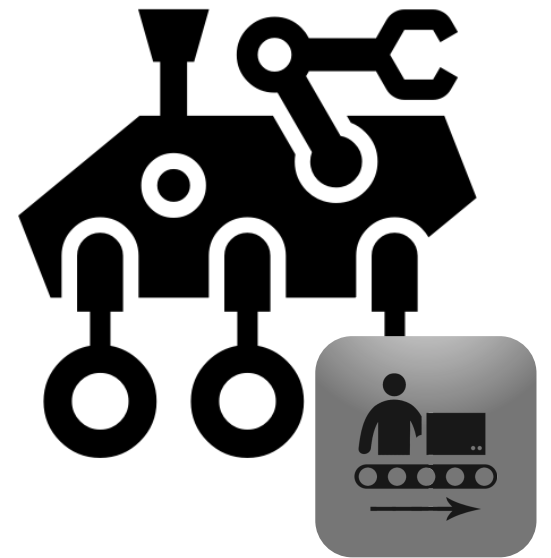


# ROS2



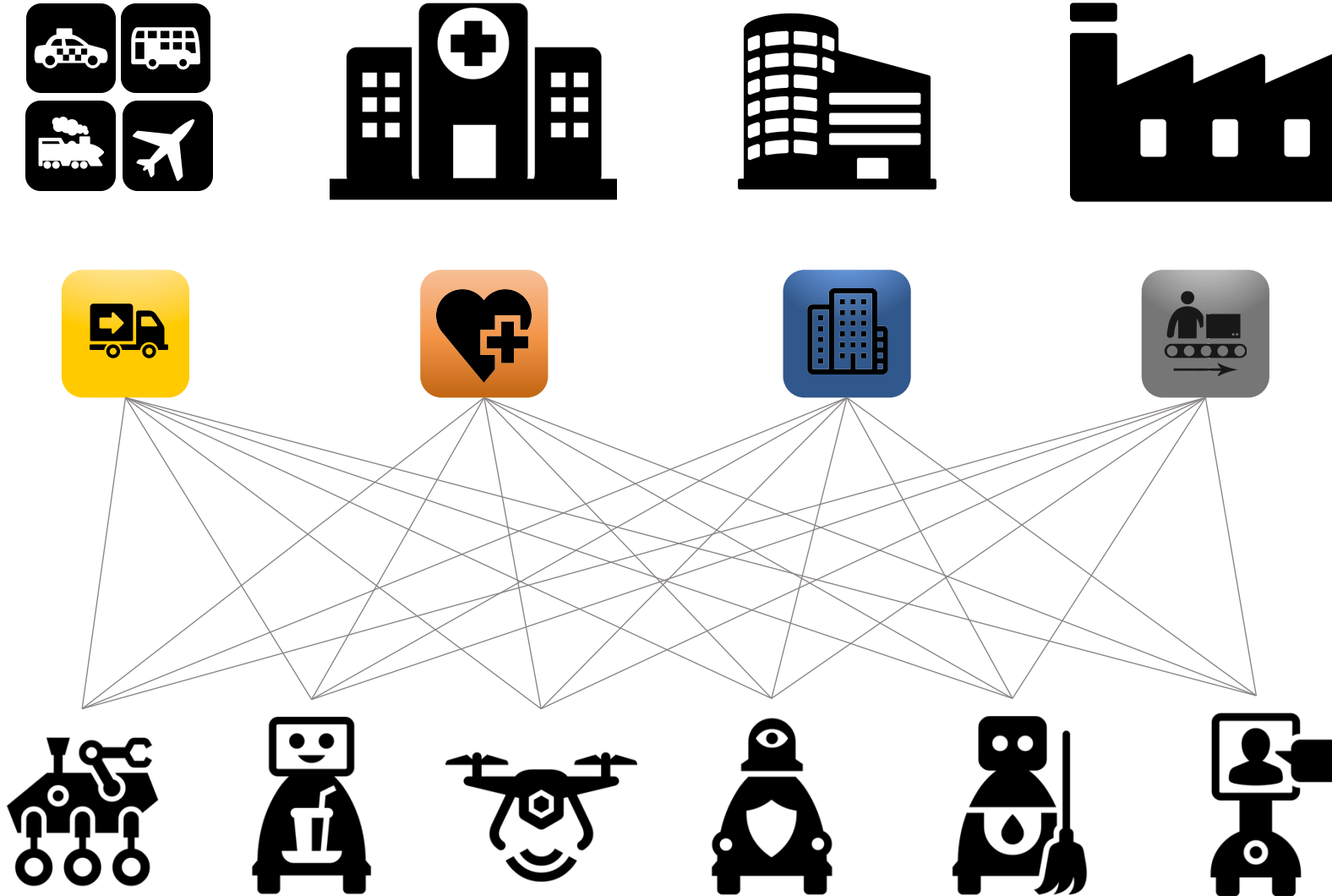


**One Robot  
One App**





# Robot Solutions



Industry-specific needs, requirements and eco-systems

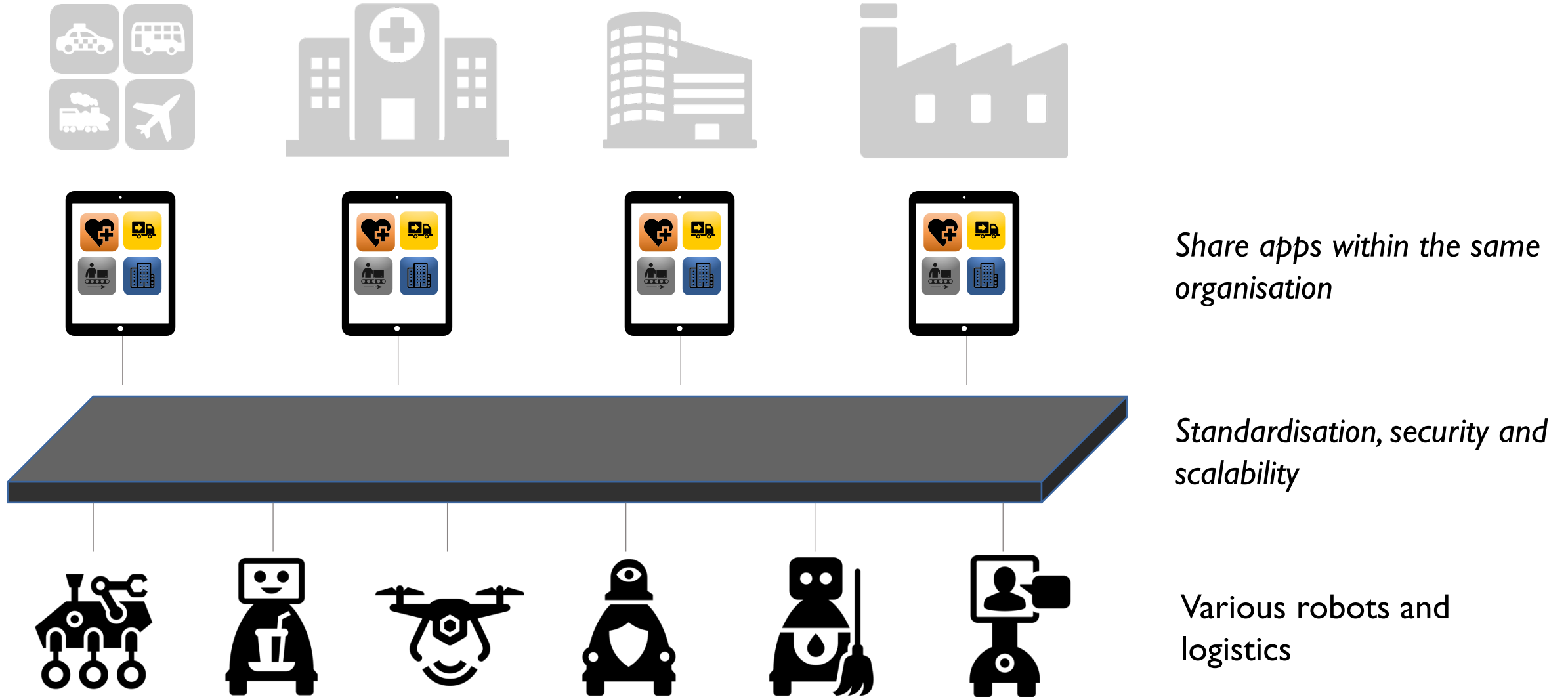
User apps – software products, user interfaces, controls, visualisations

Demeaning & endless integration, testing, debugging & stress

Various robots and logistics



