MECHATRONICS EXPLAINED BY COMPANIES

Present and future of industrial machines design

16 May 2022

University of Applied Sciences and Arts of Southern Switzerland

SUPSI

UNIVERSITÀ DI PARMA

Agenda

1. OPENING SESSION

- Welcome greeting by **Prof. Marco Silvestri**, SUPSI and University of Parma
- **Sabina Cristini**, President Mechatronics Group of ANIE Automazione

3. OEM SESSION

- Carmine Di Sciullo, **EMS** Group

2. SESSION BY TECHNOLOGIES PROVIDERS

TRANSMISSION AND MECHANICAL DESIGN
Kinematic chain and dimensioning, WITTENSTEIN
SAFETY AND SECURITY
Safety and Security, SCHMERSAL
AUTOMATION AND CONTROL
Edge and cloud optimization in automation, OMRON ELECTRONICS
Robot guidance with vision system, SICK
Cables in dynamic applications, LAPP ITALIA
SIMULATION AND VIRTUALIZATION
Bridging Digitalization and Automation, ROCKWELL AUTOMATION
Virtual Sensing: a closed loop digital twin to improve production performance, SIEMENS
LOGISTICS
Technology for Intelligent Transport Systems, BECKHOFF
Intralogistics: Mobile Assistance Systems and the Lean Smart Factory, SEW-EURODRIVE

ANIE Automazione

- Reference point for companies supplying advanced technological systems and solutions for industrial automation.
- Member companies are organized into working groups, distributed on several working groups:

VARIABLE SPEED DRIVES	**5G**
COMPONENTS AND TECHNOLOGIES FOR MEASUREMENT AND CONTROL WG ENCODER, NETWORKING, RFID, SAFETY, WIRELESS, VISION SYSTEMS	**MECHATRONICS**
PROCESS CONTROL	**INDUSTRIAL SOFTWARE**
HMI-IPC-SCADA	**REMOTE CONTROL SYSTEMS**
PLC-I/O	**INTELLIGENT TRANSPORT SYSTEMS**
OPC-UA	

- A network committed to supporting and promoting the technological excellence of the sector.
- At the forefront on issues of digitalization and Industry 4.0.

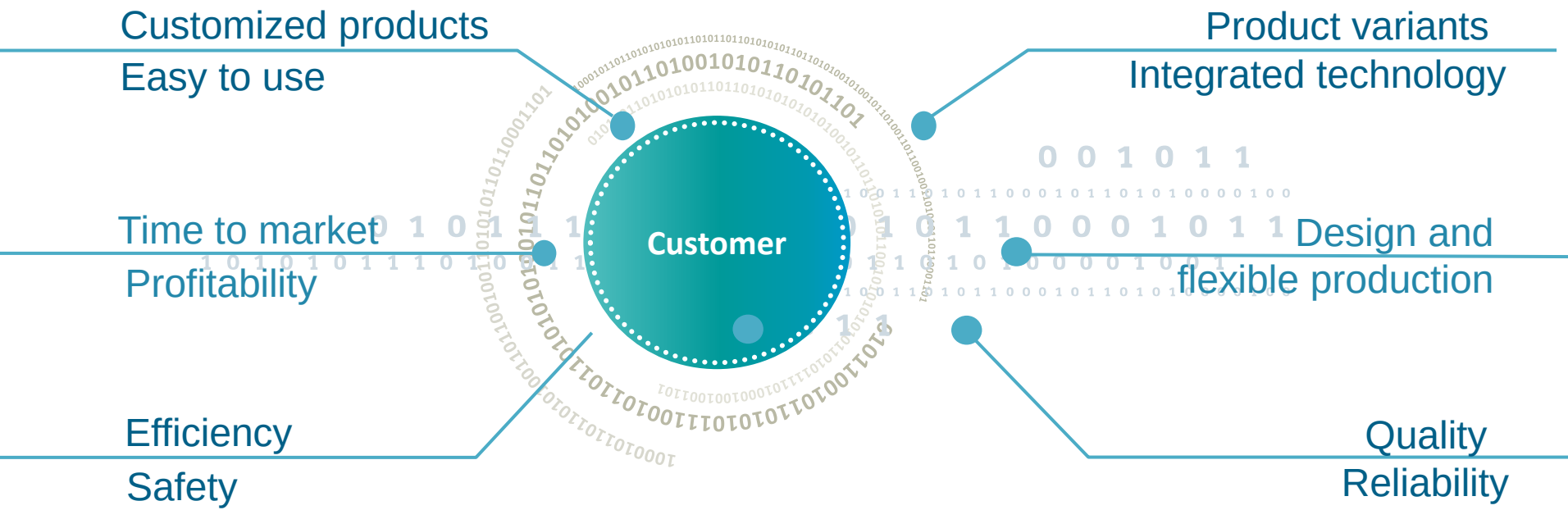
ANIE FEDERAZIONE
Technologies for our future

CONFINDUSTRIA

ANIE AUTOMAZIONE

Mechatronics Group

Growing global challenges in industry



Advantages of the mechatronic approach and simulation

- Development of new machines
- Expansion of existing machines/lines
- Retrofits and optimizations

