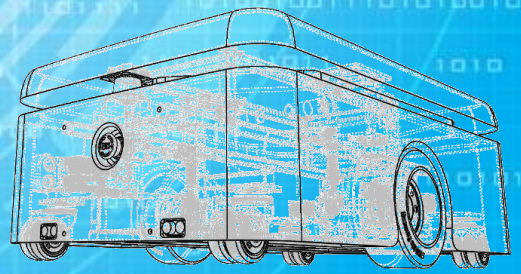
機電工程署
EMSD

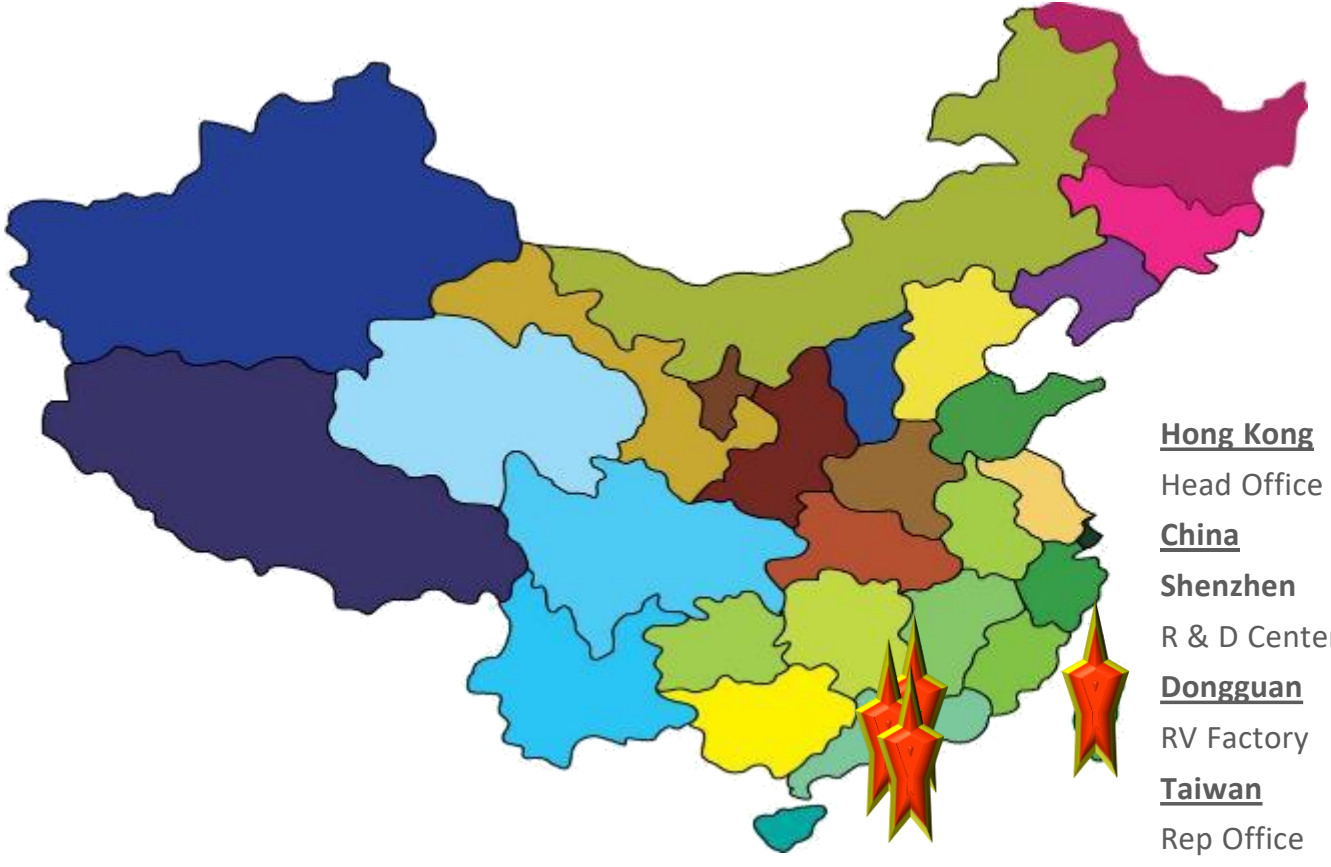
RV TECHNOLOGY

NEWEST AUTONOMOUS MOBILE ROBOT TECHNOLOGY



ABOUT RV TECHNOLOGY

OUR LOCATION



Hong Kong

Head Office

China

Shenzhen

R & D Center

Dongguan

RV Factory

Taiwan

Rep Office

RV TECHNOLOGY

WE FOCUS ON INDUSTRY 4.0 AUTOMATION

- Aviation
- Food Process
- Packaging

Automation

- Smart Warehouse
- E-Commerce

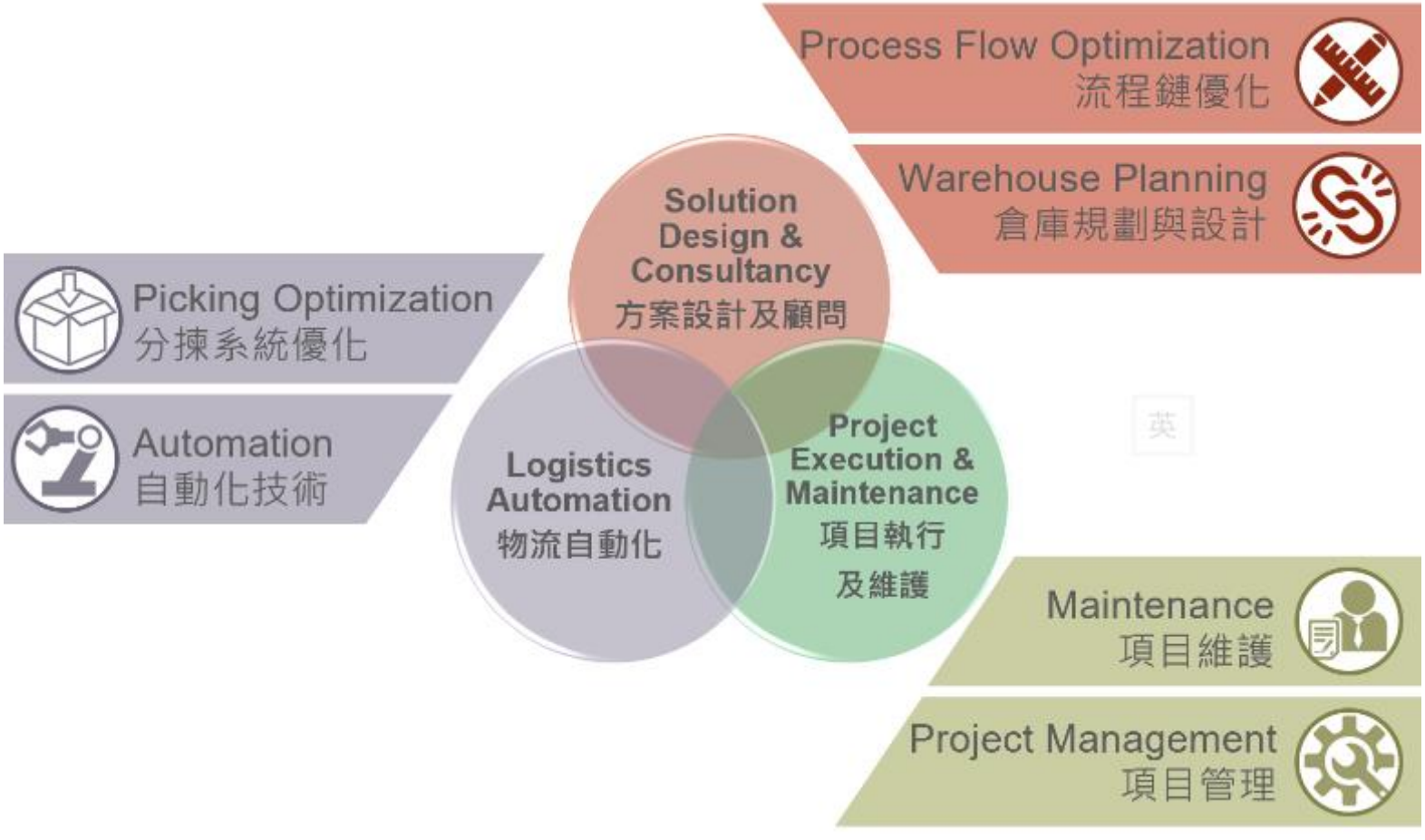
Logistic 4.0

- Automatic Storage
- Unmanned Express

Smart Express

LOGISTICS TECHNOLOGY SERVICE

RV TECHNOLOGY



EVENT HIGHLIGHTS

Smart Warehouse Launch Event

科技園公司推智能倉庫

EVENT HIGHLIGHTS

Industrial Automation Shenzhen 2017

ALMC 2017

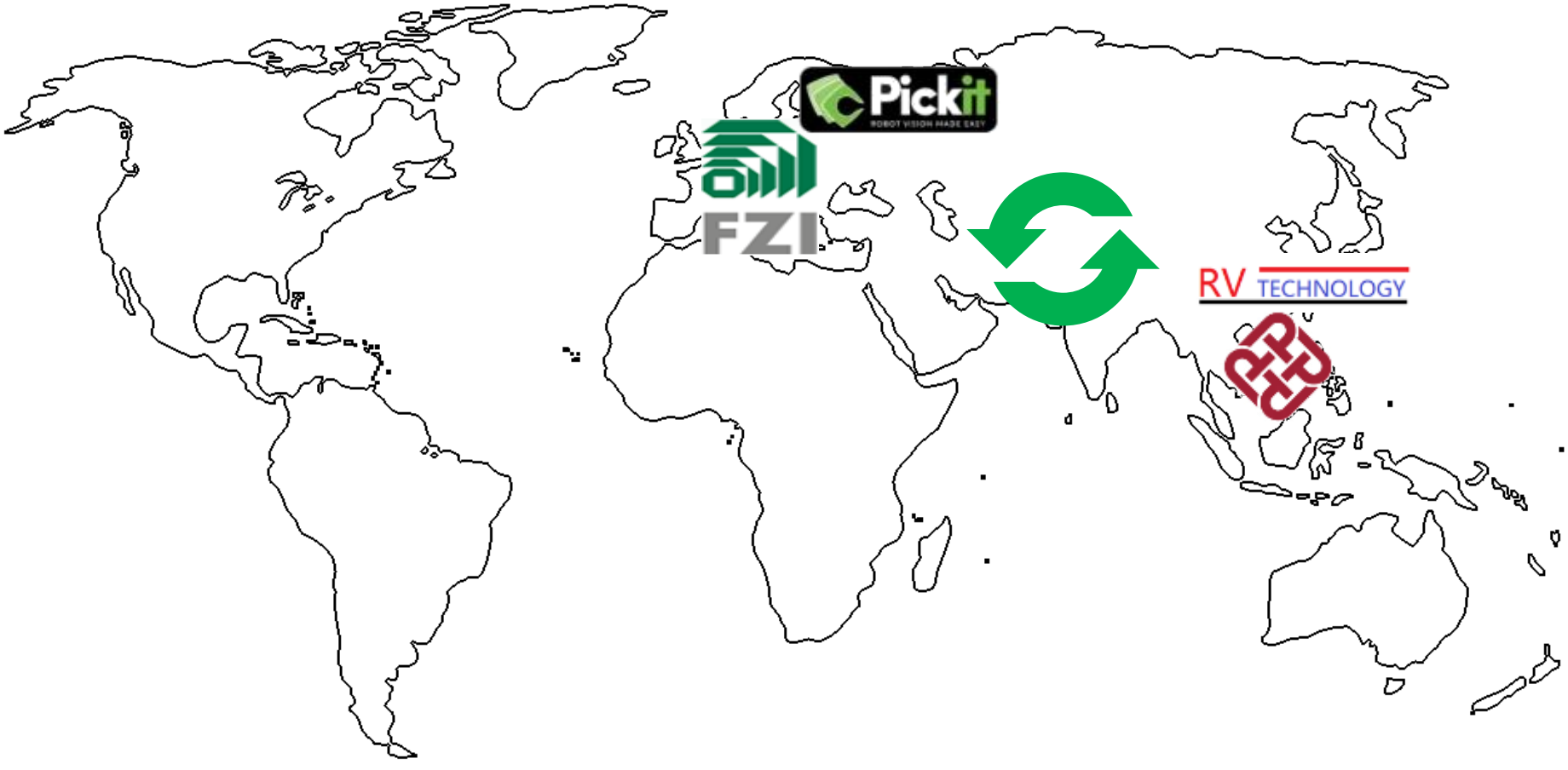
EVENT HIGHLIGHT

September 2017 – Chief Executive of HKSAR visited RV for the 2nd time in Qianhai

March 2018 – Logistic and warehouse Automation Seminar at HK PolyU (Textile and Clothing department)

