



ROLD

Innovation in real-time: a living example of Digital Manufacturing

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Roldappliance

Roldlighting

Roldindustrial



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Roldsmartfab
Roldsmartpower

Roldelettrotecnica
Roldlighting

Roldshanghai
Roldli-fi

Company Profile

- Italian Family Business
- Established **1963**
- **3** Companies **3** Business Units
- **4** Plants
- More than **230** employees

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Rocchitelli Onofrio Loro Dolores

A Family Company



Rold appliance

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Rold industrial



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Turnover

Total turnover 2017: > **43 M €**
Over the last 5 years, **Rold has reached its best business performances** in more than fifty years of company history

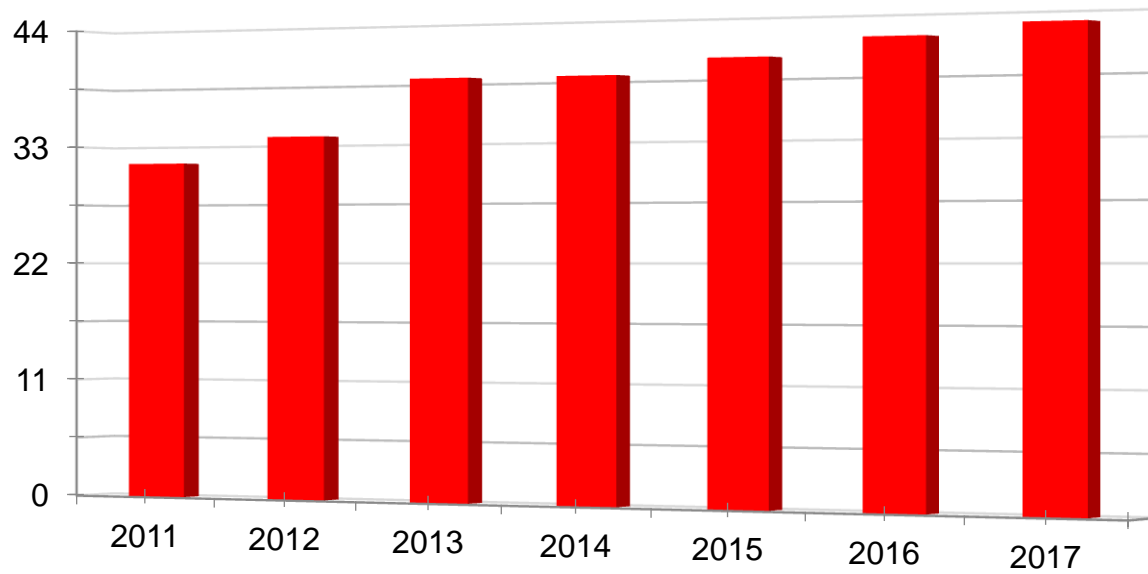
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Turnover Growth







Plants

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Values

- People
- Passion
- Courage
- Responsibility
- Performance

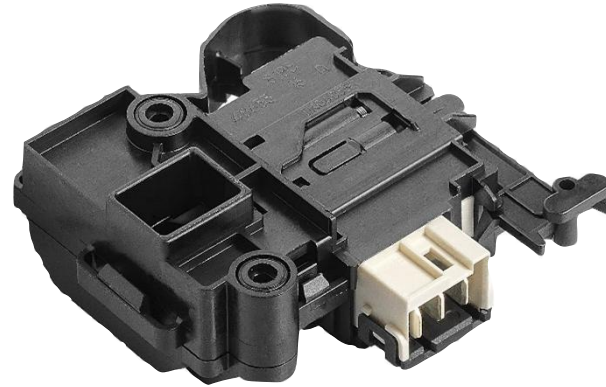
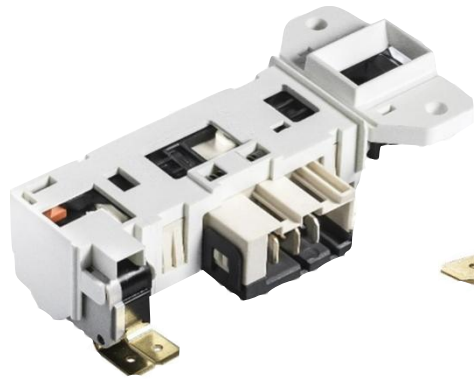
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Roldappliance

