SCALING AT THE EDGE

Delivering User-Centric Service with Smart AMR

NexAIoT

Your Partner in Smart Manufacturing

Dr. Hoe Seng Ooi
Chief Technology Officer, NexAIoT

NEXAIOT

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Autonomous Mobile Robot (AMR) for Delivery

A large variety of forklift, conveyor, top-loader, elevator, tray type of AMR;
yet there are no direct solution for fitting **“one-size-fits-all”** requirement.

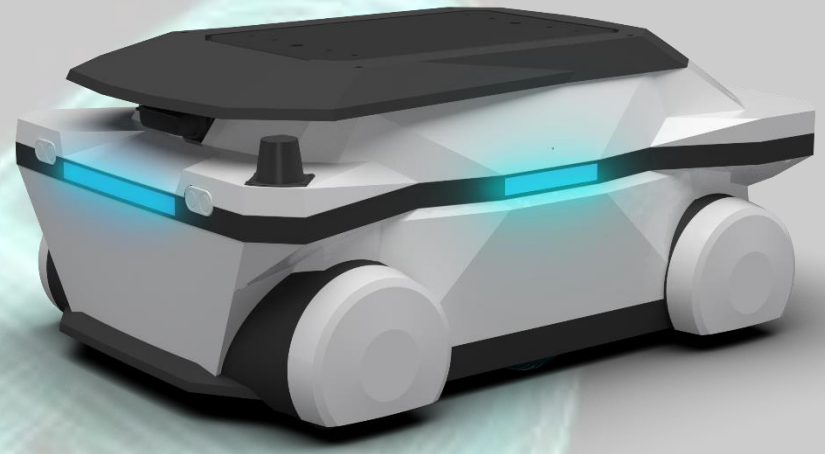
What’s NEXT?

Public

Smarter Autonomous Mobile Robot (AMR)

NexMOV

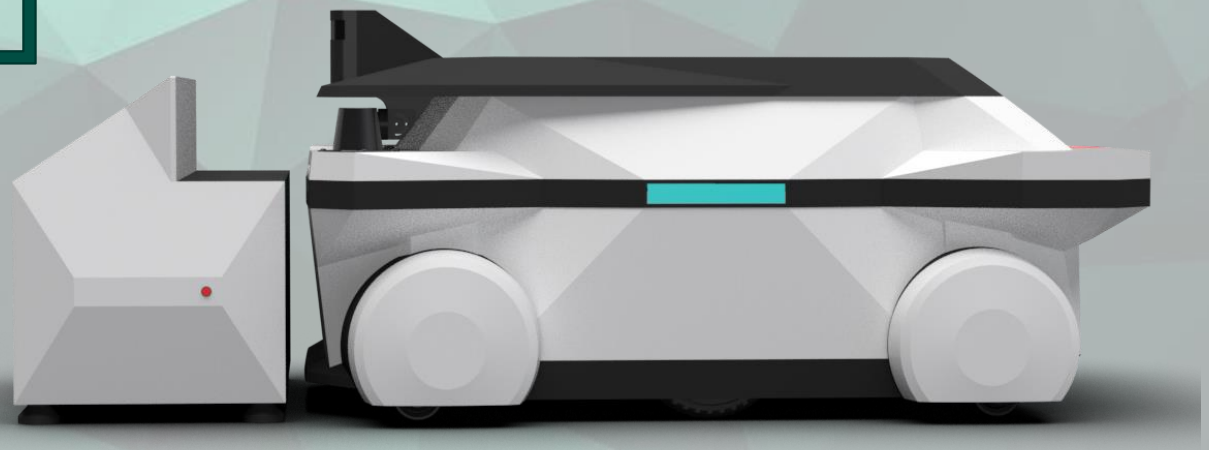
A synergy of competent hardware
and sophisticated software backend



Public

NexMOV The versatile AMR Base Unit with Wireless Charging

- Modular Design for Easy Add-On Top Module
- Small Form Factor with High Payload 200kg
- Intelligent Auto-Docking Wireless Charging
- Command Center and Service Center for Interoperability with OT/IT



