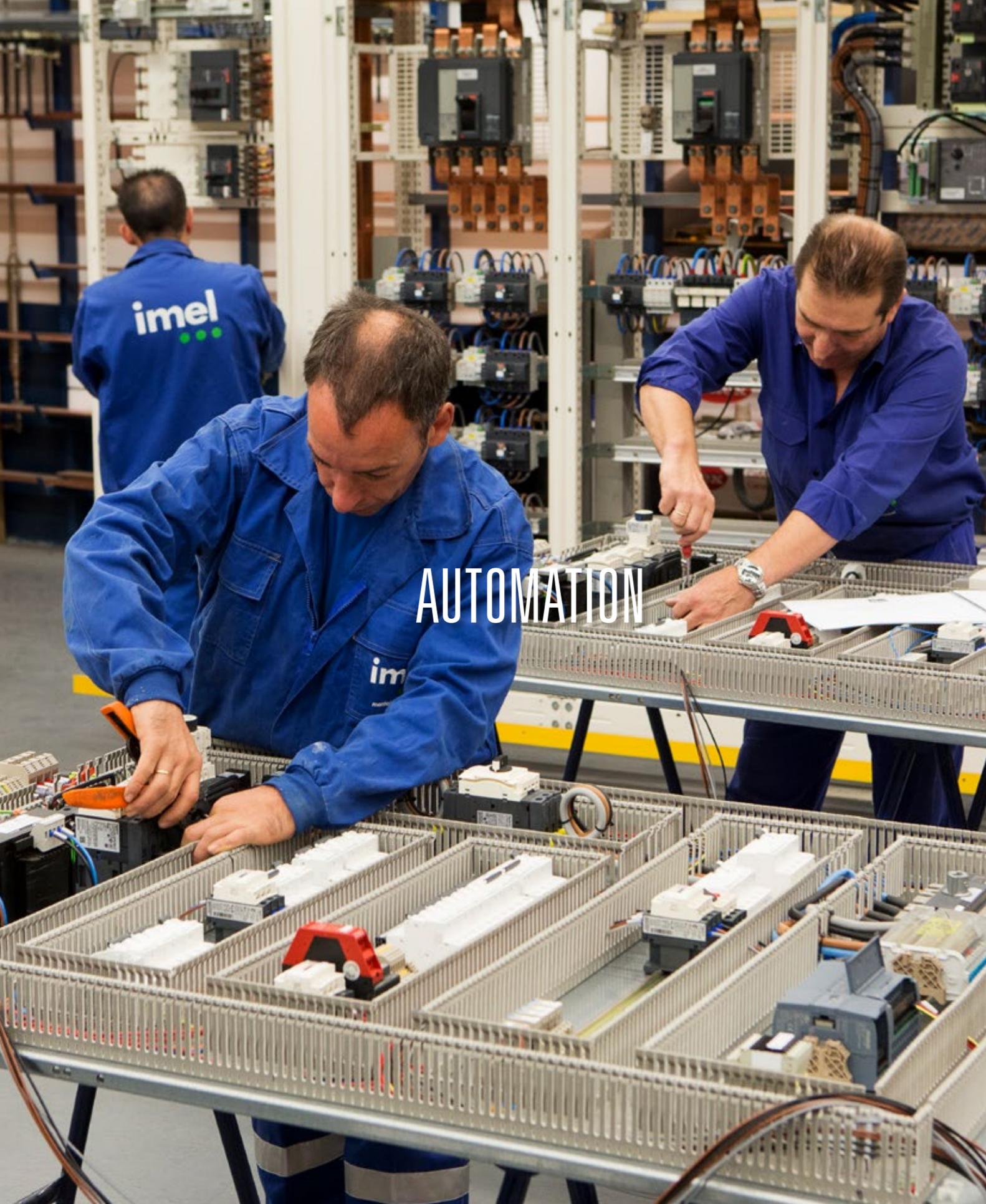


AUTOMATION



AUTOMATION


imel
ELECTRICIDAD INTELIGENTE



WHY CHOOSE AUTOMATION

Organisations' efficiency and effectiveness very clearly improve

The automation of industrial processes (manufacturing, production, administration, control, logistics...) can lead to savings of up to 40% on general company costs.

The main benefits of automation are:

- Optimum quality levels with much higher precision than manual processes.
- Automated production time, and process efficiency and precision.
- Personal security, especially for processes in dangerous environments.
- More flexible production, enabling tasks that are impossible to carry out manually.
- Improved data flow and better integration into communication networks, making more accurate decisions possible.
- Flexibility in production, since the product is adaptable to the requirements of each particular company.

