

The Future Worker for the Plastics Industry

Human Centric Innovation
in **Smart Manufacturing**



**smart
service**

**smart
product**

**smart
equipment**

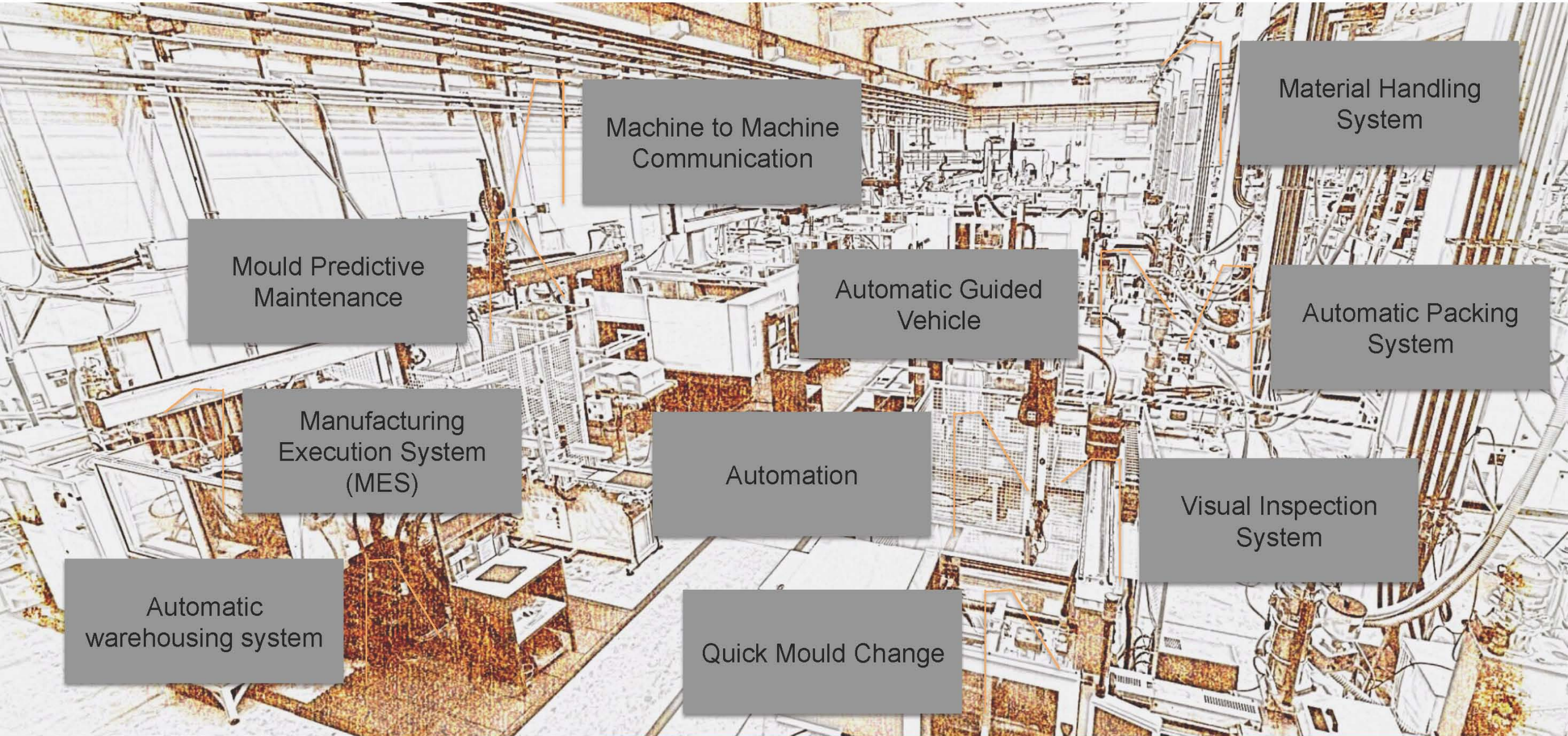
**smart
production**

Injection Moulding 4.0 Ready

Injecting the concepts of Industry 4.0 into
the traditional plastic industry and SMEs



The Future Plastics Workshop



Machine to Machine
Communication

Material Handling
System

Mould Predictive
Maintenance

Automatic Guided
Vehicle

Automatic Packing
System

Manufacturing
Execution System
(MES)

Automation

Visual Inspection
System

Automatic
warehousing system

Quick Mould Change

Past projects: Fully automated factories in Europe





Average monthly cost
for worker was US\$300



Industry **2.0**
1870-1880

Industry **3.0**
1970-1980

Industry **4.0**
Today



Inferior Quality
Counterfeit



Value for Money



High Quality



Road to Industry 4.0

1887 ← 124 Years → 2011

Merchandise Marks Act

Industry 4.0 Plan

Inferior Quality
Counterfeit

Value for Money

High Quality



→ 20XX? → 20XX?

