“Omron will be presenting a look at the development from discrete robotic solutions alongside other automation technologies that support Food safety and quality.

Secondly, we will be taking a look to a new technology termed Autonomous Intelligent Vehicles [AIV] and importantly how these may transform the future factory."

“Autonomous vehicles to enhance Food production"

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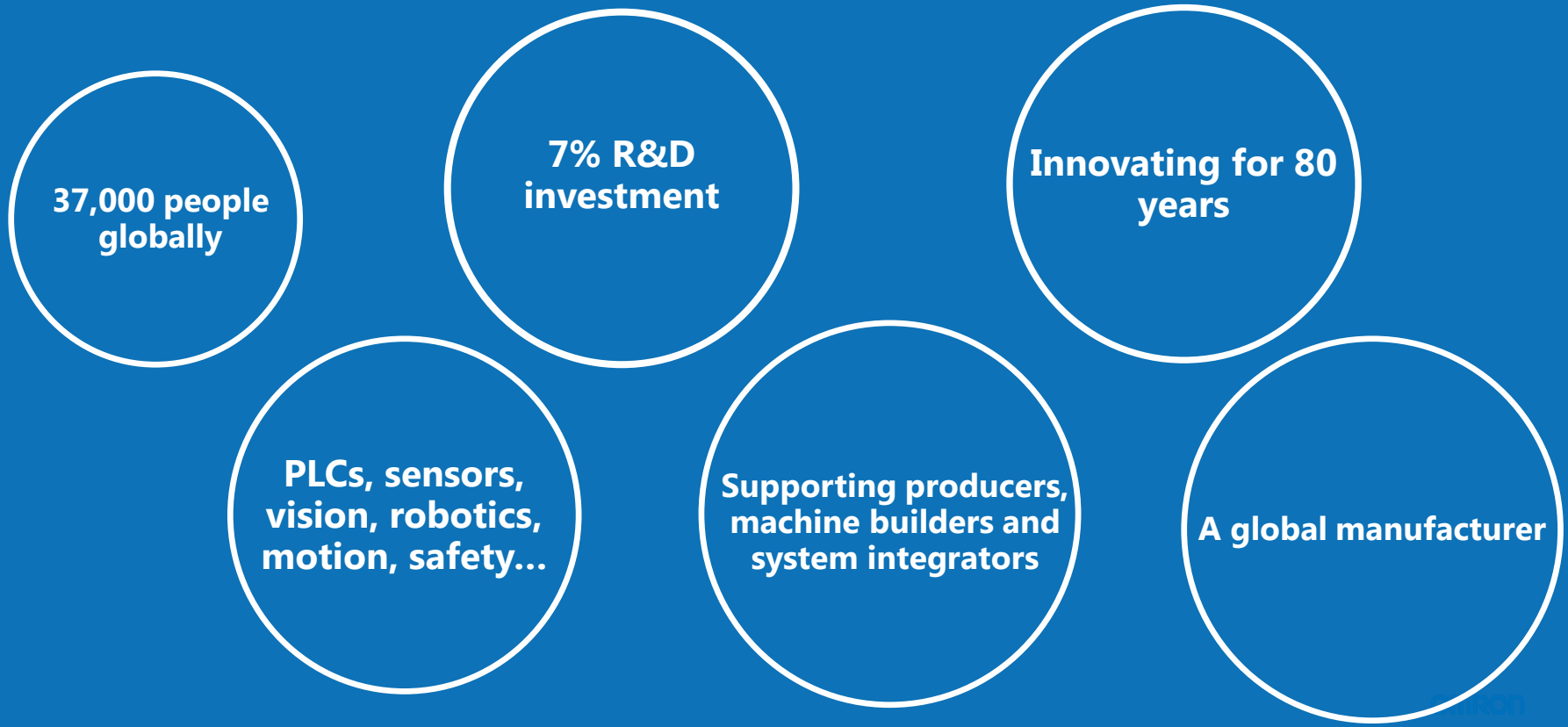
Speakers

