SETEL GROUP

SeTeL, founded in 1973, is a leader in Logistics Engineering with specific address to Integrated Logistics Support (ILS). The main mission is to provide services, advice, applications and technologies that can guarantee the best level of the requested measure of effectiveness (i.e.: operational availability, risk of support resources shortage, etc.) in the "life cycle", of complex systems. In this scenario, within 47 years of life, SeTeL has carried out activities on more than 120 Complex Systems, in different sectors such as Aeronautics, Space, Naval, Railway, Information & Communication Technology, etc.

Initially, SeTeL provided authoring services for technical documentation on technology systems for Defence; In 1992, SeTeL was the first Italian company to afford "tagged" languages, that evolved into XML in 1995, which is now a de facto market standard for data management. In parallel SeTeL have set up methods and procedures to satisfy emerging engineering demands concerning reliability and maintainability analysis of systems and equipment, technical training and basic tutorial training.

SeTeL's role as a high-value-added service provider supporting ILS services for the major manufacturers has evolved following both the technological development in these scenarios and the end-users continuous increase of ILS requirements. Over the years, SeTeL have multiplied their skills, qualifying as a partner of main companies in different fields.

DESIGN/DEVELOPMENT OF ILS SOLUTIONS RELATED TO:

- *Reliability/maintainability/testability studies and Life Cycle Management analysis of complex systems.*
- *Training needs analysis and technical training implementation (traditional and multimedia – interactive).*
- *Technical documentation development (traditional, paper, and electronic-interactive).*

SETEL IS AN EXPERIENCED PARTNER IN OTHER DIFFERENT AREAS:

- *Development of projects financed for research & development, industrial research, training and communication.*
- *The establishment, start-up and management of industrial SME clusters in highly qualified settings, such as Aerospace and Aeronautical Maintenance.*
- *Active participation initiatives and groups aimed to collaborate with Universities, Research Centres (e.g. Italian CNR and ENEA) and Enterprises.*

Starting in the 1990s, SeTeL began a process of reconversion/transfer of its expertise from the Defence to the Civil sector. It was a knowledge transfer – never interrupted and still ongoing – with which the company enhanced its own "culture" in new markets dealing with different issues, in terms of topic interdisciplinary and multidisciplinary. In this way SeTeL develop fruitful cooperation with companies such as Telespazio, Italian Railways, Ansaldo (both Signalling and Trains Manufacturer companies) today part of Hitachi group, Poste Italiane, United Nations FAO, etc.

SeTeL Group consists of three companies SeTeL, SiTiN and DEF-TECH:

SeTeL (Group Leader)

Coordinates development, marketing, commercial and technical strategies. The main asset is the provision of ILS – Integrated Logistic Support activities such as R&M, Logistics Support Analysis (LSA), supply support services and products, Safety Analysis; it also operates as a software house guaranteeing the full autonomy of SeTeL in the design, development and quality control of ICT applications, that the company realizes both as a support for its activities and as high-end technology products to be proposed to the market. SeTeL owns 20% of SiTiN.

SiTiN

Is the Group Company that develops innovative services and products in the field of engineering technical documentation and of technological training. In particular:

- Computerized document systems (XML, SGML, HTML) compliant with international standards; SiTiN is able to design, draw up and produce an extremely wide range of documentation: operational-maintenance technical manuals; catalogues with illustrated parts; technical and project specifications; documentation for bids, etc.
- Development of technical training on procedures, techniques and processes applied to complex systems. In cooperation with SeTeL, carries out both traditional training processes (theoretical-practical courses for operators and maintainers, training on the job, etc.) and Technology Based Training activities; among the solutions that can be developed:
  - ✓ Interactive simulators.
  - ✓ CBT multimedia courses.
  - ✓ E-learning systems compliant with international standards (SCORM, IACC).
  - ✓ Training courses for specialist resources to be included in the fields of Document Engineering, Logistics and Training.

DEF-TECH

Founded by SeTeL's R&D Group, specialized in the research and development of innovative solutions both in the traditional core activities and, taking advantage of the systemic expertise accumulated by the group over 47 years of activities on complex systems. Over the years, the company has developed several projects in different areas such as:

- Controls, Monitoring and Measures.
- Microsensory.
- Inflatable systems.
- 3D Hybrid microelectronics.
- Stretching Sensors.
- Actuators based on shape memory alloys.
- Robotic systems.
- Components in composite material (damage assessment).

SeTeL and SiTiN develop both software solutions for web and stand-alone processing stations, using innovative analysis and development methodologies. Moreover, when the research activities require specific competencies, DEF-TECH exploits both internal expertise and those arising from the extensive knowledge network with universities and research institutions built over the years.

As mentioned, the main activities of SeTeL are related to three engineering areas (logistic support, documentation and training).