# Robot Solutions



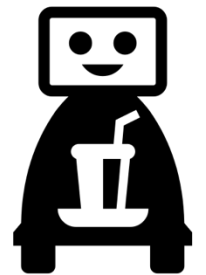
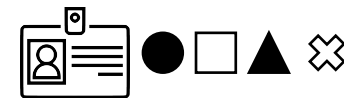
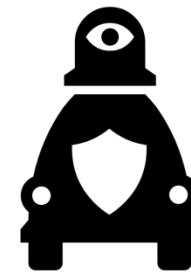
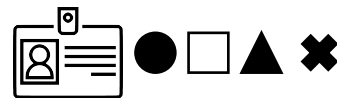
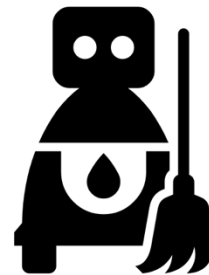
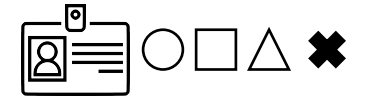
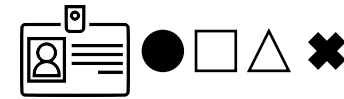
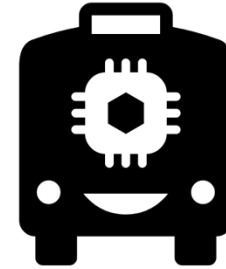
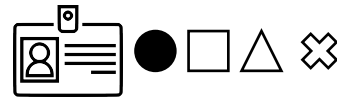
# Every robot is an employee

