



10 locations
in Hungary
as One
Continental

The Manufacturing Efficiency Challenges

Dr Robert KESZTE

Continental Automotive Hungary Ltd.

Central & Eastern European Automotive Forum
20/11/2019
New York Palace Hotel, Budapest, Hungary

www.continental-corporation.com

Agenda

- 1 Continental, The technology company**
- 2 Motivation from the market**
- 3 Solutions for efficient manufacturing at Continental**

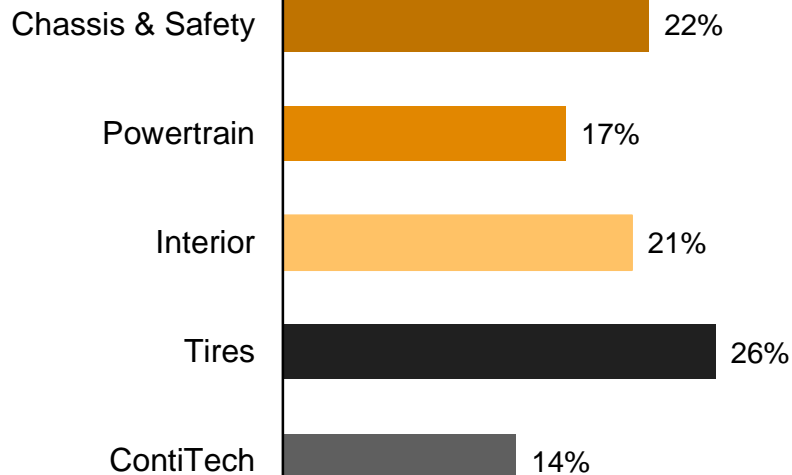
Continental, the technology company

Continental Corporation - Overview of 2018



€44.4 billion
Sales

Sales by division in %



245.000
Employees



544 sites*
in 60 countries

* Since 1871 with headquarters
in Hanover, Germany

Continental, the technology company

Continental in Hungary








- 1 Continental Automotive Hungary Kft., CEP Budapest**
 - › Production of electronic control units, power control units, mechatronic systems, displays and infotainment systems
 - › Industry 4.0 national demonstration plant
- 2 Continental Automotive Hungary Kft., ADAS Budapest**
 - › Competency center for deep machine learning
- 3 Continental Automotive Hungary Kft., Veszprém**
 - › Production of sensors for the automotive industry
 - › Development Centre (sensor & software)
 - › Test track
- 4 Vitesco Technologies Hungary Kft., Debrecen**
 - › Production of electronic control units, sensors and actuators
 - › Plastic molding and overmolding
- 5 ContiTech Fluid Automotive Hungária Kft., Makó**
 - › Production of heating, cooling hose systems
- 6 ContiTech Fluid Automotive Hungária Kft., Vác**
 - › Production of heating, cooling and fuel hoses
- 7 ContiTech Rubber Industrial Kft., Szeged**
 - › Production of rubber conveyor belt systems and high pressure hoses
 - › Production of compounding
- 8 ContiTech Magyarország Kft., Nyíregyháza**
 - › Production of air spring systems
 - › Production of compounding
 - › Production of heating, cooling hose systems
- 9 Continental Hungária Kft., Budaörs**
 - › Sales & Marketing Center of Continental tires
- 10 Continental Hungária Kft., Mosónmagyaróvár**
 - › Regional Distribution Centre (HU-AT)



More than 8.000 employees

Continental, the technology company

Product Portfolio Budapest 2019

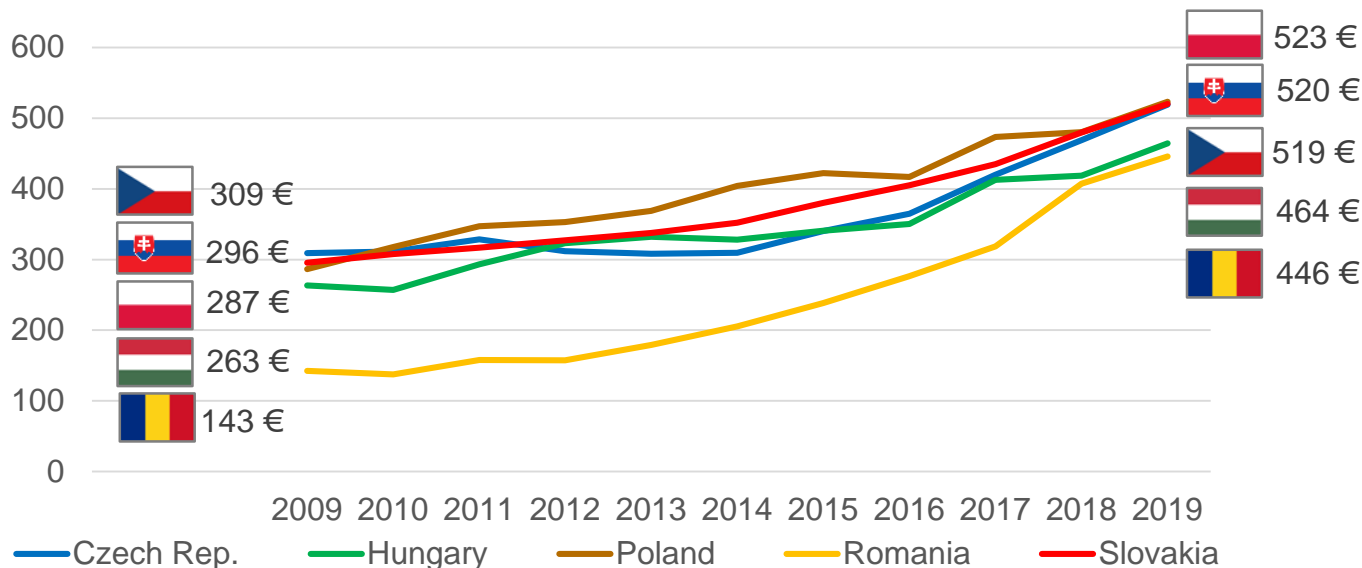
Chassis and Safety		Powertrain		Interior		
Vehicle Dynamics		HEV		IC	CVAM	
Electronic Brake Systems	Steering	HVE	MHD	S1, S2, S-ICR	Vehicle Electronics	Original Equipment Service
						
