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Sdi: The power of automation.

Is the automation, applied to continuous industrial processes, the key to Sdi's success. Since 1973 the company has been using hardware and software solutions of excellence to supply digital supervision, regulatory and control systems for strategic and mission-critical industrial realities.

Always having its own hardware and software platforms for producing integrated ICSS (DCS-ESD-F&G) and SCADA-RTU systems, Sdi can supply its clients with complete 'turnkey' systems and products - solutions for VAR (Value Added Reseller) partners.

The distinctive character of Sdi's product line and production has always been the high level of reliability and availability, which renders them compliant with the most severe standards and requirements of industrial environment.

Sdi's experience began long ago and has contributed, with the supply of ICSS and SCADA-RTU systems in line with the most advanced technological requirements, in ensuring that leading Italian realities such as ENEL and ENI, which began working with Sdi in the early '70s, could have top quality technological solutions for their own electricity and hydrocarbon (Oil&Gas) production, treatment, transport and distribution systems.

With changing market demands, and the need to manage personal assets with the help of integrated automation and telecontrol systems, the modern Multi-utilities have become interested in the top level technological solutions that Sdi can propose.

The traditional or "intelligent" (Smart Grids) electric power grids, gas distribution networks, the integrated water cycle and the railway transport systems are the application sectors in which the ICSS and SCADA-RTU platforms provided by Sdi, in addition to the integrated modules DMS (Distribution Management System), EMMS (Energy Metering & Management System) and GMS (Generation Management System), can be today's and tomorrow's keys to success.
COMPANY STRUCTURE

Since Sdi was established, a joint-stock company, has been improving the key element of its success, namely its own internal resources. In agreement with this philosophy, the company is managed by a group of shareholders who, inside the different company divisions, cover roles of leadership in the key positions in the company organization chart.

QUALITY, ENVIRONMENT AND SAFETY

For its clients, Sdi has always been distinctive for the quality of its proposed solutions, not just regarding technological elements but above all for the aspects tied to supply management as a whole. From the ’90s, Sdi has been applying a Quality System that complies with the requirements of the UNI EN ISO 9001:2008 standard and after this, as it operates in a sector where environmental problems are extremely important, it also applied an Environmental Management System certified in compliance with the UNI EN ISO 14001:2004 standard.

The use of these operative standards allows Sdi to keep its product design under control, supply execution and the environmental impacts of its activity under control, systematically searching for improvements in a coherent, effective and above all sustainable manner.

The company places great emphasis on safety when carrying out the practical and theoretical training of its staff, when carefully analyses risks and when drafting the safety plans necessary for system operation. In agreement with the philosophy of continuous and coherent company development, Sdi has formalised a safety and health management system for its employees in compliance with the DHSAS 18001 standard.

CODE OF ETHICS AND MODEL 231

In full respect of the internal guidelines dictated by its own management regarding company ethics and sustainability, Sdi works in compliance with its own Code of Ethics, which says that all activities must be carried out in observance of law, in a context of loyal competition, with honesty, integrity, correctness and good faith, in respect of the legitimate interests of the client, staff, shareholders, business and financial partners, and the community in which the company is present with its activities. The functions of Code of Ethics Guarantor are assigned to the Supervisory Authority, established in accordance with Italian Legislative Decree no. 231.

CERTIFIED METROLOGY LABORATORY

Sdi, being a Certified Metrology Laboratory or Accredited Laboratory, has the authority to act on systems dedicated to the fiscal accounting of hydrocarbons (Oil&Gas), in full respect of the legal metrology standards in force in Italy. The service is managed by a team of specialists who can even act on measuring systems supplied by third parties, no matter what measuring principle is used.
The energy is under control.

Sdi automation and control systems have always been used to manage continuous processes in the energy world.

Traditional application fields are the electricity and Oil&Gas sectors, where solutions that are strongly aimed at managing renewable sources (waste-to-energy incinerators, wind farms and photovoltaic systems) work beside automation and control applications for plants that produce energy using traditional sources (thermal, turbogas, hydroelectric and geothermal).

