

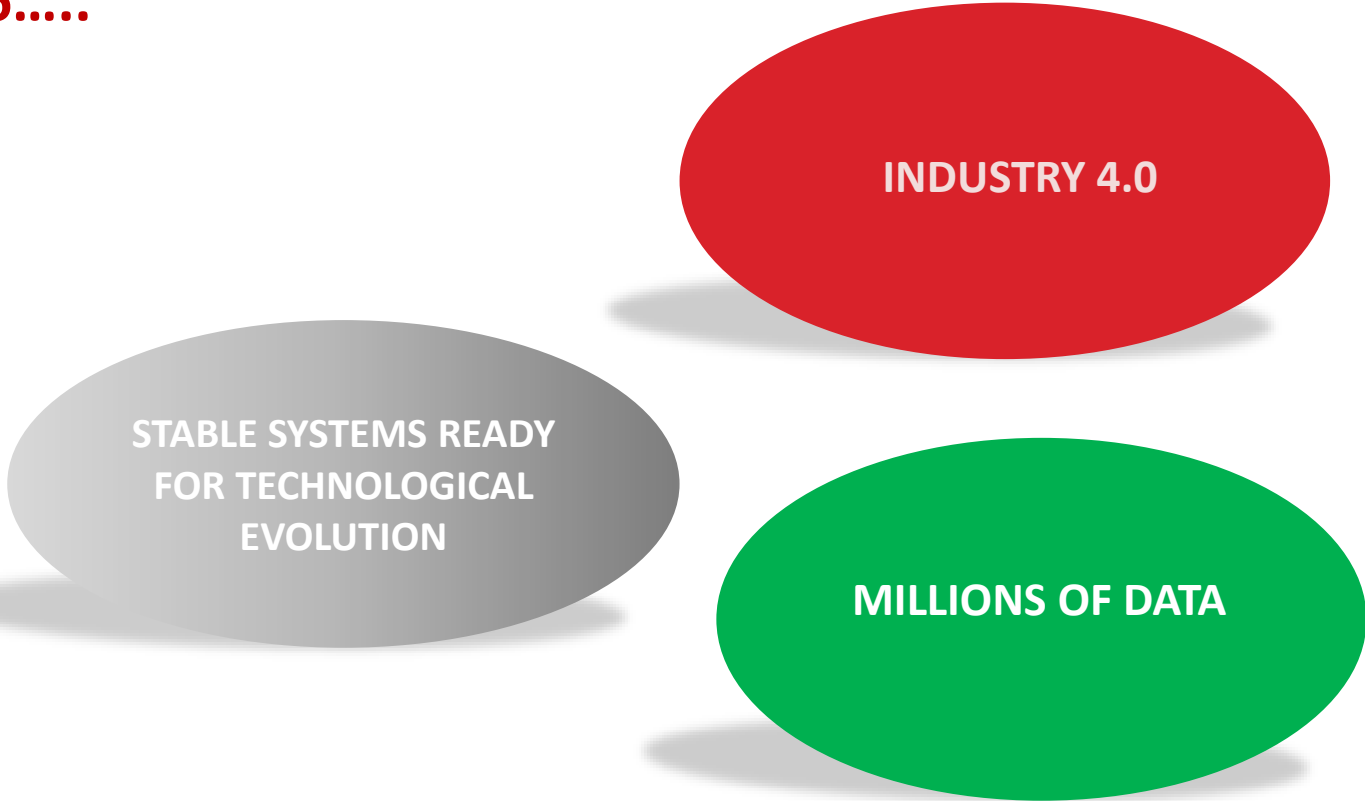
A photograph of an industrial worker in a dark, red-tinted environment. The worker is wearing a helmet and protective gear, and is holding a long, thin rod or tool. The background shows industrial structures and a large, glowing red light source, possibly a furnace or a large industrial machine. The overall atmosphere is industrial and futuristic.

Sidenor 4.0

“Facing the Future. Industry 4.0”

HOW THE STORY STARTED...

2016.....

A diagram consisting of three ovals arranged in a triangular pattern. The left oval is grey and contains the text 'STABLE SYSTEMS READY FOR TECHNOLOGICAL EVOLUTION'. The top-right oval is red and contains the text 'INDUSTRY 4.0'. The bottom-right oval is green and contains the text 'MILLIONS OF DATA'. Each oval has a soft shadow beneath it.