Skills & Capabilities

Job Role

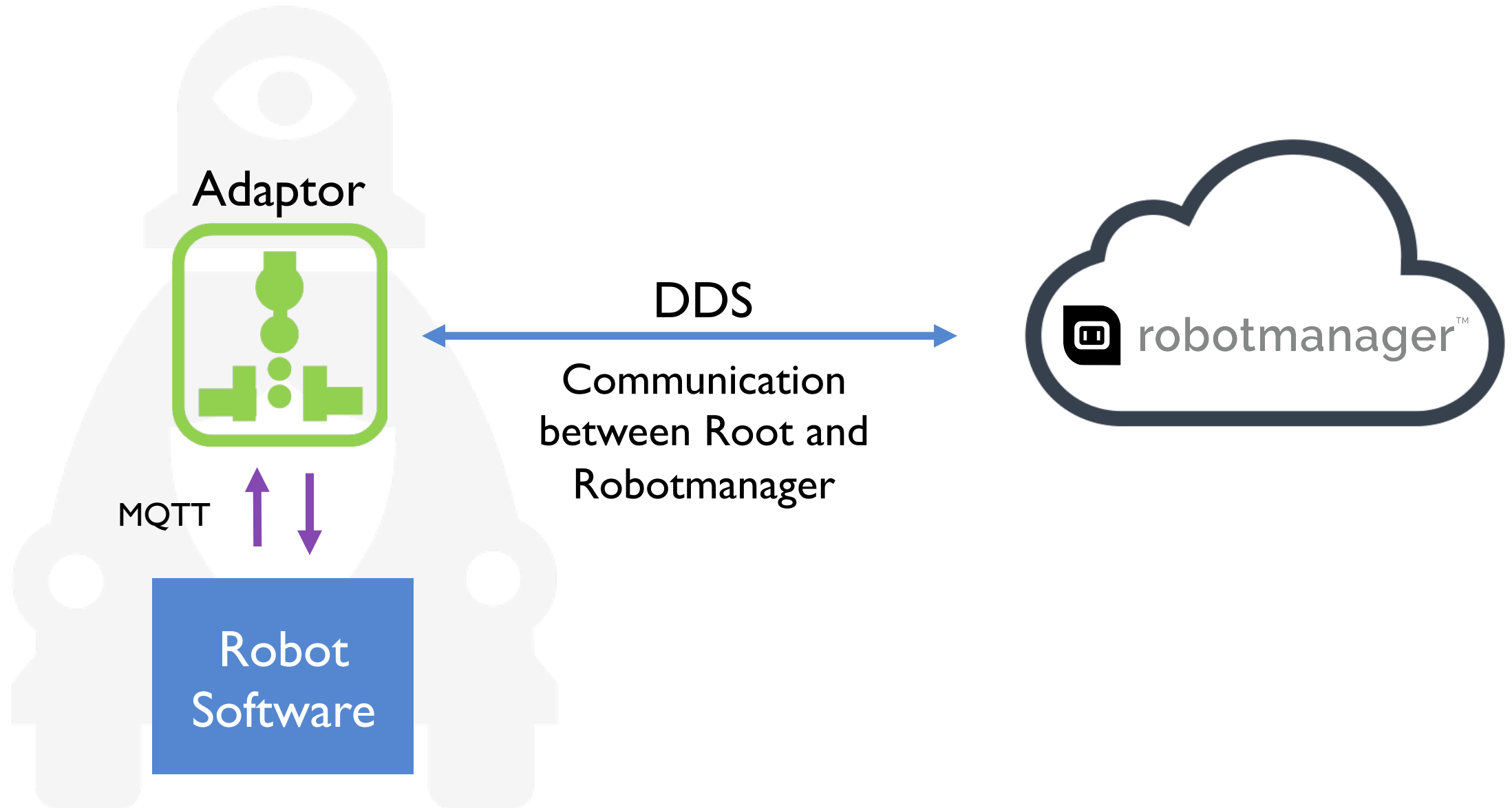
Tasks

ID