In this market Sdi can propose a wide range of solutions for high criticality plants, based on a strong and consolidated presence and experience in the supply of ICSS (DCS-ESD-F&G) and SCADA-RTU solutions.

Sdi systems and products, implemented in agreement with high quality levels based on opening and interoperability, thanks to the use of the most modern international standards, are perfect for use both when new plants are developed and when revamping and/or integrating already-existing systems that need to be expanded and updated.

Sdi widens its proposal when dealing with unmanned plants, when the production facilities must be remotely controlled by a dispatching centre with regional or national competence, integrating each plant control system inside a SCADA architecture which adopts the most suitable protocols and communication media for the purpose, in addition to developing native solutions for managing control centres in a Disaster Recovery architecture.

In the case of complex or particularly innovative plants, Sdi can also supply its clients, with engineering (for designing, testing and process optimization) or full-replica (for training operators) types of simulation system.
POWER
Control of power production using renewable or traditional sources, management of high and very high voltage distribution and transmission stations: these are the keys to Sdi’s success.

THERMOELECTRIC POWER
Coal, turbogas or fuel oil plants.

The thermoelectric generation plants were the first to use DCSs (Distributed Control System) extensively for managing control, regulation and automation.
Sdi supplies a flexible and safe ICSS (IEC-61850) platform for producing the whole plant control system or for integrating independent functional units, such as: the generation unit supervision system, the supervision and control system for auxiliary units, the plant alarm system, the plant shut-down systems.

The proposed shut-down functions (ESD/PSD) comply with the international IEC 61508 and IEC 61511 standards regarding functional safety and can offer automation solutions also for this type of plant.

Sdi solutions for hydroelectric power plants cover both the requirements tied to managing the single production plant and the problems related to the availability of dispatching centres that allow working from a single control centre on the competent stations, generally unmanned, planning and optimising the production of the whole hydroelectric pole.
The DCS system by Sdi has proved itself to be an optimal instrument because it process oriented features, and can be fully integrated with existing devices. It also has high levels of investment scalability and harmonization regarding the effective plant needs, and is notably efficient in respecting installation times and methods, with the resulting reduction in plant out-of-service times.
In addition, Sdi offers its clients integrated telecontrol and production management solutions so that, using RTU and SCADA systems, the remote dispatch centre can manage the production plants in an optimal manner.

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HYDROELECTRIC POWER
Clean energy par excellence

Wind, photovoltaic and waste-cycle

The increasingly growing attention on clean and renewable energy has resulted in the appearance of numerous alternative power systems, above all wind and photovoltaic farms. These systems, often large and geographically distributed, require remote control and energy management instruments that are expandable and easy to implement in order to guarantee effective and efficient management.
Sdi proposes dedicated solutions for these installations, already widely used in large-size photovoltaic systems (average power above 2 MW) and in wind farms with more than 30 wind turbines. The company produces dedicated instruments for supervision and local control, complete station control, saving of the oscilloperurbographic records, the acquisition and display of the protection relays, intervention sequences, the acquisition and display of the oscilloperurbographic records and the implementation of automated operation sequences.
For these systems, normally unmanned, there are also dedicated solutions for the remote control and management of the production unit or substation from a remote dispatch centre with regional or national competence.

RENEWABLE SOURCES

NETWORKS AND SUBSTATIONS
HV/HV substations and EMS systems

Not only the production nodes connected to the electrical grid are of fundamental importance for answering market needs flexibly, but also HV-HV (High and Very High Voltage) stations play an important role in making the distribution of energy through the network safe.
Sdi can offer automation solutions also for this type of plant.

Adopting the most recent standards in use in the power field, such as IEC 61850, Sdi systems can dialogue with protection relays, automation and monitoring devices, allowing complete station control, saving of the protection relays intervention sequences, the acquisition and display of the oscilloperurbographic records and the implementation of automated operation sequences.