Speed

- Parallel design of mechanical and automation aspects
- Less time to develop a prototype and machine variants

Quality

- Optimize machine design and functionality in a virtual environment
- It helps to identify mechanical or electronic faults at an early stage

Risk

- Safe and efficient testing using models
- Reduced risks for real commissioning and fewer failures in operation

Cost

- Margins to reduce risks and costs during real commissioning.
- Reduced time to market

Flexibility

- Environments to simulate/experiment with alternative control concepts
- Evaluation of machine modifications in operation

TECHNOLOGIES SESSION

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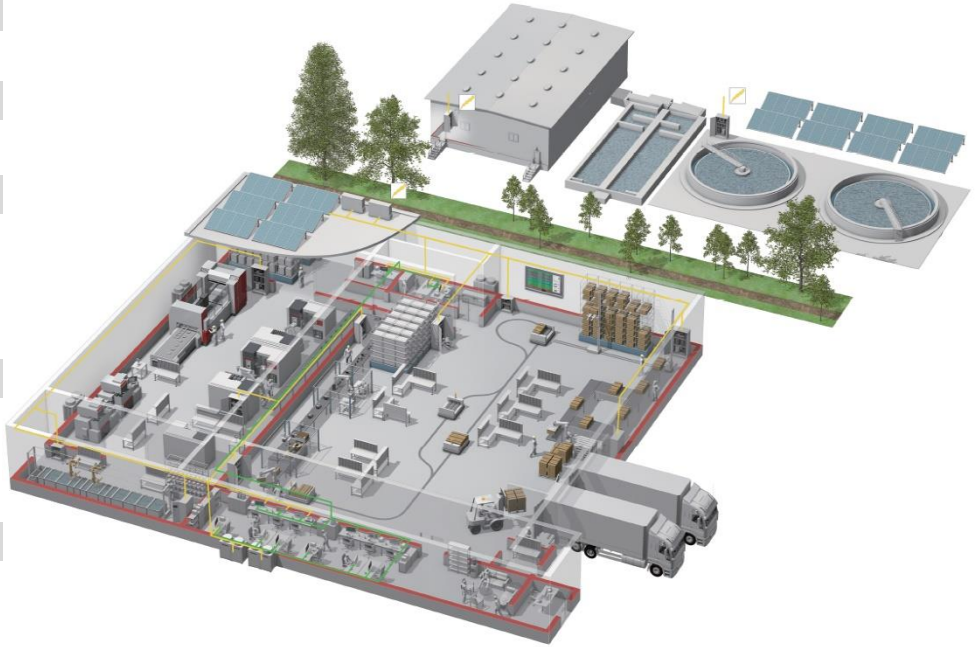
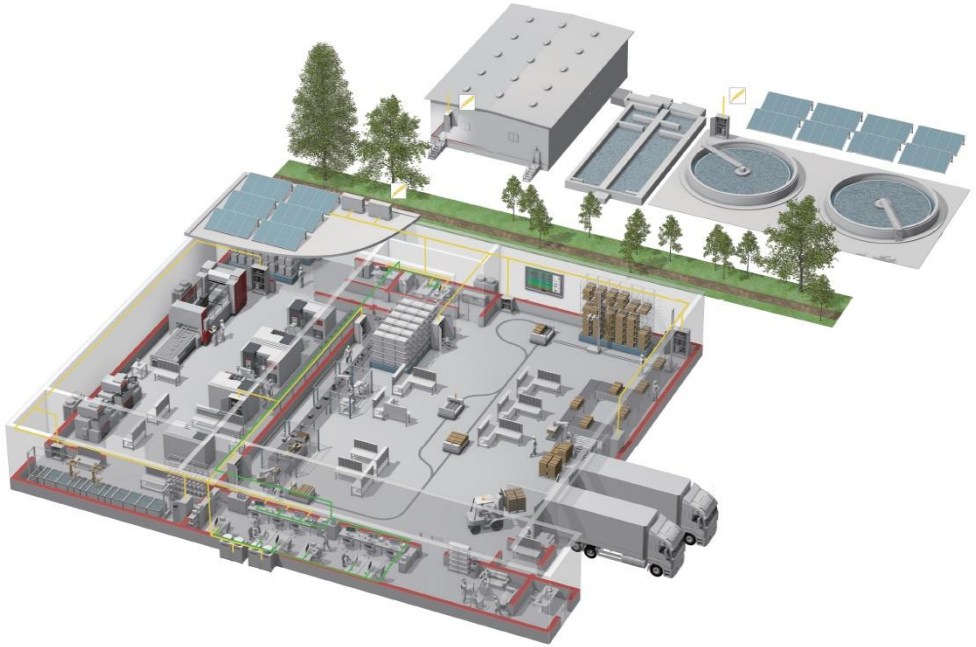


OEM SESSION

EMS Group

Carmine Di Sciullo

Chief Technical Officer



THANK YOU!

The workshop proceedings will be available on
www.anieautomazione.it

Contact us for the certificate of participation
anieautomazione@anie.it