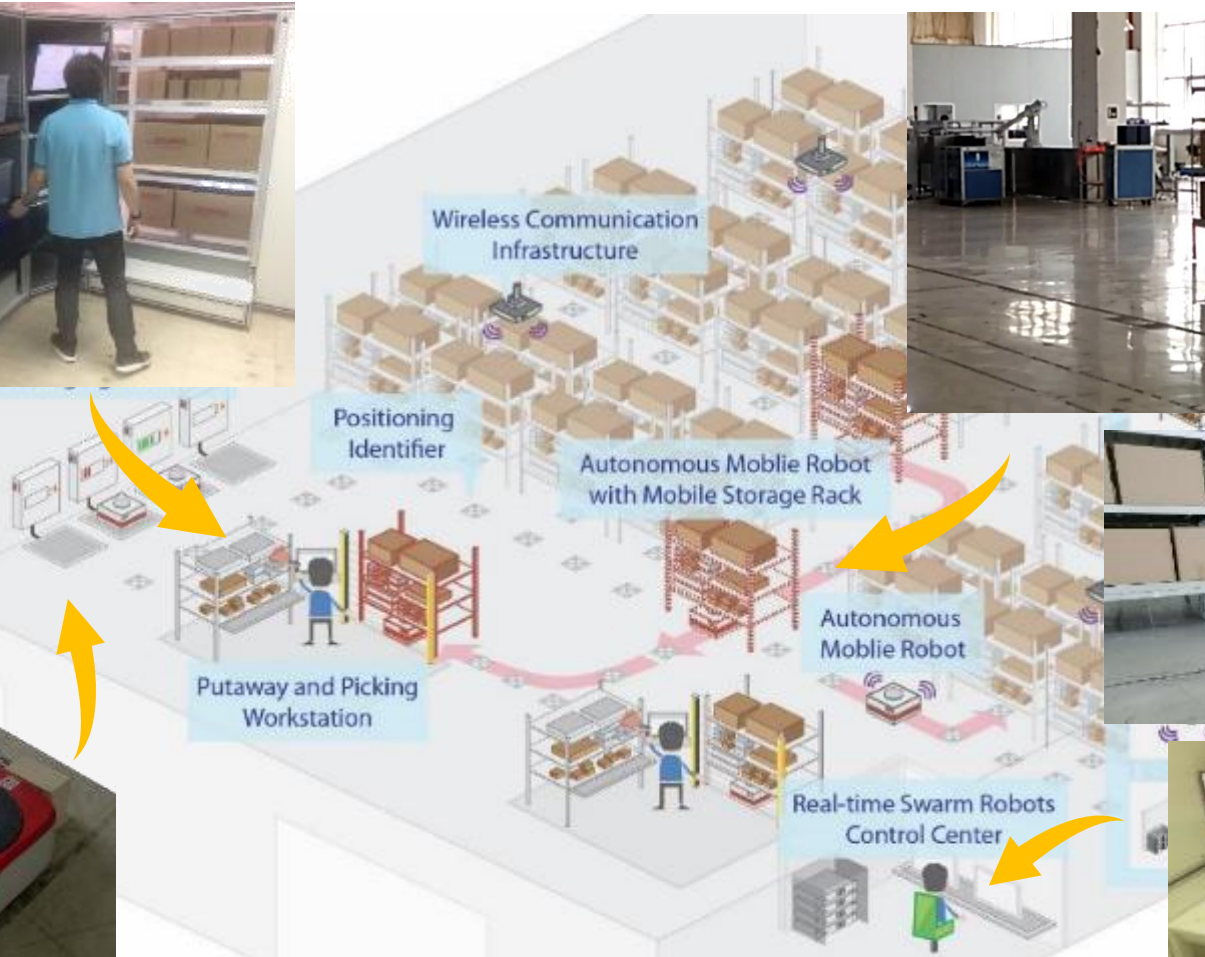
R & D PARTNERSHIP

RV TECHNOLOGY



ROBOTIC SMART WAREHOUSE SOLUTION - SWS

RV TECHNOLOGY



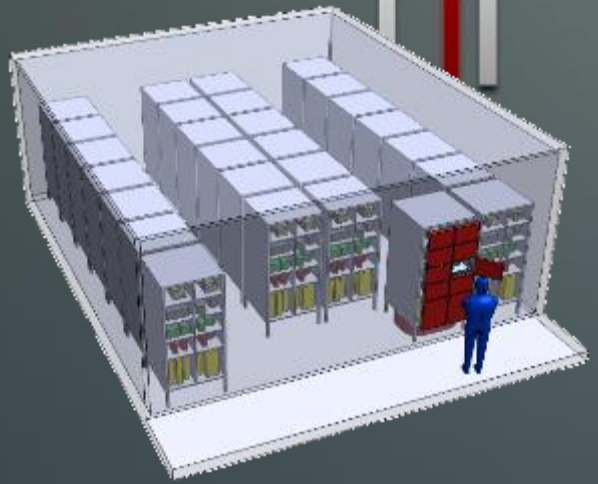
ABOUT RV TECHNOLOGY

RV TECHNOLOGY

APPLICATION

NEW GENERATION

HIGH SECURITY UNMANNED STORAGE



UNMANNED STORAGE

RV TECHNOLOGY

Some Storage requirement should be in high security control, monitoring and fully recording handling control.

For example: Current Exhibit storage unavoidable handling by human in each process

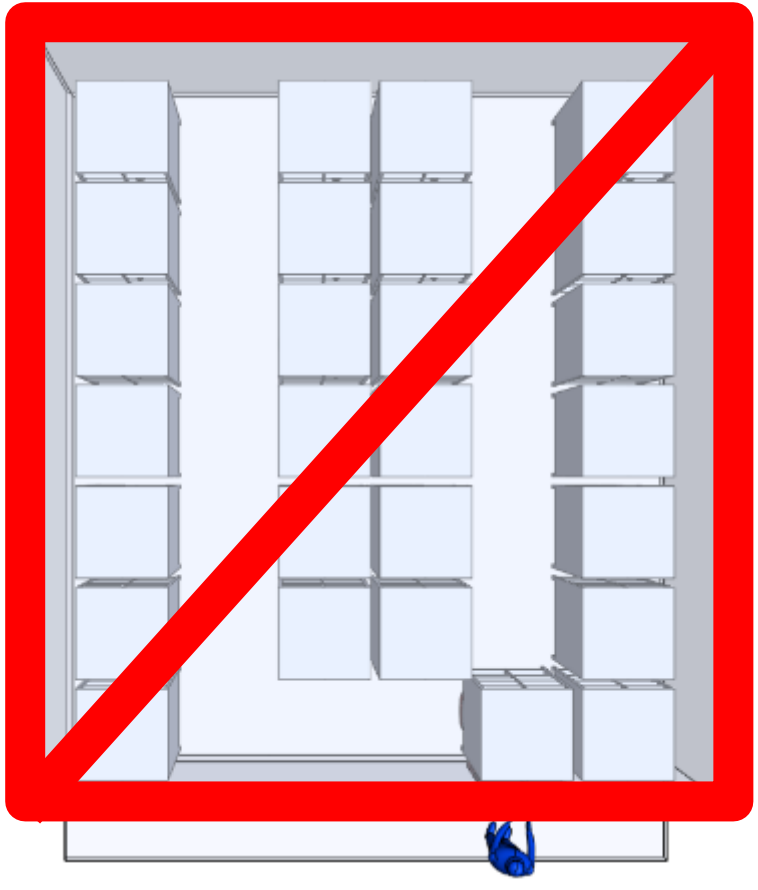
RV provided a fully High Security unmanned Storage system, Suitable for Exhibit Storage characteristic

Through the latest unmanned storage Smart system, it can total solve the security handling issue with fully monitoring and control

Smart Storage system with autonomous mobile robot to provide fully automated solution achieve unmanned storage zone, and automation handling system, with as less as human handling process