For these systems, normally unmanned, there are also dedicated solutions for the remote control and management of the production unit or substation from a remote dispatch centre with regional or national competence.

NETWORKS AND SUBSTATIONS
HV/HV substations and EMS systems

Smart grids for a sustainable future

In today’s and also tomorrow’s reality, in which energy will be generated in an increasingly more distributed manner over the territory, and the grids connected to each other will be at the service of different types of consumer, it is increasingly more important to make production units dialogue with the management centres located throughout the territory in order to permit the correct dynamics of the energy flows.

Sdi’s solution for managing these “smart grids” is based on the supply of the additional modules of its control platform: GMS (Generation Management System), DMS (Distribution Management System) and EMS (Energy Management System).

The high level of interoperability requested between the products of different power suppliers and the systems of different power distributors has imposed the use, in all Sdi products, of communication and data exchange standards that have been purposely defined at an international level to manage smart grids.
OIL&GAS
From extraction to delivery to the end user, passing through the distribution and accounting networks: Sdi can manage the whole value chain.

OFF-SHORE
Hydrocarbon off-shore platforms
Extracting hydrocarbons using off-shore platforms is one of the application sectors in which Sdi successfully integrates local process control with remote control from on-shore gathering and treatment plants which, in addition to managing the unmanned platforms, also act as dispatching centre and historical production data repository.

On the platforms, ICSS (DCS-ESD-F&G) and/or RTU systems are used to acquire the signals coming directly from the instruments or dedicated PLCs for managing each plant package. The off-shore control system that automates all the auxiliary subsystems and the extraction process, as well as the in-line elaboration of the parameters that identify each well.

The management of communication, implemented by Sdi in an effective and safe manner, between the off-shore and on-shore systems to permit continuous remote control of the platforms by the operators from the on-shore plant, is also of fundamental importance.

ON-SHORE
On-Shore: Treatment, compression and storage facilities
These are the hydrocarbon treatment plants, the booster and compression stations, the storage sites, ... the on-shore installations for treating the hydrocarbons to which Sdi offers its technological proposal.

Sdi’s ICSS (DCS-ESD-F&G) system makes it possible to carry out normal plant management by collecting data and scheduling the automation, protection and interlock operation sequences.

Maximum attention is given to service continuity, making an ICSS platform available that is fully redundant in each part, in addition, each element that makes up the process control and regulatory chain is diagnosed in order to quickly identify each control system problem and malfunction.

The functional safety management within the system is guaranteed by application of the IEC 61508 and IEC 61511 standards, in compliance with the SIL safety levels required by the application.

TRANSPORT NETWORKS
Transport network, compression and booster stations
Sdi can supply a complete solution dedicated to monitoring and controlling transport networks, using specialised solutions to cover the problems tied to the criticality level of each area of the network (national, regional, urban networks).

With its SCADA-RTU platform, Sdi can propose highly complex and critical solutions for national and regional dispatch, so that the control room operators have an instrument that can daily manage the network in line with the operative requirements and simplify management.

For particularly important systems, the native architectures of Disaster Recovery, with which the SCADA platform is supplied, give the manager a solution with the maximum level of availability. In this particular architecture, the emergency system is kept constantly aligned with the main system, therefore all the information necessary for immediate subentry when carrying out management operations is available.

LEAK-DETECTION
Leak detection and Line-Pack: supporting operations
Today pipelines are the most economic and safe method for transporting gas and fluids; because of the long distances covered, however, they must guarantee high levels of reliability and efficiency.

It is therefore fundamental to supply an aid to control correct line operation and quickly identify any leaks.

Sdi’s leak-detection system, which works together with the SCADA system and from which it collects both the physical parameters and the state of the plant equipments, supplies the transport system manager with brief alarms that highlight the presence of a possible leak in addition to showing the monitored process variables.

The identification of possible leaks is based on sophisticated engineering algorithms that implement mass balancing methods (Mass Balance – MB) and pressure/flow wave propagation models (Pressure and Flow – PF) in the transported fluid.