STABLE SYSTEMS READY
FOR TECHNOLOGICAL
EVOLUTION

INDUSTRY 4.0

MILLIONS OF DATA

OUR APPROACH OF THE PLAN



Training in
new
technologies



Interviews and
workshops with
business leaders



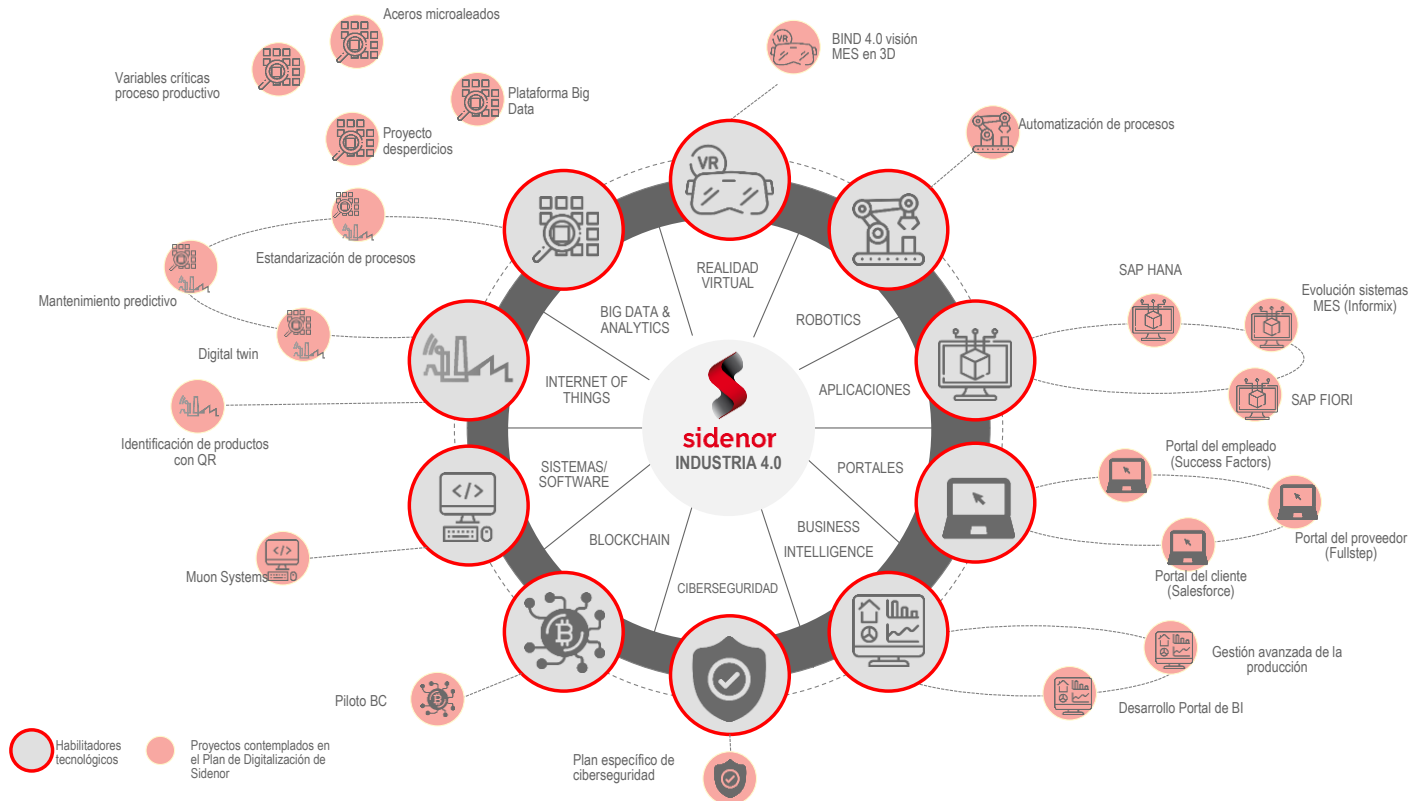
Identification