UNMANNED STORAGE

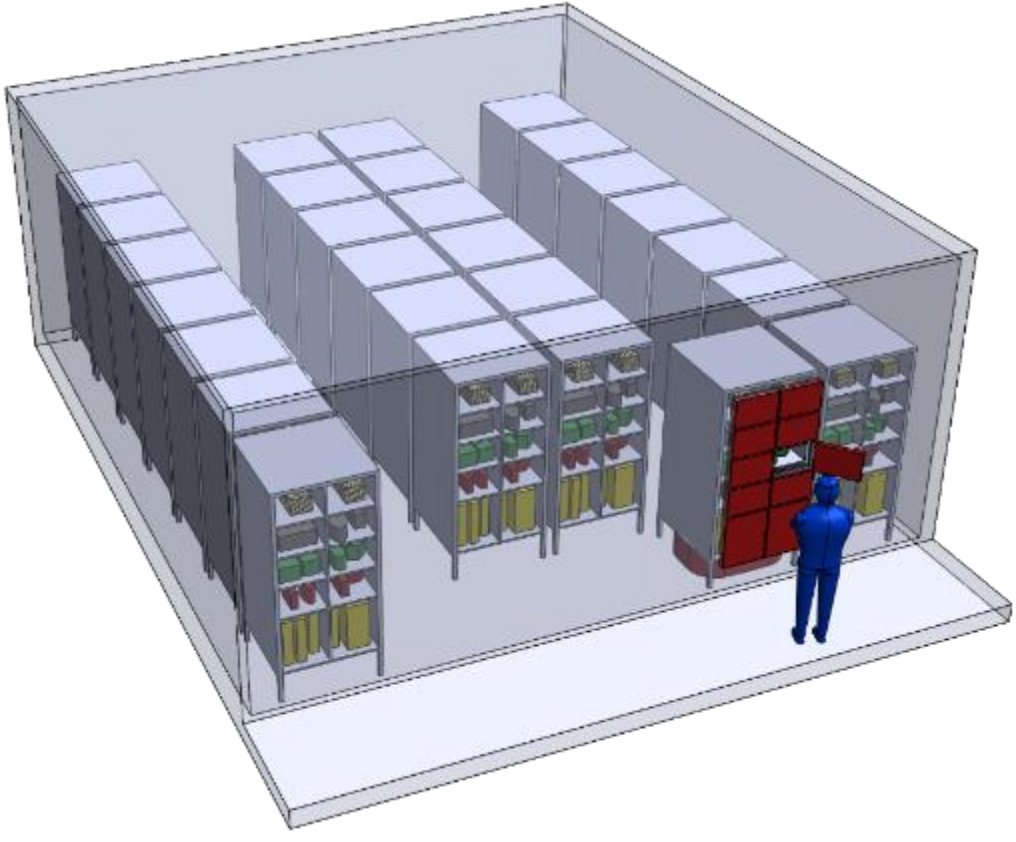
RV TECHNOLOGY



High security
Unmanned Zone

UNMANNED STORAGE

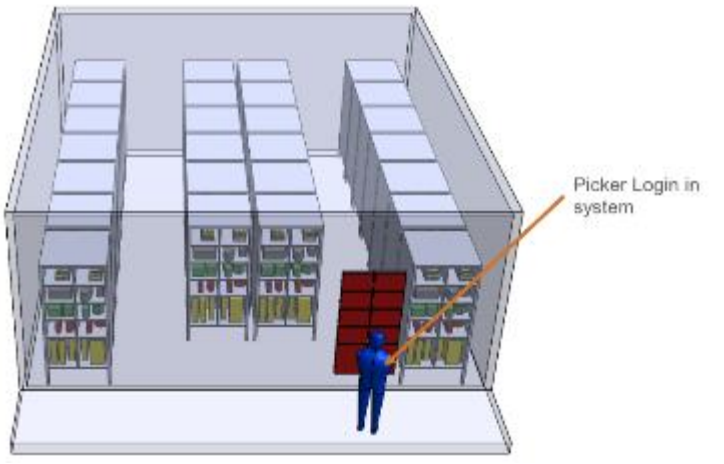
RV TECHNOLOGY

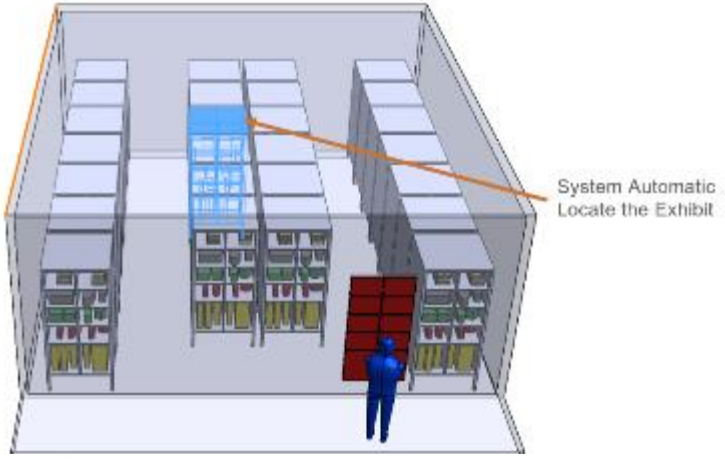


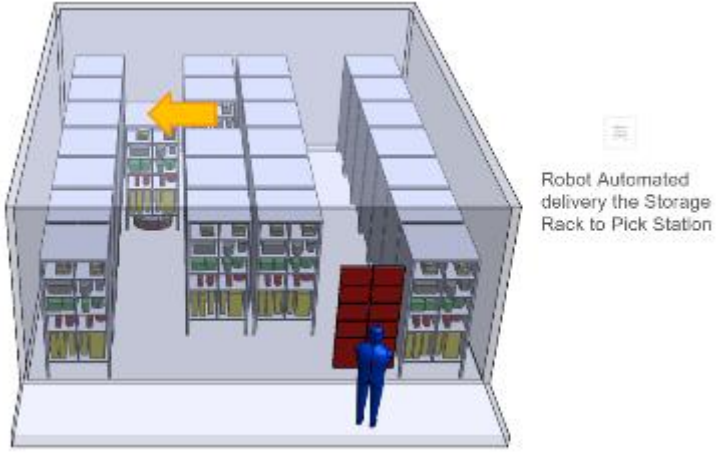
The Picker Only can touch the Exhibit with record

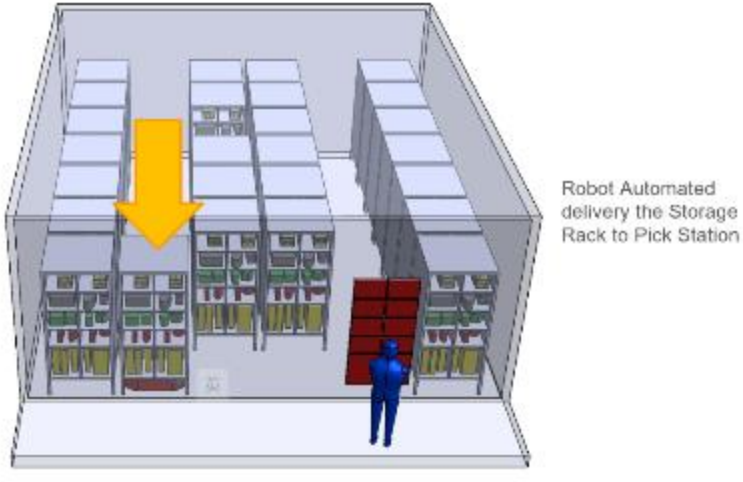
UNMANNED STORAGE

RV TECHNOLOGY



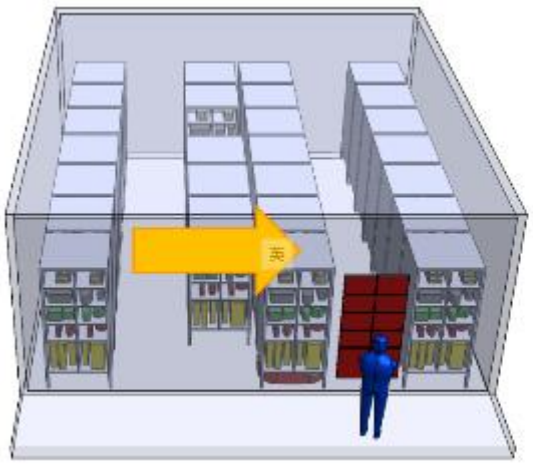




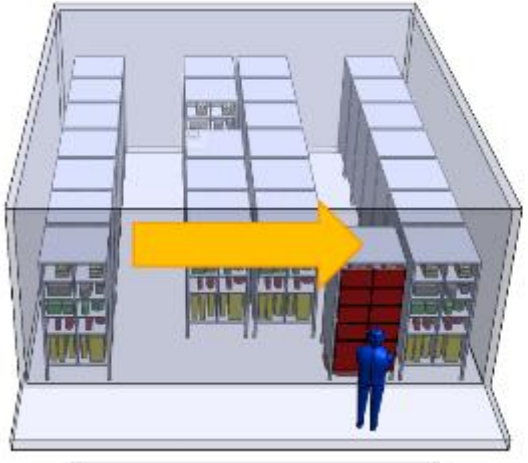


UNMANNED STORAGE

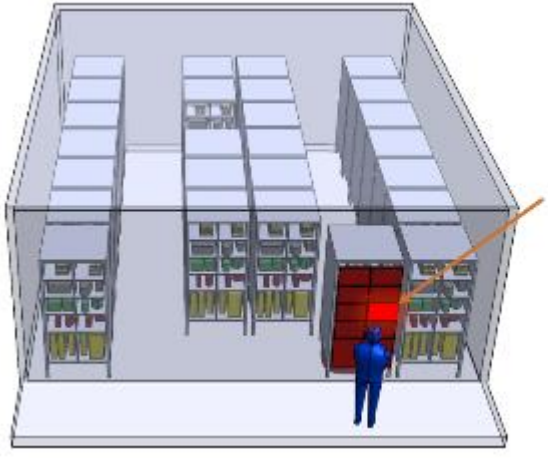
RV TECHNOLOGY



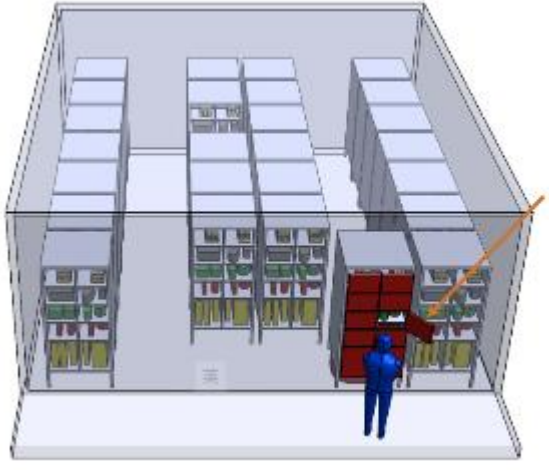
Robot Automated delivery the Storage Rack to Pick Station



Storage Rack arrived to Pick Station

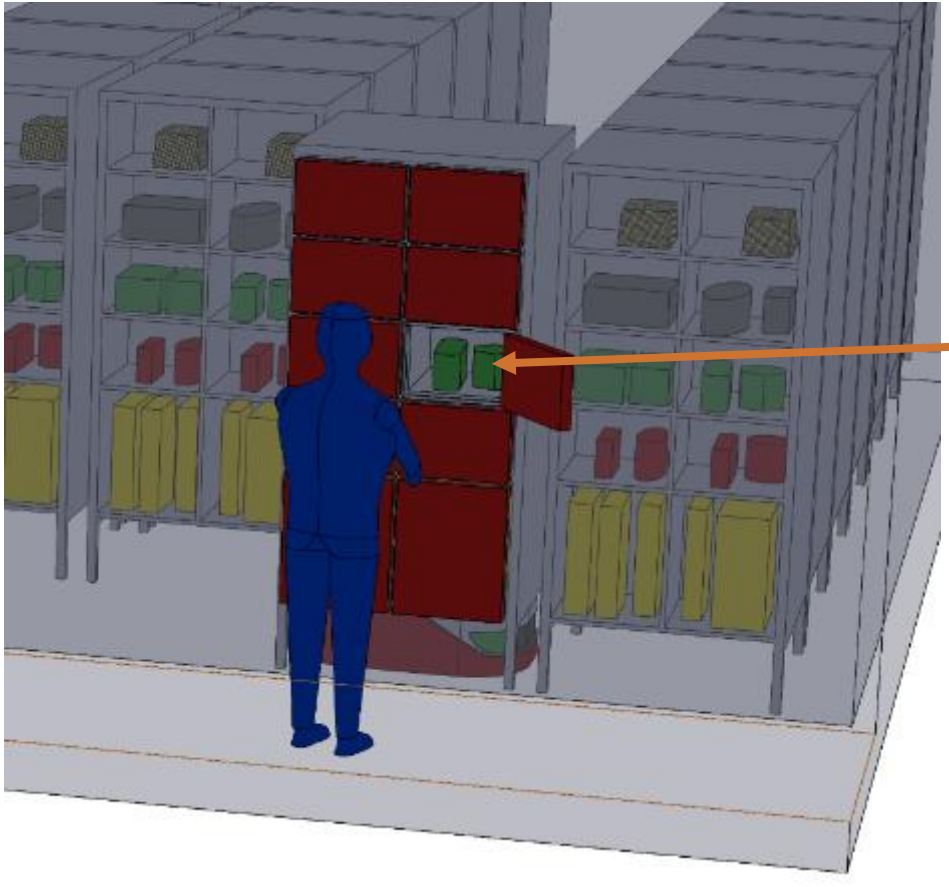


The Exhibit located on the Highlighted Red Door



Door Open automatically

UNMANNED STORAGE



Picker Collect the Exhibit

UNMANNED STORAGE

RV TECHNOLOGY

Highlight:

1, Fully Unmanned Zone

2, Full Record operation

3, ONLY Authorized Exhibit delivered

4, Multi Storage Size

5, Fully Automated

6, Fully Control by Customize procedure

RV TECHNOLOGY

NEWEST AUTONOMOUS MOBILE ROBOT TECHNOLOGY

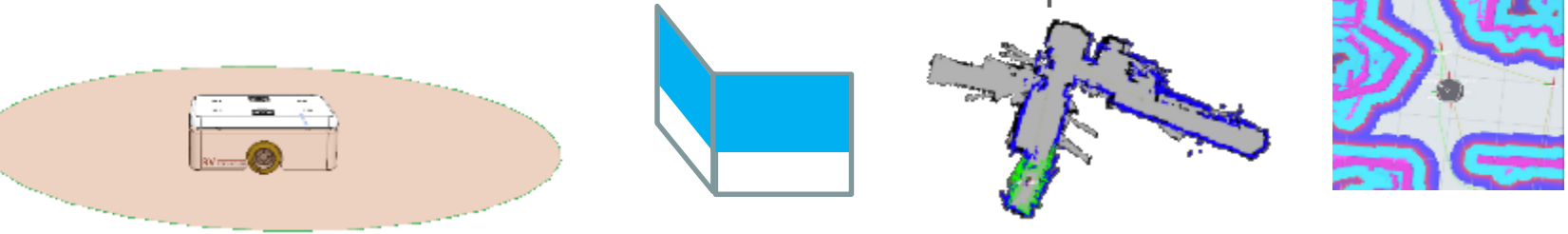
AUTONOMOUS MOBILE ROBOT (AMR) - **FOBO**

RV TECHNOLOGY

Follow/Guide: **FOLLOW ME** can Follow the Person/ Person to Follow to reach a designated location.