Wireless Charger *NexMOV AMR Base Unit*

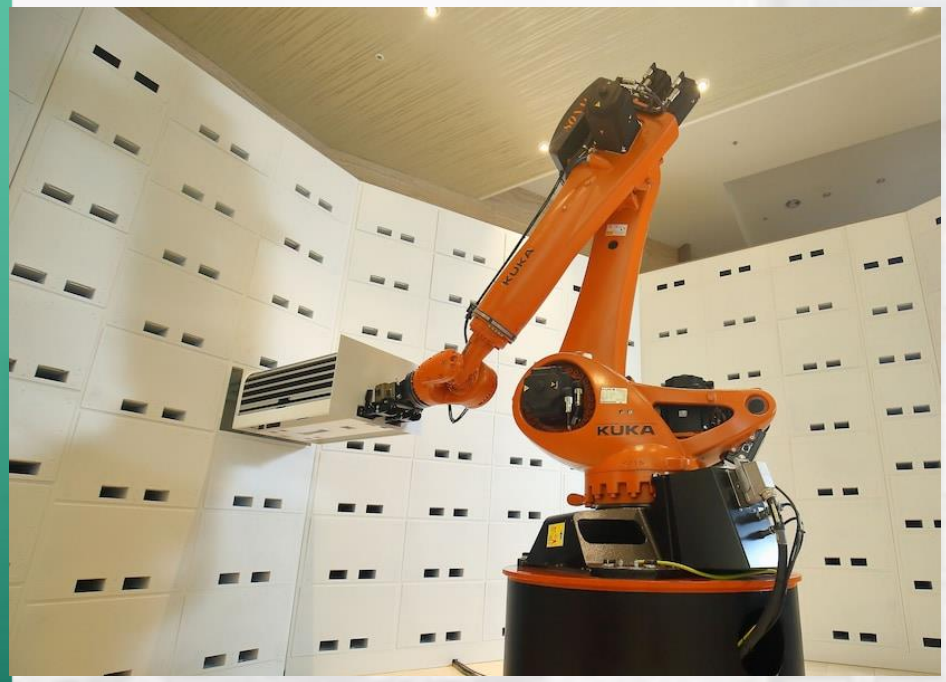
Public

NexMOV Easy Add-On Top Module

Public

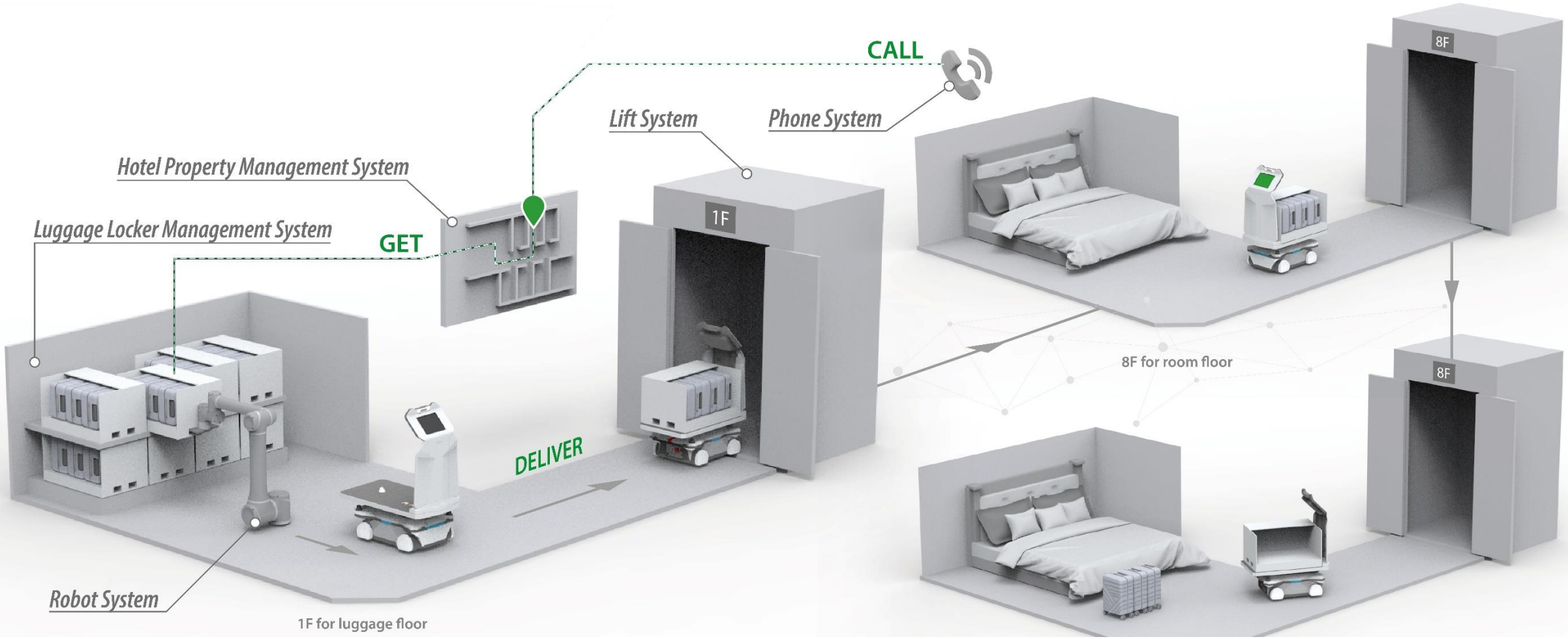
Use Case Kloud Hotel in Taichung (centre of Taiwan)

- Hotel is located nearby the most famous Night Market of Taiwan.
- A robotic arm is used for luggage storage system.