of usage
examples



Sidenor 4.0
plan
development



Communication
and follow-up



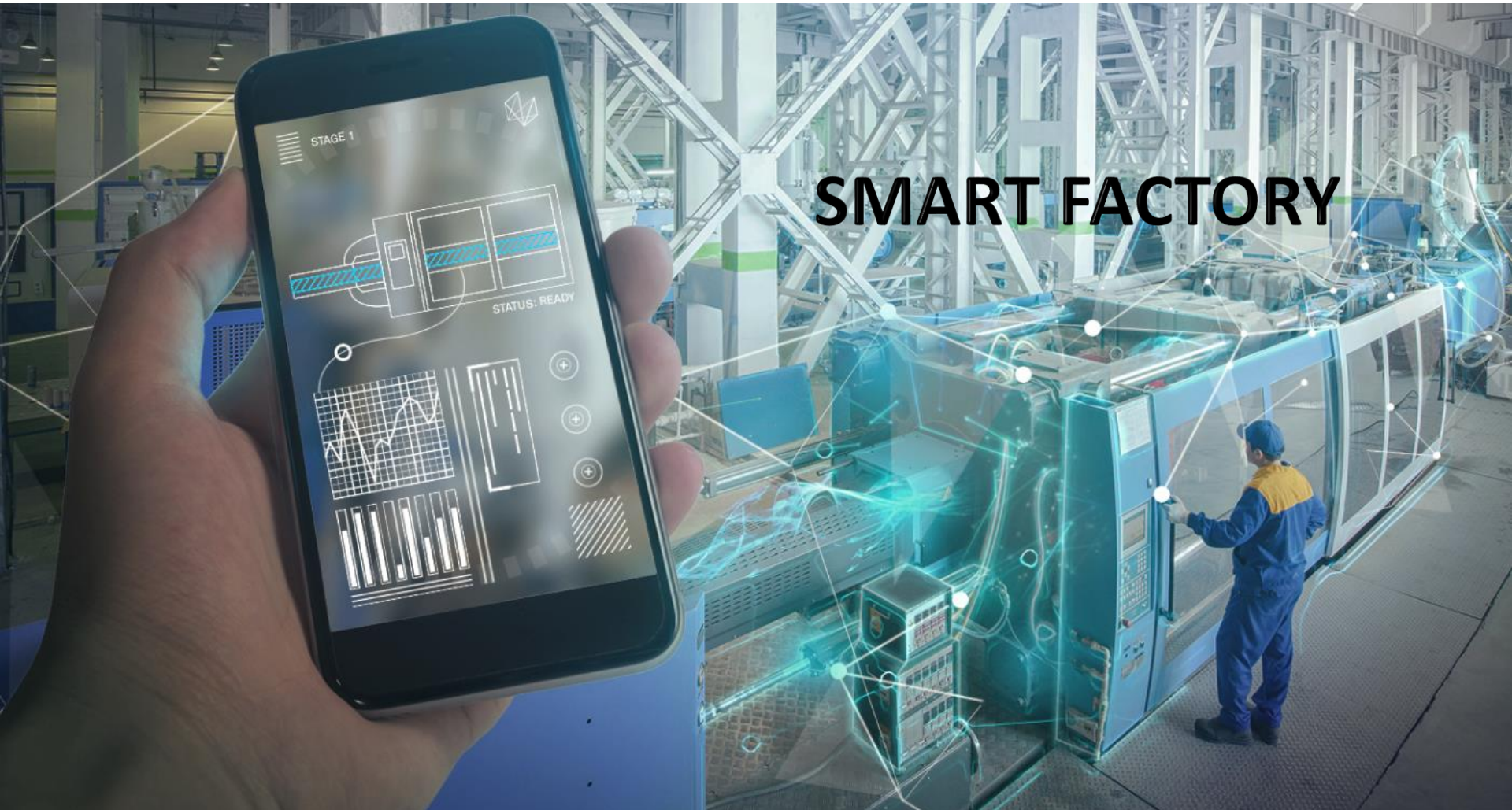
SMART FACTORY

TECHNOLOGY INNOVATION

SMART BUSINESS

CYBERSECURITY

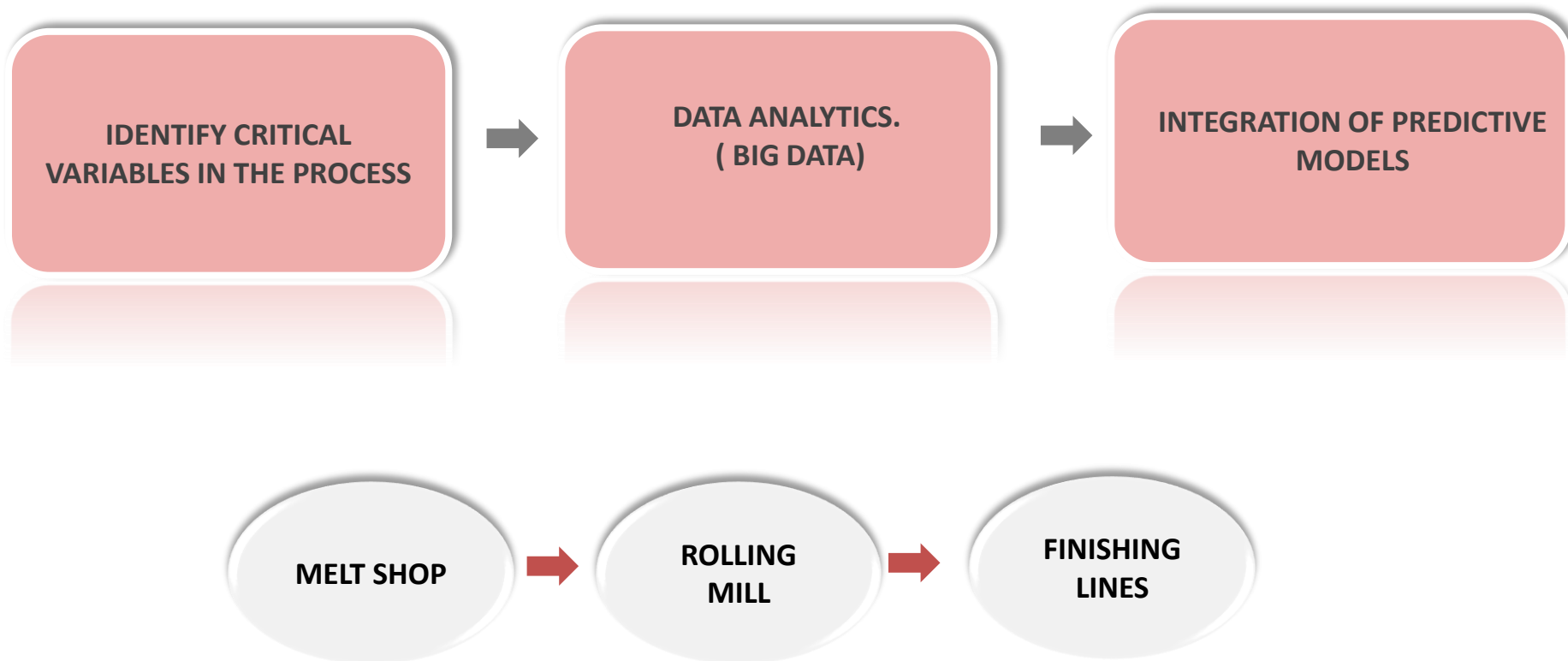