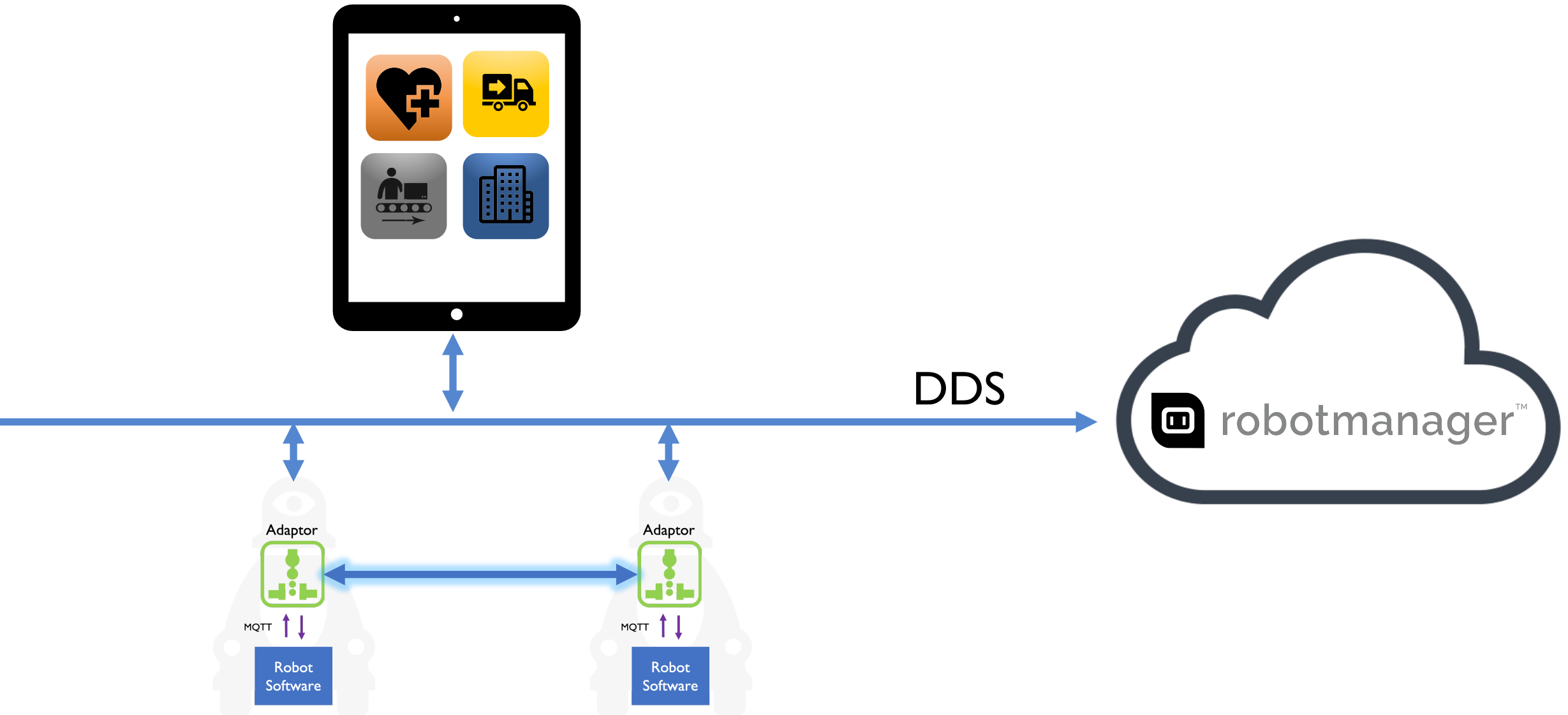




# Connecting to Robotmanager