METERING
Information accounting and integration
Sdi has matured vast experience in "metering" solutions (also fiscal type) in OIL&GAS applications, for which it supplies metering systems, complete skids and EMMSs (Energy Metering & Management System) for managing single metering points or complex custody transfer sites even distributed geographically.

With regard to traditional measuring solutions, Sdi can integrate its proposal through remote control functions and plant data integration inside the ERP systems of the client through the production of organized multilevel acquisition structures with data hubs distributed over the territory.

Being a Certified Metrology Laboratory / Accredited Laboratory completes the range of services that Sdi can offer in this application area.
Modern Multi-utilities today find themselves having to effectively and efficiently face the problems of managing services supplied to citizens in their competent territory. Integrating modern monitoring and remote control instruments and field instruments makes it possible to optimally manage the “services based on network” tied to plants that are typically distributed over vast geographic areas. The need to make available, in shared and open databases, large quantities of information with which to analyse and better understand the state of the controlled processes with KPI (Key Performance Indicators) identification is continually increasing.

In this environment, Sdi proposes itself as a valid and dynamic partner of a modern Multi-utility for answering the daily challenges set by the market. Sdi can propose to its clients local and remote control systems for the MV/LV electric distribution networks and substations, gas distribution networks, the integrated water cycle, power production plants and systems for district heating networks.

Sdi’s staff of experts helps the client choose the best technological solution for the requested use, so that the connectivity between the remote control (or dispatch) centre and the field equipment (RTU) is not considered as a problem by clients but rather as a key to the success of their business. It doesn’t really matter whether communication is wired (dedicated lines or LAN/WAN networks), wireless (telephone lines or radio) or a circumspect choice that considers the characteristics of both systems.

Not only remote control but also integrated solutions: Sdi creates systems in which the regulatory and control loops are managed to work in a coordinate way by DCS systems with remote control solutions based on RTU; this is the case of the water purification and treatment systems, where management of the purification processes integrates with control of the pumping and measuring stations.
Electrical grid: DMS systems

In the modern and dynamic market of energy and electricity distribution service management, the DMS (Distribution Management System) suite by Sdi is a valid support instrument for managing the network, allowing both the management of largely extended and very complex electrical grids and the contemporary supervision of several separate networks.

The DMS platform makes available, in a native and integrated manner, the operation functions necessary for managing the distribution network through graphic representation methods based on the topology of the network and Functional type displays showing Power Supply Feeders or Voltage Levels.

The integration functions with GISs (Geographic Information System), fault finding, analysis and network layout simulation systems, and the tools dedicated to service failure management complete the Sdi platform.

Gas distribution networks: reaching the end user

Sdi supplies solutions that allow Multi-utilities to control gas distribution in an urban environment; it supports its clients not only with the creation of remote control centres, from which the first stage and second stage gas pressure reduction stations are monitored together with the numerous Final Reduction Groups (GRF), but also with the supply of acquisition and remote control (RTU) apparatuses.

The company department dedicated to Metering, which can support its clients through the definition, realization and metrological certification of complete measuring systems (technical and fiscal) for gas, complete the range offered by Sdi. The use of the EMMS module (Energy Metering & Management System) gives a completely integrated solution that satisfies clients 100%.

Managing the integrated water system is an asset of primary importance for Sdi, which supplies its clients with highly integrated solutions suitable for covering both the distribution service for Fresh water and sewage collection and the purification process of wastewater.

The spirit of innovation and research that characterizes Sdi can yet again be applied to this environment with the proposal, for the plants of its customers, of front-running solutions that are shared with the main research centres that are active in the sector.

Special importance is given to analysis and research solutions for mesh water networks, to optimizing energy consumption and to stabilizing purification processes using fuzzy regulatory systems of the DCS system being used, with specific patents in partnership with Universities and research centres.

Complete management of the integrated water system

Railway electrical traction power management, monitoring of circulation and auxiliary systems

Public transport has always been of strategic importance for Sdi, which in this sector has a monitoring and control platform for the circulation of trains, interfacing with information panels for passengers, electrical traction power management and electric substation control.