- Doorlocks
- Rotary Switches, Encoders
- Switches & Micro Switches
- Push button units
- Smart Sensors
- Electrical and Electronic control systems
- IoT integration

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Roldappliance

- Washing Machines
- Dryers
- Dishwashers
- Home & Professional Cooking
- Food Preservation

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Roldlighting

- LED – based, high efficiency Lamps
- Designed and assembled in Italy
- Industrial, Retail, Public spaces, Sport centers
- IoT integration

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Roldsmartpower

- Innovative modular platform based on PLC technology
- Connect, Measure and Manage
- IoT for Energy Management

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Li-Fi Technology

- **Connecting through light**
- **Based on VLC (Visible Light Communication) technology**
- **Use of common LED lamps to send data**
- **Whole range of specific applications**





Investments

In the past 3 years in R&D,
Technology and Digital Manufacturing

6M €

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componenti



Fondazione
Politecnico
di Milano



Roldresearch

- **SME Network**
- **University Foundation**
- **Multidisciplinary**
 - **Mechanical**
 - **Electronics**
 - **Materials**
 - **Design**

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POLITECNICO
MILANO 1863



POLITECNICO
DI TORINO



SANTA CHIARA | LAB
Università di Siena 1240



LOMONOSOV MOSCOW
STATE UNIVERSITY



University Collaborations

- **Politecnico di Milano**
- **Politecnico di Torino**
- **Santa Chiara Lab University of Siena**
- **Lomonosov Moscow State University**
- **Bauman Moscow State Technical University**

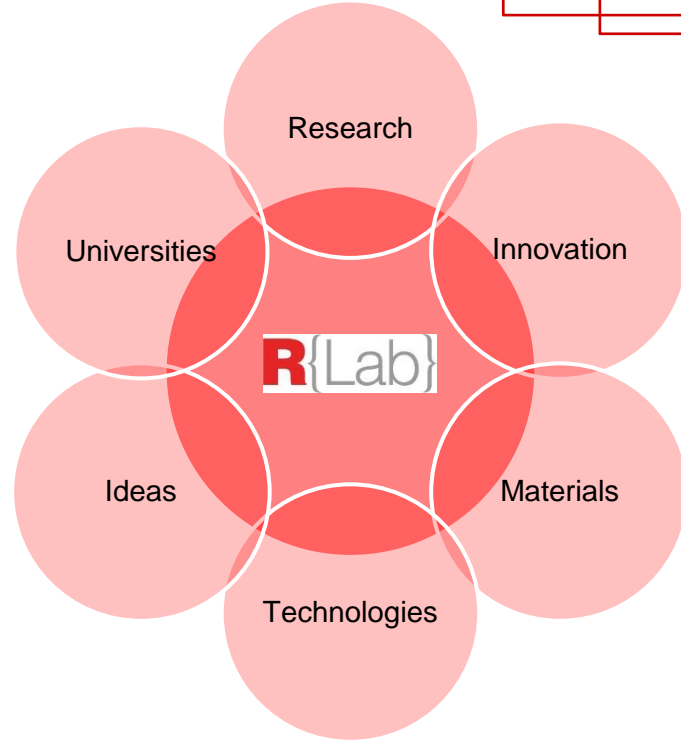
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R{Lab}