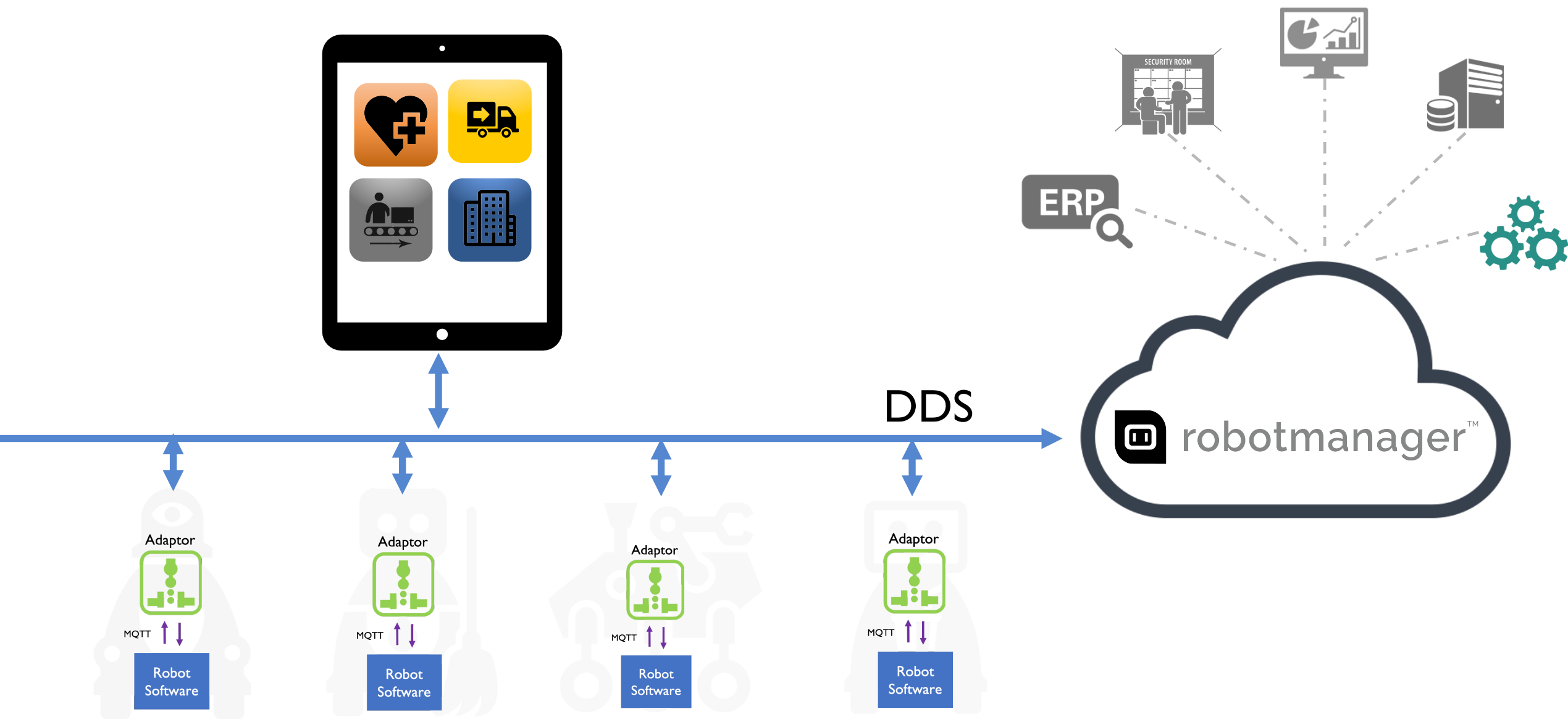


# Connecting to others

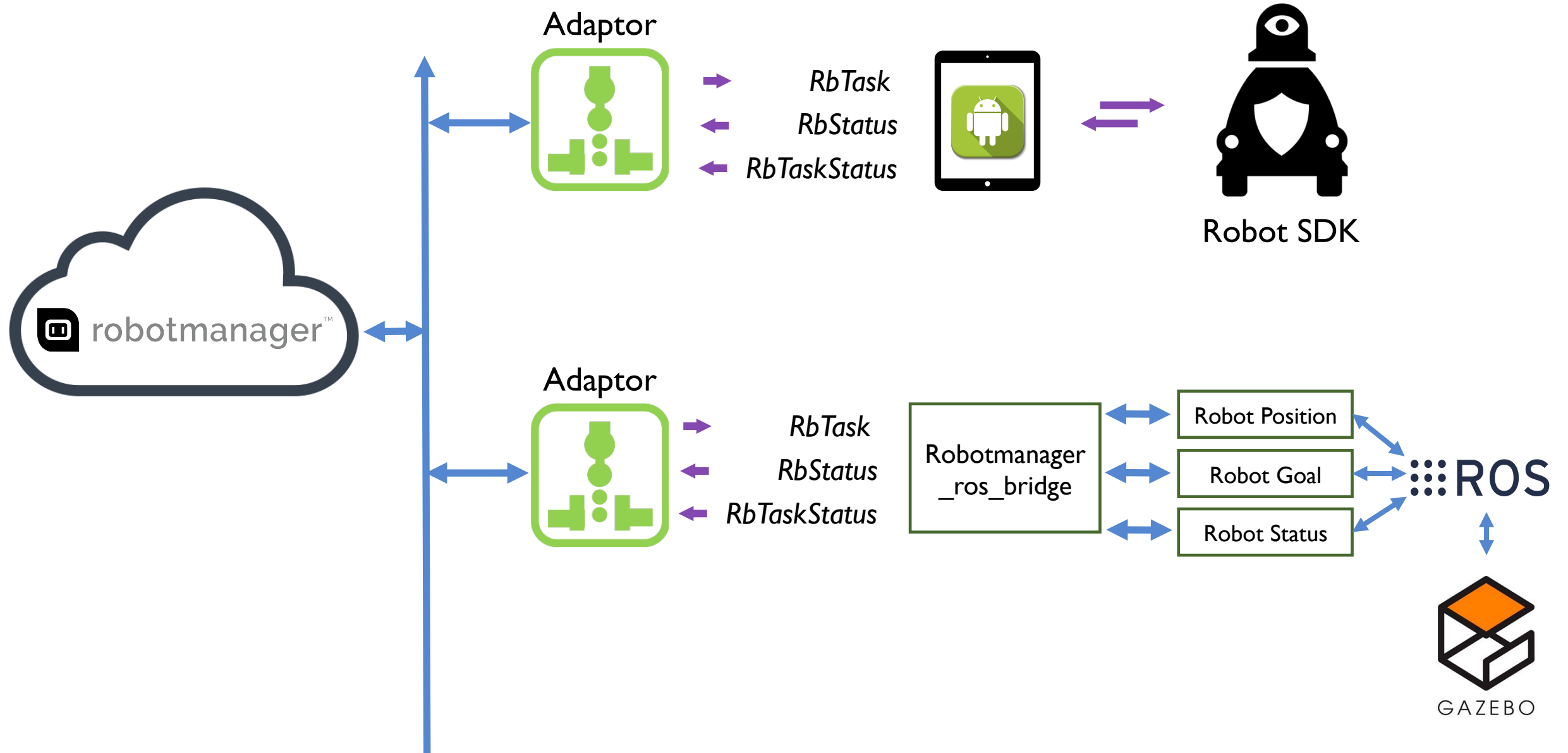