Automated Driving		Electric Mobility		Connectivity		

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Motivation from the market

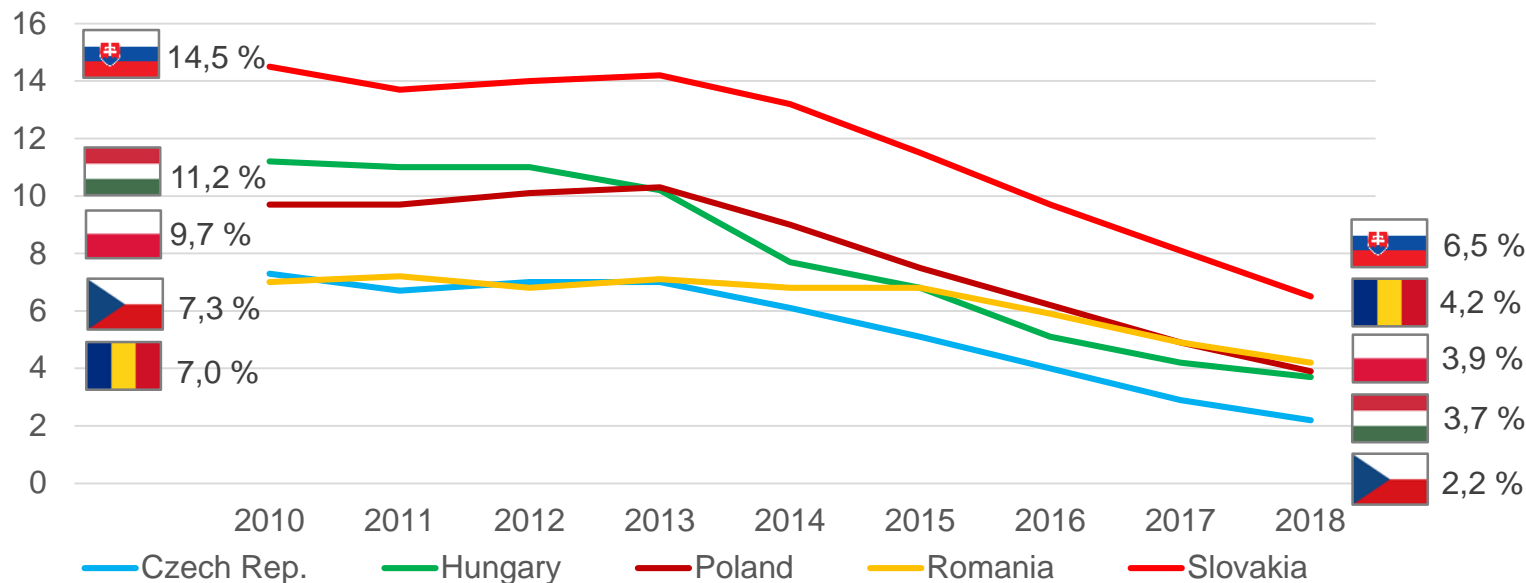
Minimum wage increase 2009-2019 [€/ month]



Source: Eurostat

Motivation from the market

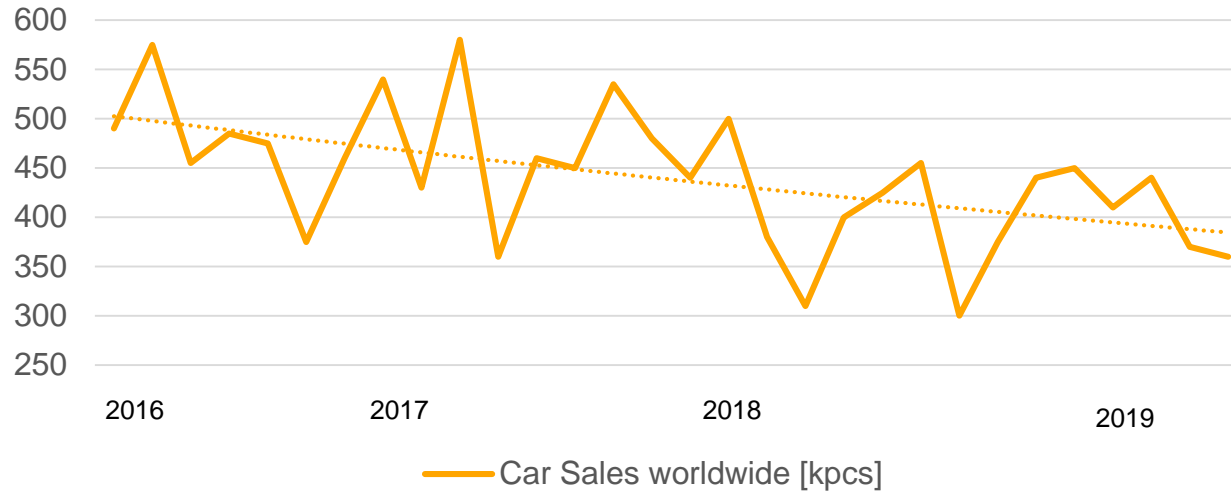
Total Unemployment rate by Countries 2010-2018 [%]



Source: Eurostat

Motivation from the market

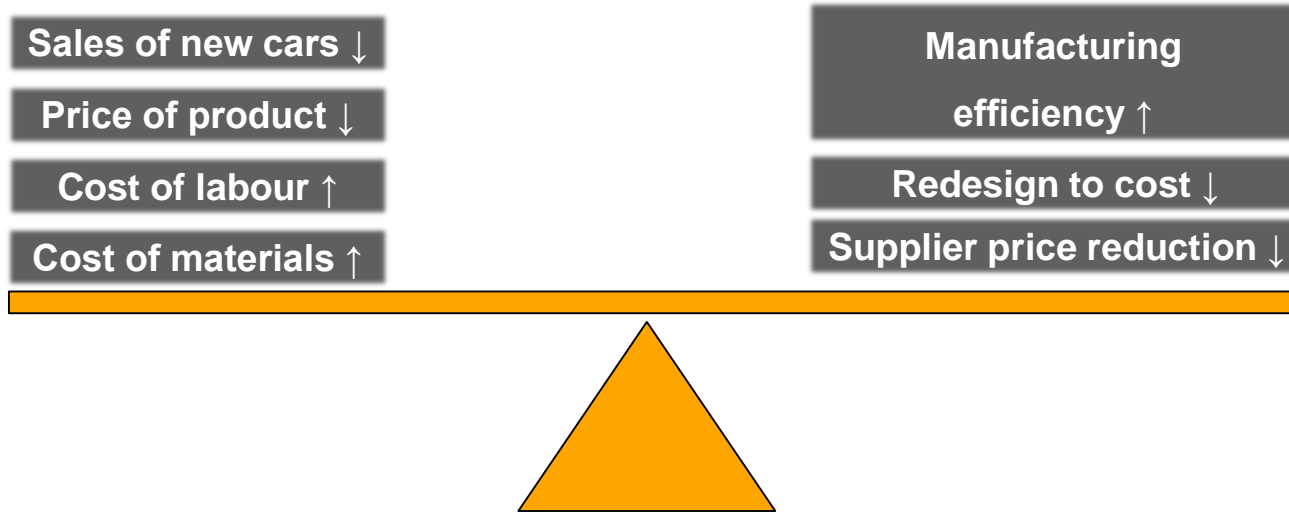
Car Sales worldwide 2016 – 2019Q2 [kpcs]



Source: VDA (Verband der Automobilindustrie)

