

SMART FACTORY AUTOMATION

AIV MATERIAL MANAGEMENT

ANDRÉ PATENGE
MANAGER SOFTWARE ENGINEERING
MÜHLBAUER GMBH & CO. KG

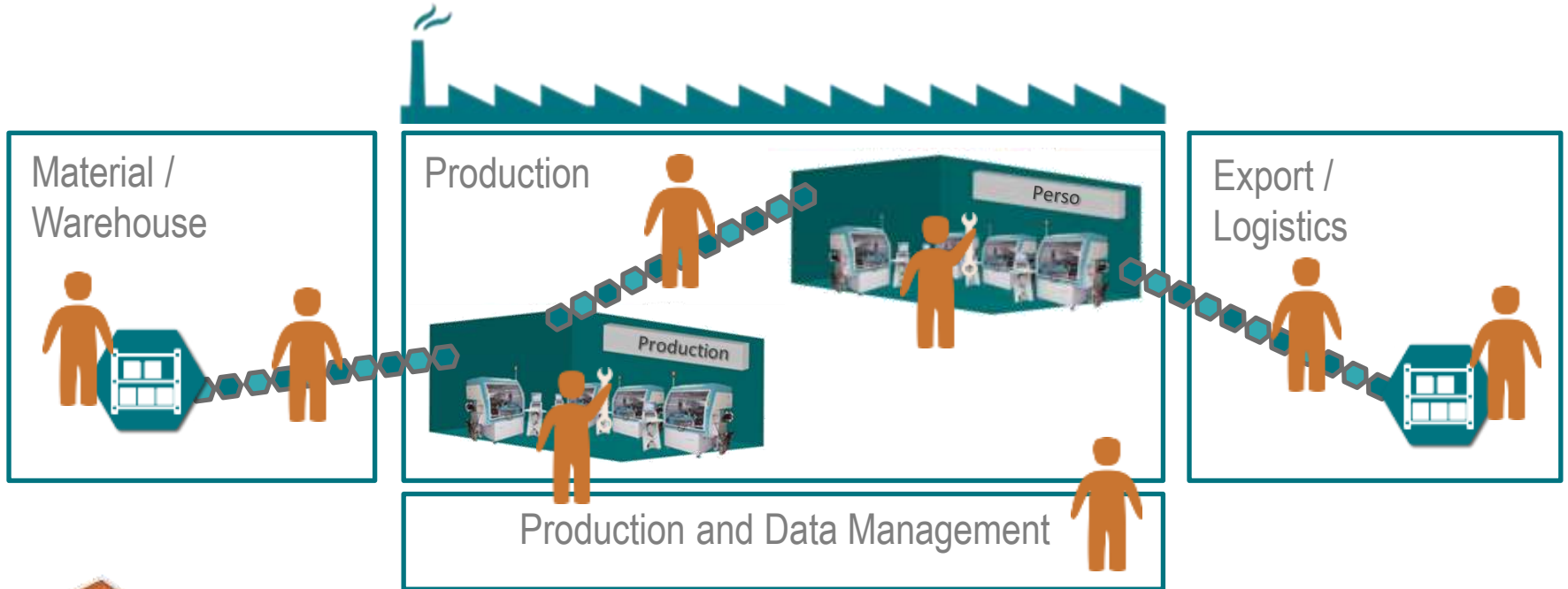


- Production Today
- AIV Material Management
- Secure IIOT Interfaces
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Production Today



