INNOVATION FOR
INDUSTRY
COMPETITIVENESS

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Digital transformation projects focused on operational efficiency and business competitiveness

Your company

Complete in of the produ

'4.0 Journey'

Current manufacturing diagnosis 01	Conc an roadp 02

The Pillars o

Intelligent machines

People empowerment

Potential applications ▶

Identification of Bottlenecks and Roadmap 4.0

ntegration uctive chain

cepts
d
map

Pilot
deployment

03

f Industry 4.0

Smart
products

Control
Systems

Companies of the future

- **Intelligence and efficiency**

- **Increase of customer performance**

factory

- Process automation(NPI)
- Lean 4.0
- Computer vision

- Artificial Intelligence
- Intelligent setup
- Command center

CERTI MES

Main modules:

1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
Integrated production management	Planning	Quality	Maintenance	Setup	ERP Integration	Connectivity

Shop floor management

Main advantages:

- Traceability and production management in real time, on cloud;
- Automatic notes on ERP;
- Management of industrial production losses
- Overall equipment effectiveness management

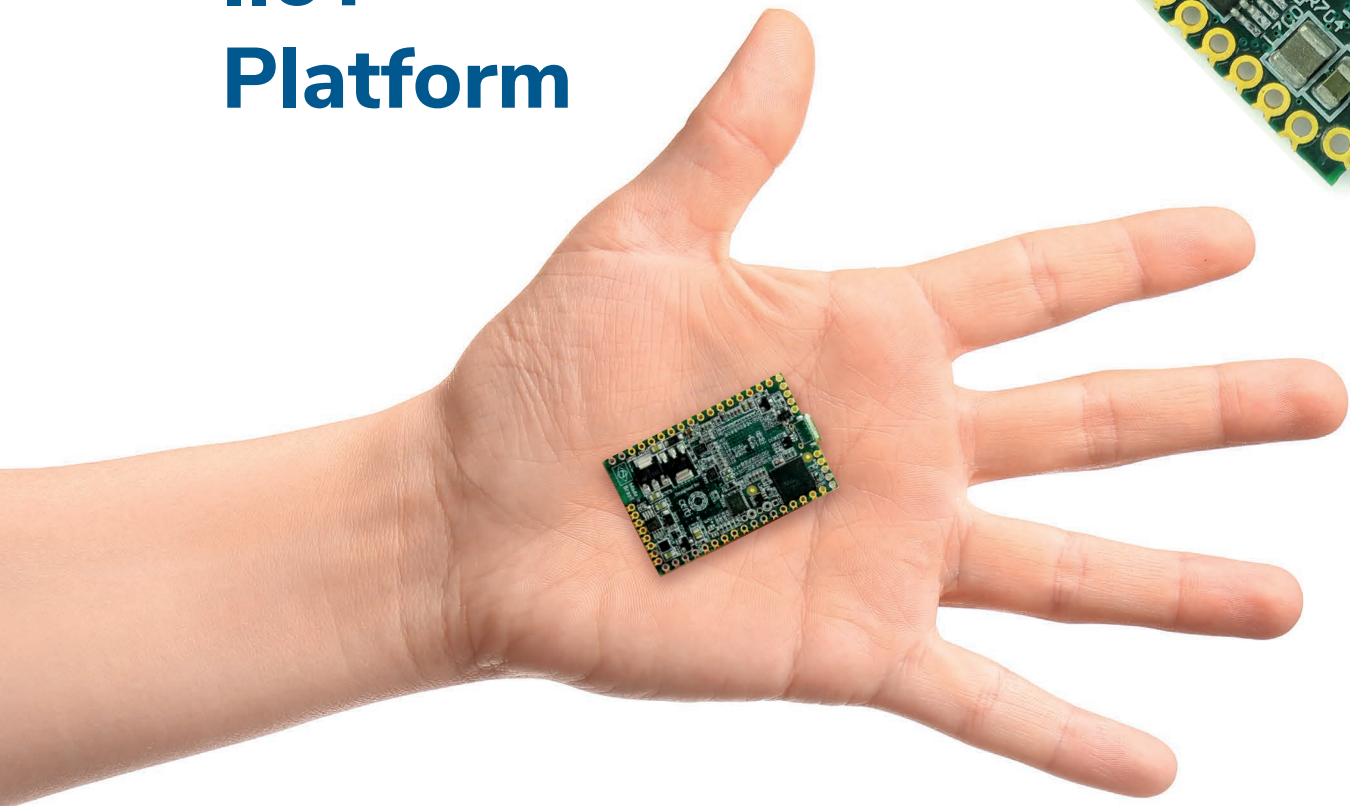# Produza BOT

PRODUZA

Inteligência em manufatura

Low cost industrial robot

- Modular robot platforms;

- Safety compliance;

- Easy adoption by companies;

- Competitive acquisition and operation cost;

- Possibility of attaching external vision system, gripper, suction cup and others;

Main application

- Repetitive tasks replacement;
- Pick and place;
- Packing.