SMART FACTORY

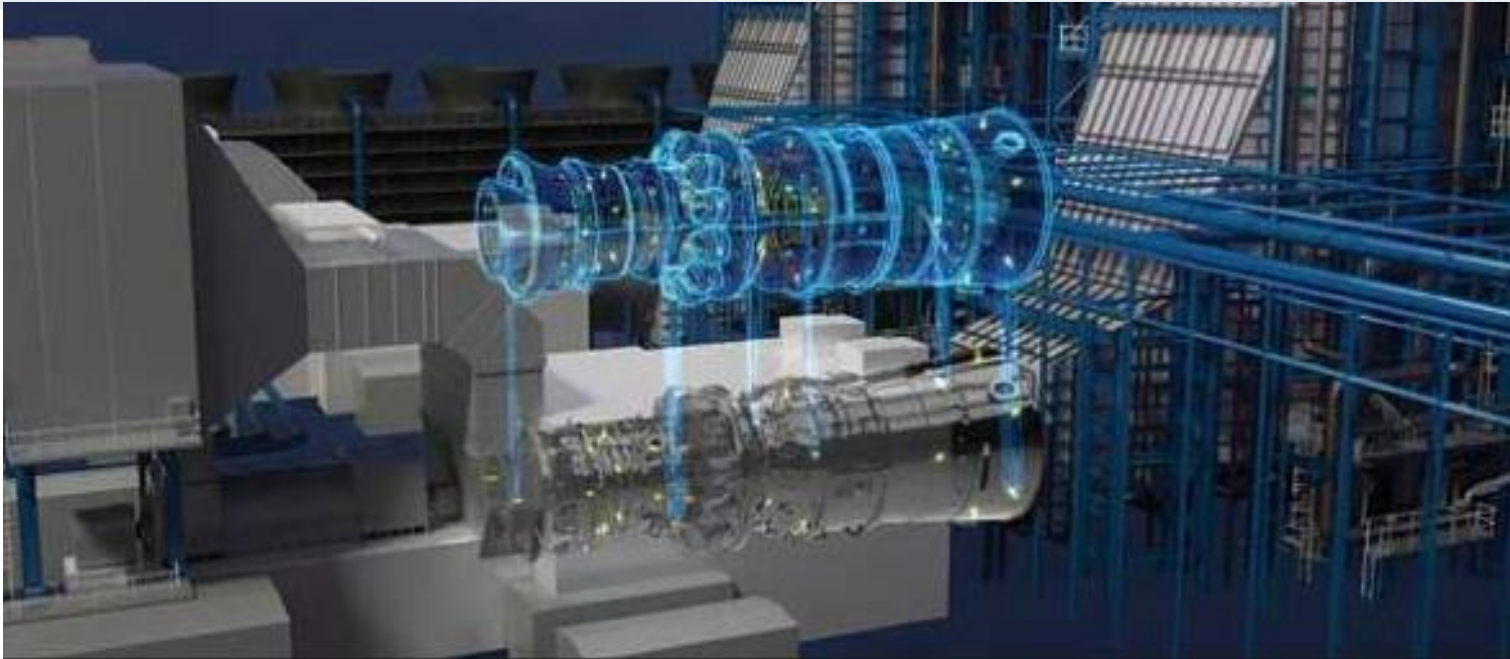


**SMART
FACTORY** = Quality &
Competitivity



Identify the critical variables of the process and define optimal production parameter values for complying with quality requirements.