INTEGRATE LOGISTIC SUPPORT ENGINEERING

It includes design, delivery and provision of value-added services such as:

- Reliability, maintainability and testability studies of innovative materials, composites, technologies, sensors, plants, systems and complex equipment and analysis of "safety and risk" factors connected to them.
- FMEA, FMECA, FTA, RCFA, HAZOP, Human Factor Engineering, Safety Analysis.
- Maintenance planning (preventive, corrective, predictive and evolutionary).
- Experience and knowledge about ILS topics has been achieved by participating and supporting activities for major projects, as for example:
  - ✓ R&M analysis concerning avionic equipment of Tornado, AMX, EH101, NH90, EFA, NIMROD, A129 projects.
  - ✓ Full logistics engineering activities (R&M analysis, technical documentation, and training planning and conduction) concerning the Norway SSSB system, Denmark SSSB system, Sweden HF2000 system.
  - ✓ ILS activities planning, execution and management concerning the Arianne Space SYSTA programme for Telespazio.
  - ✓ Participation in the ILS Team of the IRIDIUM programme Ground Segment with the Motorola Space Division for Telespazio.

- ✓ Integration, testing and training activities about the Italian Air Force SICRAL space programme for Telespazio.

- Analytical LCM: as VAR for Italy of the Systecon AB Sweden company products and related support and training for the Italian end users. In addition SeTeL offers Analytical LCM studies and a capability platform based upon the Opus_Suite by Systecon which allows to correlate three main criteria: Strategy Management, Information Management, Analytical Analysis. This means that decisions are based on a prediction of a future outcome quantified in terms of operational readiness and life cycle cost in the system life cycle cost perspective.
- Maintenance Management Systems and Configuration Control Management.
- Specialistic advice consultant for the field of regulations and standards in the sectors of ILS (i.e.: US DoD MIL, CALS, AECMA, DEF-STAN-0060, ASD S3000L etc.).
- IT Logistics: Information Technology solutions that, starting from the Logistics Data Bases, defines methods and processes logistic data to optimize Logistics Support of Complex Systems. Processes and databases are based on the traditional MIL-STD- 1388 1A and 2B (Logistic Support Analysis) standard and are constantly evolving towards the GEIA-STD-0007 to afford the new Product Support Analysis (PSA) view, and the European ASD 3000 L (International procedure specification for Logistic Support Analysis) legislation. The data generated by the studies are keyed into the logistic databases and then processed in order to optimize the various aspects of the logistics disciplines (according to the standards of the US DoD and the European regulations of the ASD series (Aerospace & Defence).
- Autonomic Logistics. This discipline that, in a complex system, assesses the state of degradation of each individual parameter and their whole to be able to determine the remaining life related not only to the predicted failure (already detectable with current systems) but also to degradation of safety and mission critical parameters.
- Research activities, Innovations and Development in the field of ILS.

DOCUMENTARY ENGINEERING

This was the first asset in which SeTeL put into practice their concepts, skills and knowledge for implementing a complex process (as is the development of technical documentation) and related management, operational, technical and quality control procedures related to them. from this workflow process an integrated tool has been developed over time - powerfully supported by a robust technological context - able to realize, optimizing all the phases of the documentary process and managing it in an effective way by objectives, contents, required professional roles, and technologies. thanks to this system, named technical publication system (TPS), SeTeL is able to design and develop any type of technical documentation through an real "intelligent factory" process inside which it is possible to join document format, editing quality features, and authoring activity performed by technical writers.

COMMUNICATION ENGINEERING AND TRAINING AND KNOWLEDGE TRANSFER

This asset is closely related to the fundamental SeTeL mission to plan and conduct training programmes to transfer to end user operation and maintenance tasks as required to achieve the best system Operational Availability. It is with this in mind that the company carries out the technical, process and managerial training projects that are requested by the market All resources to be qualified - be they operators, maintainers, system engineers, project managers or specialists to be included in innovative development processes - are trained with the aim of competing, each for the parts of its own competence, the full functionality/operation of the system on which they will be called to operate or on which they will have to implement documentation or training activities. SeTeL develops training processes ensuring that they are implemented in quality - in all phases: from the analysis of needs/requirements to the definition of training objectives, from macro to detail design, until the delivery of the course/courseware, the control of the results and the follow-up in time. This implies - both for traditional training projects and "Technology Based" - the availability of adequate specialist resources such as: educational analysts/systems, instructional System Designer, Multimedia instructional Designer, instructors and trainers, Project Manager.

A fourth asset has been added to the above assets for some years: the integration engineering and multidisciplinary governance., characterized by non-homogeneous skills to integrate with each other. In this scenario, SeTeL can:

- Promote, and optimise the ability to relate and communicate multidisciplinary with multi-discipline between complex organisations (large, medium, small and OdR) in the development of high-tech projects.
- Ensure effective governance of activities/issues related to the integration of national and international actors (businesses, universities, research, etc.) with very differentiated languages, techniques and entrepreneurial cultures.
- Manage processes aimed at the creation of clusters and cluster networks, including entrepreneurs and research, operating on innovative supply chains.

SETEL HAS BEEN CERTIFIED ISO 9001 SINCE 31 JULY 2003. THE CERTIFICATION COVERS THE VARIOUS ENGINEERING ACTIVITIES DESCRIBED SO FAR, ADOA CERTIFICATION IS IN PLACE WITH EASA FOR THE DESIGN OF AVIONICS EQUIPMENT.