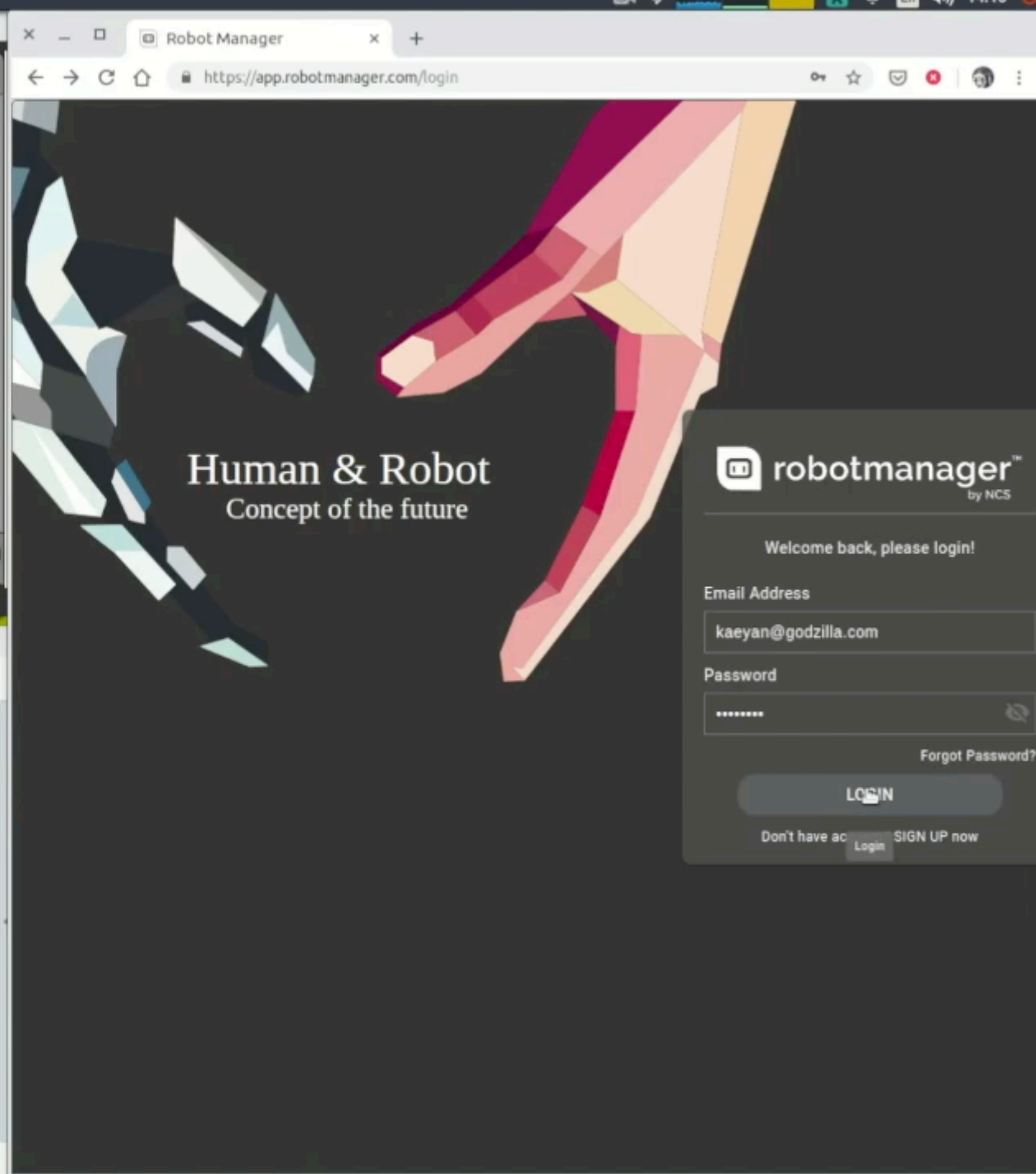
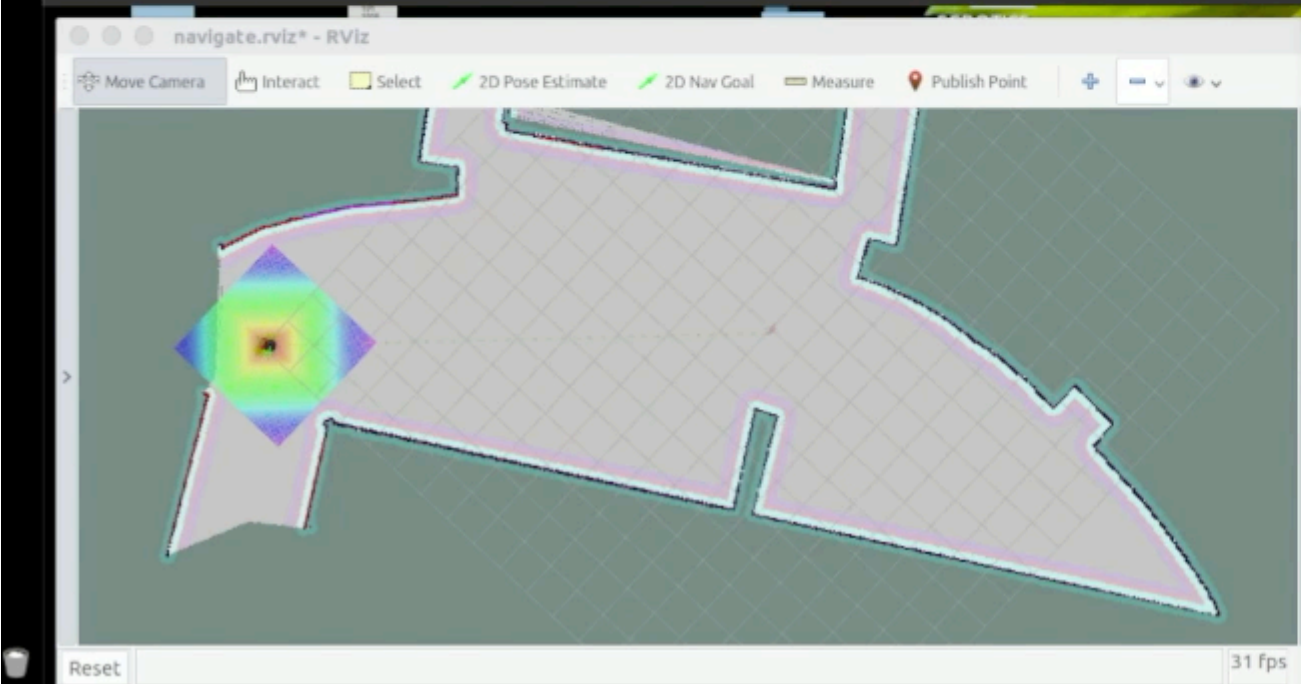