Our main challenge is to create a simulator of our manufacturing process, whose objectives are the following:

- Predict possible problems in the process.
- Develop new products without any risk.

Steel DNA

Complete traceability of the process.



MELTSHOP



ROLLING MILL –Ev 2



FINISHING LINES – L2



SMARKTEC
Steel Marking Technology

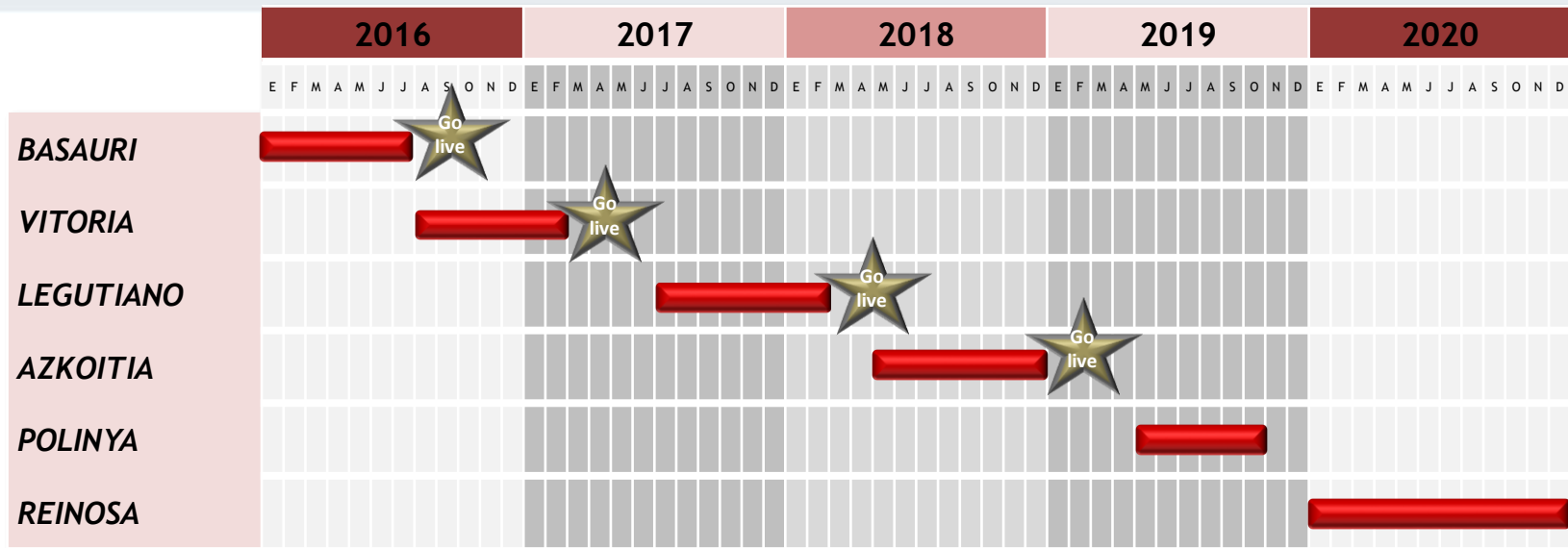


- ✓ Information incorporation in customer production process
- ✓ Access to material information through Datamatrix codes