Motivation from the market

Competitiveness

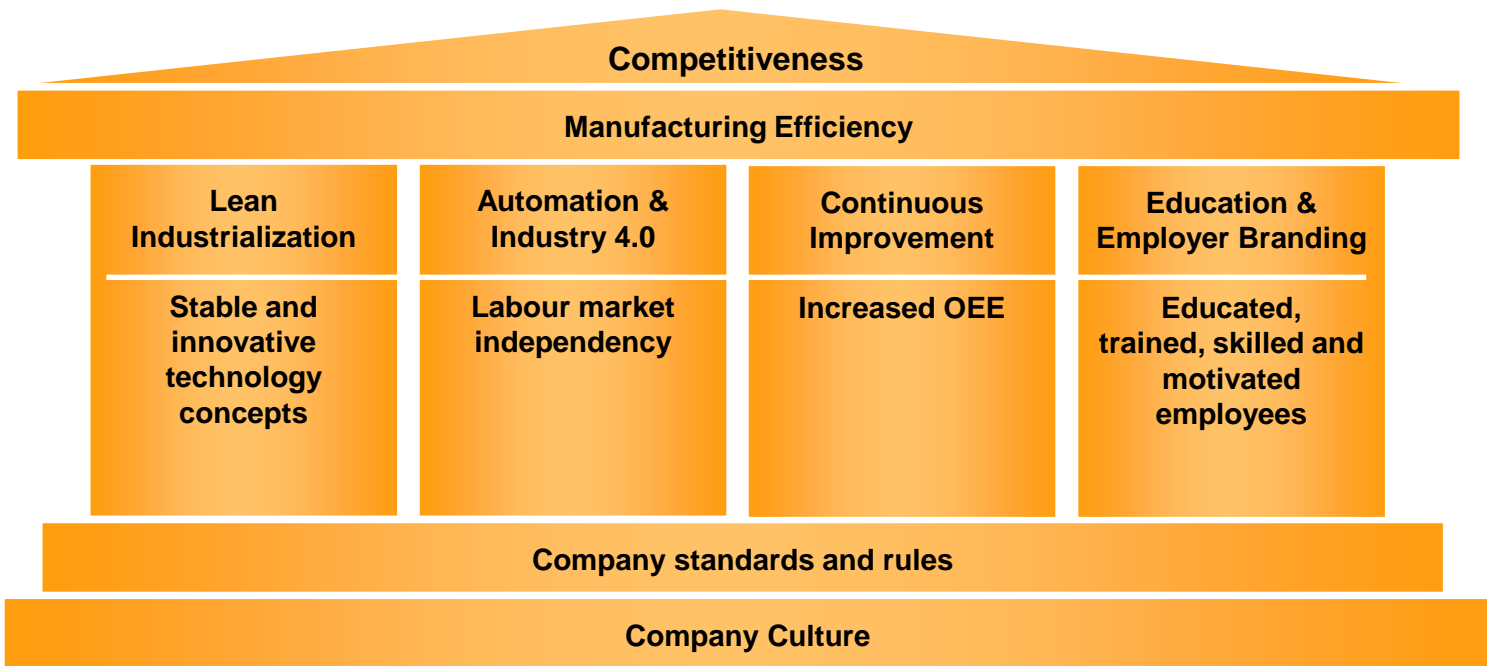


Agenda

- 1 **Continental, The technology company**
- 2 **Motivation from the market**
- 3 **Solutions for efficient manufacturing at Continental**

Manufacturing Efficiency Challenges

Pillars of Efficiency that supports Competitiveness



Manufacturing Efficiency Challenges

Pillar 1 – Lean Industrialization

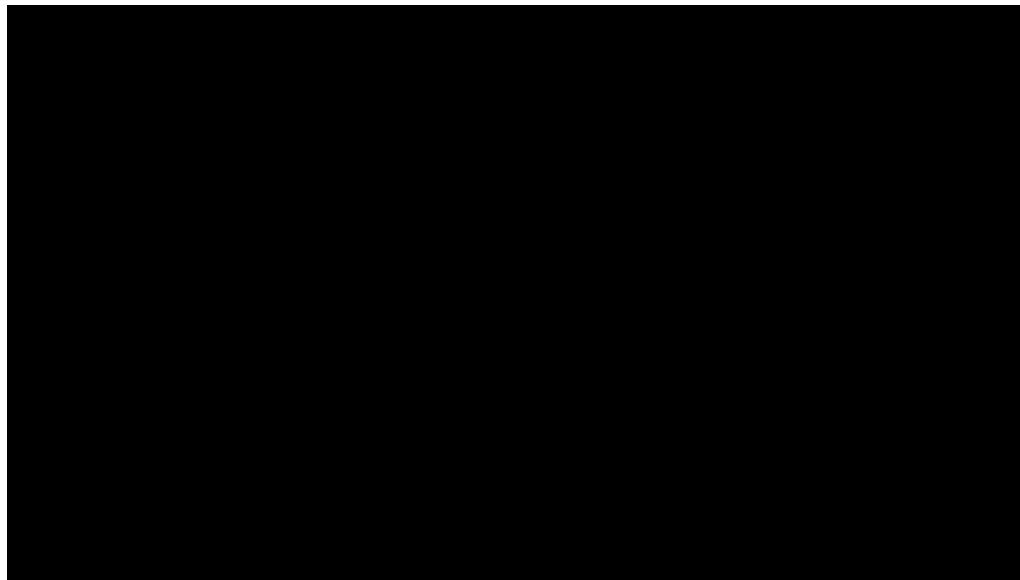
- › Stable and innovative technology concepts



Manufacturing Efficiency Challenges

Pillar 1 – Lean Industrialization

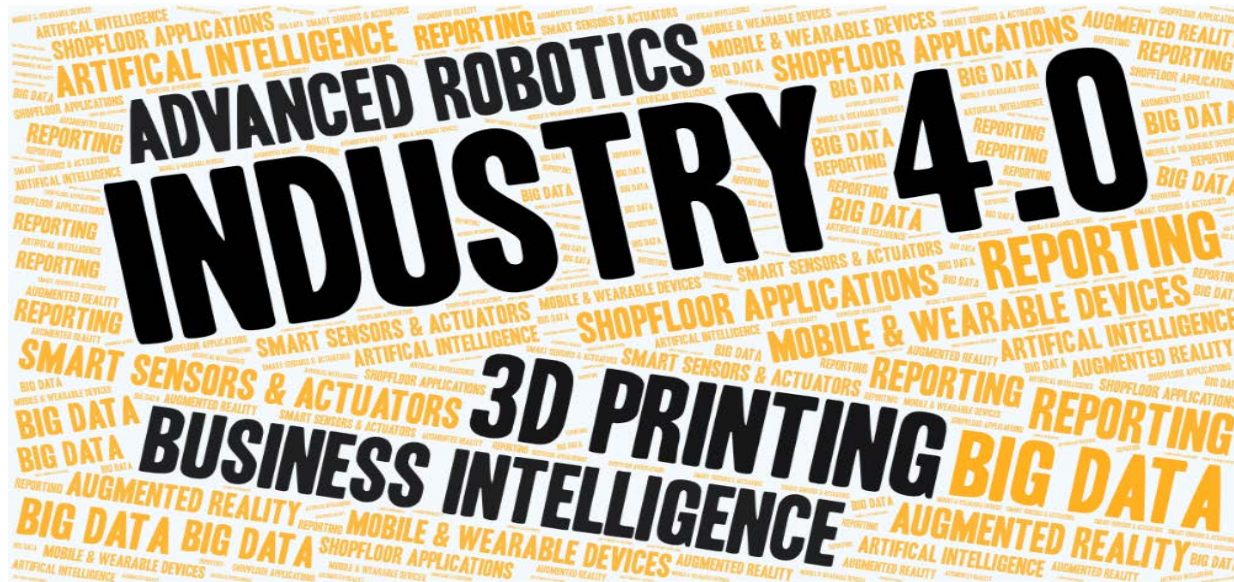
- › Stable and innovative technology concepts