IIoT Platform

SmartSMEMA

Device with Plug & Play installation that provides report of (1) individual cycle and relative M&M; (2) cycle time legacy machines and conveyors; and (3) time cycle of lines through clusters of data, providing traceability of production, identification in Real Time of the dynamic bottleneck, production KPIs, among other features.
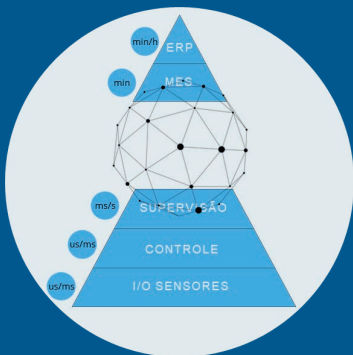
Gen.IO

Device based on Internet of Things (IoT) concept for collecting data from sensors installed on machines and equipment. Possibility of using different types of sensors such as inductive, capacitive, optical, in addition to limit switches and relays.

IIoT for connectivity
between machines, products and systems
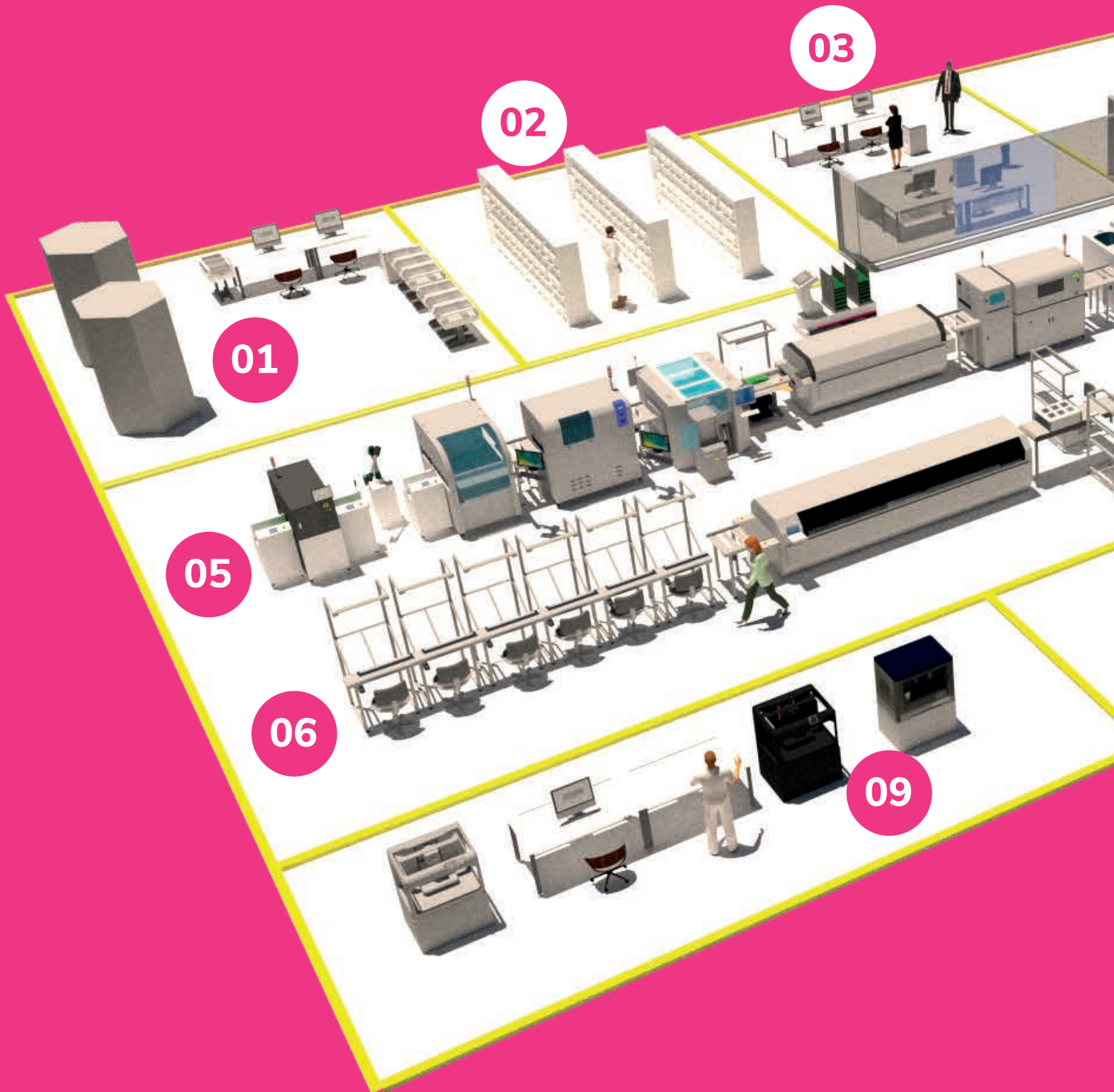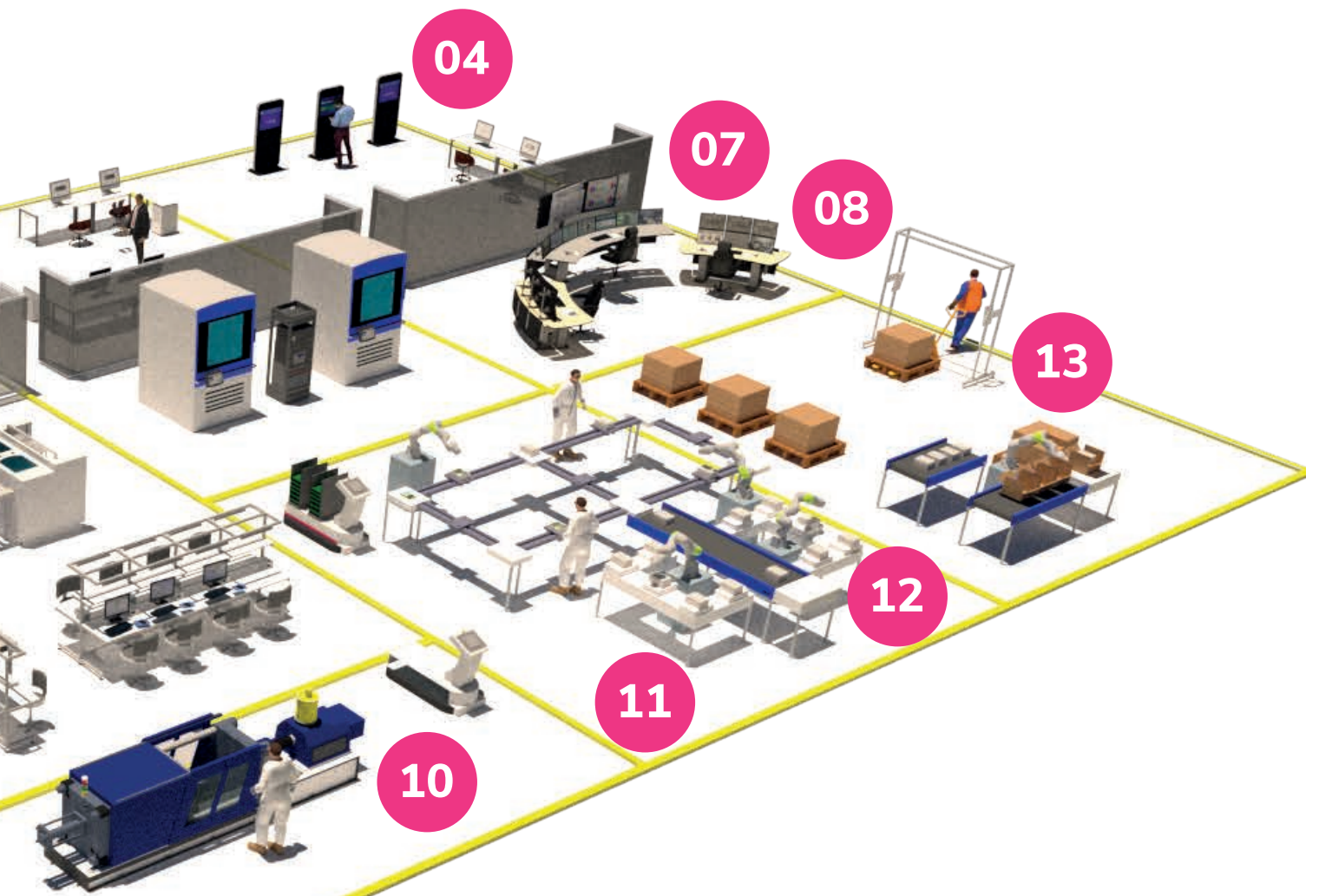
Centralized management
of IIoT devices

IIot devices convergence IIoT
with the factory information

Interoperability with other
devices and legacy systems

Enabling technologies of industry 4.0 applied by CERTI

01	**Supply of lines per AGVs**
02	**Automate inventory synchronization**
03	**Systems for integration of supply chain**
04	**Integration factory market**
05	**Smart setup**

06	**Integration M2M e P2M**
07	**Command center**
08	**Digital twin simulation**
09	**Additive manufacturing**
10	**Collaborative robots**

11	**Functional movement systems**
12	**Computer vision system**
13	**Complete traceability of production**

The CERTI Foundation is a private and independent organization that since 1984 works in technological development and innovation in Brazil and world, in different specialties, in the most diverse sectors with multidisciplinary teams, contemplating projects in health, electronics, industry in general, energy, aerospace and defense, telecommunications, automotive, agribusiness, among others.

CERTI is an EMBRAPII Unit accredited to act in the field of competence of Intelligent Systems, providing solutions to innovative products and processes in its area of activity, having part of the subsidized solution.