# **Information Technologies**

Telvent, the information technologies company for a sustainable and secure world, specializes in high-value-added products, services and integrated solutions in the Energy, Transportation, Environmental and Public Administration segments, as well as Global Services. Its innovative technology and proven experience help ensure secure and efficient management of the operating and business processes of the world's leading companies.

Forerunners in the development of information technologies for a sustainable and secure world



## 2007 Summary

Throughout the year 2007, at Telvent we continued to face two of the main challenges of today's society: climate change and security. At Telvent, we believe that the cleanest energy is the energy we do not use; and within this context we persisted in our efforts on behalf of energy efficiency and reduction of CO<sub>2</sub> emissions in the energy, transportation and environment segments, constantly innovating, to provide high-value-added technological solutions, as well as global services. With respect to security, at Telvent we work in the field of critical infrastructures and the management of data and information for application to the energy, transportation and public administration sectors, in addition to global services.

Thus, for example, in 2007 the start-up of the Smart Grid Solution Suite initiative was especially significant in responding to the formidable challenges facing us from industry in the electric power sector. This initiative offers enhancement in the management of electrical infrastructures through quantification of energy costs and optimization of real-time operational parameters for utilities.

In the Transportation segment, our solutions for managing traffic in urban areas through constant adaptations of traffic light schemes have shown, since the 90s, the capacity to defer the point of congestion, improve travel times and reduce consumption, together with the now intensive use of low-consumption traffic signal elements. In addition, the implementation of information systems for drivers, via Internet or telephone communications. offers alternatives for choosing travel times and routes. Information on occupancy and signposting of public parking facilities also reduces recurrent city traffic flow of drivers looking for a parking space. Furthermore, the experience acquired by Telvent in public transportation solutions merits emphasis, especially fare integration, incorporating payment methods for parking facilities as well as diverse public transportation systems, thereby promoting alternative means of transportation, with a direct impact on emissions reductions.

We also offered solutions pertaining to security, in numerous facets, for the Transportation segment, in road safety through systems for detection of and



response to incidents, monitoring and control of infrastructures (tunnels, bridges, highways, etc.), dynamic signal systems and weather information, as well as for police forces, with special attention to central systems, docked or mobile, and data management of different types. Video surveillance also constitutes a key element in practically all management centers, of both traffic and transportation, with the possibility of complementing them with artificial vision equipment, depending on the specific needs of each project.

Our solutions and products in the Environment segment also have a positive impact on sustainability and security from diverse standpoints. They lead to increased security under adverse weather conditions in highway, rail and air transportation; they optimize energy consumption for water utilities, applying technology, simulation and control and reducing  $\mathrm{CO}_2$  emissions; they also provide early warning, prevention and mitigation of the effects of adverse weather conditions that cause natural disasters; they continuously monitor air quality in cities and industrial areas in order to prevent the possible negative impact on health; and, finally, our solutions and products provide infrastructures with greater security against terrorist attacks and intrusion.

Finally, through the outsourcing and management of critical technological infrastructures, in 2007 we continued to dedicate ourselves to the security of the information systems of over 400 clients, in compliance with Spanish and international legislation, and to assist clients in keeping their computer security optimized and up-to-date. Through the solutions for centralized monitorization of systems and networks carried out in our Security Operation Centers (SOC), we contribute to enhanced computer security in their clients' national and international telecommunications systems and networks. As far as sustainability is concerned, we achieved reductions of almost eleven thousand tons of  $\mathrm{CO}_2$  in 2007, thanks to the systems concentration and optimization conducted in our network of Green Data Centers in Spain and Portugal.

#### **Our Business**

At Telvent, we assist in efficient and secure global management of the operating and business processes of the world's leading companies, focusing on five different areas of activity:

- Energy. In this area, Telvent focuses on realtime technological solutions for enhanced management of energy efficiency. We thus offer systems and services that help to manage critical infrastructures and data through highly secure and available solutions in three main areas: electricity, oil and gas.
- Transportation. Telvent provides solutions and services with the ultimate aim of contributing to the reduction of CO<sub>2</sub> emissions. Specifically, we offer global traffic information and control systems, applications for highway management and information, as well as solutions for automatic toll payment.
- Environment. In this area, Telvent offers applications for water and weather management, as well as solutions and services that span the whole cycle of water management and permit global protection of the environment.
- Public Administration. At Telvent, we work with the aim of optimizing governmental, regional and local management at the global level. To this end, we offer integrated technological solutions for facing the challenges of today's society in security and sustainability, applying them to each of the specific areas of the public sector.
- Global Services. Telvent offers a global technological outsourcing model that spans the complete life cycle of the client's information and communications technologies, leading to growth and evolution without the need for greater investment in resources or having to assume the significant risks related to the development and control of the company's current and potential technologies.

#### **Evolution in 2007**

# **Energy**

#### 2007 Business Evolution

In 2007, the Energy business area developed in accordance with the strategic plan, focusing on three different approaches: constant investment in research and development (R&D), strengthening strategic agreements of collaboration, and acquisitions in order to fully cover the products and services we offer.