Bruno Adam
Mobile Robot Business Director
Omron Europe BV

Robert Brooks
Food & Beverage Industry Marketing Manager
Omron Europe BV

Bringing innovation to Food & Beverage manufacturers



Food & Beverage Manufacturing

Flexible and safe production, Quality inspection, traceability through serialisation, productivity, reducing waste and resources

Innovative automation solutions

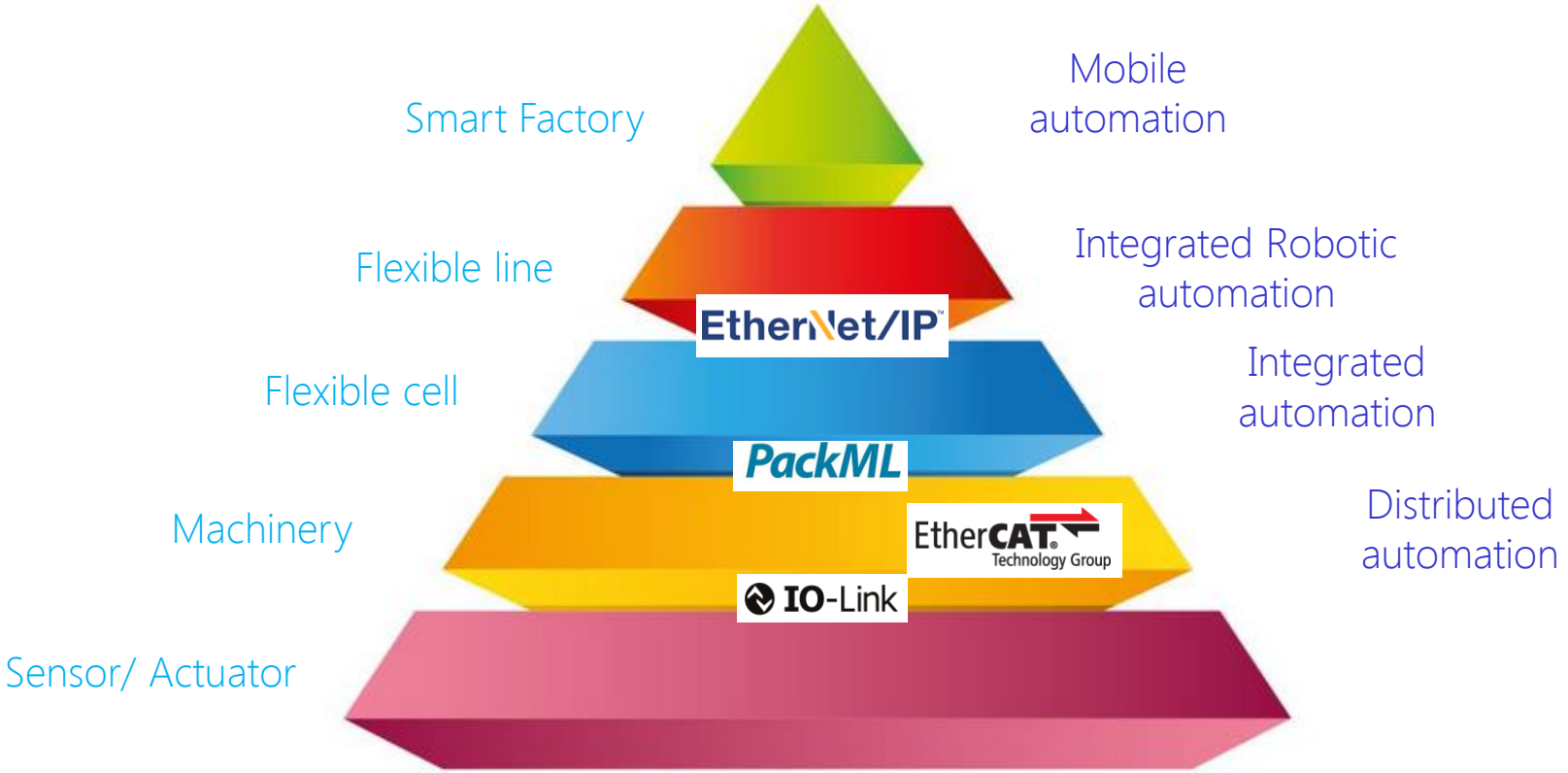
Robotic solutions, advanced vision systems, safety services, information management, energy management

The specifics of F&B production

…there are particular challenges in terms of consumer habits, labour related trends, technology and regulation….


tariff
salt
retailer
margins
genome sequencing
counterfeit
acrylomides
sugar
recall
ohmic heating
labour
labelling
skills
provanance
clean label
fraud
waste
listeria
natural
GM

Automation architecture….



