

Experience, Technology and Industrial Solutions to empower Processes Digitalization

COMPANY PROFILE





A group of companies that has been developing industrial automation systems for over 50 years all over the world in different product sectors like:







Fashion









Specialised in software solutions for Operation: **MES – WMS – WCS** (for the management of automated warehouses) and **testing** software.



Specialised in **sheet metal moduls** for **home appliance** industry.



Specialising in machine vision systems applied to industrial solutions, such as robot manipulators and non-contact measuring devices.

KPI



30% of which in the technical and engineering offices















Your end-to-end partner for the digitalization of operational processes.

MAIN RFERENCES

ABB

Amica Wronki

Arcelik / Beko

Asko Cylinda

Atlant

Aventis Pharma

B/S/H/

Calzedonia

Candy

Catalent

Celli

Ebac

Electrolux

Eli Lilly

Femas

Fendi

Galanz

GE Appliances

Gilmar

Godrej

Gorenje

Gree

Haier

Liebherr

Midea

Miele

Novartis

Robam

Saint Gobain

Smeg

Subzero

TCL

Vestel

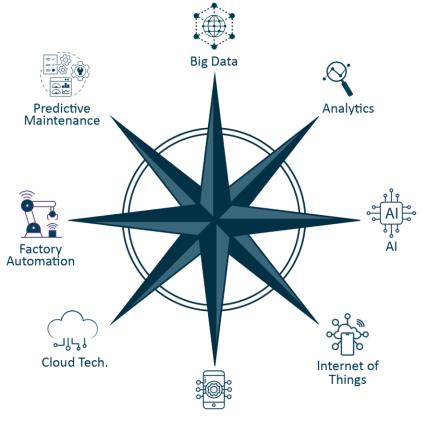
V-Zug

Whirlpool EMEA

Whirlpool USA

OUR DIGITAL COMPASS

TO SUPPORT THE DIGITALIZATION OF PRODUCTION AND LOGISTICS PROCESSES



OUR STRENGHT

Semplification



We don't sell products but

solutions that allow to

semplify challenging

processes.

Event sourcing



Our innovative toolbox.

We develop stable, safe and modular solutions with state-of-the-art technology.

Agile method



Each **customer** is

involved in the

realisation of customized

solutions.



ESIWMS

Warehouse Management System

- Warehouses management;
- Hight level of customization to meet the needs of various product sectors (Pharmaceutical, Fashion, Food, Chemical, Furniture, Manufacturing);
- Standard protocol for interfacing with major field devices and handling systems, managed by major brands (Siemens, Omron, Rockwell, Phoenix, Wago, etc.).







- Integrate warehouse logistics flows;
- 2. Communicate data in **real time** with field devices;
- Support the company in organizing, coordinating and controlling processes.



- Operator efficiency;
- Reduction of costs and errors;
- Real-time stock control and up-to-date inventories;
- Fast and accurate picking;
- Space optimization.

SYSTEMS AND APPLICATIONS



ESI WMS allows *end-to-end* management of the following tools:

- Automated and traditional warehouses;
- Systems with **AGV**, **LGV**, **AMR** vehicles;
- Conveyor systems for pallet and boxes;
- Palletising systems;
- Order Picking and Sorting systems.



Main types of shelving served:

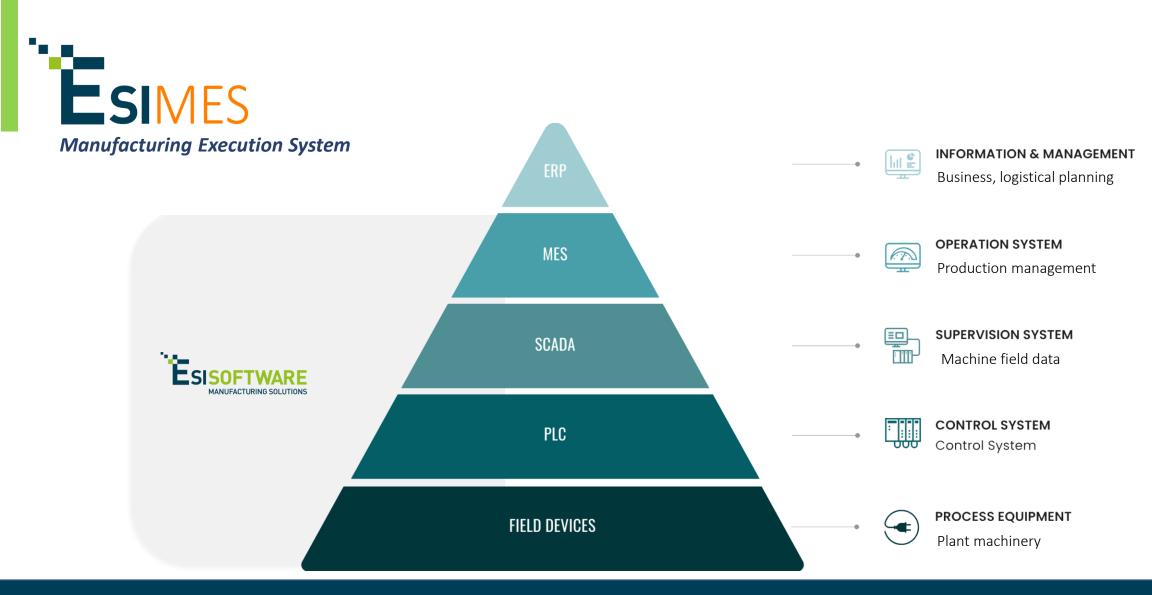
- Single, double or multi-depth pallet racks;
- Miniload for single, double or multi-depth boxes;
- **Continuous shelves** for boxes with variable size.





Your customized production process management suite









- Data collection and analysis to optimize production steps;
- Performance indicators (KPIs), such as the
 OEE (Overall Equipment Effectiveness)
 metric.



Data collected is processed in **real time** and exported to ERP systems to ensure **complete control** of the factory (downtime, errors, etc.). All data is collected in **customizable reports**.

MODULAR SOLUTION



ESI MES suite consists of modules that manage and improve the quality and performance of production flows.



Thanks to its event sourcing feature, the system allows easy integration of a large number of different modules capable of monitoring, tracking, documenting and controlling the production process.



MAIN REFERENCES

















Bonferraro



































We develop **end-to-end solutions** for the management of **test and inspection systems**.

Main implementation experiences:

- Washing machines
- Dishwasher
- Dryer

- Ovens and cookers
- Refrigerators
- Coffee machines
- Electrospindles



Automatic Quality stations – Test program interfaces





MODULS

TEST PROGRAM

Testing Software

GENERATION

Software that generates the test plans used by the testing software

STATISTICS

Website containing all test data, product history and dedicated KPIs

TEST PROGRAM



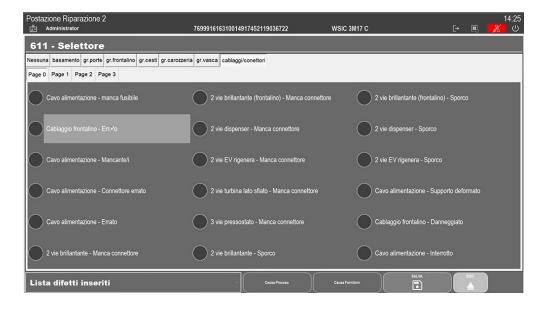
The keyword is **MEASURE**.



Our testing software, through the use of dedicated devices and specific software algorithms, is capable of measuring any data.



Each type of product and each type of test provides a specific and fully customizable sequence according to customer requirements.





STATISTICS

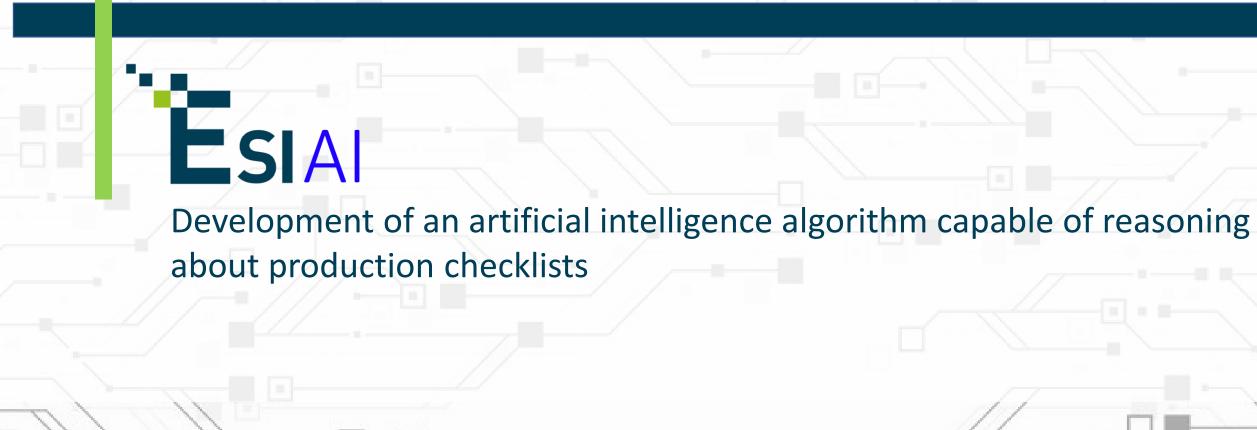
All data related to the testing area (and not only) are collected on one website.