Manufacturing Efficiency Challenges

Pillar 2 – Automation & Industry 4.0

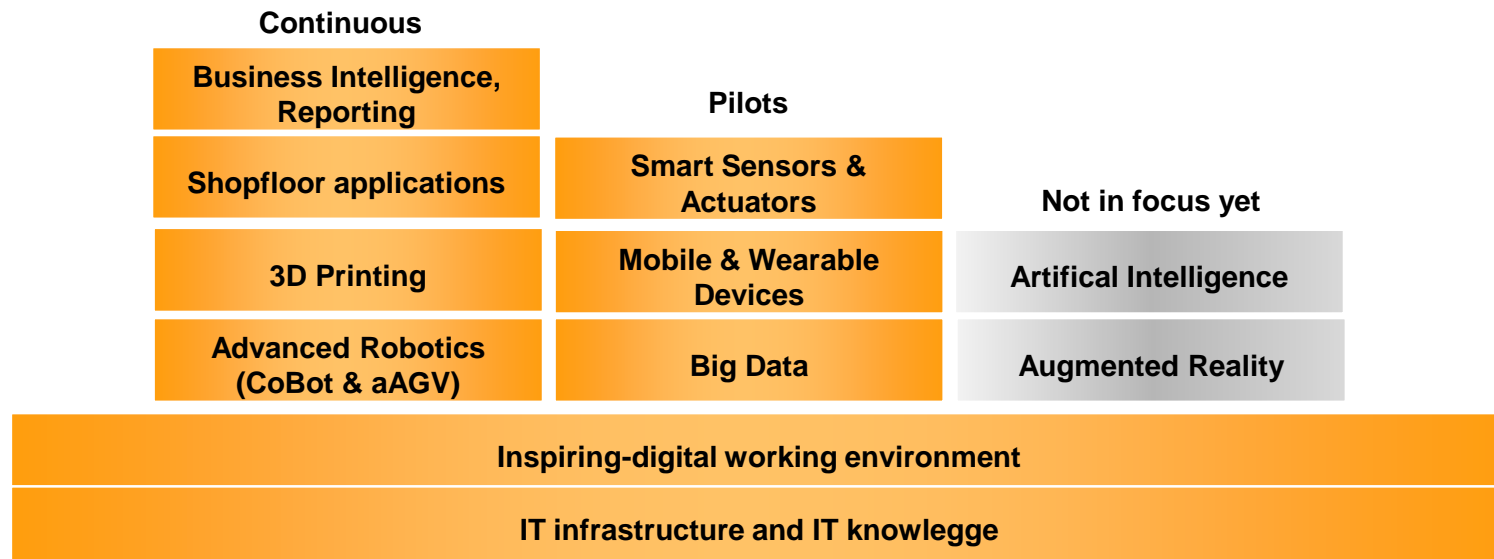
- › Labour market independency



Manufacturing Efficiency Challenges

Pillar 2 – Automation & Industry 4.0

› Continental Budapest – Industry 4.0 Strategy



Manufacturing Efficiency Challenges

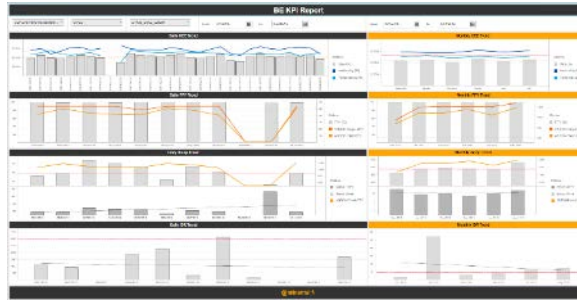
Pillar 2 – Automation & Industry 4.0

- › Labour market independency

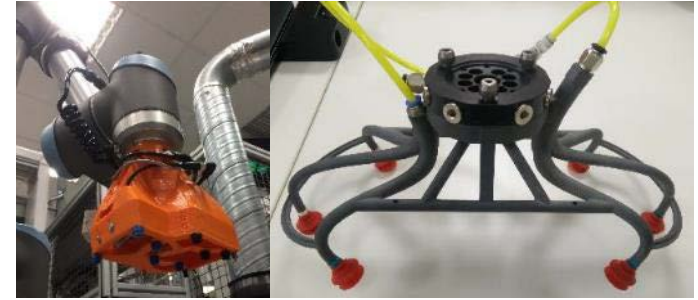
Advanced Robotics Collaborative Robotics