Advanced
Mechatronics

HMI
Applications
& Devices

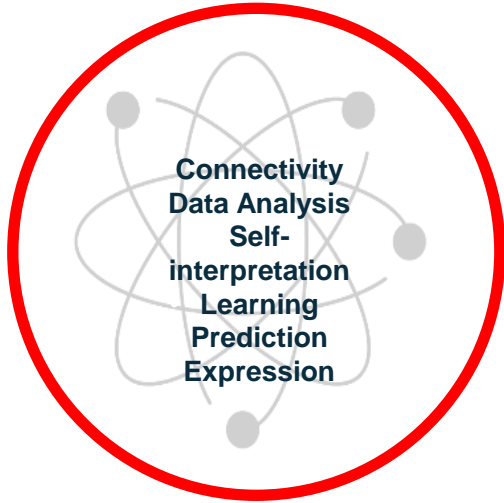
VR / AR
Applications

Advanced
Materials

Knowledge
Sharing

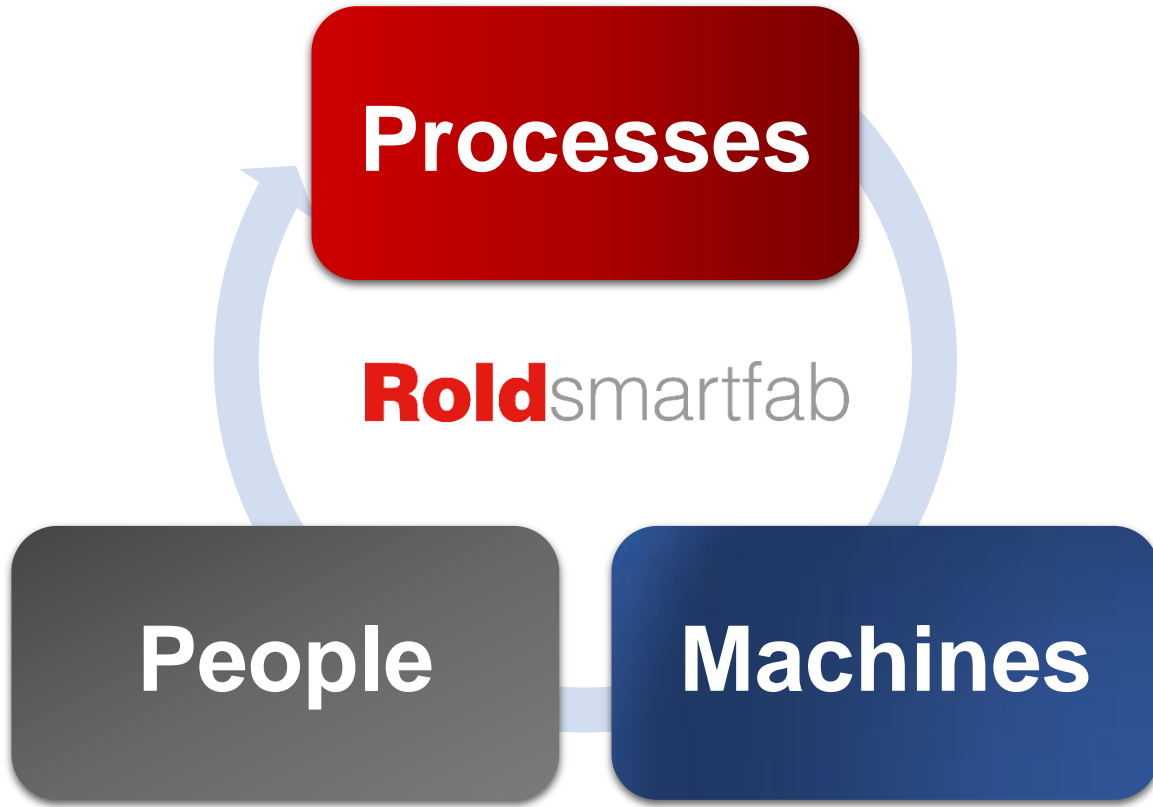
R{Lab}

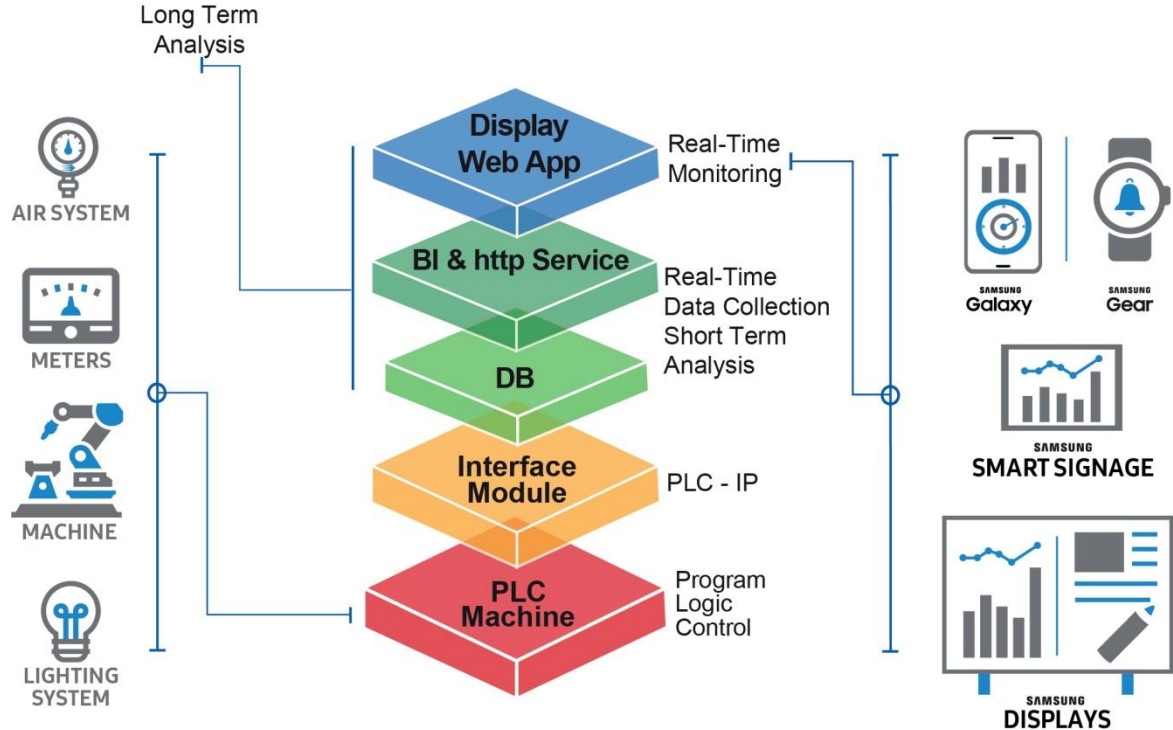




- **Sensor, Actuators**
- **Human Machine Interface**
- **Connectivity**
- **Smart Software**
- **Battery & Power**

Digital Manufacturing





Rold smartfab

- Digital Manufacturing Platform
- Monitoring
 - Machines | Sensors | Energy | Air
- Real-Time Data and Alerts
- Data on touch-screen displays
- Mobile & wearable devices

- OEE
- Big Data Analytics
- Preventive Maintenance
- Chatbot





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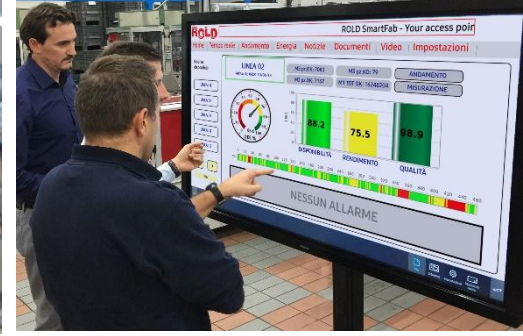
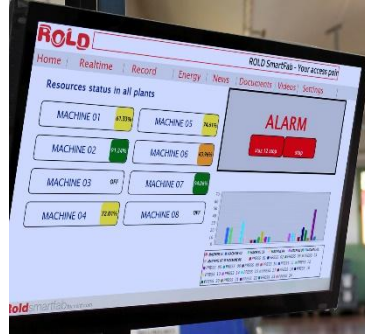