Inferior Quality
Counterfeit

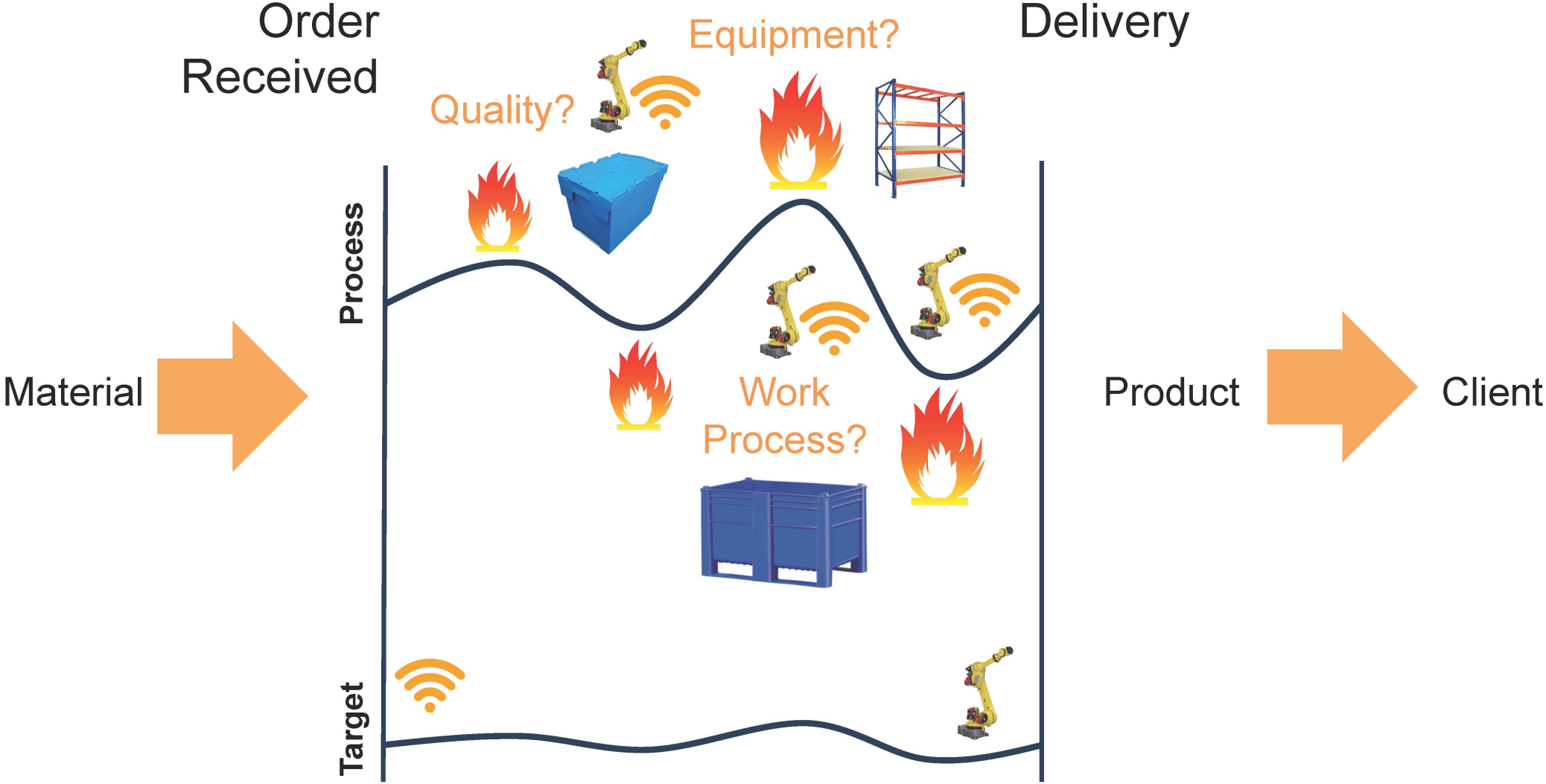
Value for Money

High Quality

Smart
Manufacturing



Challenges



Development Roadmap for Injection Moulding 4.0 Ready

04

Smart Manufacturing
Injection Moulding 4.0 Ready

 iPlast 4.0

03

LEAN Automation

Improve product assembly and work flow