Sdi proposes hierarchical SCADA-RTU solutions in geographically distributed architecture, in order to reconstruct the state of the whole area that is monitored and controlled with the data punctually identified on-site in real-time mode.

The centralized management of the transport system makes it possible to carry out all those coordination and optimization activities that are requested when managing a service that is of vital importance to citizens.
The products and solutions that Sdi proposes have a very precise position in the automation, control and remote control system environment for industrial type applications which are mostly “Mission Critical”.

The application environment of these solutions is perfect for covering the plant requirements of the client, from information collection of field sensors up to representation on the operator console in the control room; this is created through the supply and personalisation of the ICSS (DCS-ESD-F&G) and SCADA-RTU platforms made by Sdi.

In agreement with the company mission, Sdi concentrates its activity on the realization and production of hardware equipment and software components specifically for automation and control, each time Sdi identifies the best communication and connectivity solutions on the market. The solutions proposed by Sdi are very flexible and versatile for implementing the solutions requested by its clients.

The hardware equipment proposed by Sdi ranges from ICSS modular nodes to the most compact RTUs for remote control systems, maintaining throughout the whole range of diagnostics and redundancy that are intrinsic of its control platform, making it possible to obtain highly reliable and safe systems.

All the software produced by Sdi (SCADA, HMI, Engineering Stations, DMS, EMS systems, ...) is developed starting from a modular structure and supports multiple deployment policies, permitting the realization of different system architectures and selecting, each time, the most appropriate solution to be used, even in the case of integration with already-existing systems.

The supply and integration of solutions in a metrology environment allows Sdi to boast a wider range of solutions to propose to its clients, both regarding the services for activities tied to “legal metrology” to be carried out on already-existing installations, and for supplying new and integrated metering solutions.
ICSS (DCS-ESD-F&G) by Sdi is designed with modular architecture having the primary objective of reaching high levels of reliability and safety without leaving behind the flexibility of architecture that must always satisfy the requirements of the client.

Both the electronic subsystems and the control firmware guarantee a high level of safety. For this purpose, Sdi is very careful to always select very reliable components, redundant circuits and diagnostic controls for all those elements and/or components that are important for safety integrity; in addition, module and communication bus redundancy is always a basic function of the supplied systems.

Careful auditing of the operation and flexible and precise management of the plant alarms, carried out from the stations of the control room operator, make it possible to place both functional and safety aspects at the centre of daily activities.

The intrinsic flexibility of the system means that different LAN and WAN (wired and wireless) connectivity possibilities can be used between the different elements it is made up of: control node, field equipment, interconnected external systems, remote control centres or company ERP systems, in order to transport the data where they can be best interpreted and used.

The Sdi platform was created to be flexible and scalable in order to permit the realization of systems designed on the basis of client requirements, both in terms of system architecture and respect of their sizing (up to 225 control nodes connected to the same network and up to 1,000,000 physical I/Os), making it possible to protect the investments already made when extensions should be necessary.

In addition to the traditional type of I/O card, digital communication interfaces are available for field buses interfaces. The DCS system, in addition to control and regulatory tasks, can be equipped with elements for covering "Functional Safety" requirements (SIL 3 in compliance with the IEC 61508 and IEC 61511 standards) for ESD/PSD, fire & gas detection (F&G) and fires extinguishing; all this in completely integrated solutions.

ICSS SYSTEM - COMPONENTS
• Modular control nodes for DCS
• Programmable controllers
• Smart I/O interfaces
• Field bus interfaces
• Communication interfaces
• Programmable regulators
• ESD/PSD (SIL 3) nodes
• F&G-Extinguishing nodes
• RCE/SOE chronological event recording
• Operator stations (HMI) and flexible video walls
• Engineering stations
• Storage stations
• Asset Management
• Advanced control and optimization modules
SCADA, RTU, TELECONTROL AND TELEMETRY SYSTEMS

Sdi proposes its own SCADA platform, which is highly integrated and composed of software elements from the central system and field peripherals (RTU) to be installed in the crucial points of unmanned systems.