Business Intelligence Daily Management Reporting

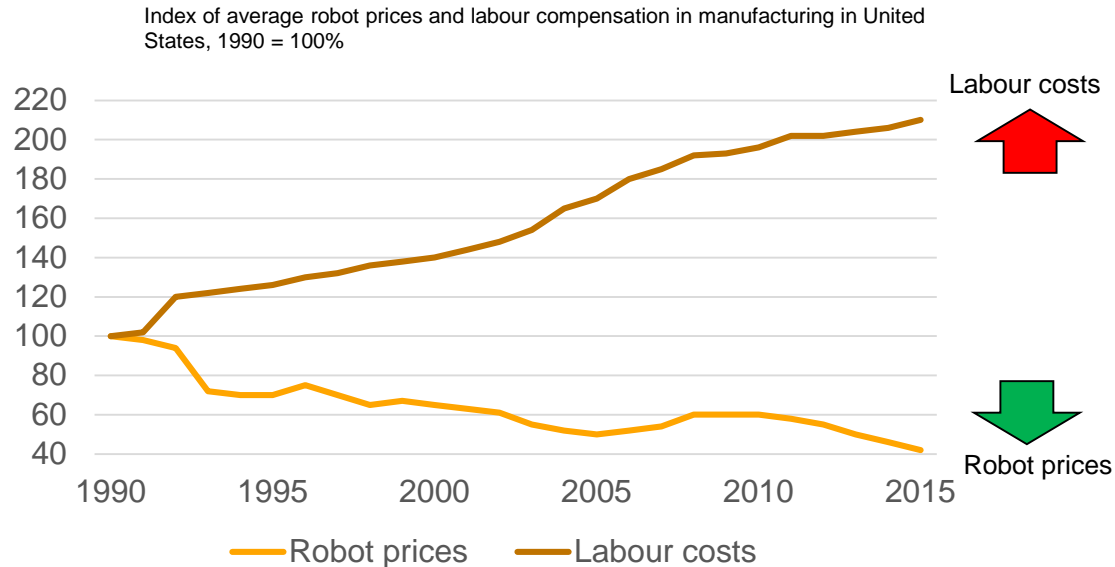


3D Printing 3D printed Robot grippers



Manufacturing Efficiency Challenges

Pillar 2 – Automation & Industry 4.0

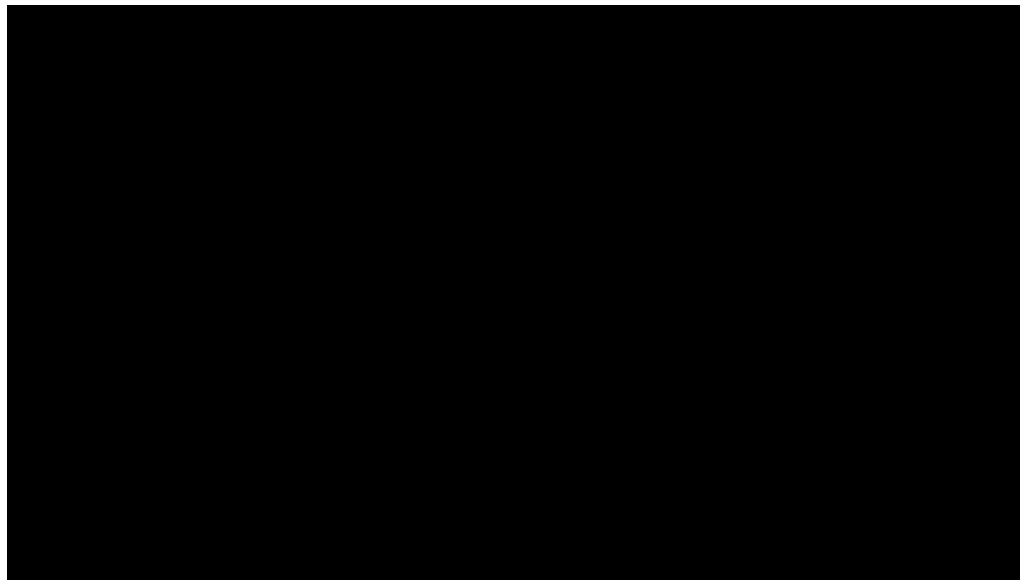


Source: Economist Intelligence Unit; IMB; Institut für Arbeitsmarkt- und Berufsforschung; International Robot Federation; US Social Security data, McKinsey analysis

Manufacturing Efficiency Challenges

Pillar 2 – Automation & Industry 4.0

- › Labour market independency



Pillar 3 – Continuous Improvement

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Manufacturing Efficiency Challenges

Pillar 3 – Continuous Improvement

› Increased OEE

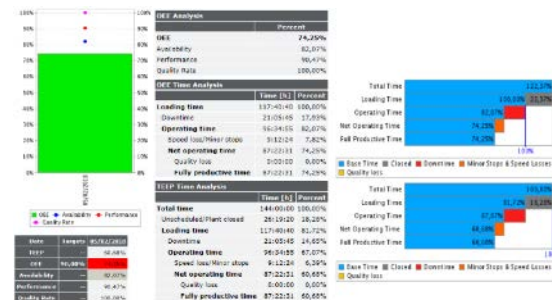
Cycle time Cycle time analysis



Simulation of material management Lean cartoon box simulation



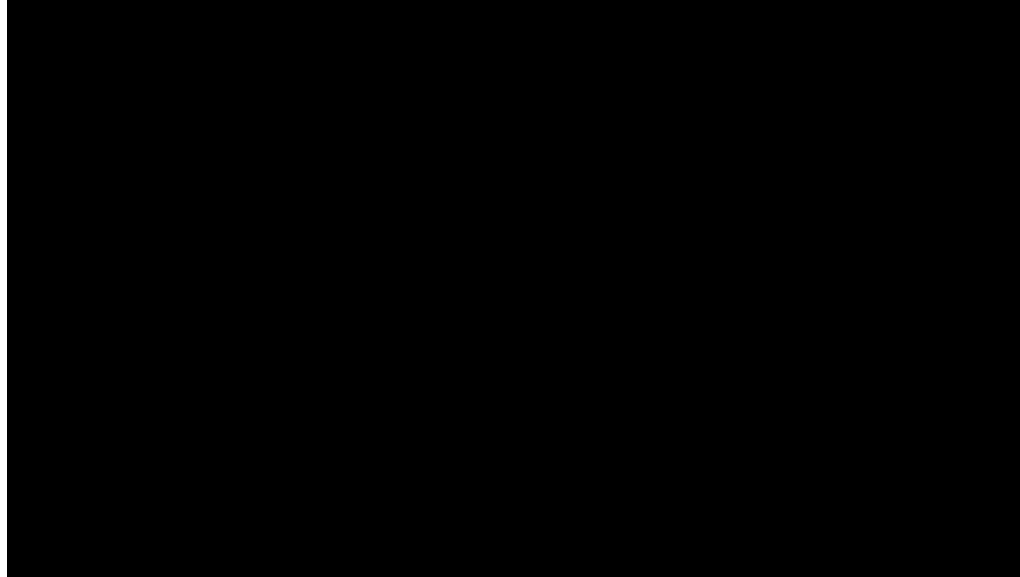
Shopfloor applications Downtime Registration