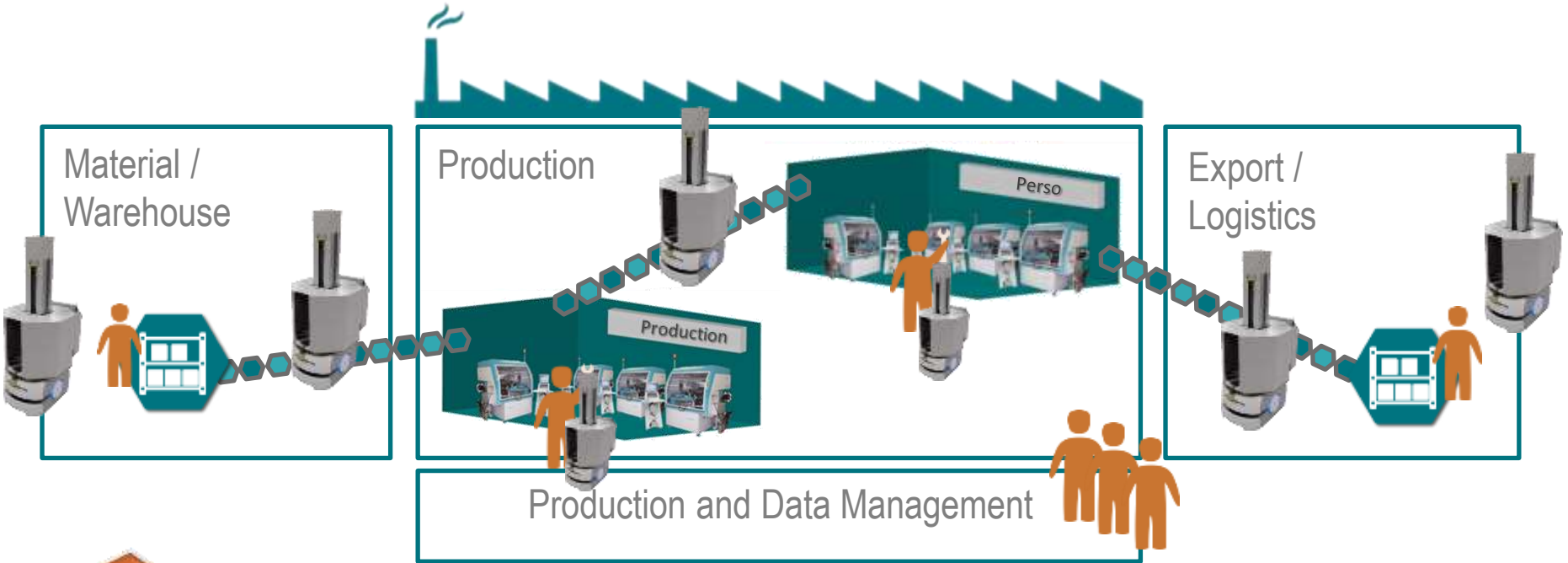


- Many manual and time consuming tasks
- Mistakes through paperwork
- Missing human resources
- Quality issues
- High storage capacities and costs