NexMOV Luggage

Use Case Automated Luggage Storage and Delivery



Use Case Automated Luggage Storage and Delivery

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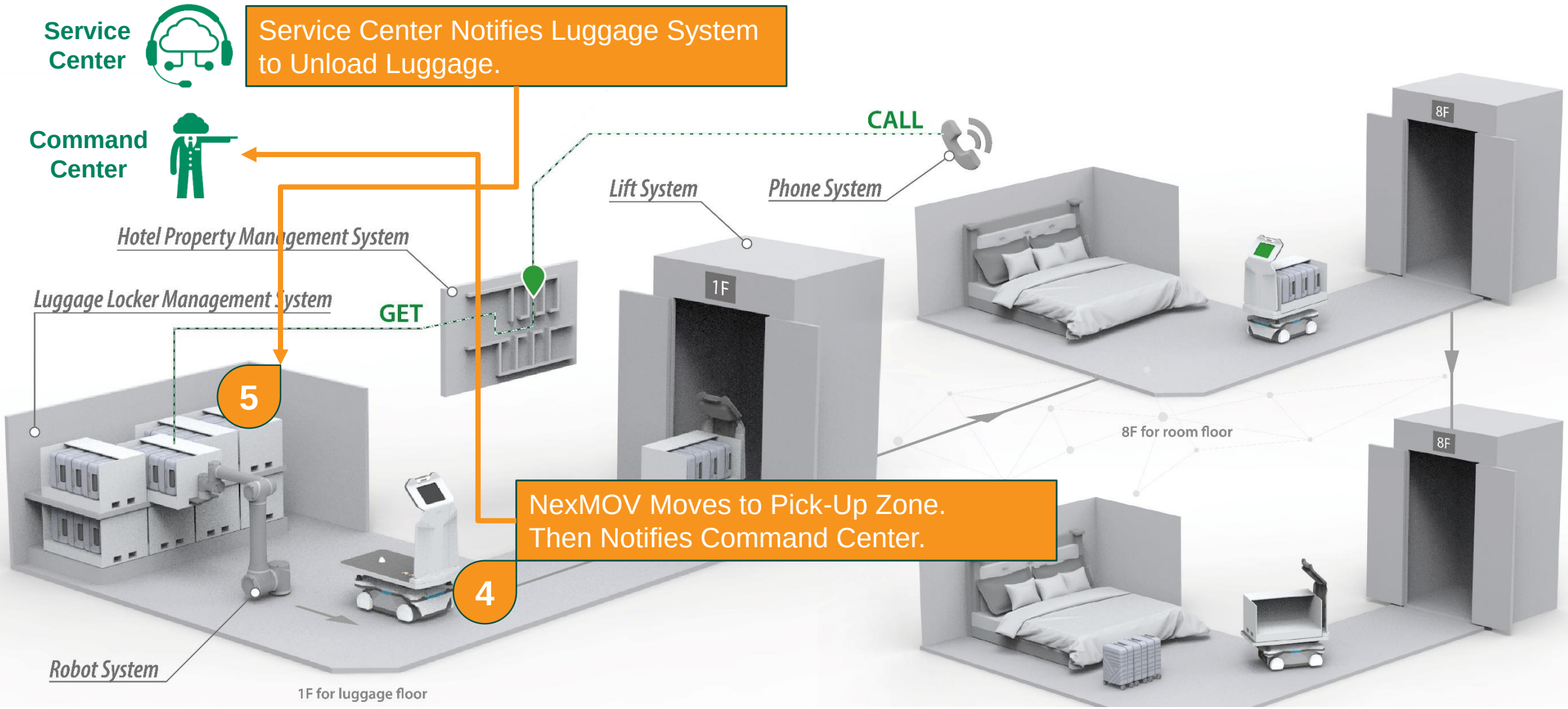