Competitiveness

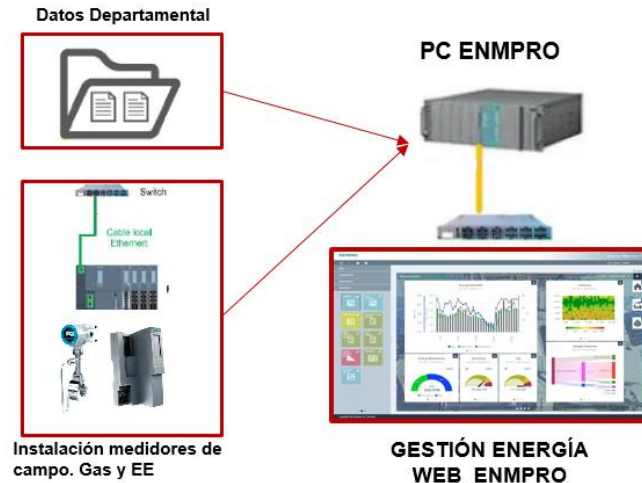


SIDENOR 4.0 – PROCESS TRACEABILITY



- ✓ *Material Location*
- ✓ *Inventory management*

**Energy
Efficiency
project
H9 H12 H15 y TABO**



SIEMENS
Ingenio para la vida

**Predictive
Maintenance L3 Ac.
Negro**



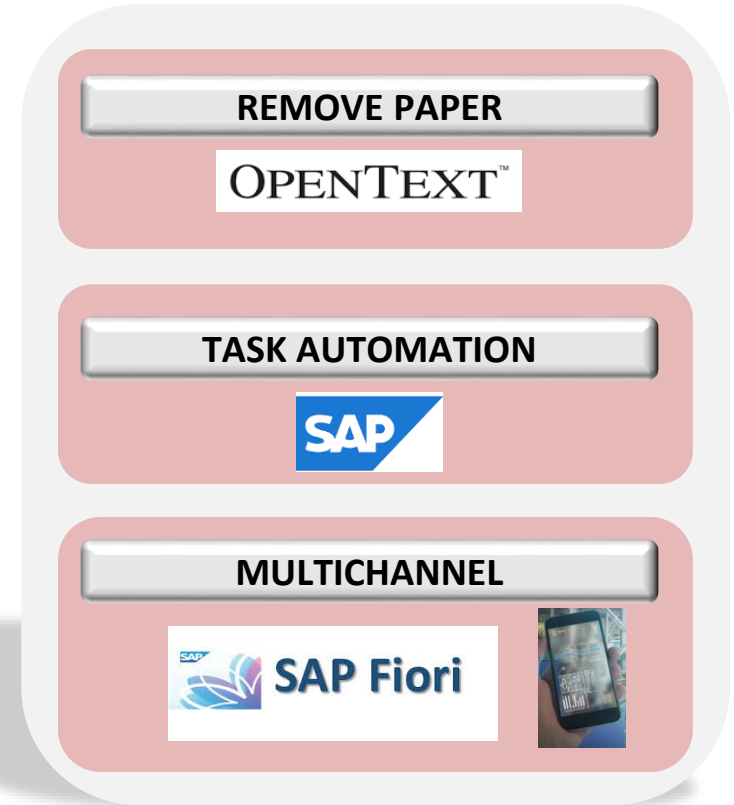
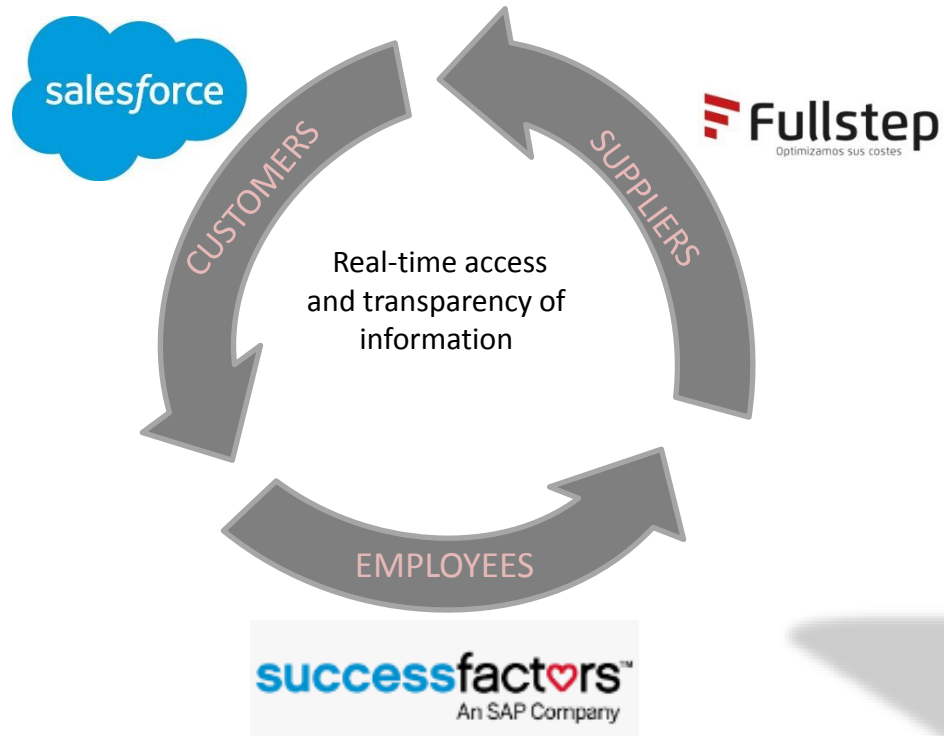
MEVASA
METALURGICA VAT, S.A.