AIV Material Management





Automated Guided Vehicle

Costly & time-consuming to install

Follow pre-programmed paths

Inflexible, and hard to reconfigure

Can't drive around obstacles and obstructions

Autonomous Intelligent Vehicle

Can safely operate alongside people

No workspace retrofit required – rapid installation

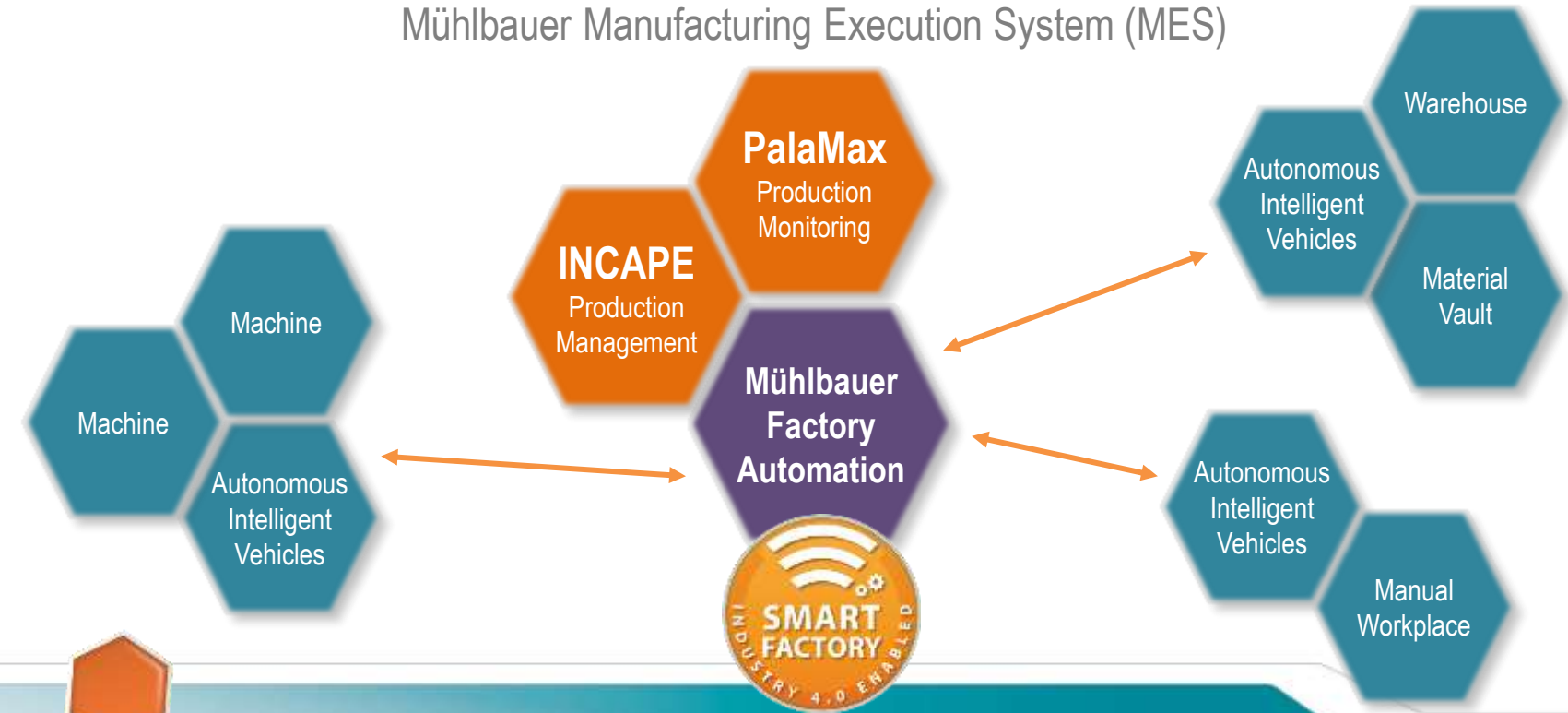
Capable of planning alternate routes

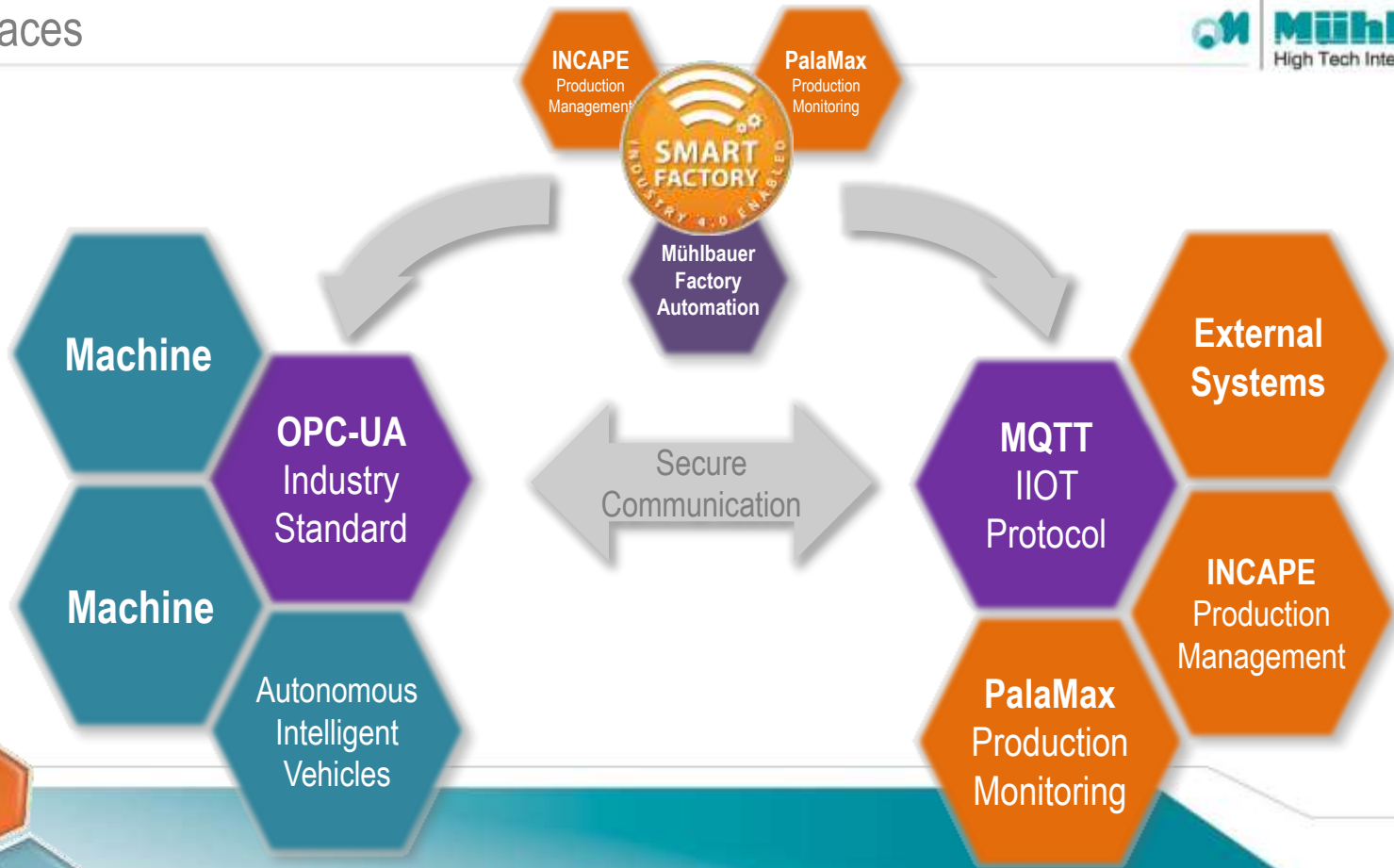
Operate in very dynamic environments

Work collaboratively in a fleet



Mühlbauer Manufacturing Execution System (MES)





Handling
Payloads

Customizable