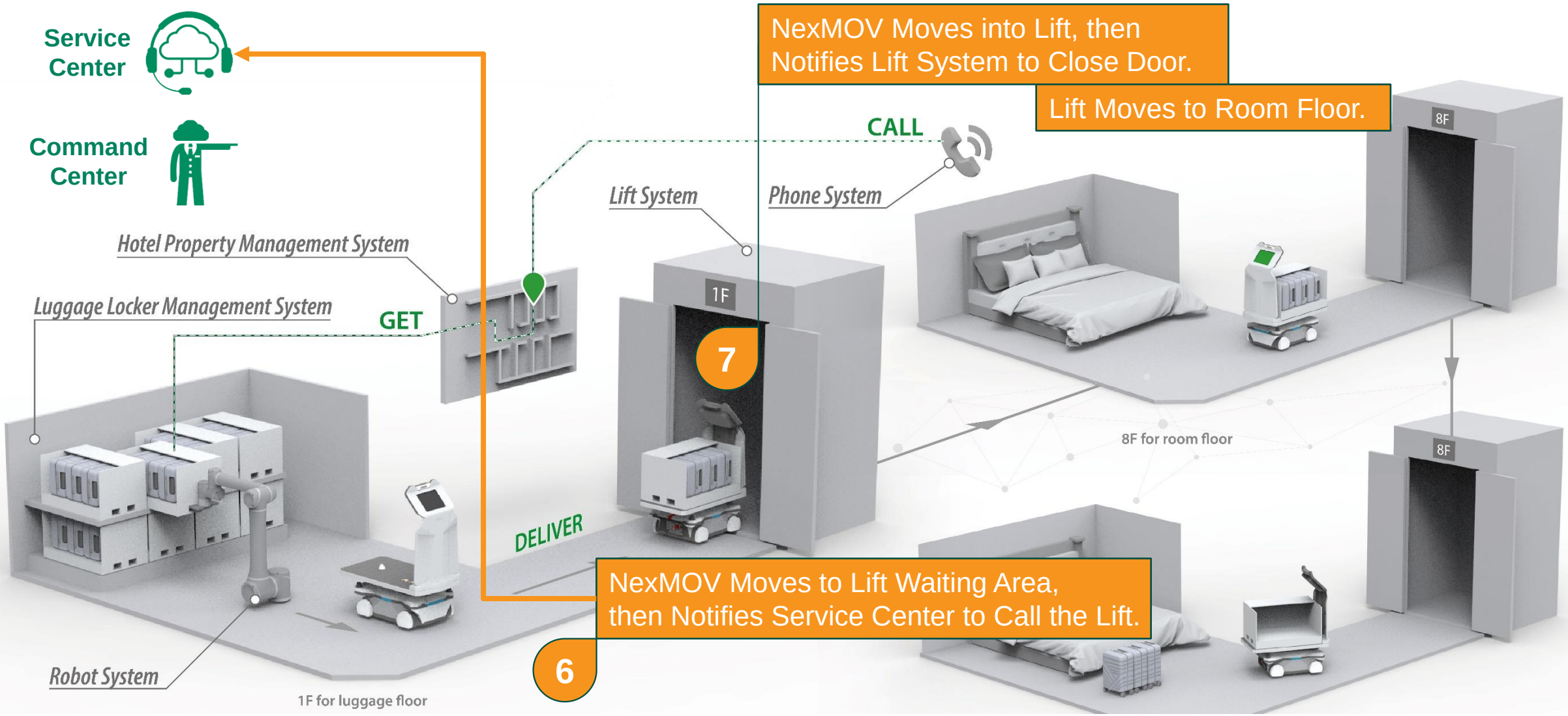
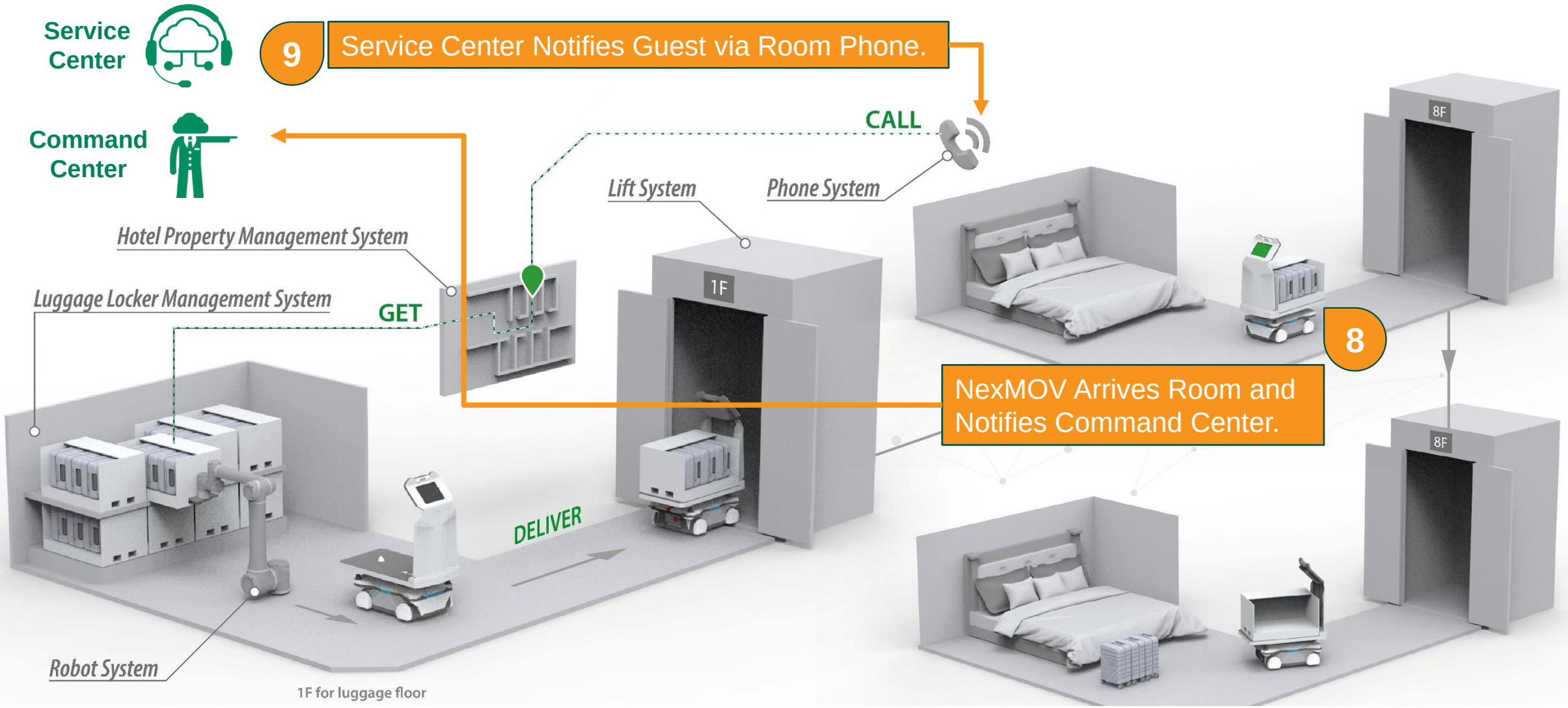