02

Smart Maintenance

Increase equipment reliability

01



SmartData

Scientific Moulding

Improve process stability

People-Centric Innovation
in Smart Manufacturing

THE INDUSTRY AND EDUCATION REVOLUTION

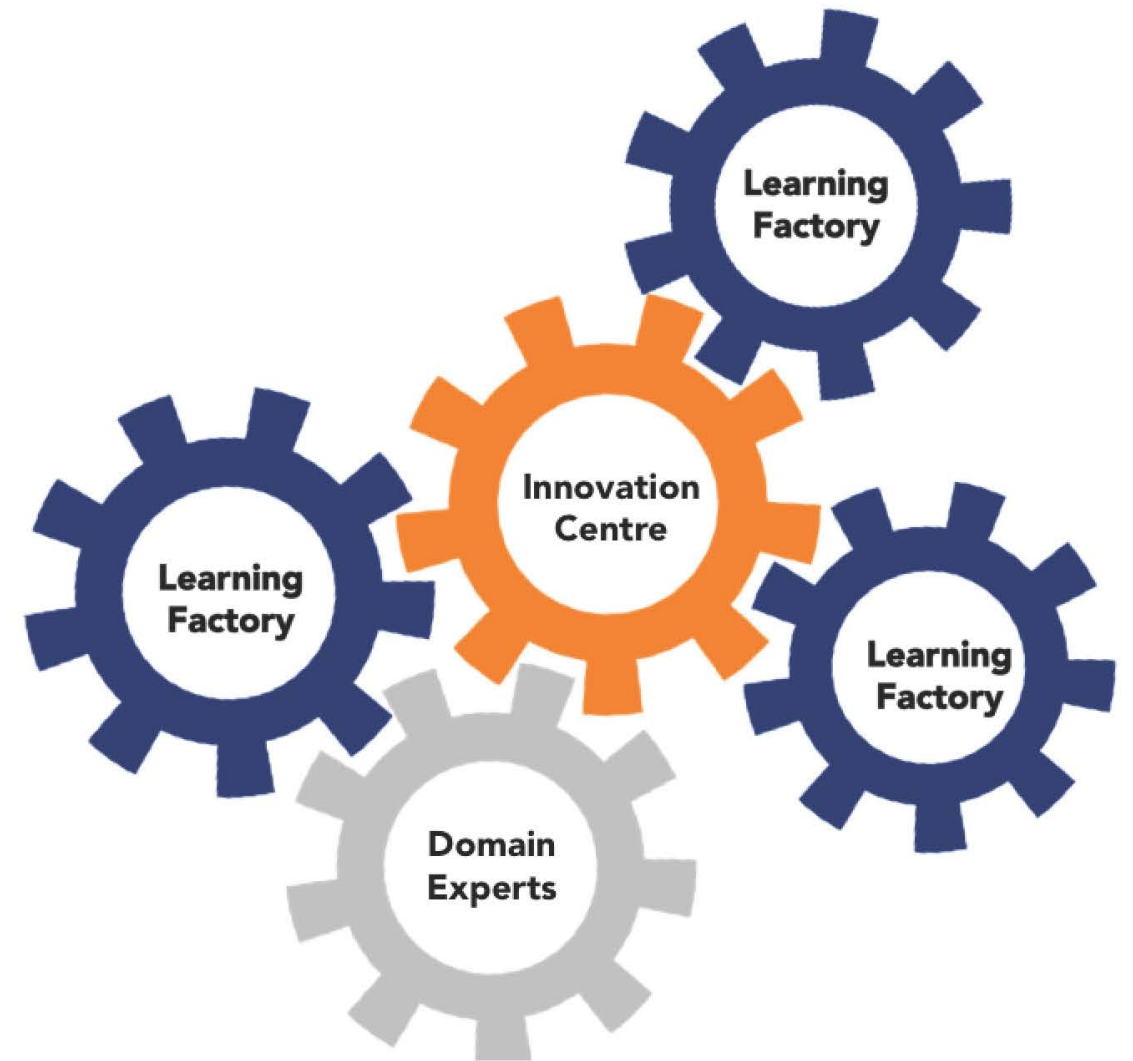
iPlast 4.0 iPlast4.0 Innovation Centre and Learning Factories