- More refined, repetitive processes are obtained without errors or alterations. In this way, production is uninterrupted and available 24 hours a day which, for example, is a significant advantage for highly seasonal companies. Process automation allows for greater precision in weights, measurements and mixtures. Furthermore, non-production times and interruptions are avoided.

All of the above provides us with a competitive advantage as it increases market competition, allows us to offer better quality products in less time, and to react more quickly and flexibly to changes.

WHY IMEL

Experience in the installation and maintenance of highly complex facilities (WWTP for the Canal de Isabel II in Madrid; compost treatment for a recycling plant in Pamplona; process programming in the aeronautical industry, etc.)

Agility and immediate response times thanks to a very large team of staff, made up of programming and other technicians, and process engineers.

Capability to develop **major projects** thanks to a large, diverse, structured team of specialists that offers a quality service.

Comprehensive service that oversees the whole process; high voltage, assembly of automation panels, design of production systems from an automation angle, advanced design of automations, execution and maintenance of projects.

Versatility to work in **English and French.**



SOLUTIONS

IN INDUSTRY

- Machinery manufacturing
- Engineering
- Installation companies that do not work with automation

IN HOME AND BUILDING AUTOMATION

- Engineering
- Construction
- Individuals

WE ARE INVOLVED EVERY STEP OF THE WAY

- 1 PROJECT DESIGN
- 2 INSTALLATION
- 3 INTEGRATION
- 4 MAINTENANCE





SECTORS

Wineries

- Management and control of wine decanting
- Temperature control for wine fermentation. Control of the cleaning and casking process
- Management of bottling lines.
- Wine press programming.
- Ventilation control in storage spaces and cask storerooms.



Transport

- Modification to industrial process integration
- Automation of conveyor belts
- Temperature control during processing
- Application of artificial vision for different processes
- Management and control of powder coating booths.

Pharmaceuticals

- Design and creation of equipment infrastructure to carry out necessary processing operations on materials
- Control system architecture with the necessary requirements, instrumentation and programmable logic controllers
- Control and monitoring systems for all processes

Water treatment

- Management, development and implementation of waste water treatment processes for WWTPs and drinking water plants (DWTPs)
- Automation and control of pumping systems (EBAR)
- Automation of osmosis and demineralisation plants.



Food Industry

- Automation of conveyor belts
- Monitoring of batching systems
- Temperature control during processing
- Control of the filling and packaging process

Chemical Industry

- Automation of lines for surface and penetrative metal treatment.
- Management and control of powder coating booths.

Aeronautical Industry

- Design and control of vacuuming and packaging systems for fibre pieces
- Control of process parameters and all traceability.

Glass

- Automation of glass loaders and conveyor belts in production lines
- Control of traceability throughout the process.

SERVICES

AUTOMATION

Distributed control systems

We design and produce our own control panels under the best standards and adapt them to any demand, whether they are control panels, DCS, MCC or IO peripherals, communicators, data processing centres, pneumatic system panels or related to installation and interconnection.

Design and development of HMI and supervisory, control and data acquisition (SCADA) systems

We develop and implement systems with software and hardware elements that allow industries to control industrial processes locally and remotely, monitor, collect and process data in real time, as well as interact directly with devices such as sensors, valves, pumps, etc. This also allows events to be recorded in a log file. They improve efficiency, process data to facilitate better decisions, and alert the system to potential problems in order to reduce downtime.

Process control and monitoring

We monitor all production process data in real time. This is one of the characteristics of industry 4.0, as it reduces costs, increases production quality, allows remote repairs, offers greater security for workers and achieves flexible and scalable productions.

Project definition, programming of automatons and on-site start-up

We specialise in the design, installation, commissioning and maintenance of all types of automation solutions based on open and scalable systems. PLC, PCS7, HMI, etc, industrial com-

munication networks, collaborative robots, artificial vision, control panel construction, fieldbuses and process instrumentation.

Industrial communications and integration of networks and fieldbuses: Modbus, OPC, Profinet, Profibus...

We ensure that machines and processes 'speak' one language, and that vital information for plant intelligence systems is readily available. We offer the most modern industrial communication technologies, promoting the use of ethernet-based networks (Profinet, industrial ethernet, ethernet /IP, etc.), combining high transmission speeds without losing industrial robustness by interacting with the standard industrial fieldbuses in the sector (Modbus, Profibus, etc.)