Use Case Automated Luggage Storage and Delivery



Use Case Automated Luggage Storage and Delivery



Use Case Automated Luggage Storage and Delivery

Solution – NexMOV System Functionality

1. Call lift to NexMOV location.
2. Set lift target floor for NexMOV.
3. Notify NexMOV when lift reaches target floor.

1. Get room number for delivery service.
2. Luggage delivery service request from Luggage System.
3. Notify Luggage System
   i. NexMOV is at Pick-Up Zone.
   ii. NexMOV is at target position ready to receive luggage box.
   iii. To inform Robot to put luggage box back to locker when transfer is completed.

WebSocket

WebSocket

WebSocket

1. Receive call from hotel guest for luggage service.
2. Call hotel guest and provide luggage collection password when NexMOV arrives at room.

Luggage Module | Lift Module | Phone Module

Service Center

WebSocket

Command Center

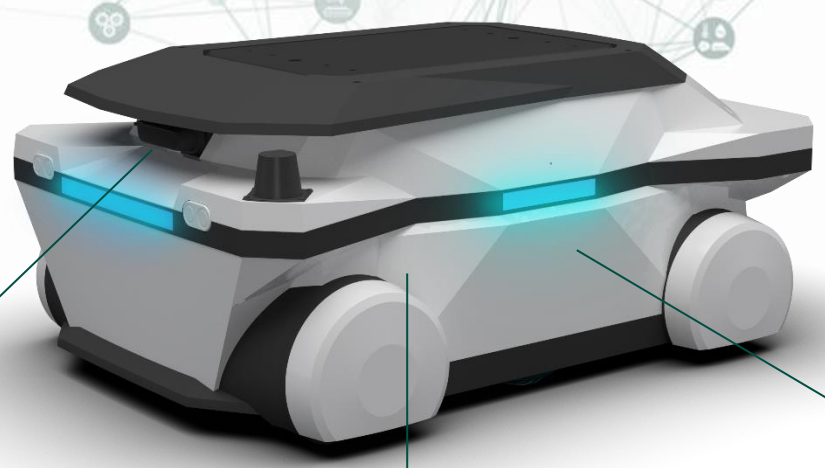
WiFi

1. NexMOV interactive user interface.
2. Luggage collection password verification.
3. Lock/Unlock luggage box door.
4. Monitor door status during luggage transfer
5. Voice playback.

1. NexMOV mission execution
2. NexMOV status update
3. New mapping for mission planning

NexMOV

Modular Design for Easy Add-On Top Module to accommodate different use cases



Command Center and Service Center for Interoperability with OT/IT

Intel® RealSense™ camera

OpenVINO™

Intel® Distribution of OpenVINO™ toolkit

NexAIoT Controller RCB600
Powered by Intel® Core™ i7 processor based industrial PC

Public

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