Auto Return/Navigation: **FOLLOW ME** through own navigation to route back to the original location. This function can be control by user panel.

SLAM Technology: real-time positioning and construction, especially the incremental construct of 2D environment map.



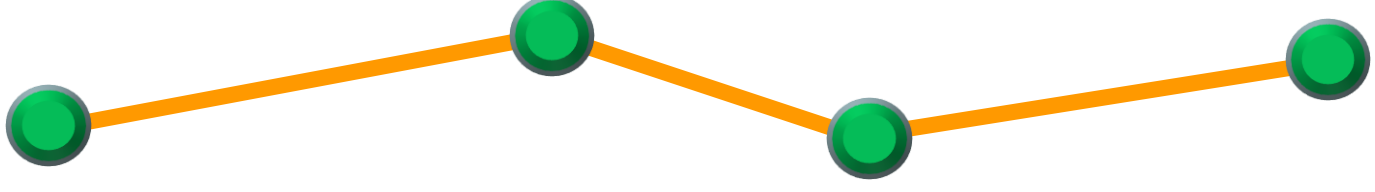
AUTONOMOUS MOBILE ROBOT (AMR) - **FOBO**

RV TECHNOLOGY

Anti-Interference: **FOLLOW ME** can withstand personnel interference, when someone pass between **FOLLOW ME** , and Target, it can Recognize original target.

Obstacle Avoidance: The navigation system use 3D and 270º detection to achieve path planning and collision in an unstructured environment

Way Point Record and Execution: Pre-records the waypoint in a known map, **FOLLOW ME** can travel to pre-defined destinations.

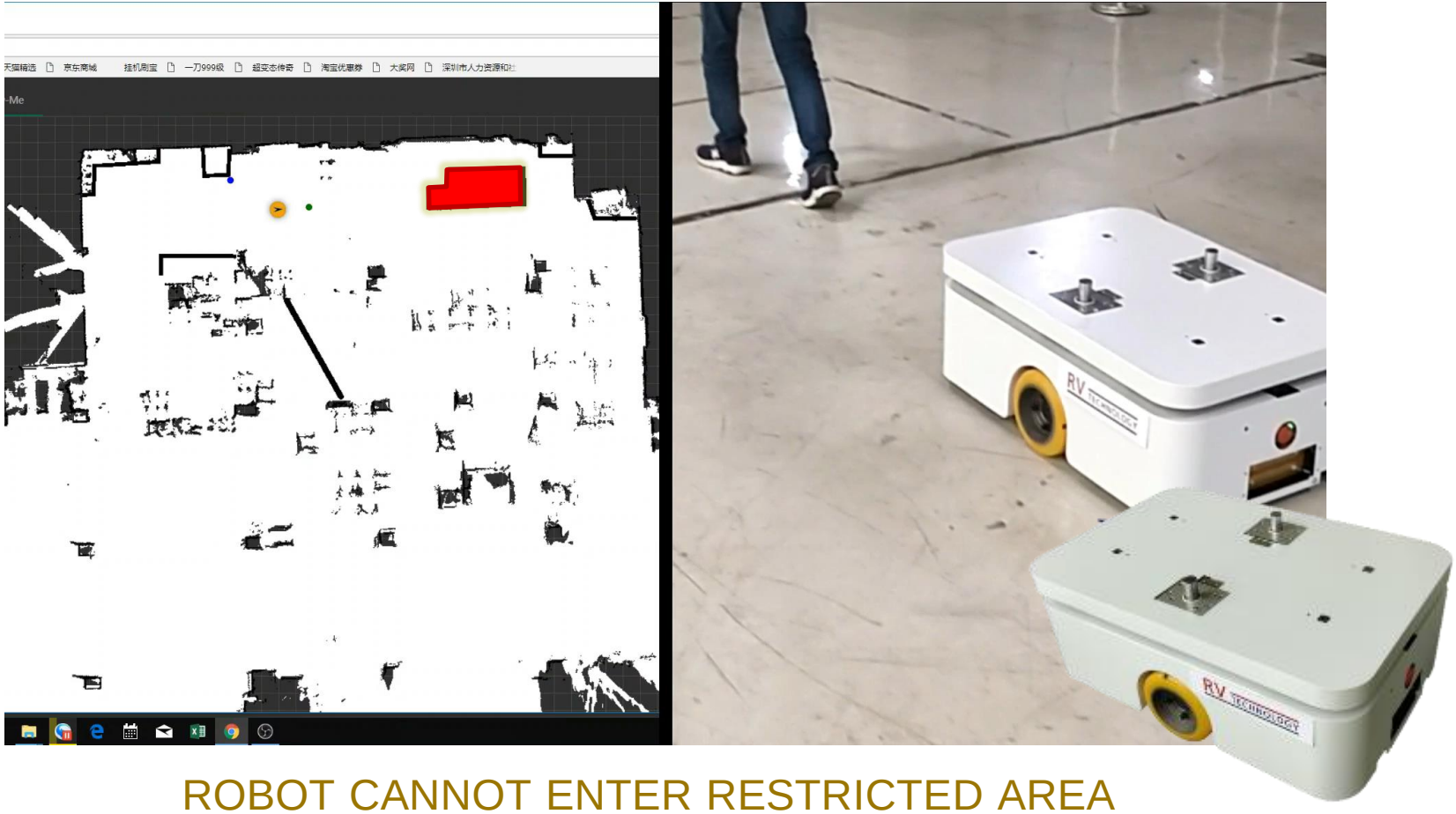


AUTONOMOUS MOBILE ROBOT (AMR) - **FOBO**

RV TECHNOLOGY

AUTONOMOUS MOBILE ROBOT (AMR) - **FOBO**

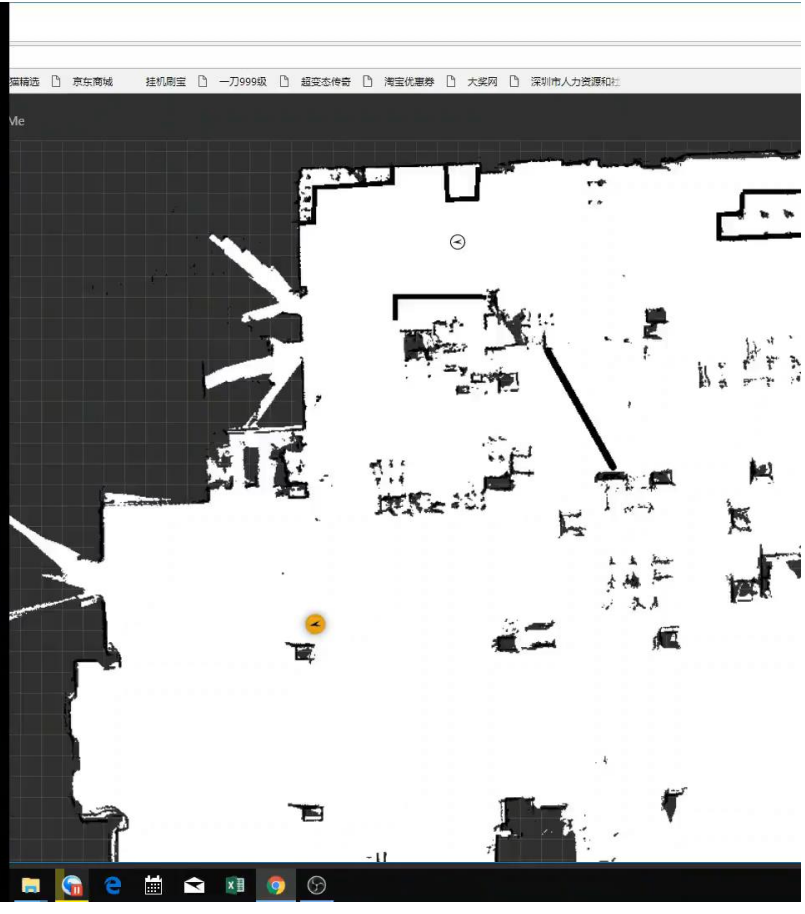
RV TECHNOLOGY



ROBOT CANNOT ENTER RESTRICTED AREA

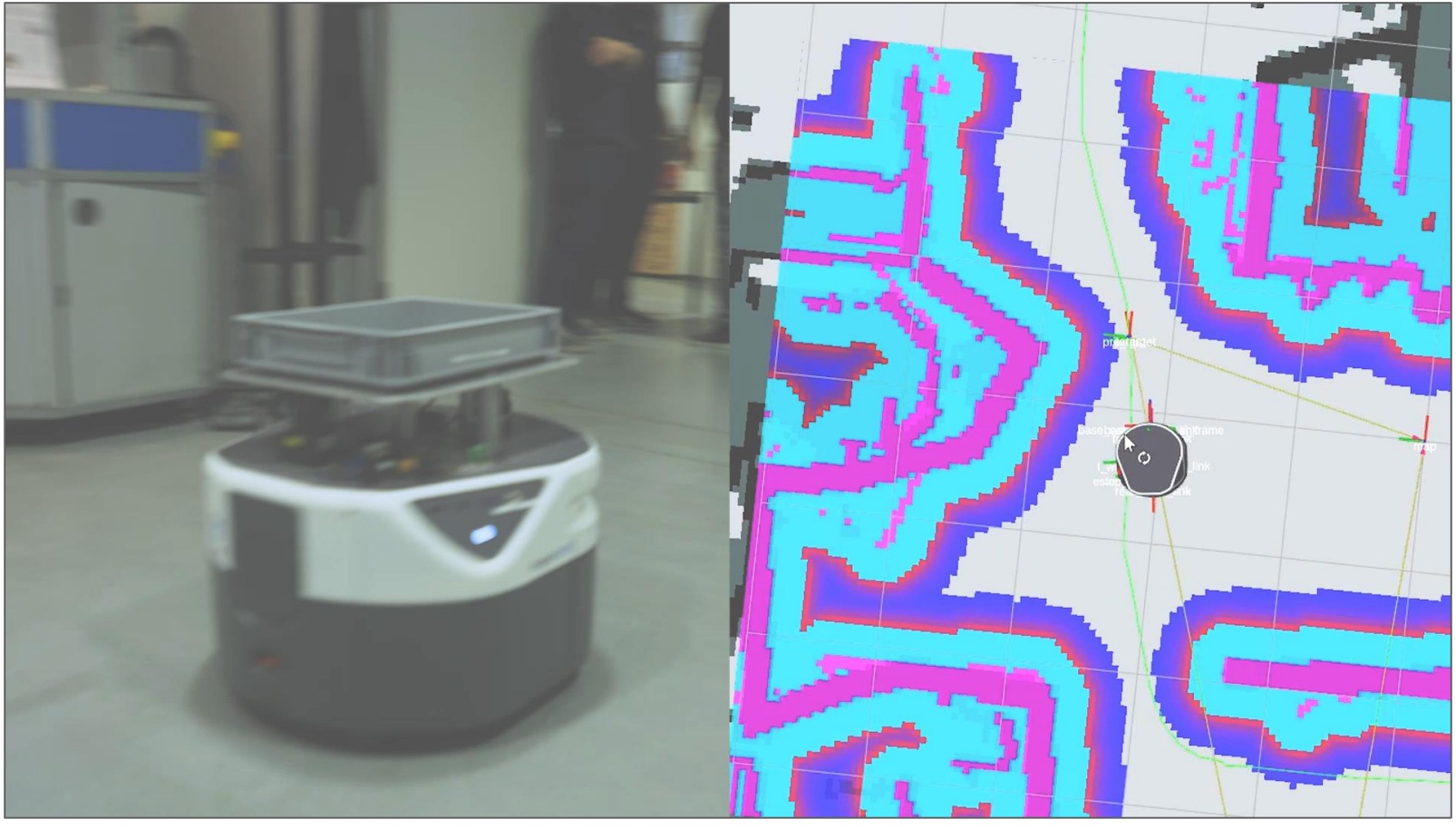
AUTONOMOUS MOBILE ROBOT (AMR) - **FOBO**