Manufacturing Efficiency Challenges

Pillar 3 – Continuous Improvement

- › Increased OEE



Manufacturing Efficiency Challenges

Pillar 4 – Education

- › Educated, trained, skilled and motivated employees



Manufacturing Efficiency Challenges

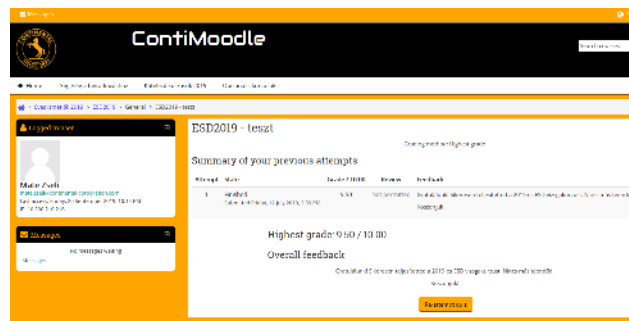
Pillar 4 – Education

- › Educated, trained, skilled and motivated employees

Internship program



eLearning



Vocational training center for technical positions on shopfloor



Manufacturing Efficiency Challenges

Pillar 4 – Employer Branding

- › Create great work conditions and environment to motivate employees



Manufacturing Efficiency Challenges

Pillar 4 – Employer Branding

- › Create great work conditions and environment to motivate employees

Outstanding Performance Award



Family Day



Team Buildings



Manufacturing Efficiency Challenges

Pillar 4 – Employer Branding

- › Create great work conditions and environment to motivate employees





**Thank you for
your attention!**

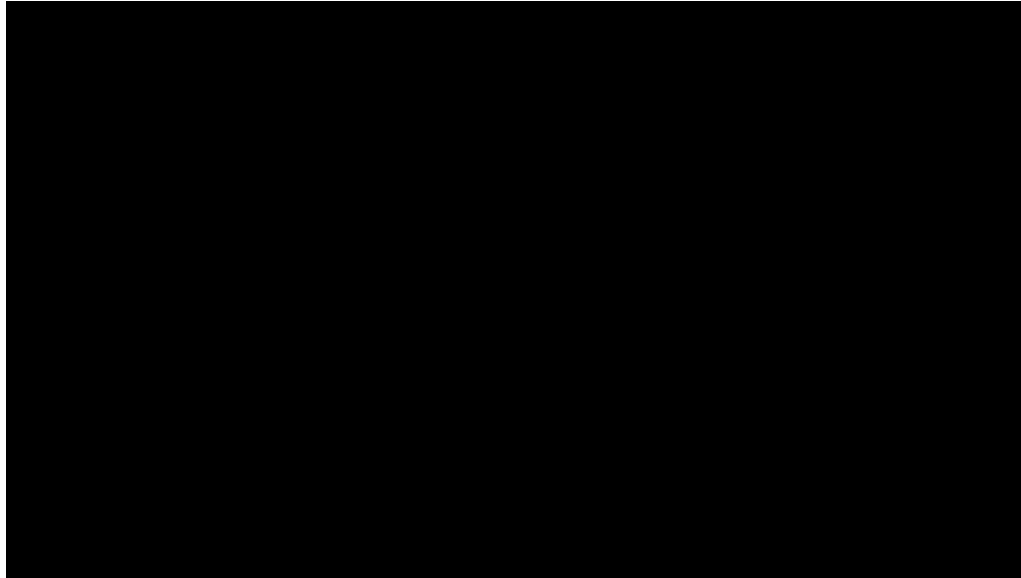
www.continental-jobs.com

Backup

Manufacturing Efficiency Challenges

Industry 4.0 Demonstration Center for Hungarian SME's

More than 500 Hungarian SME Leader visitor in our Plant!



Join us to discover our lean and digital solutions!

www.ipar4.hu

Manufacturing Efficiency Challenges

Pillar 1 – Lean Industrialization

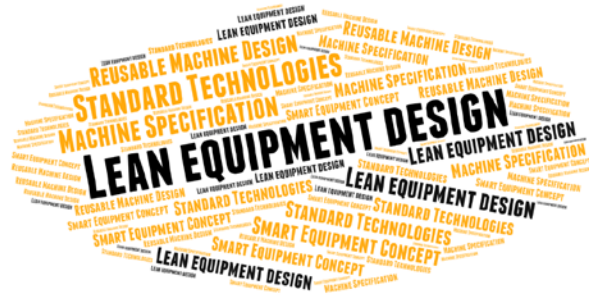
- › Stable and innovative technology concepts



Manufacturing Efficiency Challenges

Pillar 1 – Lean Industrialization

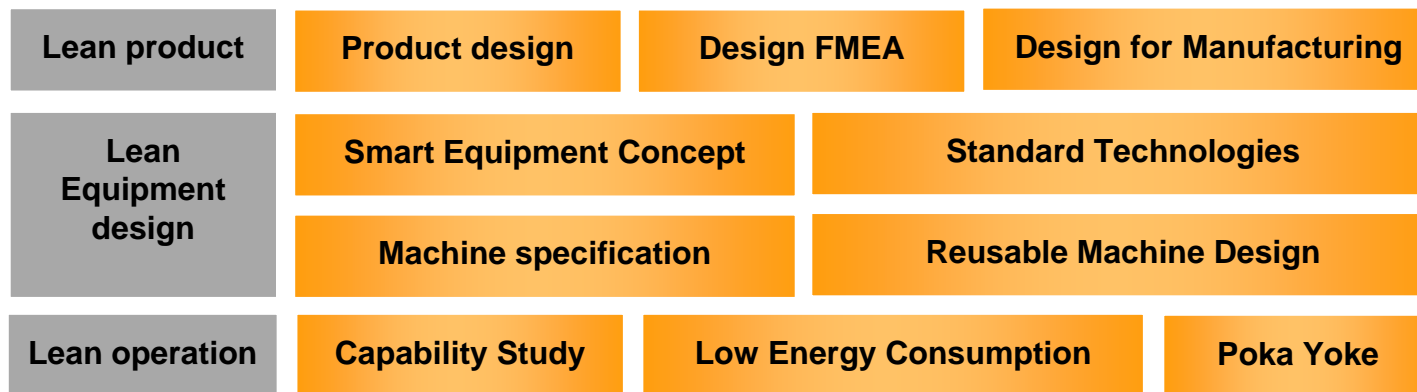
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Manufacturing Efficiency Challenges