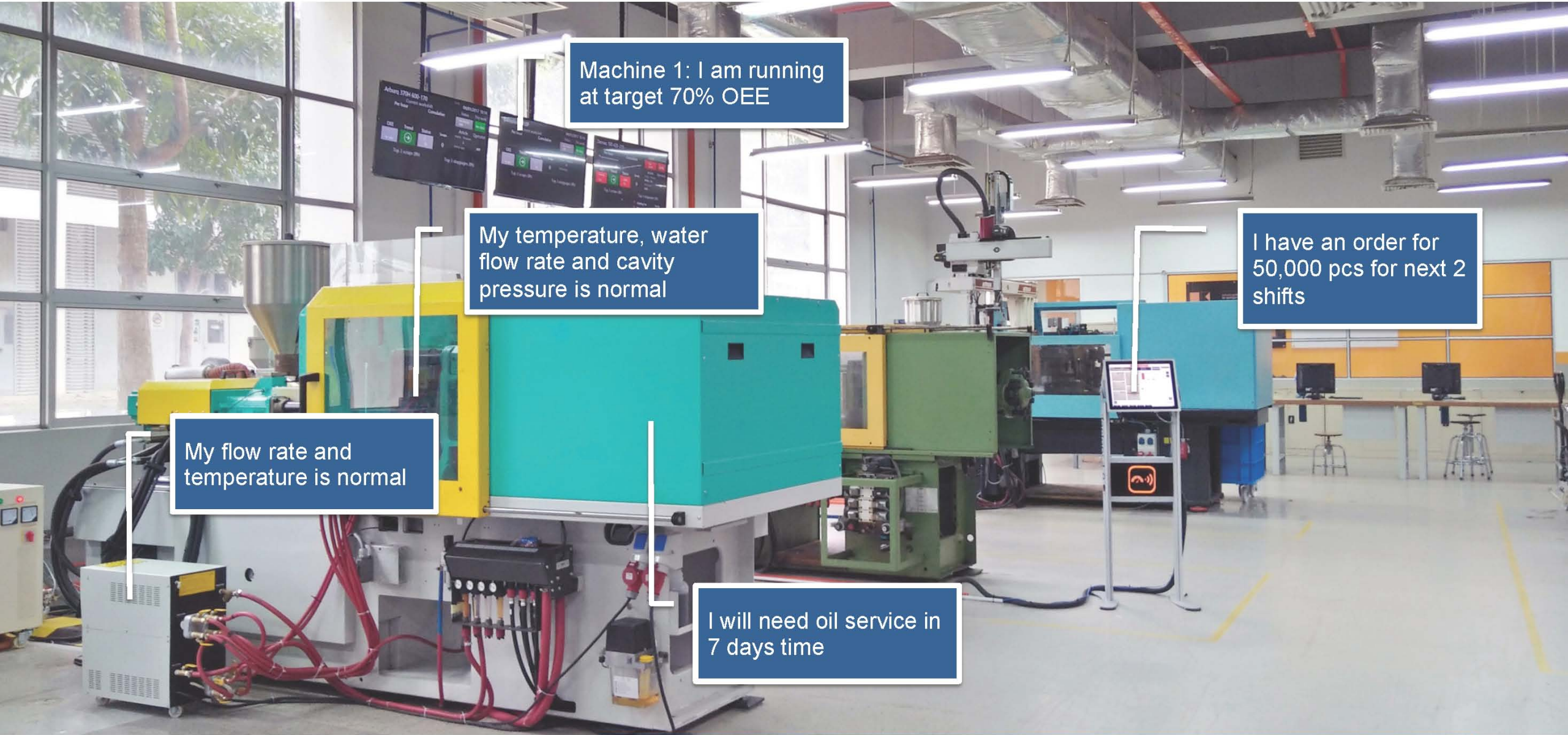
To implement *smart manufacturing* for the many companies



Realising Injection Moulding 4.0

- 1 Set up a “Smart Moulding Factory” according to the German “Industrie 4.0” concept.
- 2 A platform for the plastics industry, educators and students from different disciplines to come together and set new standards for the future smart production.
- 3 Attract and retain talents for the plastics industry.