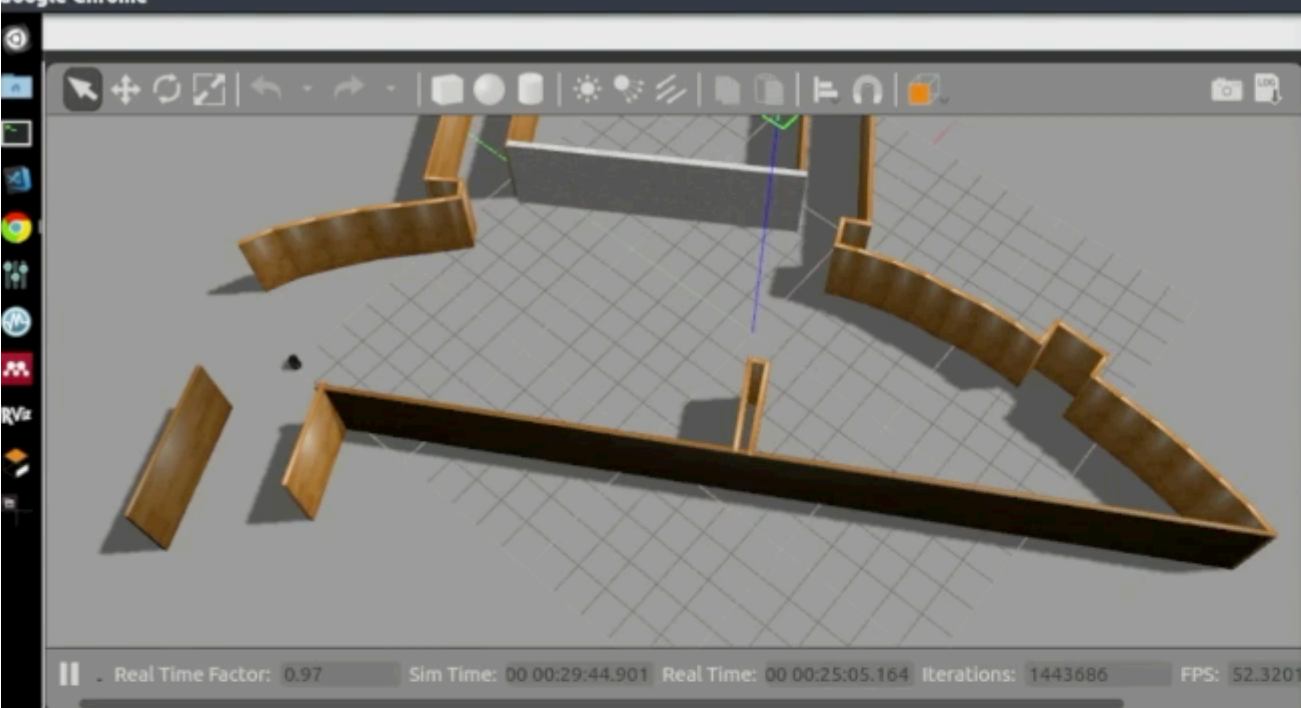
# Scalable Enterprise Robot Solutions