RV TECHNOLOGY



AUTONOMOUS MOBILE ROBOT (AMR) - **FOBO**

RV TECHNOLOGY



AUTONOMOUS MOBILE ROBOT (AMR) - **FOBO**

RV TECHNOLOGY

Wide range Application

Flexible extended equipment adaption

Fleet Management Support

Tour Patrol Robot

Robot Arm

Extended Other application

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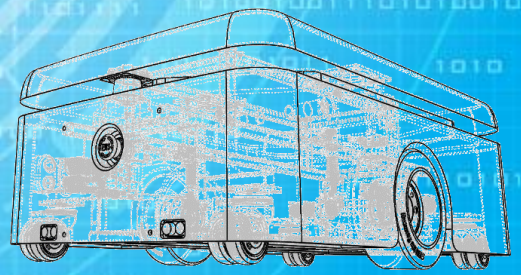
RV TECHNOLOGY

APPLICATION

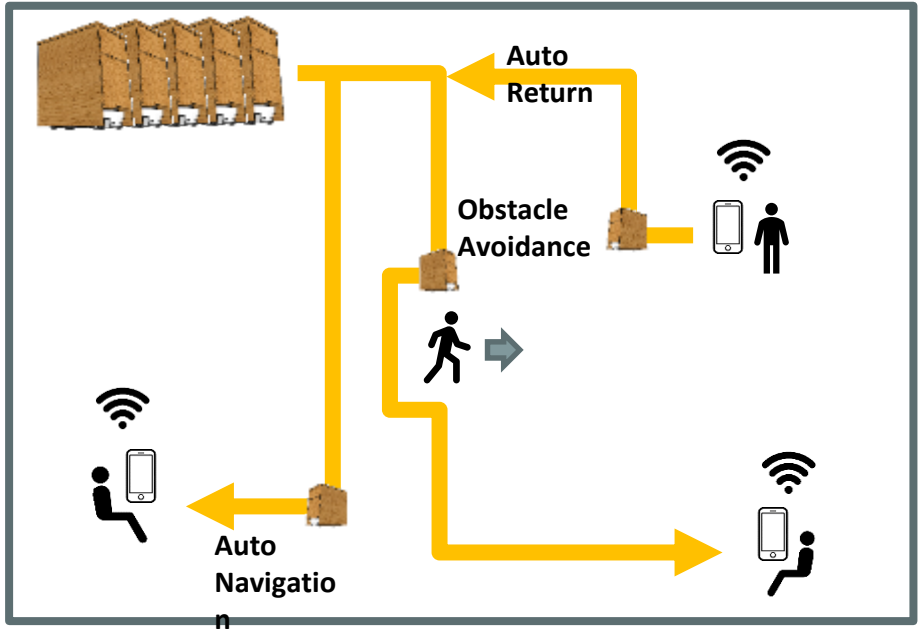


Support Nomadic Working Mode

Non-Guided AMR technology:
Auto Return/Navigation: **AMR** through own navigation to route back to the original location. This function can be control by user panel.
SLAM Technology: real-time positioning and construction, especially the incremental construct of 2D environment map.
Obstacle Avoidance: The navigation system use 3D and 270° detection to achieve path planning and collision in an unstructured environment
Way Point Record and Execution: Pre-records the waypoint in a known map, **AMR** can travel to pre-defined destinations.
Fleet Management: for Multi-AMR (up to 100+) in Site
APP Asset Management: APP remote lock/unlock Cabinet and Central management
Wireless Charging: Support Wireless Charging (optional)
Attractive Unit Pricing:

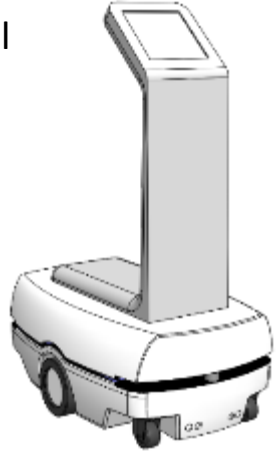
Support Nomadic Working Mode

APP remote lock/unlock Cabinet

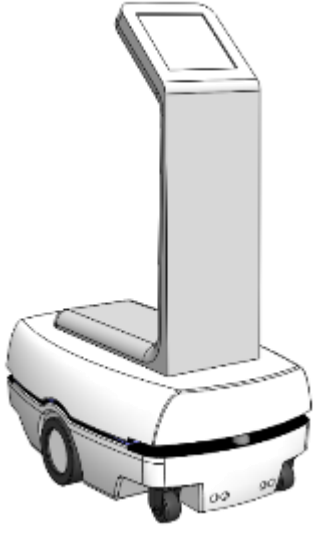


Guided Tour Working Mode

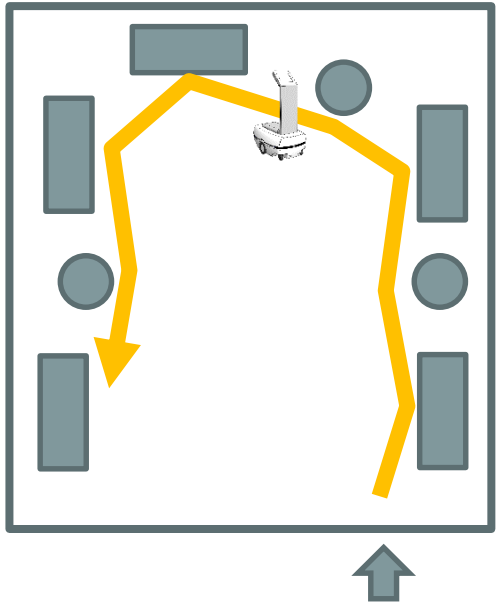
Follow/Guide: **FOLLOW ME AMR** can Follow the Person/ Person to Follow to reach a designated location.
Anti-Interference: **FOLLOW ME AMR** can withstand personnel interference, when someone pass between **FOLLOW ME AMR** , and Target, it can Recognize original target.
Auto Routing: **FOLLOW ME AMR** through pre-set route on site
SLAM Technology: real-time positioning and construction, especially the incremental construct of 2D environment map.
Obstacle Avoidance: The navigation system use 3D and 270° detection to achieve path planning and collision in an unstructured environment
Way Point Record and Execution: Pre-records the waypoint in a known map, **AMR** can travel to pre-defined destinations.
Wireless Charging: Support Wireless Charging (optional)
APP control:



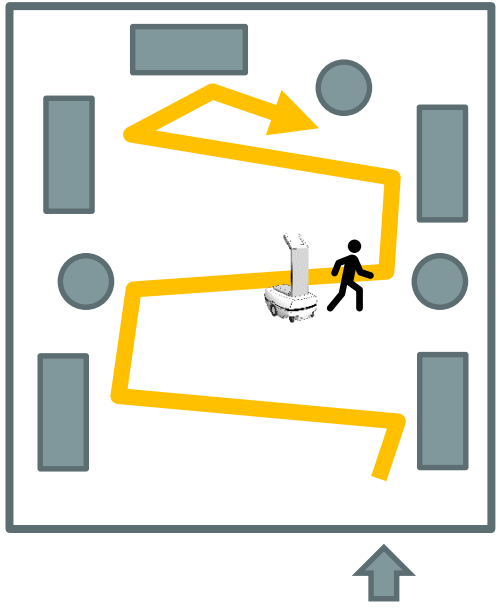
Guided Tour Working Mode



Auto Route Mode (fix Route)

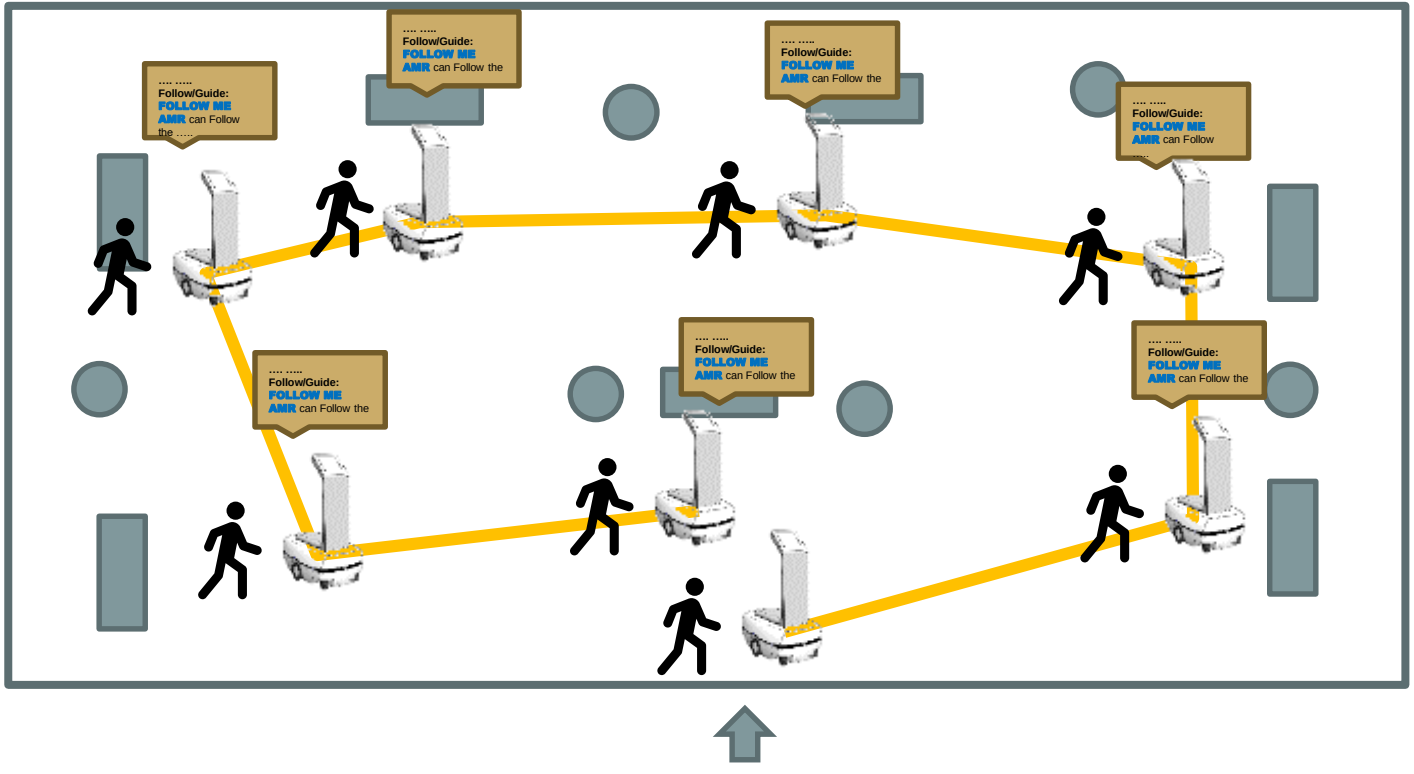


Follow Guest Mode (Flex Route by Follow Guest)