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i-automation

Intelligent, Interactive, Integrated Factory

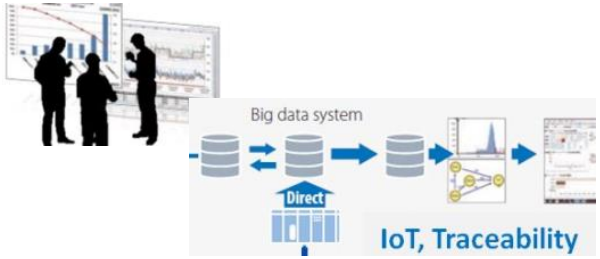
Productivity

Changeover

Food package quality

Reducing energy

Traceability



EtherNet/IP

PackML

Robotic handling

Quality inspection

Temperature control

Data handling

Motion control

Evolution of robotics

Discrete robots

Collaborative robotics

Autonomous robots

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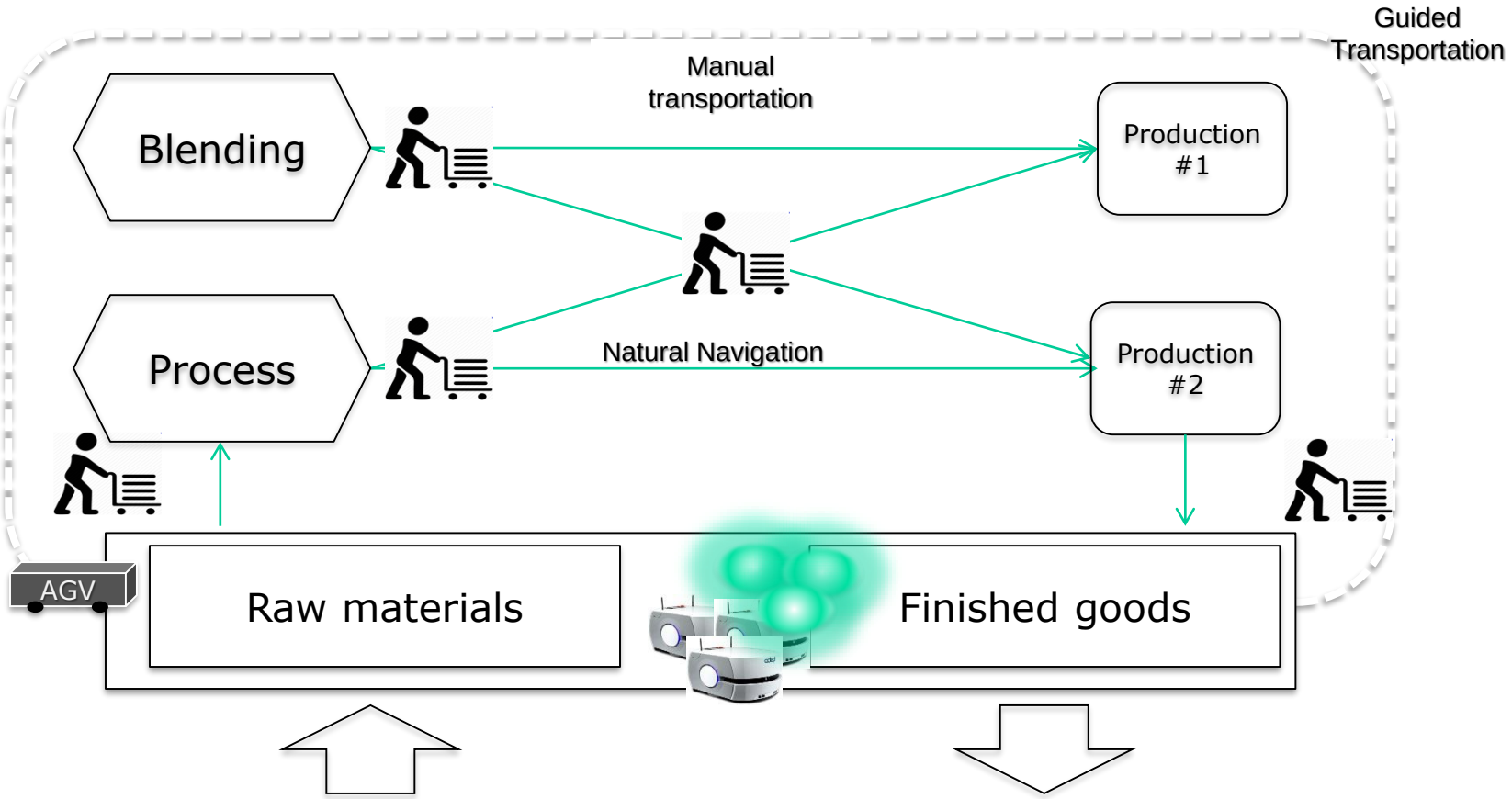
Intralogistics evolution