Project development and schematic design using EPLAN Electric

We have decided to opt for Eplan Electric P8, the most powerful tool on the market when it comes to designing electrical plans to configure and carry out all types of electrical projects and designs with more complete As Built installation documentation.

PLC retrofitting and control systems

We have extensive experience in the conversion and migration of all types of control systems and PLCs in turnkey projects with the top brands on the market, such as Siemens (S5, S7200...), Omron (CS, CQM1, CH...), Allen Bradley (SLC500, Logix...) and Schneider (TSX...).

Integration and implementation of motion control

We have extensive experience in all types of motor control through frequency variators, servomotors, stepper motors...

Teleservice and remote assistance during installation.

We offer this practical and effective service so that we can access control system and PLCs at any time and from any place, allowing us to assist clients more immediately whenever they need or in the event of breakdown.

AUTOMATION

Automatic control and lighting regulation (DALI, 0-10...)

Thanks to this service, we can actively regulate and control lighting systems, adapting light and space to any situation. This provides improved comfort and optimised energy consumption. It includes control elements and systems that can be analogue or digital, integrating them into the proposed solution.

Automatic solar control for blinds and awnings for building energy optimisation

Automatic solar controls for blinds and awnings allow the maximum amount of sunlight to be captured without directly affecting the interior, preventing the sun from negatively affecting the temperature and achieving considerable energy savings in air conditioning.

Integration of air conditioning systems (Mitsubishi, Daikin...)

The regulation of air conditioning systems is crucial to energy saving and efficiency. A good installation needs efficient regulation to reach its full potential. We install and monitor regulation systems to measure energy consumption, as well as to facilitate its remote access via telephone, SMS or Smartphone (iOS or Android).

Integration of air recuperation and ventilation systems (Zhender, Techna, Trox...)

More and more facilities are equipped with heat recuperators for ventilation. At Imel, we integrate the system control as an additional element, with the advantage of being able to see and control its operation and trace real data for optimisation.

Design, centralisation, development and implementation of all systems in passive buildings (Passivhaus)

We believe in energy efficiency, so we promote and develop projects based on new technologies and social and human visions, such as the Passivhaus system and the design and installation of heat recovery systems for optimisation and better use.

Elaboration of Building Management System (BMS) systems and remote access via web or app for installation control

We install and develop building automation and control systems for all building sizes, uses and characteristics. We offer automation, control and optimisation of simple and complex insurance systems, covering individual environment controllers and the mana-

gement station. Smart energy management includes monitoring and energy saving to reduce the cost of energy.

Control and implementation of propriety systems in smart homes (Simon, Fermax, ABB...)

We specialise in home automation installations applied to the domestic area for the control and automation of different equipment, as well as their communication between each other to achieve greater efficiency and smart control of the home. They integrate wired and wireless systems, sensors and actuators that detect and activate the different pre-established actions.

TECHNOLOGY FOR AUTOMATION

- SIEMENS
- ALLEN BRADLEY
- OMRON
- WAGO (PLC PROGRAMMING. FAM. 750 AND 753)
- SCHNEIDER
- MITSUBISHI
- FESTO
- BECKHOFF
- UNITRONICS



AUTOMATION FOR WINERIES

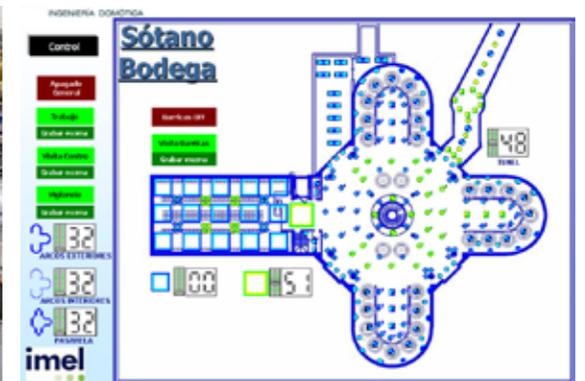
Wineries can save costs, time and reduce errors thanks to the total control of each process; receiving grapes, managing casks and tanks, bottling and shipping pallets, etc.

The automation is adapted to the size and model of the winery and to its specific needs. Without a doubt, its biggest advantage is having an efficient process that meets high quality standards and immediately impacts on the quality of service, therefore resulting in higher sales.

What can be automated:

- Movement of goods
- Efficient use of physical space
- Input and output processes
- Stock control
- Storeroom temperature control
- Air conditioning
- Bottling process
- Quality control.
-

Thanks to process automation, wineries can cut costs and improve quality.





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