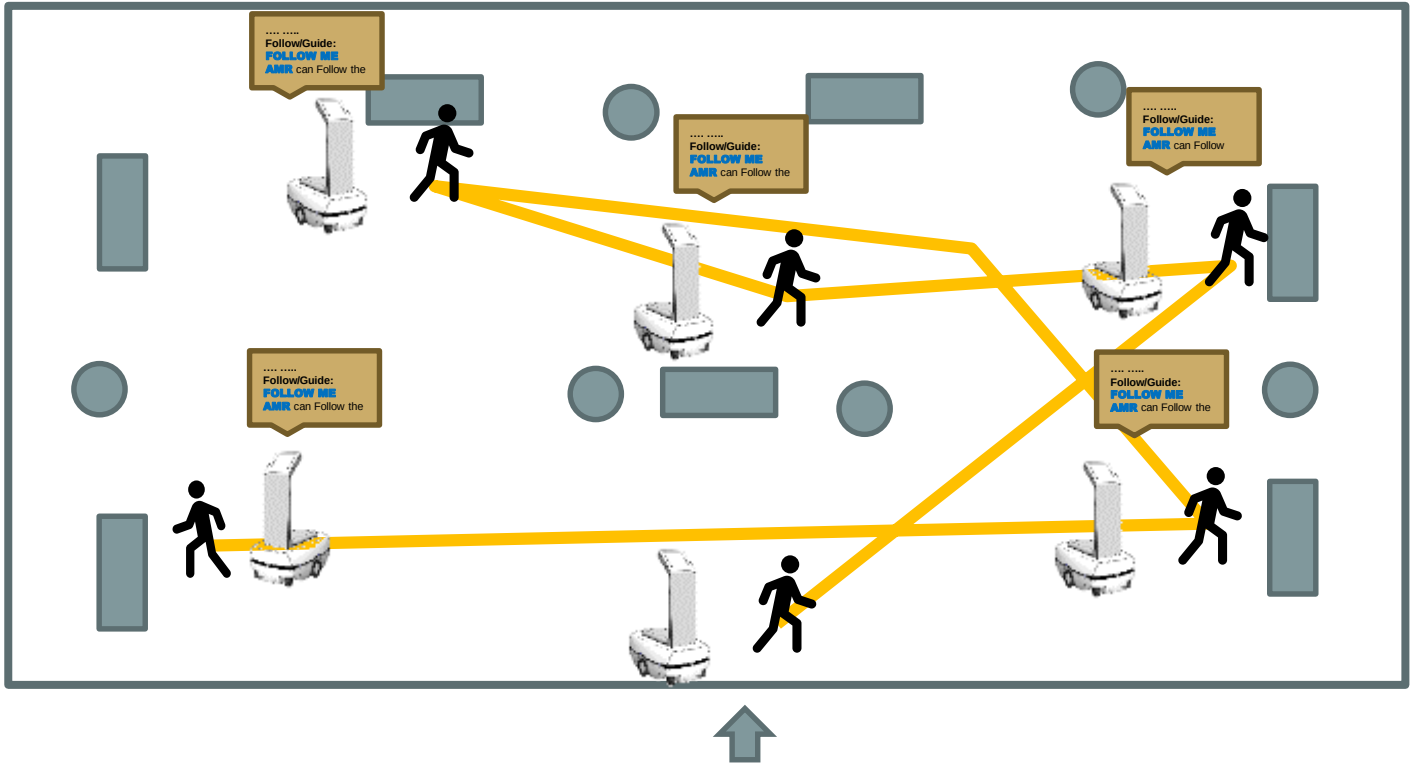
Guided Tour Working Mode

Auto Route Mode (fix Route)

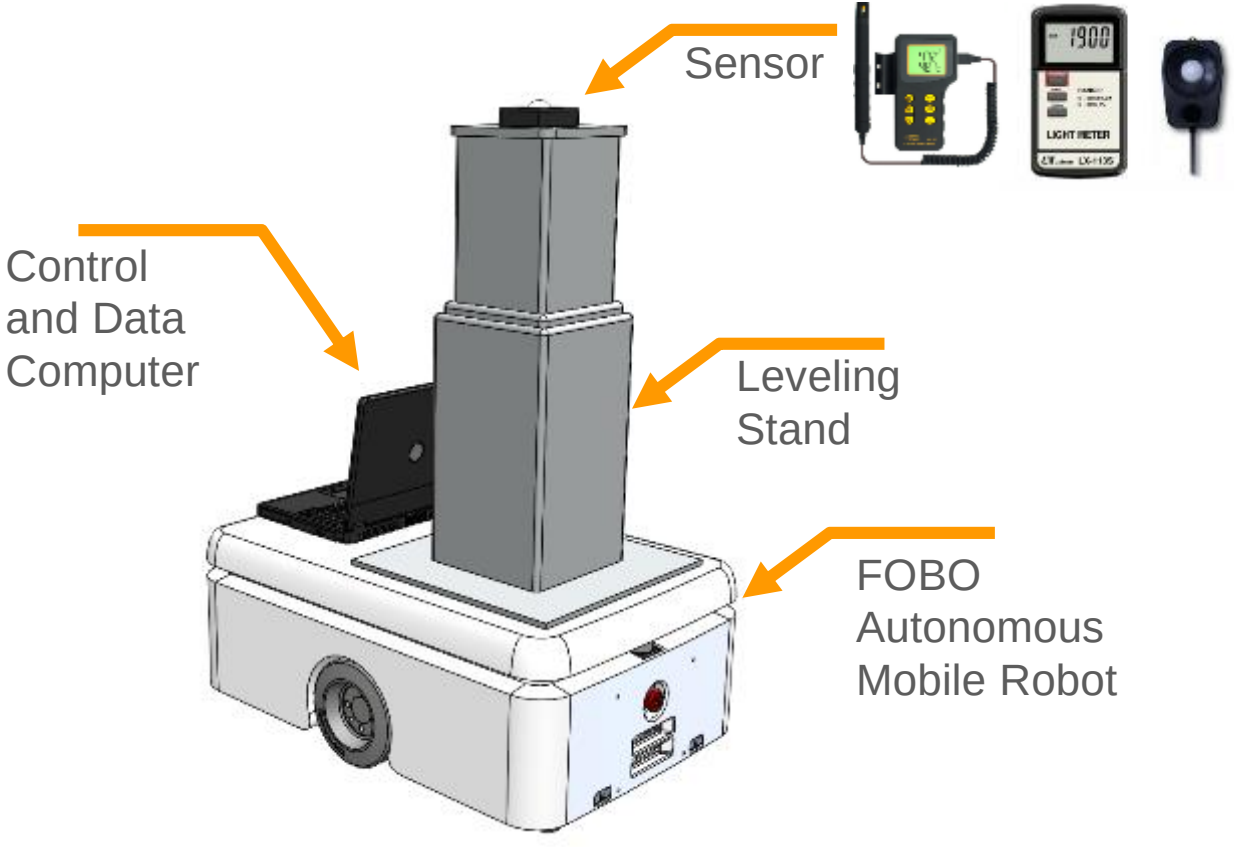


Guided Tour Working Mode

Follow Guest Mode (Flex Route by Follow Guest)