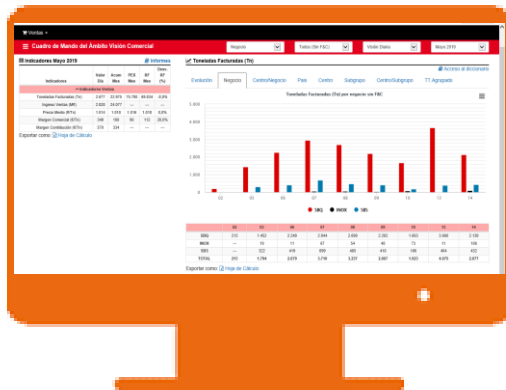
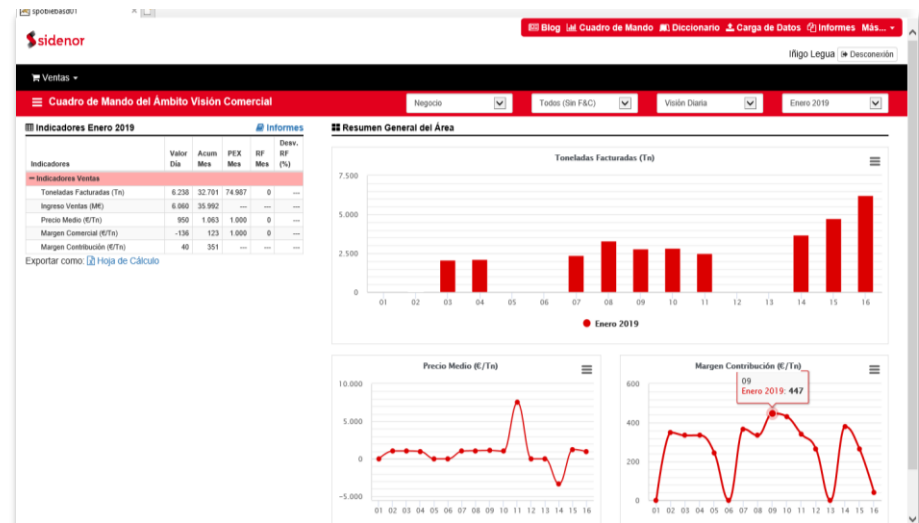
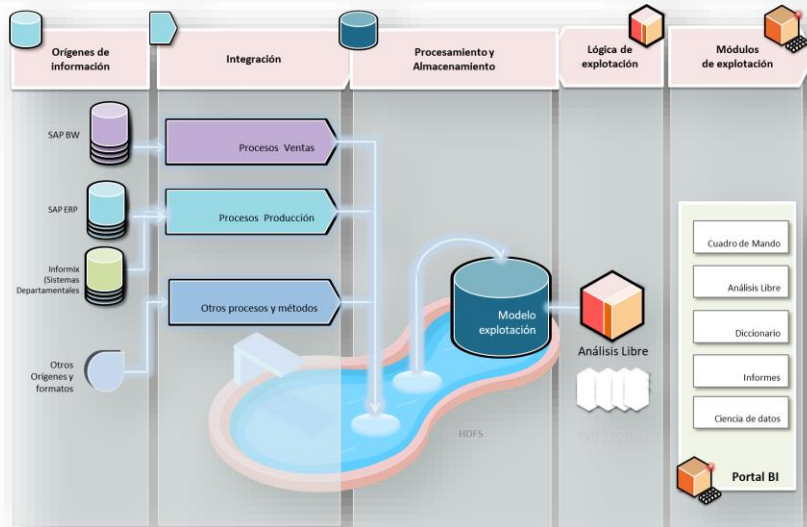
SSB

