Even though Industry 4.0 is often referred to as the blueprint for the future factory, intelligent applications that enable a customizable and highly flexible production, are long since reality.

### Control of chocolate production via the molds
- **User benefit:** Flexible production of different products depending on the production process
- **RFID tags:** Used in each casting mold to control the production process
- **Data consistency:** Available in real-time throughout the entire logistics process

### Identification of Cryovessels in the pharmaceutical industry
- **User benefit:** Identification of Cryovessels for clear identification of the container and contents
- **Applications:** Suitable for pharmaceutical industry
- **RFID tags:** Contain all information for controlling the processing machines

### Position detection of the gondola arms in circulators
- **User benefit:** Increased plant availability through prefailure warning
- **Applications:** Suitable for amusement parks
- **RFID tags:** Detect the resonator position

### Preventive maintenance of conveyors
- **User benefit:** Reduced changeover times by automated changing of molds
- **RFID tags:** Used in each casting mold
- **RFID sensors:** Detect the resonator position

### Monitoring of cabinets and protective housings
- **User benefit:** Increased plant availability and avoidance of unplanned downtimes
- **RFID tags:** Used in cabinets and protective housings
- **Applications:** Suitable for machinery and plant components

### Summary
- Industry 4.0 offers a wide range of applications that enable a highly flexible and customizable production process.
- RFID technology plays a crucial role in enabling this level of automation and efficiency.
- The examples provided illustrate how Industry 4.0 can be implemented in various industries, from chocolate production to pharmaceuticals and beyond.
**Industry 4.0 – User Benefits**

- Increased availability of machines and plants 
- Better quality assurance up to the end user 
- Reduced quality assurance processes 
- Selective machine control and maintenance 
- Reduced machine downtime 
- Optimal production processes 
- More efficient production in small quantities

**Industry 4.0 – Key Technologies**

- Faster diagnosis of causes for process variations, handled by sensors that sense only the relevant function through smart automation 
- Increased efficiency through intelligent monitoring of control systems 
- Easy and flexible to integrate and expand production facilities 
- More efficient processing of data and communication solutions

**Industry 4.0 – Data and Communication Solutions**

- **Increased availability of machines and plants**
- **Better quality assurance up to the end user**
- **Reduced quality assurance processes**
- **Selective machine control and maintenance**
- **Reduced machine downtime**
- **Optimal production processes**
- **More efficient production in small quantities**

- **Faster diagnosis of causes for process variations**, handled by sensors that sense only the relevant function through smart automation.
- **Increased efficiency through intelligent monitoring of control systems**.
- **Easy and flexible to integrate and expand production facilities**.
- **More efficient processing of data and communication solutions**.

---

**Functionalities of a typical Industry 4.0 system:**

- **Reduce** cycle times in production processes, 
- **Reduce** quality assurance processes, 
- **Optimize** production processes, 
- **Enable** data communication and processing to reduce cycle times.

**Industry 4.0 – Key Technologies**

- **Increased availability of machines and plants**
- **Better quality assurance up to the end user**
- **Reduced quality assurance processes**
- **Selective machine control and maintenance**
- **Reduced machine downtime**
- **Optimal production processes**
- **More efficient production in small quantities**

- **Faster diagnosis of causes for process variations**, handled by sensors that sense only the relevant function through smart automation.
- **Increased efficiency through intelligent monitoring of control systems**.
- **Easy and flexible to integrate and expand production facilities**.
- **More efficient processing of data and communication solutions**.

---

**Industry 4.0 – Data and Communication Solutions**

- **Benefits from the wide range of products**
- **In its extensive portfolio of data and communication solutions**, Turck also has the right Industry 4.0 tools for you.