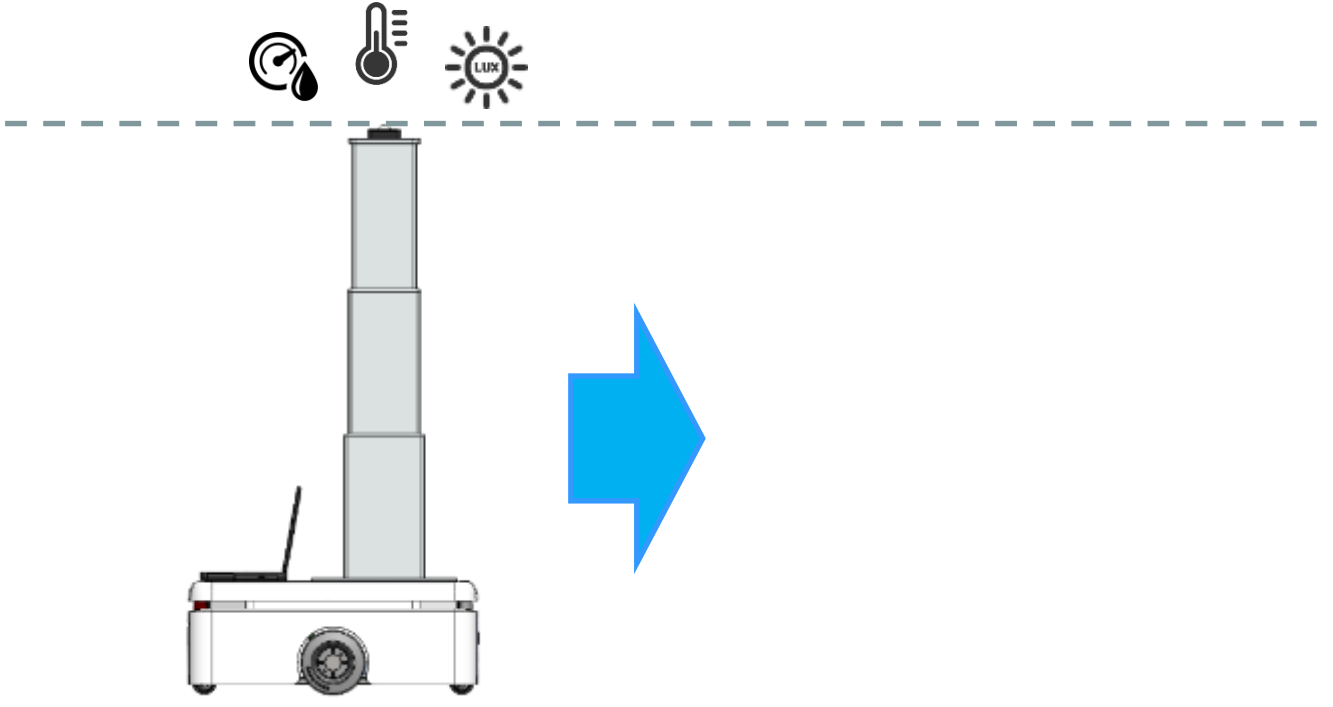


INSPECTION MEASURE ROBOT

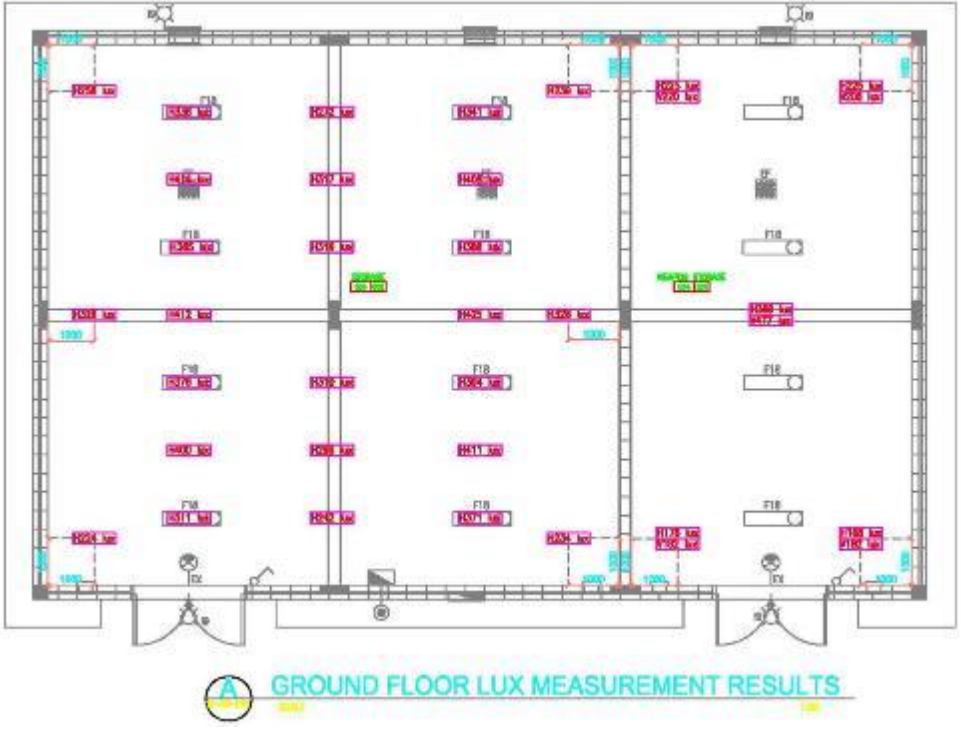


ROBOT-ROUTING

DATA COLLECTION



System Cab Create mapping Result and Excel table

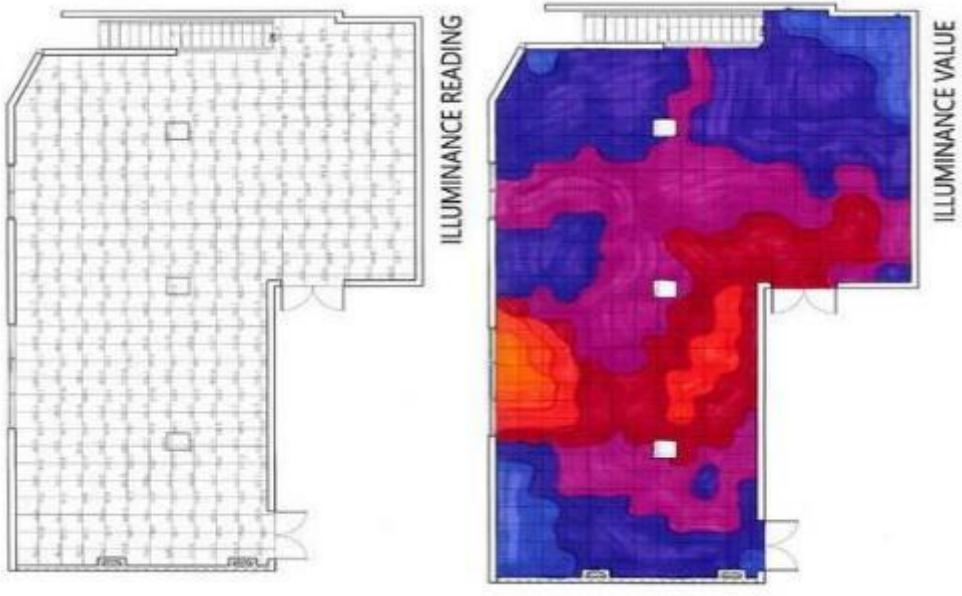


REPORT

RV TECHNOLOGY

Due to Data can be fast measurement, it can add additional measure point between target target, and create value added Result Mapping Result

Example:



Alarm warning when ad-normal result situation

RV TECHNOLOGY

NEW GENERATION

SMART/ROBOTIC WHEELCHAIR

WHEELCHAIR HISTORY

RV TECHNOLOGY

MANUAL WHEELCHAIR

ELECTRONIC WHEELCHAIR

1930s

2010s

RV TECHNOLOGY

SMART/ROBOTIC WHEELCHAIR

- 360 degree Joystick Manual Control
- SLAM Technology/Auto-Navigation
- Obstacle Avoidance
- Advance Follow Me Feature
- Anti-Interference
- APP – Remote Control/Calling
- Auto Charging
- Wireless Charging
- Support Fleet Management

RV TECHNOLOGY

FULLY INTEGRATED WITH FOBO AND ELECTRONIC WHEELCHAIR

ADVANCE FOLLOW FEATURE

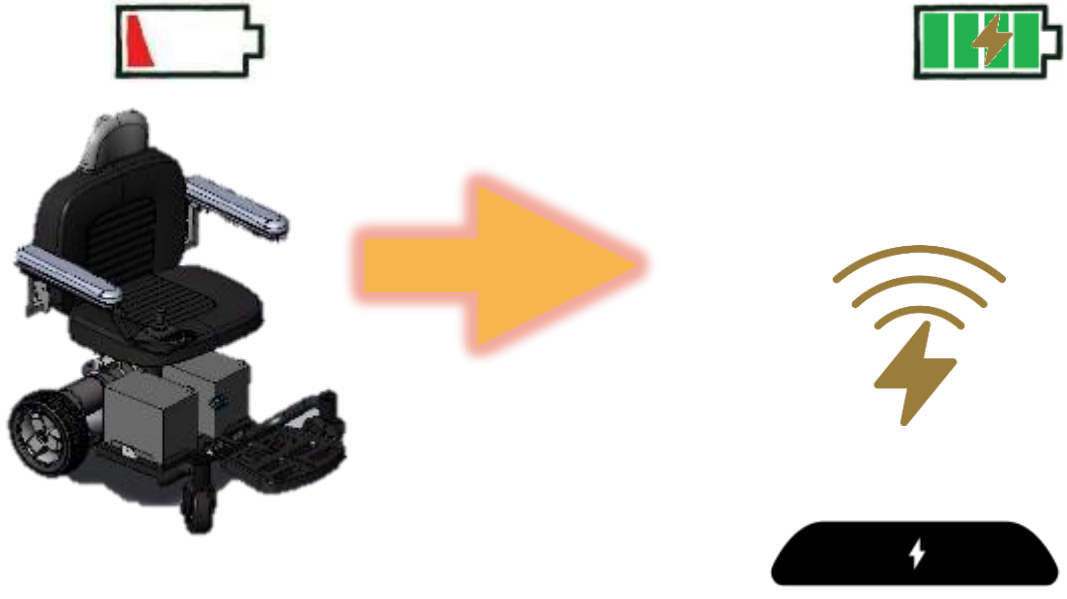
FOLLOW ME feature let Smart Wheelchair can Follow the Person/ Person to Follow to reach a designated location.

MOBILE REMOTE

Mobile device Remote: Smart Wheelchair can call by mobile device, and defined the destination

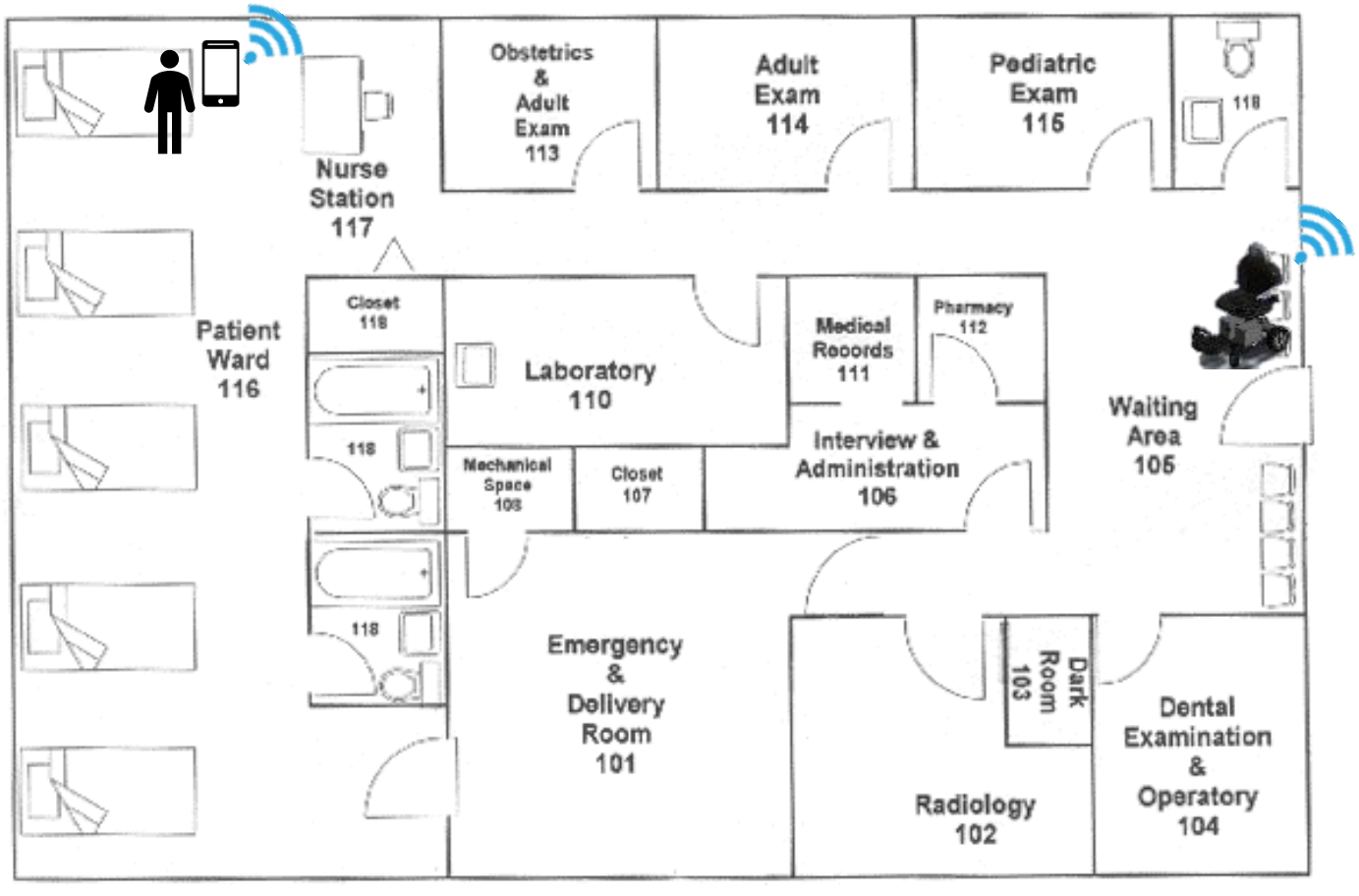
CHARGING

Auto-Charging: Smart Wheelchair Support Auto-Charging with Power management



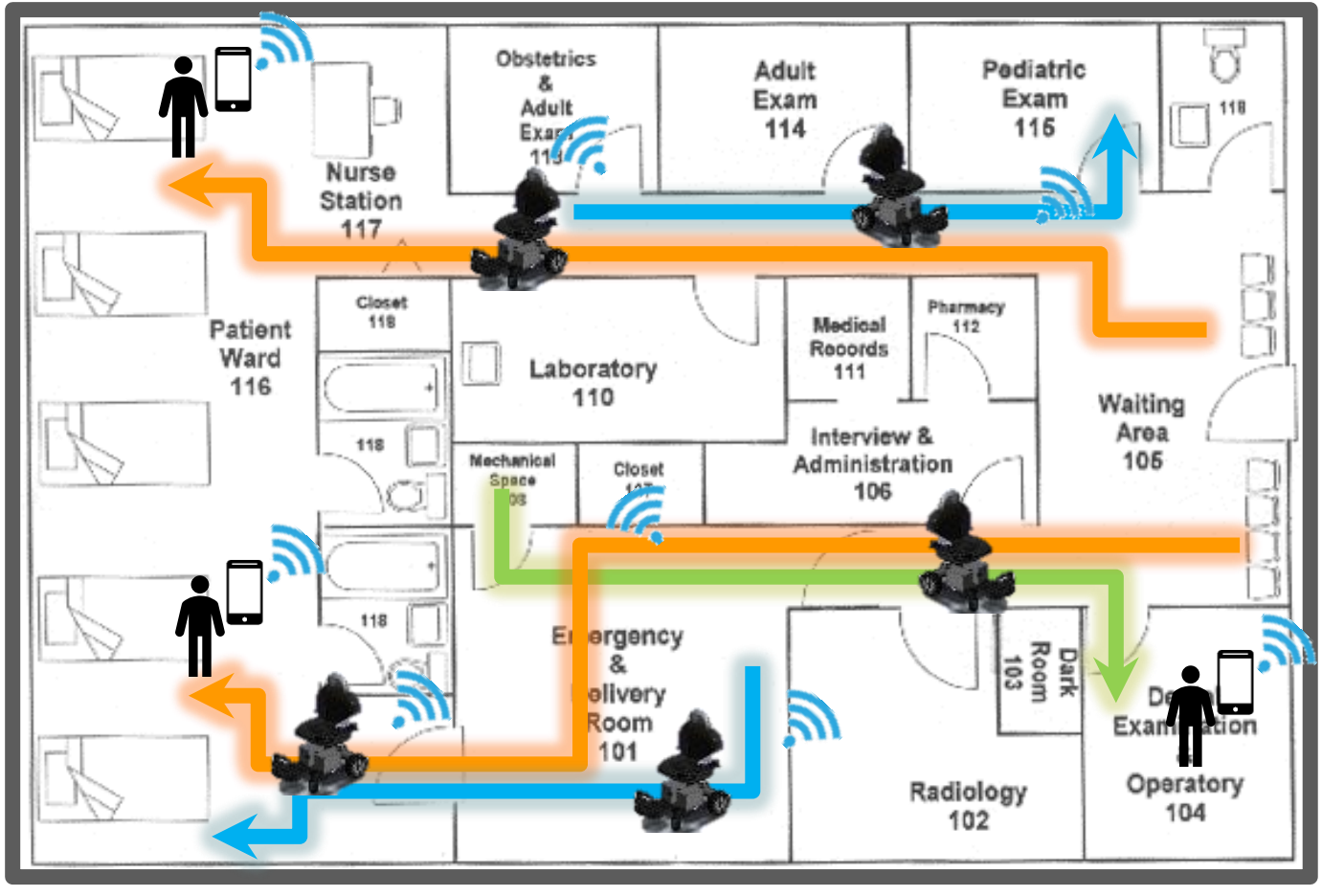
NEW GENERATION WHEELCHAIR - APPLICATION EXAMPLE