Intralogistics of the future…Today!

Autonomous Intelligent Vehicle (AIV) - Concept and Philosophy

- Fixed schedule
- Fixed route
- Fixed fleet
- PUSH flow
- Break-down blocks the track

- On call
- Shortest route
- Existing infrastructure
- Flexible fleet
- Pull

Introducing the Mobile platform from Omron

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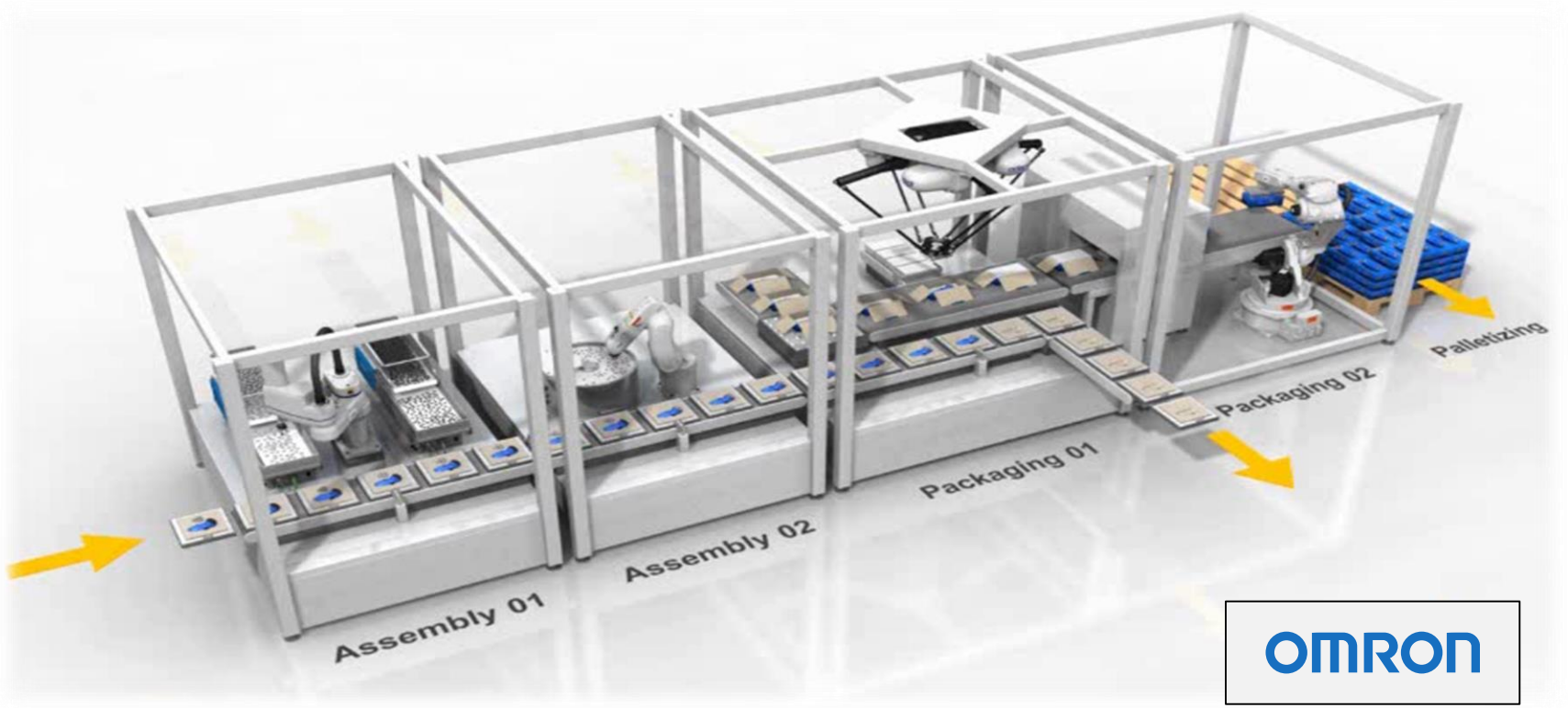
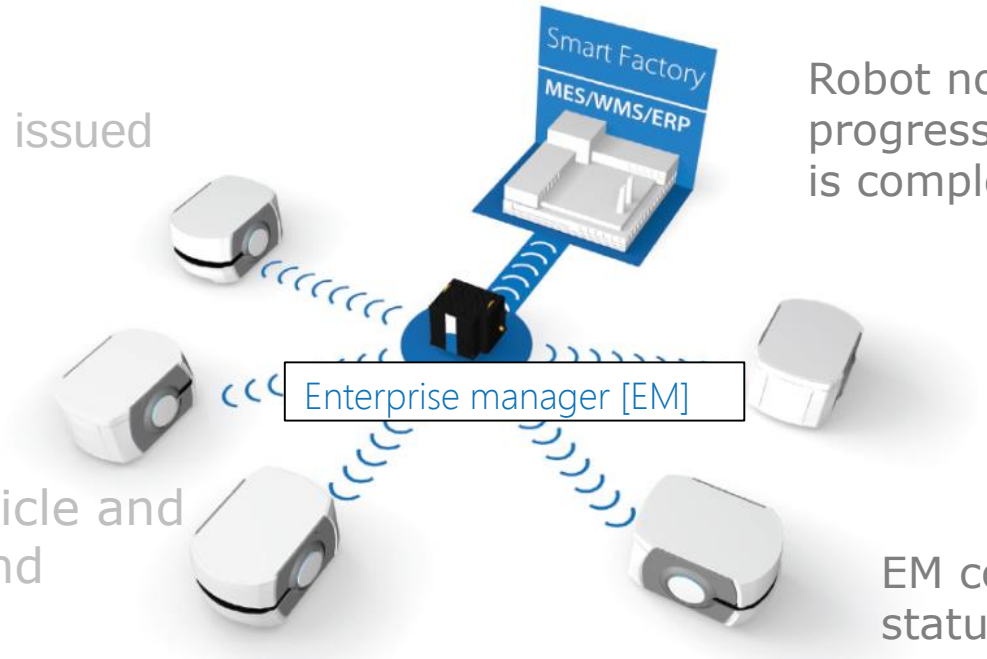
AIV in a conveyor-less flexible automation cell