Workflows

Standalone
or integrated
operation

Scalable
Fleet

Machine –
Equipment
Handling

Safety
Standards

Mühlbauer
Solution
Integration

Long Lasting
Batterie



- Intelligent workflow planning
- Overview of workload and tasks
- Secure IIOT Interfaces
- Integration to Production Management and Monitoring
- Mobile application
- AIV path planning and map setup
- Secure areas, ideal transport paths



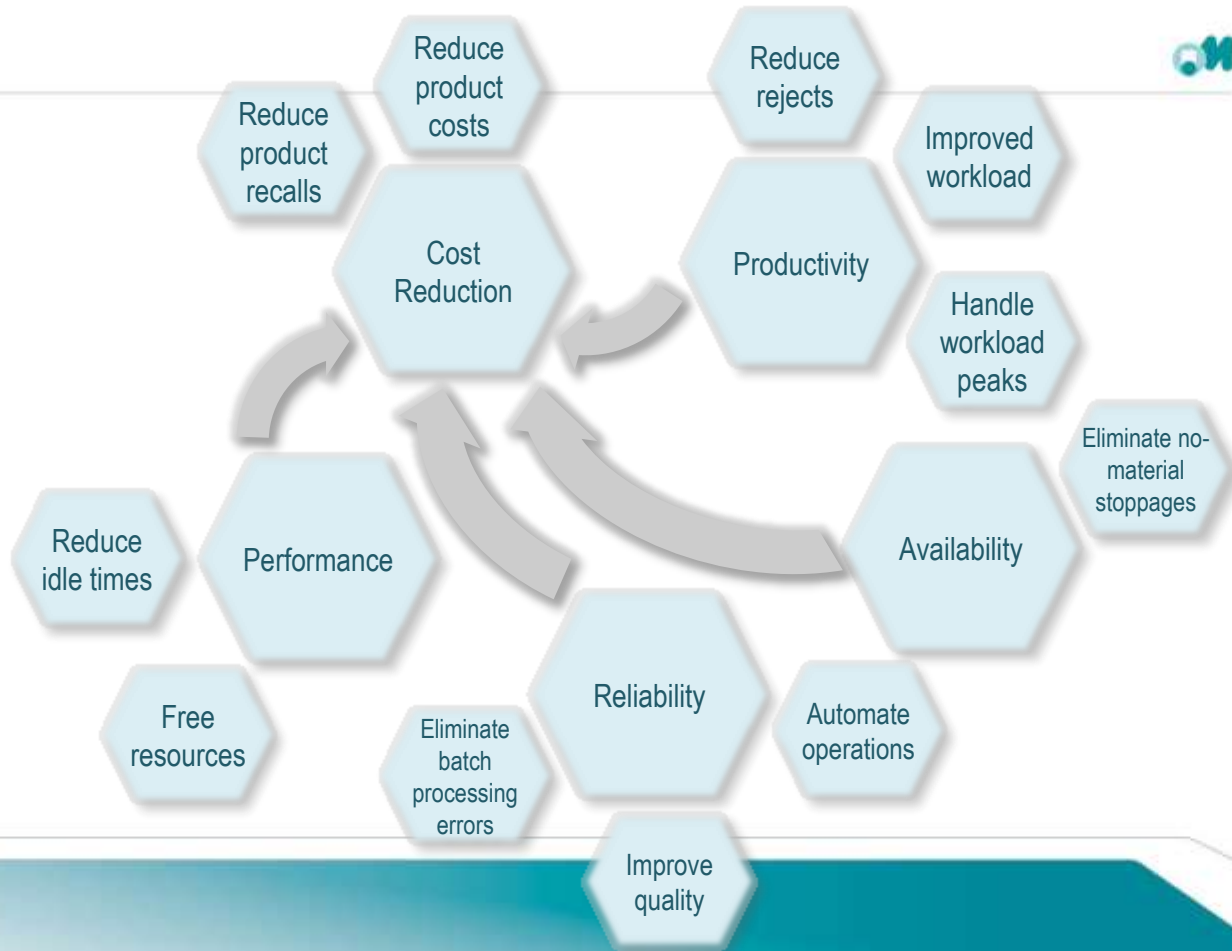
The screenshot displays the MIFlexManager software interface. It features three main panels: 'C136050' (Status: Running), 'CMI' (Status: Running), and 'Request Queue' (Status: In Progress). Each panel lists tasks with their respective start and end times. Below these panels is an 'AIV' (Autonomous In-Vehicle) section with a 'Working Request' and a 'Lot Status' table. The 'Lot Status' table shows the status of 8 lots, with lots 1-3 and 7 marked as 'Loaded' and others as 'Empty'. To the right, a floor plan map shows the layout of the facility with various workstations and transport paths. The map includes labels for 'DKL5000_MagMag_Marshall' and 'DKL5000_MagMag'. The interface is titled 'MIFlexManager' and 'version 1.8.0.0 | Mühlbauer GmbH'.