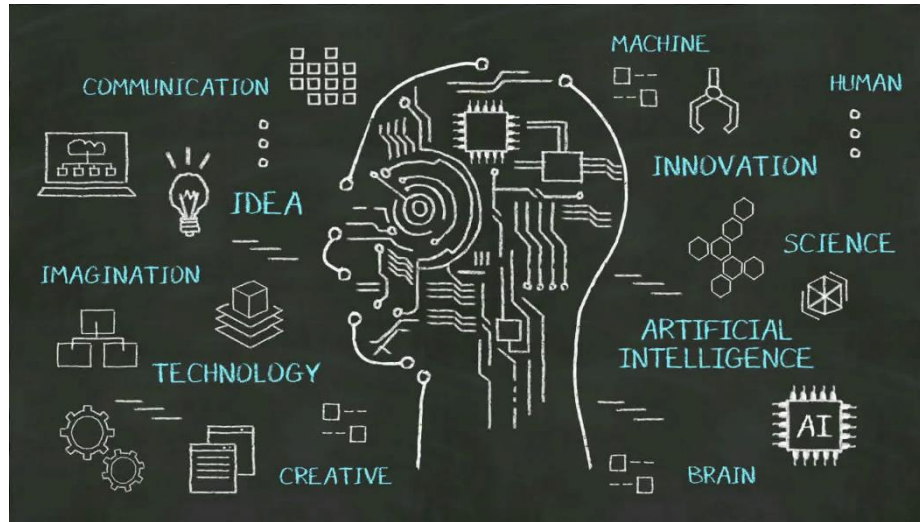
SMART
BUSINESS

PROCESS AUTOMATION AND COLLABORATIVE PLATFORMS

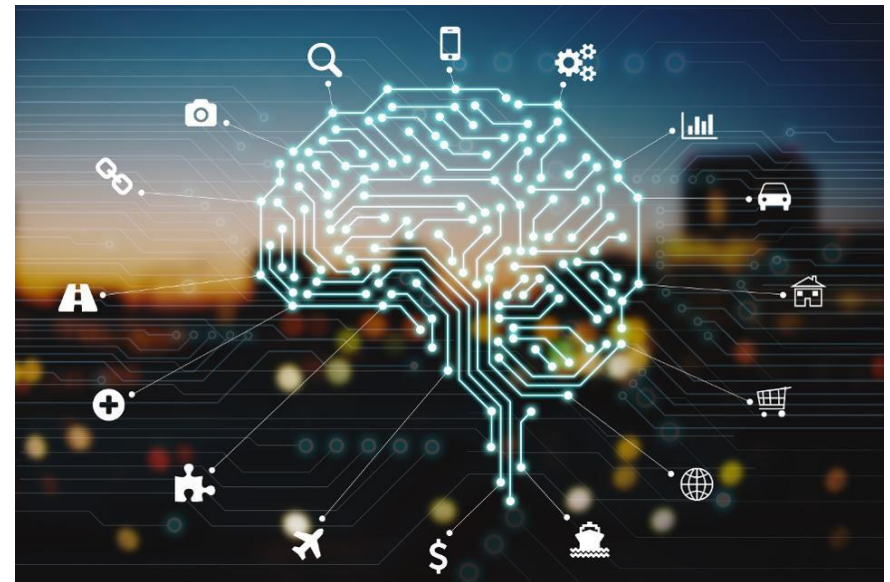


BUSINESS INTELLIGENCE PORTAL





**TECHNOLOGY
INNOVATION**





BIND4.0

STARTUP!
BASQUE INDUSTRY 4.0
ACCELERATOR PROGRAM



GLOBAL SOLUTIONS

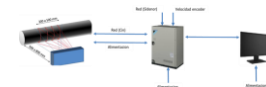
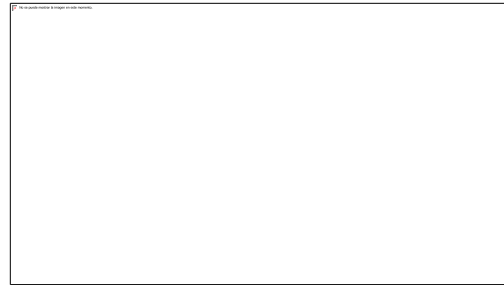
**ACCESS TO NEW
TECHNOLOGIES**

**DEVELOPMENT
OF START-UPS**

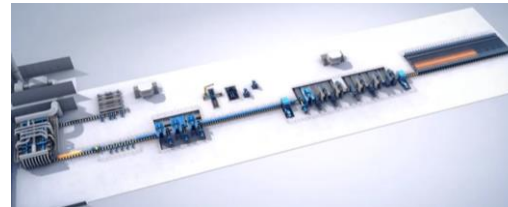
SIDENOR 4.0- TECHNOLOGY INNOVATION PROGRAMMES



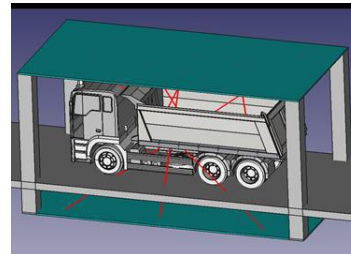
Straightness control
L2 de Basauri



3D vision for the
rolling mill in Basauri



Detection of
non-metallic
impurities in
scrap trucks







ANTIPHISHING

RAMSOMWARE PROTECTION

**INTRUSION PROTECTION
SYSTEM (IPS)**

**SECURITY MANAGEMENT
SYSTEM (SIEM)**



Iñigo Legua ClO

l.legua@sidenor.com