Managing Fleets of AIVs

Tasks are issued



Robot notifies EM of progress and when task is completed

EM selects vehicle and issues command

EM communicates status - traceability

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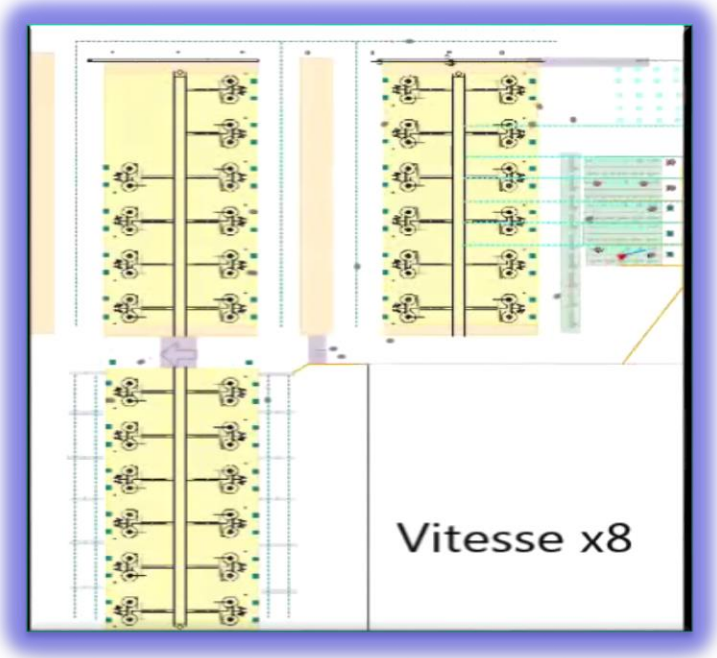
AIV fleet operation in action

- Three shift operation
- Improved quality due to elimination of repetitive and physical handling
- Simulation of a fleet of 24 AIVs