Pillar 1 – Lean Industrialization

- › Stable and innovative technology concepts



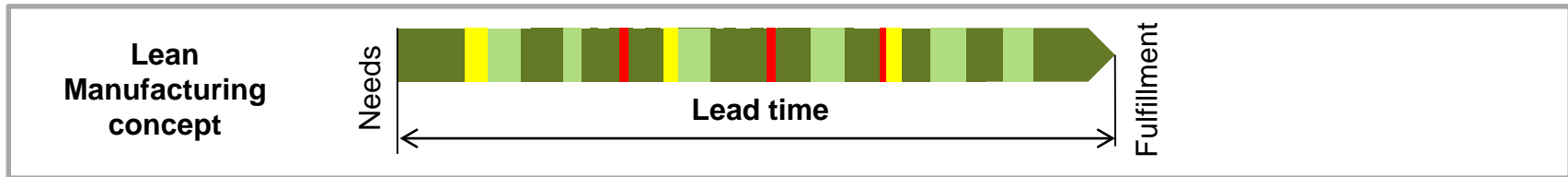
Manufacturing Efficiency Challenges

Pillar 1 – Lean Industrialization

- › Stable and innovative technology concepts



Create waste eliminated processes through the entire Value Stream



Manufacturing Efficiency Challenges

Pillar 2 – Automation & Industry 4.0

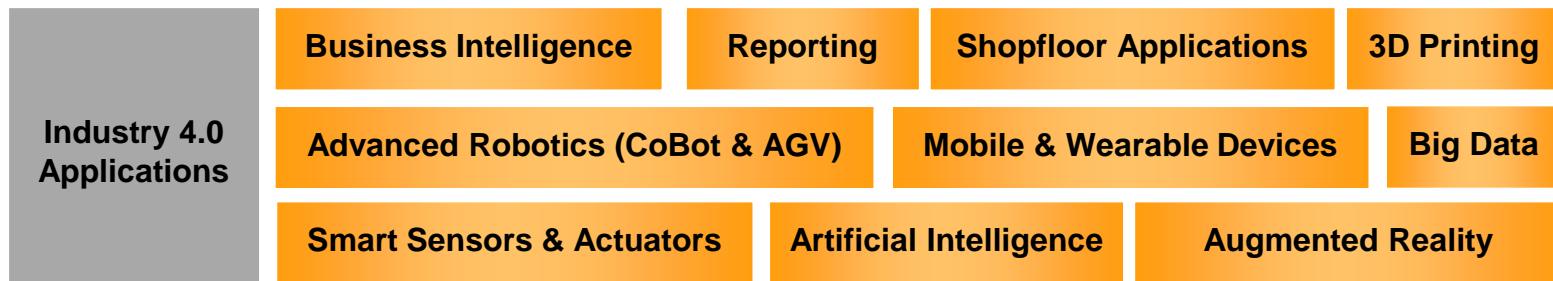
- › Labour market independency



Manufacturing Efficiency Challenges

Pillar 2 – Automation & Industry 4.0

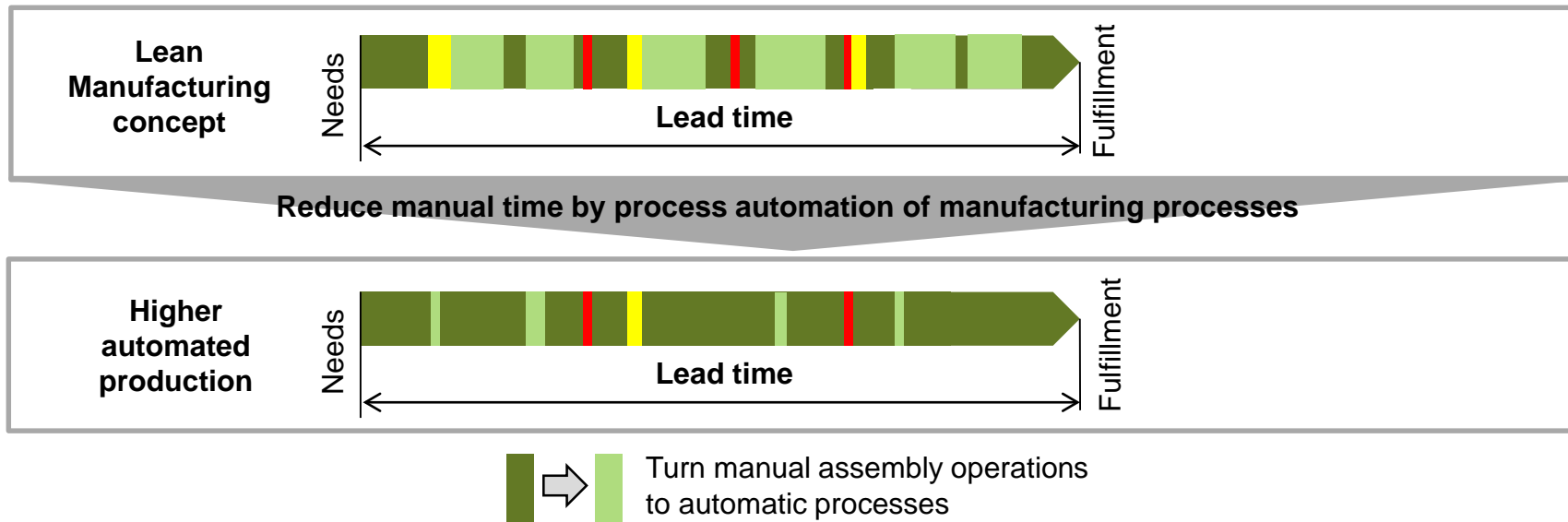
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Manufacturing Efficiency Challenges

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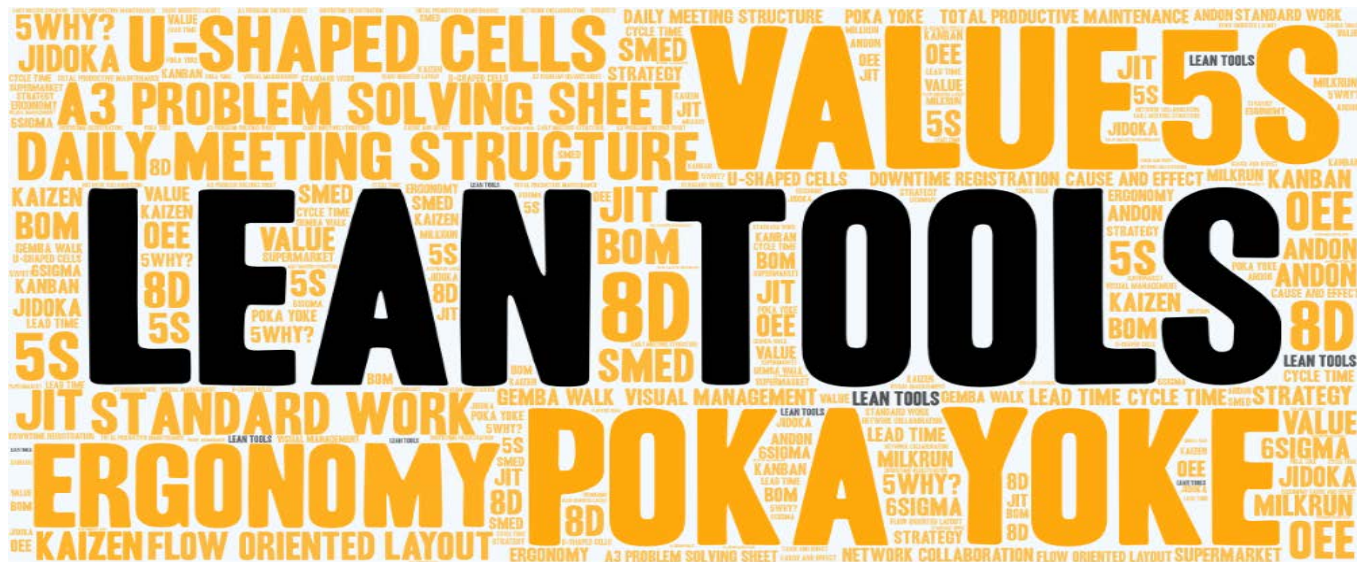
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Manufacturing Efficiency Challenges