Machine 1: I am running at target 70% OEE

My temperature, water flow rate and cavity pressure is normal

My flow rate and temperature is normal

I will need oil service in 7 days time

I have an order for 50,000 pcs for next 2 shifts

iPlast 4.0 SmartMould

Clamping force

Projected area: 0 cm²

* Enter your calculated value or take a photo for auto-calculation.
Download PDF

Flow distance: 0 mm

Wall thickness: 0 mm

Material: PA6

No. of cavities: 1

Calculate

iPlast 4.0 SmartMould

Reports

- Filling row
- Injection speed
- Volumetric filling
- Sealing pointing
- Clamping force
- Cooling time
- Cycle time
- All reports

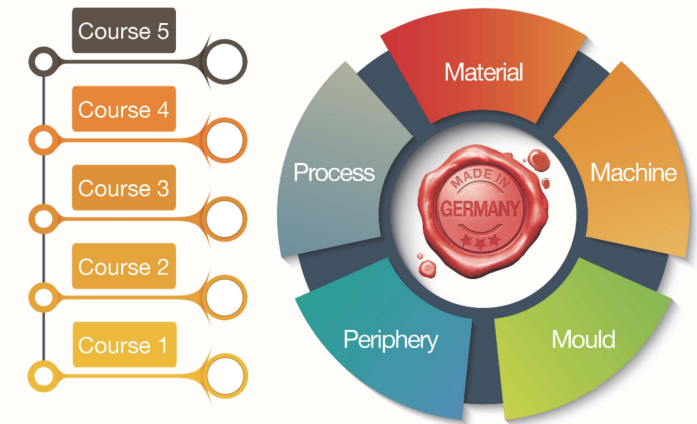


Injection Moulding Driver Licence®

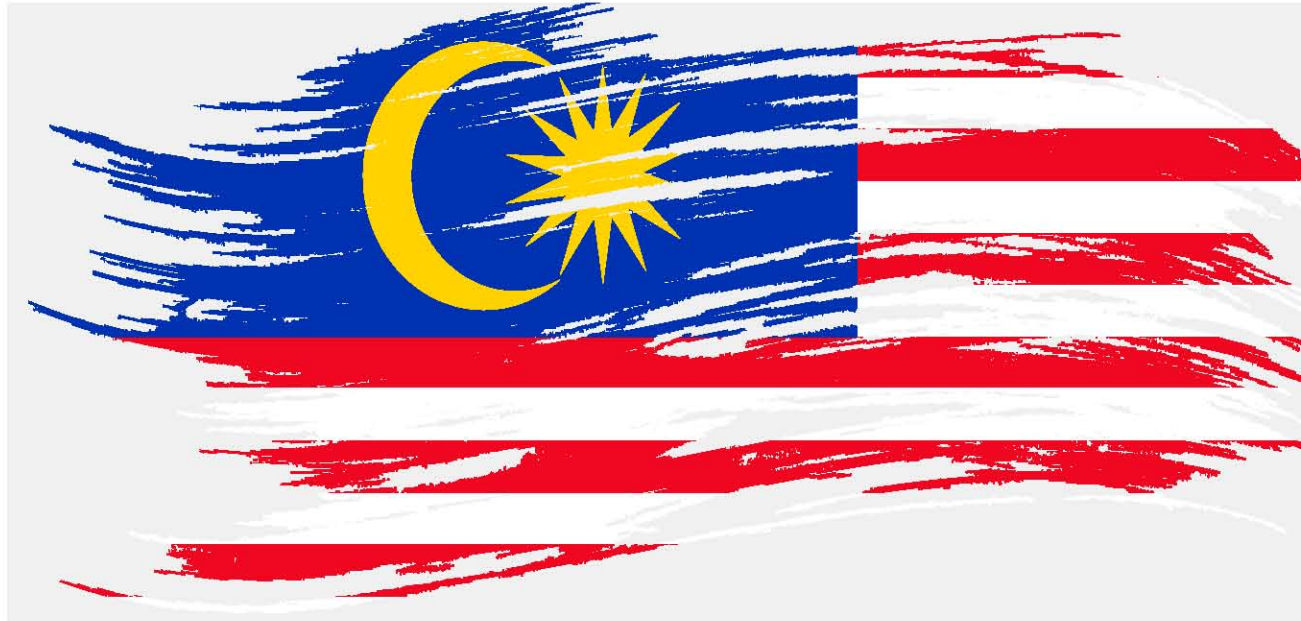
Systematic and all round training for injection moulding



Systematic and all round training



Keep manufacturing in Malaysia!



Thank you!