RV TECHNOLOGY



NEW GENERATION WHEELCHAIR -

RV TECHNOLOGY



AUTONOMOUS MOBILE ROBOT – EXTENDABLE SOLUTION

RV TECHNOLOGY

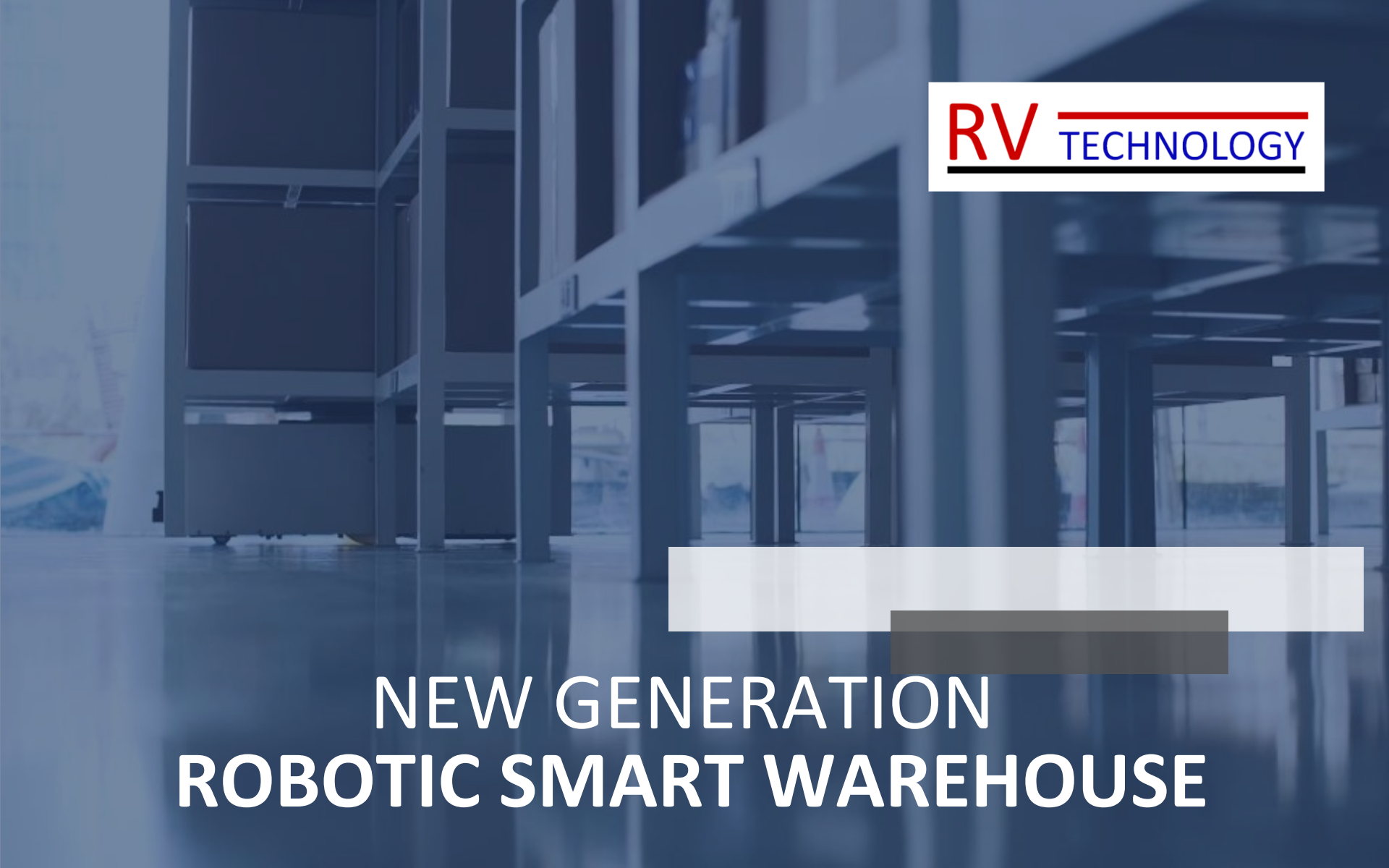
Patrol Robot

Floor Cleaning Robot

… …

… …

Welcome to Input



NEW GENERATION
ROBOTIC SMART WAREHOUSE

MOBO AMR

RV TECHNOLOGY

- 2D LIDAR Sensor
- Optical Reading Head
- Lithium rechargeable battery
- Motor - China High Speed Train Motor Provider

SICK
Sensor Intelligence.

PEPPERL+FUCHS

HAWKER
POWER GROUP LTD

HollySys

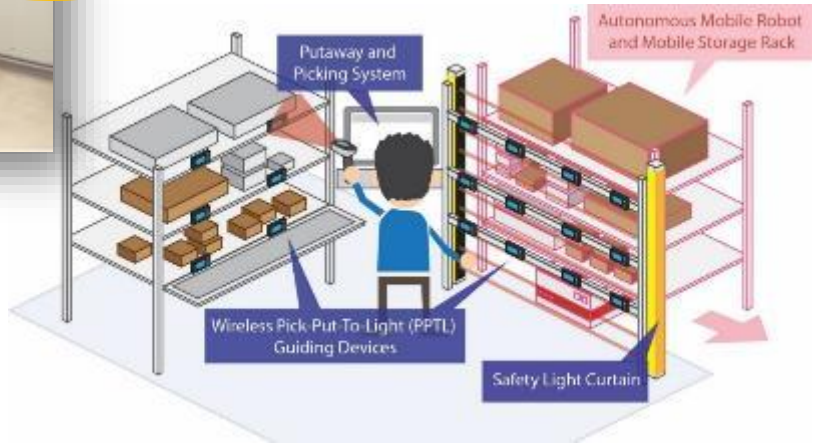
PICKING & PUT-AWAY STATION

RV TECHNOLOGY

Pick/Put to Light Workstation Customization for Client

Safety Curtain

Pick/Put to LED Light

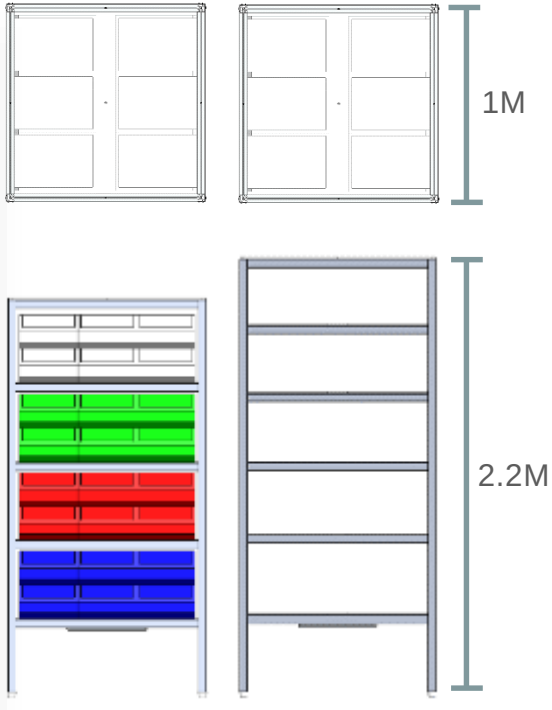


Pick/Put to LED Light with Qty Display

STORAGE RACK

RV TECHNOLOGY

Storage Rack Customization for Client’s requirement



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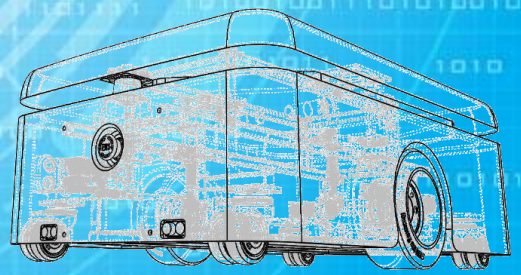
EMSD

RV TECHNOLOGY

OTHER SOLUTION



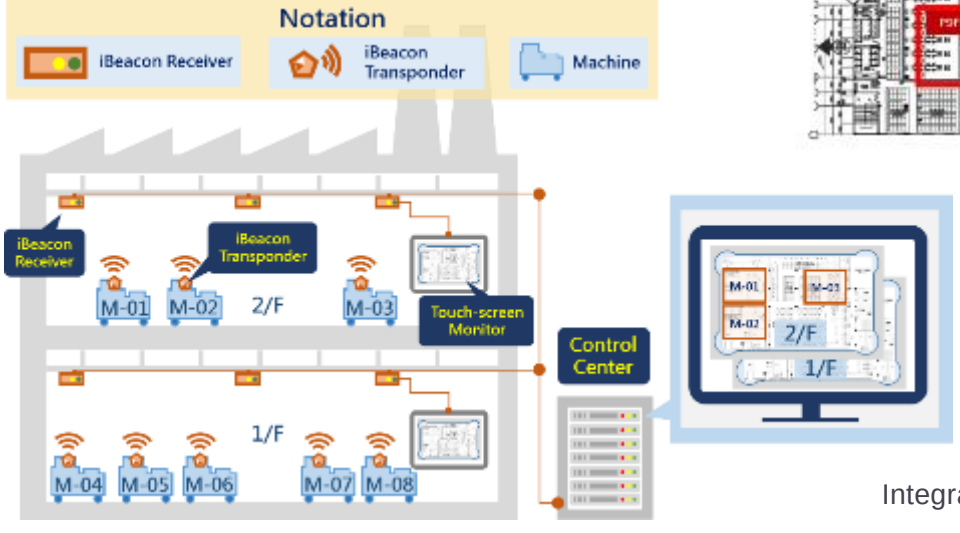
ROBOTIC 3D VISION

RV TECHNOLOGY

Pickit
ROBOT VISION MADE EASY

IOT ASSET MANAGEMENT SOLUTION

RV TECHNOLOGY



Integrated I4.0 and IOT Technology

機電工程署 EMSD

RV TECHNOLOGY

THANKS

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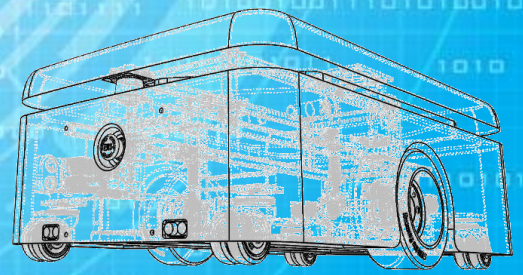
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