Special attention is given to results that can improve product qualitative analysis.

Prior forces Lagrida B Construction Final State of State

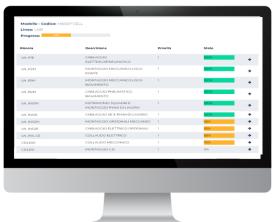
Serial number	769991586850062755452102039579	Production date	2021-01-14T23:16:33	Marel Data
Model	DIE 2B19	Family	ML2020 NEL IKEA	
Line	6	Tube barcode	Tub Barcode not found for this barcode	
DATE	Туре	Place	Operator	Result
1/14/2021, 11:16 PM	Estetico Strutturale	Collaudo Estetico Strutturale	Kinga Wloka	OK)
1/14/2021, 11:27 PM	Funzionale Lungo	Collaudo Funzionale-Lungo	Agata Galwa	КО
1/14/2021, 11:27 PM	Eeprom	Programmazione Eepom	Agata Galwa	OK OK
1/14/2021, 11:27 PM	Funzionale	Collaudo Funzionale-Lungo	Agata Galwa	KO
1/15/2021, 1:58 AM	Funzionale Lungo	Collaudo Funzionale-Lungo	Dorota Mielczarek	OK
1/15/2021, 1:58 AM	Eeprom	Programmazione Eepom	Dorota Mielczarek	OK
1/15/2021, 1:58 AM	Funzionale	Collaudo Funzionale-Lungo	Dorota Mielczarek	OK
1/15/2021, 2:31 AM	Elettrico	Collaudo Elettrico	System	OK
1/15/2021, 2:33 AM	Estetico	Delibera Finale	Katarzyna Trajdos	OK
Test type	Details	Unit	Value	Result
Electric	Terra	Ohm	0.046	OK
Electric	Terra	A	26.8	OK
Electric	Rigidità	kV	1.421	OK OK
Electric	Rigidità	mA	0.38	(3)













- It provides a predictive forecast of the probability that the product sold will be returned by analysing the data from the checklists (through AI algorithms).
- It identifies the checklist parameters that have the most influence on the calculation of the probability of return.
- It provides an optimisation of the checklist process and, as a result, of production processes.



Identification of models with a consistent correlation
 (from 65 to 80 per cent of accuracy) between the
 product's return and a range of checklist parameters.



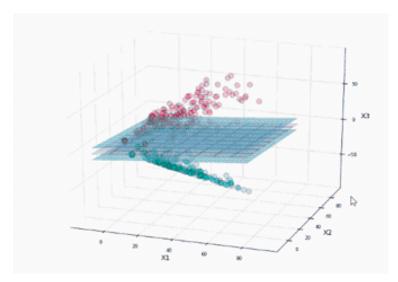
HYPOTHESIS: Some models show a correlation between the service data and the checklist available.

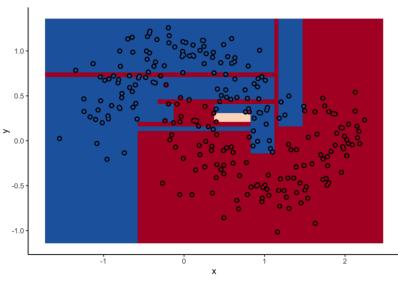
SOLUTION: Development of an app with AI and ML algorithms able to analyse checklist data.

→Automatic selection of results from different ML algorithms in order to become more efficient.

OUTPUT: The app shows the probability for which the product (serial number) analysed is returned.

→Identification of a set of parameters that contributes more to calculate the probability that the product has defects.





The group





Your *ALL-IN-ONE* partner in automation systems!

CONTACTS









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