Benefits

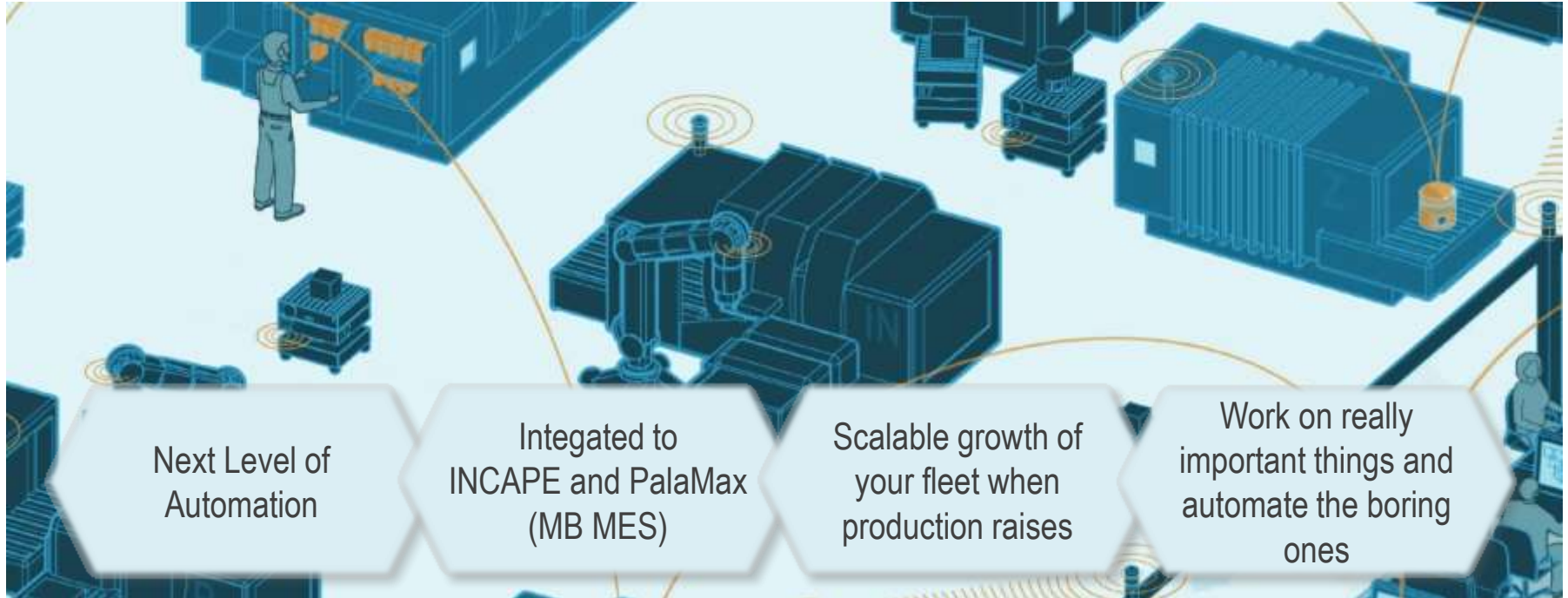


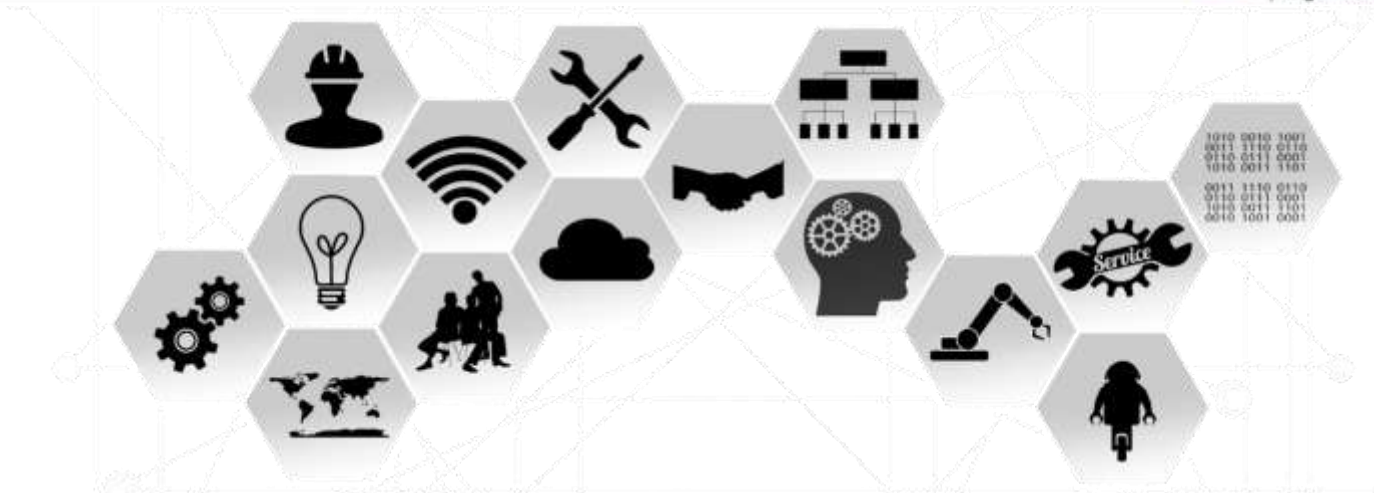
Benefits



Summary







Smart Factory touches all facets of a production and transforms the current way of manufacturing by increasing the level of automation. The intelligent use of the production data available combined with technological advances in factory automation facilitates everything from customer's requirements to support throughout the world around times, local production with short manufacturing distances and cost savings.



Live Demonstration



- Confidence of governments & public authorities worldwide
- Trust and reliability - our most important values
- Convincing by high speed, best quality & strict customer orientation
- Planning, risk management, effective monitoring & support
- Close partnerships with all stakeholders

**YOUR TRUST IS OUR GREATEST MOTIVATION TO
TURN EVERY CHALLENGE INTO A SUCCESS STORY.**



THANK YOU FOR YOUR ATTENTION!

MÜHLBAUER GMBH & Co. KG
Josef-Mühlbauer-Platz 1
93426 Roding

Phone: +49 9461 952 0
Fax: +49 9461 952 1101
Mail: info@muehlbauer.de
Web: www.muehlbauer.de