Both the RTU apparatuses and the central system have been designed and developed over time to answer the most demanding market requests, allowing Sdi to use its platform when monitoring and controlling "mission-critical" infrastructures.

For this purpose the system in its totality was designed to be compliant with the "Functional Safety" characteristics dictated by the IEC 61508 standard, the system software was developed and is maintained in compliance with the "V-model" described in the Standards, and the RTU apparatuses proposed can be supplied with SIL 3 certification in compliance with the same Standards.

Each element of Sdi’s SCADA platform is redundant with hot-backup type architecture; the system database can control up to 1,000,000 tags and manage multilevel hierarchy structures in an integrated manner in order to promptly support the creation and development of geographically distributed remote control systems.

The human machine interface is very flexible and can be activated on one or more traditional stations or remote stations connected by Web, with single or multiple screen, up to the most modern and complete solutions based on video walls, just one configuration and parameterization tool allows to manage small- and medium-sized systems and also for working on large distribution infrastructures using thousands of animated objects on the displayed pages.

The system makes it possible to work using different types of communication network towards the field equipment (telephone, LAN, WAN, wired and wireless), either single or redundant; the punctual diagnosis of the connectivity and the possible activation of backup connections permit the contemporaneous use of different types of connection, optimizing device and communication network use at the same time.

The SCADA platform can be scaled and can interface even third party RTUs. In the same manner, the RTU peripherals produced by Sdi (which use standard communication protocols from the IEC 870-5-101 and IEC 870-5-104 families) can be used with already-existing central systems supplied by others.

For the criticality of the processes controlled by its own systems, Sdi has chosen to render available, in a native manner inside its own SCADA solution, geographic type safety functions with the issue of DR (Disaster Recovery) architecture which, in case of necessity, make it possible for a secondary centre, identical to the main one or with reduced dimensions but equally efficient, to immediately accept the control functions.

SCADA SYSTEM - COMPONENTS

- SCADA in single or redundant solution
- System architecture for Disaster Recovery solutions
- Operator stations (HMI) and flexible video walls
- Engineering stations
- Storage stations
- Field peripheral interface modules
- External system interface modules (IEC 870-5-101, IEC 870-5-104, IEC 61850, MODBUS, ...)
- Wired e wireless communication manager
- Modular or single-board remote control peripherals (RTU)
- SCADA “Safety” software (developed and maintained in compliance with the “V-model” of the IEC 61508 standard)
- RTU-Safety remote control peripherals (RTU with SIL 3 certification)
- Intelligent I/O interfaces
- Field bus interfaces
- RTE/AGIE chronological event recording
- Asset Management
- Simulation and optimization modules
A new approach to the measuring world … this is what Sdi proposes to its clients after having effectively touched their needs in a continually developing market that evidently requires integration.

Sdi can supply "turnkey" solutions that accompany the client from definition of the functional requirements to the technical design, from realization to activation, without forgetting two fundamental aspects that make it possible to truly define a complete supply of this type: metrology approval of the system and information integration with company systems for their analysis and accounting.

Sdi has gained many years of experience in the Oil&Gas world, and in this particular application area it can supply technological solutions based on "state of the art" market devices. The elements that highlight the proposed solutions are: the primary measuring device (Venturi and mass meter) and the supplied field instruments, the Flow-Computers and the quality analysis systems of what has been accounted.

The proposed solution is completed by the use of Sdi’s EMMS (Energy Metering & Management System) modules, which make it possible to maximize information availability through high levels of interrogation.

**METERING SYSTEMS - COMPONENTS**

- Mechanical and electro-instrumental elements of the metering chain (trunk, skid, local indicators, …)
- Primary measuring element
- Process Transmitters (P and T)
- Flow computer
- EMMS (Energy Metering & Management System)
- Accessory elements (quality and composition analysis, filtering, pre-heating, …)
- Installation, activation and calibration services
- Periodic checks
Experience, expertise and technology.