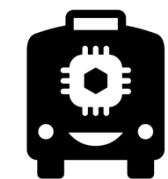
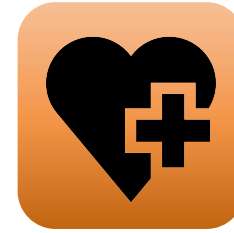
# Quick Start







**Different robots**  
**Different apps**  
**One solution**







Dashboard

Resources

Reports

Custom View 1

Custom View 2

Visitor Movement

Wednesday, Mar 29, 2017

Locator

Search Objects





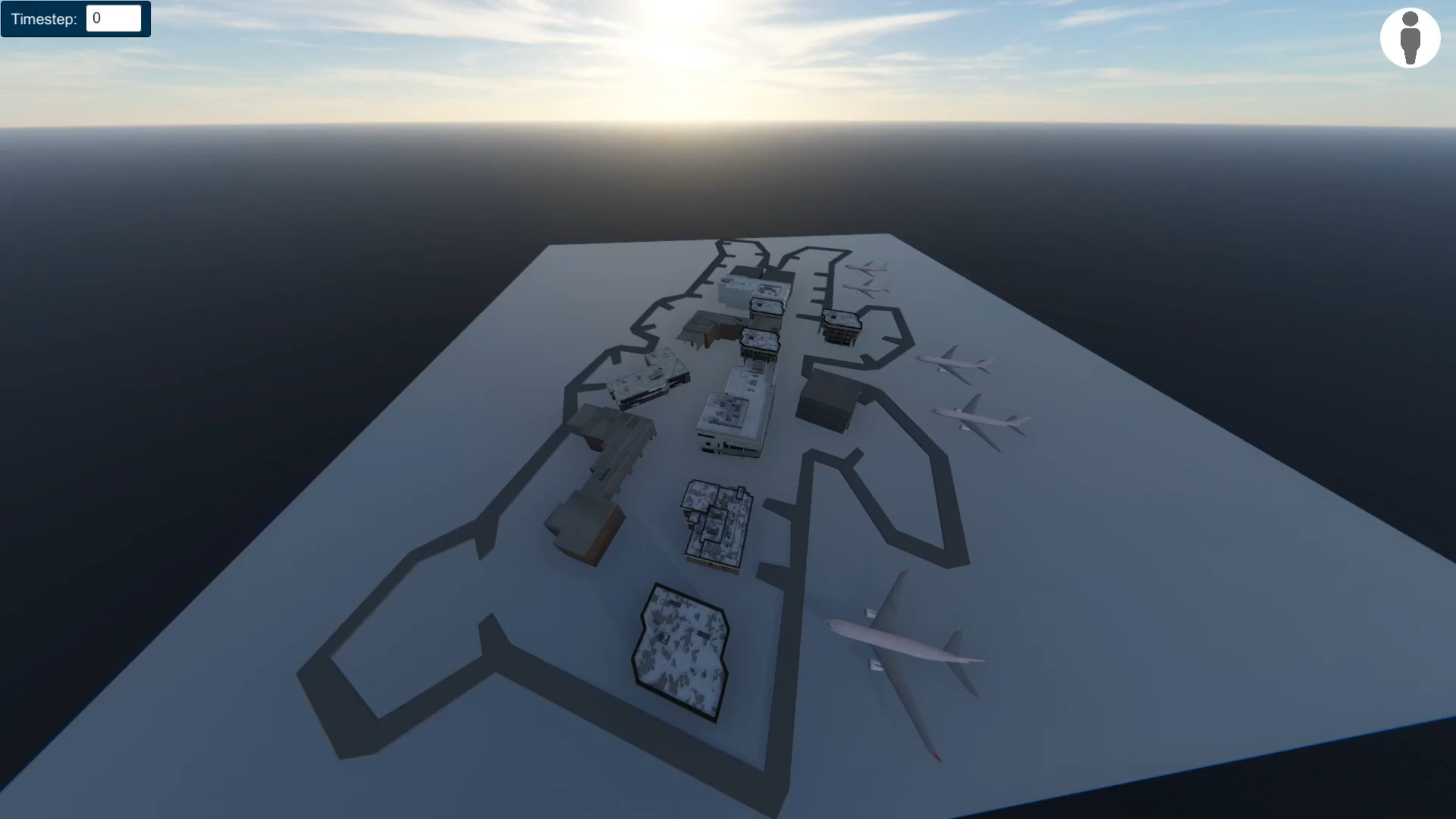
# Exhibition Hall



## Robot Management

Click on one of the robots to find out more.






Timestep:







*“AI & Robots will not replace managers, but managers who use AI & robots will replace those who don’t.”*

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