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All the data and factory alerts in real-time and ready-to-use

Real-Time Notification to the Operator



Timely Problem Solving



Instant Feedback to the Manager





Results

Cerro Manufacturing Plant

+ 1,12% Availability
+ 6,14% Performance
+ 7,05% OEE

Comparison 10 mo. 2017 vs 2016

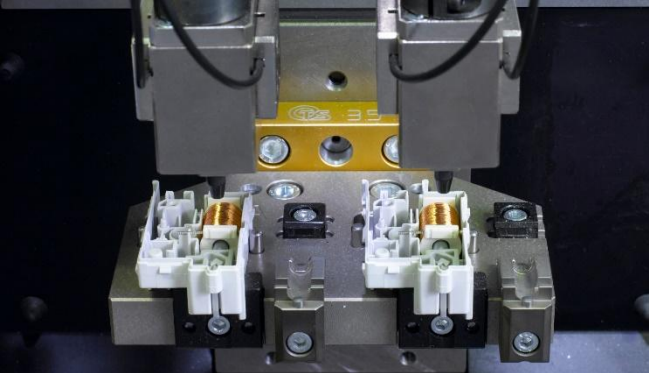
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Results

Doorlock Assembly Line

+ 9,6% OEE
+ 282.000 pcs. Production Increase

Comparison 9 mo. 2017 vs 2016





Results

Moulding Machines

+ 4% OEE
+ 4,8% Availability

Comparison 9 mo. 2017 vs 2016

Innovative Products = Innovative Company

Increased Productivity = Increased Turnover

Innovative Plant = Talents Attractiveness

Tangible Innovation = Reputation



Thank you

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