Preserving and improving the opinion of its customers on the fact that it is a valid technological partner is the true challenge that Sdi faces daily, both concerning the technological innovation level of its products and the reliability of the supplied systems.

The R&D activities that Sdi carries out in its laboratories allow the company to keep all its HW and SW platforms at the "state of the art" level, and subject all its products to continuous revision and improvement.

Over the years, the need to contribute as an active partner in the continuous improvement of the operative safety aspects of the plant staff and the managed plant has brought Sdi to invest in its own products and in the know-how of its staff to make available solutions that comply with the most widespread standards (IEC 61508 and IEC 61511).

Sdi offers clients its own skills even through ad-hoc engineering and HW and SW development solutions, often but not necessarily tied to specifications issued by the engineering departments of its clients.

The elements that distinguish the relations that Sdi establishes with clients are skill and a positive approach to the client’s needs, above all for activities tied to the engineering and realization of complete and complex systems.

Making an automation and control system operative is a complex and delicate operation, Sdi uses highly specialised staff that has the best technical solutions and maximum client satisfaction as its objectives.

Sdi completes its services with maintenance servicing available 24H/365 days/year for the supplied systems, in order to cover all the needs of its clients, from corrective type maintenance to the enhancement services for a system that must always be operative and continuously improving.
Product development activities carried out by the R&D department of Sdi is aimed at making available the best hardware and software solutions for producing process control applications. The continuous analysis of the progress made in the technological field and the novelties introduced in the new hardware and software platforms for industrial type applications allows Sdi to keep its products always updated and at “state of the art” level.

Constant interaction with clients and experience in implementing field systems are a precious aid for the development of the company’s own control platforms; the systems continually perform in a better manner and answer real operation requirements.

Participation in innovative projects, carried out in collaboration with important universities and research centres, also makes it possible to experiment new technology as soon as it is available, making rational choices based on objective data possible when designing new products.

Safety is the fundamental element that guides the daily activity of our staff when carrying out their jobs. Thanks to the contribution of its specialized staff, which is trained and certified, Sdi can actively help the client in the definition and design of solutions tied to plant safety, whether they refer to “Functional Safety” regarding the IEC 61508 and IEC 61511 (ESD-PSD) standards, the fire & gas detection (F&G) or extinguishing (Extinguishing).

Sdi can be a valid partner in the design of integrated solutions for ICSS (DCS-ESD-F&G) and SCADA-RTU control systems, and also for R&D activity in the design and development of industrial solutions and devices.

Considering the extremely high criticality level of the supplied systems, Sdi has a structured team of in-house staff dedicated to the HW and SW maintenance of what is supplied and installed.

The supplied service is based on a highly reactive and flexible organization that makes it possible to solve each type of identified criticality quickly.

Sdi provides its clients with a wide range of support and maintenance services that range from phone help lines to online customer support and remote maintenance, guaranteeing availability with a service that is always on hand and which guarantees coverage 24 hours a day, every day of the year. Sdi also provides computer security services with the continuous monitoring from its premises of the system installed, using procedures that update all the guards and security patches.

Being able to choose from different levels and types of intervention, contemplating both products servicing both in the factory and “on-site”, each client can identify the most suitable maintenance solution for their requirements according to the criticality of the plants being managed and the structure of their own company.

Sdi offers clients its skills in developing engineering software or microprocessor hardware equipment for automation, supervision and control applications.

In this manner clients can obtain the best product for their requirements by combining their skills with the more than ten years of experience that Sdi has in the sector. Each solution is developed in compliance with detailed or functional specifications supplied by the client, or perfected together with them, to produce solutions of common use or which require product certification by accredited bodies (e.g. Safety Integrity Level in compliance with the IEC 61508 standard or similar).
"If we exclude the prodigious and single moments that destiny can give us, loving one's work (which unfortunately is a privilege enjoyed by only a few) is the best concrete approximation of happiness on Earth: but many do not know of this truth."

(Primo Levi – The Wrench)