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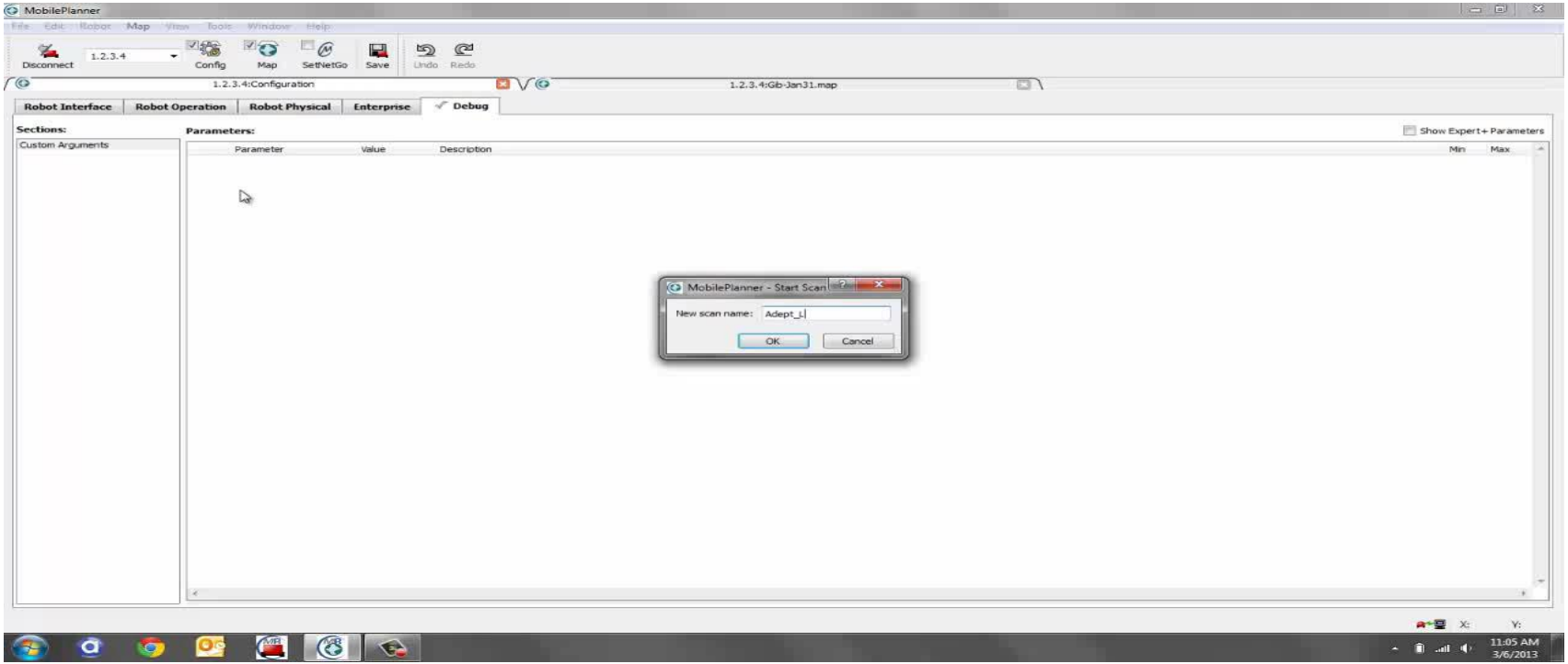
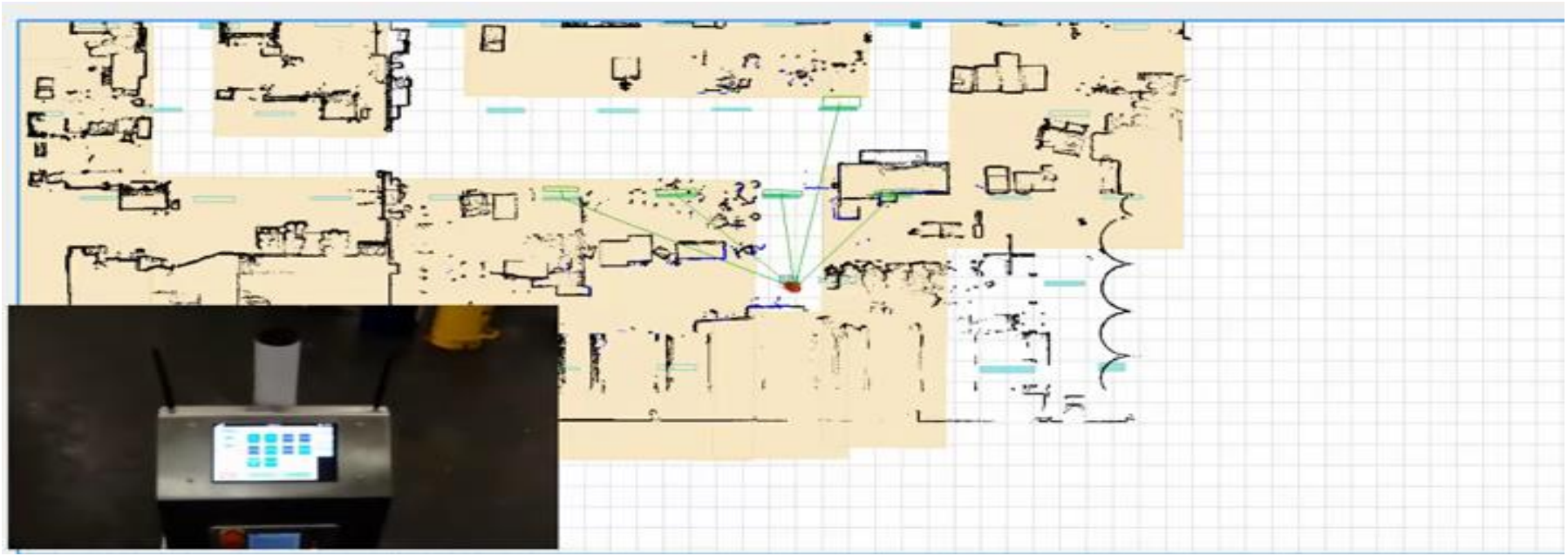
Mapping the work space



Natural navigation in a Dynamic environment



Summary

Applications

Line side replenishment
Work In Progress transport
Finished Goods Inventory deployment
Maintenance task integration
Sample/ testing

Benefits

- Reduced wasted stock and labour movements
- Integrated platform ensures traceability
- Less stress on labour force
- Use labour in added values areas

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Summary

Integration

- AIVs operate as part of a fleet
- Linked to Enterprise level
- Provide efficient, flexible, safe and traceable solutions

Customisation

Safety design

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Thank you for your attention

Please take some time to come and speak to Omron in the networking area….