Pillar 3 – Continuous Improvement

- › Increased OEE



Manufacturing Efficiency Challenges

Pillar 3 – Continuous Improvement

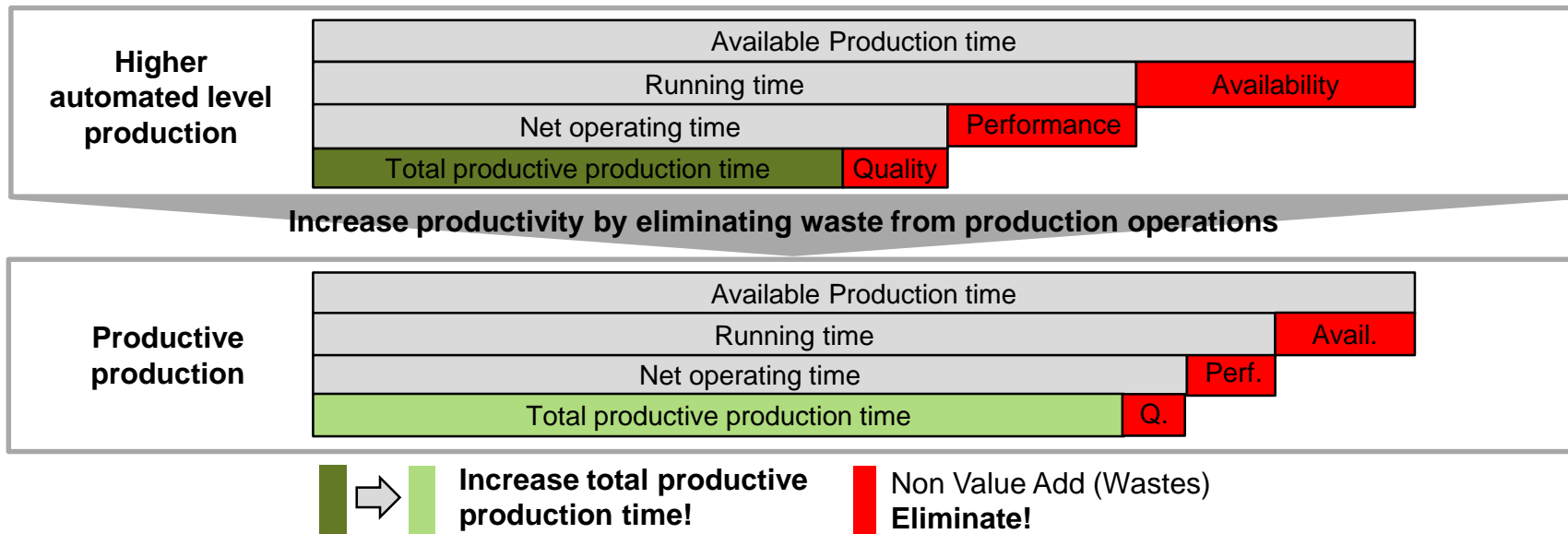
› Increased OEE

Lean tools	Value	Poka Yoke	Daily meeting structure		A3 problem solving sheet		U-shaped cells	
	Ergonomy	5S	Standard Work	Flow oriented Layout		Kaizen	Jidoka	5 Why?
	8D	Strategy	Cycle time	Visual Management		6 Sigma	Milkrun	BOM
	SMED	OEE	Total Productive Maintenance		Gemba Walk	Andon	Cause and Effect	
	Kanban	Supermarket	Downtime registration		Lead time	Network Collaboration		JIT

Manufacturing Efficiency Challenges

Pillar 3 – Continuous Improvement

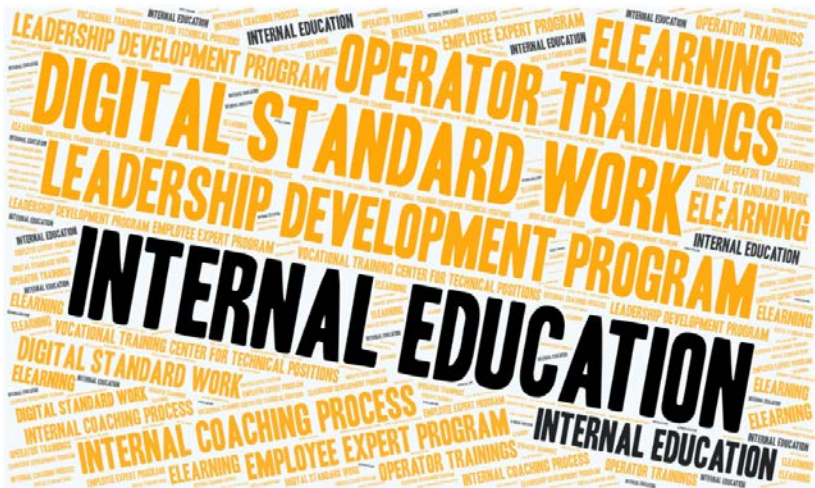
› Increased OEE



Manufacturing Efficiency Challenges

Pillar 4 – Education

- › Educated, trained, skilled and motivated employees



Manufacturing Efficiency Challenges

Pillar 4 – Employer Branding

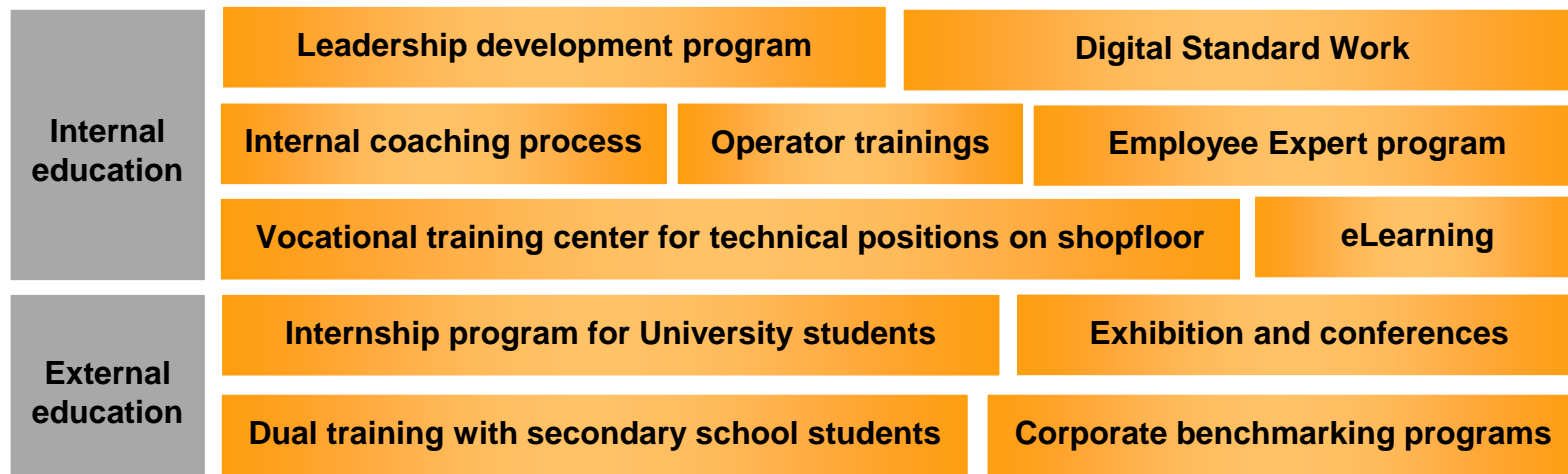
- › Create great work conditions and environment to motivate employees



Manufacturing Efficiency Challenges

Pillar 4 – Education

- › Educated, trained, skilled and motivated employees



Manufacturing Efficiency Challenges

Pillar 4 – Employer Branding

- › Create great work conditions and environment to motivate employees

Financial benefit	Bonus System	Project based payment	Outstanding performance award
	Outstanding performance award	Employee of the Year Award	
Priviledge benefit	Employee Assistance Program	Home Office for White collar workers	Team Buildings
	Engagement survey	Focus groups session (employee involvement)	Christmas Party

Manufacturing Efficiency Challenges

Pillar 4 – Education

- › Trained, skilled and motivated employee