In the area of R&D, we focused mainly on three areas: maintaining, enhancing and developing our current products; developing new solutions and products; and, finally, conducting research on new technologies and strategies for potential products and services. Specifically, we made improvements in the subsystem of real-time data acquisition and critical infrastructures, we expanded our suite of business GIS solutions, ArcFM, and updated our Remote Terminal Unit subsystems. As far as new products and solutions are concerned, we developed the Smart Grid Solution Suite initiative, an innovative integrated solution geared toward improving efficiency in the transmission and distribution of electrical energy, as well as SimSuite Pipeline Power Optimization, a product that provides a hydraulic model for efficient energy use in the transportation of hydrocarbons. Research and planning followed the line of development of software and hardware in order to evolve in synchronization with the technological sector.

In the area of strategic collaboration agreements, five, among others, represented key relationships for the Energy business area: continuous rapport with ESRI of Redlands, strengthened in 2007; the partnership with OSIsoft of San Leandro; agreements with Echelon, based on the use of its Intelligent Metering System; the National Laboratory of Idaho; and, finally, with the National Laboratories of Sandia, through the LOGIIC2 initiative (Linking the Oil and Gas Industry to Improve Cyber Security).



## Most Relevant Projects in 2007

- Contract with TransCanada Pipelines, in Canada, for the TCPL Milestone Project, a large 'green field' project for transporting crude oil from Canada to the U.S. This 3,000-km. pipeline will pump 435,000 bbl/d of oil to refineries in the central U.S.
- Contract with the New York City Transit Authority, in the United States, for back-up of the electrical system that feeds the New York subway system.
- Orders for the PIA project from Red Eléctrica de España (REE) to supply equipment and integrated control systems for different substations of the electrical energy transportation network operated by REE throughout Spain.
- Contract with Petrobras Transporte Transpetro, in Brazil. This represents one of the largest and most complex OASyS installations and upgrades.
- Contract with Electra Noroeste, in Panama, for supply, installation, operation, support and testing of a Distribution Management System comprised of SCADA/DMS/OMS modules of 100,000 household meters. This contract represents an extension of the initial contract, under the generic designation of Amrelva3.
- Contract with ADMA-OPCO, in Abu Dhabi, United Arab Emirates, to install the SCADA system in two of the world's largest petroleum complexes: Zakum and Umm Shaif.
- Contract with L&T to supply remote terminal units for the telecontrol system of the power facilities at the JERP refinery, owned by Reliance, an Indian company. The contract includes supply of electronics put together by L&T in their factories in Mumbai.
- Contract with PetroChina to supply hardware, engineering, installation and training for its main Control Center in Beijing and the Backup Center in Langfang.
- Contract with Sui Southern Gas Company Limited (SSGC) for GIS; the company already has the range of ArcFM, ArcFM Server, ArcFM View, Inspector and Designer products for managing its distribution system in a more secure and efficient way.

## **Transportation**

**Business Evolution in 2007** 

In 2007, we consolidated integration of 2006 acquisitions for the Transportation business, expanding our activities in the strategic markets of





China and the United States (Telvent-BBS and Telvent Farradyne, respectively), as well as the bus segment (Maexbic, in Spain). We also finalized acquisition in the month of May of Caseta Technologies, headquartered in Austin, Texas (U.S.) and with proven experience in advanced toll systems.

In the international area, the year 2007 was characterized by contracting and execution of a large number of projects that strengthened our position in Europe and North America, along with upgrading/expansion of systems installed in previous years in Latin America, China and southeast Asia.

The Spanish market maintained its consolidation in recurring projects in operational and maintenance services and increased activity with significant projects for new road infrastructures under construction and activities involving traffic violation management.

# Most Relevant Projects in 2007

- The General Traffic Department (DGT), in Spain, chose Telvent to develop a variety of projects: maintaining the Northwest Management Center (La Coruña), the Southwest Management Center (Seville) and Madrid access points, as well as the maintenance and exploitation of its cinemometer network and its expansion in 4 of the 7 designated areas, as well as the supply of diverse solutions and services for the National Traffic Violations Processing Center in Spain.



- Start-up and maintenance of the new SCADA system for Oresund-Konsortiet (Sweden/Denmark).
- Design, implementation, operation and maintenance of the 511 Traveler Information System in San Diego (U.S.).
- Consulting and support in the management, operation and maintenance of the ITS communications network in the state of Florida, contracted with the Florida Department of Transportation.
- Maintenance contract with the New York Department of Transportation for toll systems installed in tunnels and bridges accessing Manhattan.
- Maintenance of maritime traffic management systems (VTS) at 5 ports (Lázaro Cárdenas, Manzanillo, Mazatlán, Progreso and Tampico) in Mexico with systems previously installed by Telvent, with the Communications and Transportation Secretariat of Mexico. In addition, installation and maintenance of maritime traffic management systems (VTS) for 3 new Mexican ports, in Ensenada, Vallarta and Guaymas.
- Contact-free ticketing system for expansion of Line
  2 of Metrorrey and upgrade of Lines 1 and 2 in
  Monterrey (Mexico) to this technology.
- Contract signing and work start-up of UTC in Mumbai (India).
- Completion and maintenance of the ITS Beijing Supercenter, in China.
- Contract signing and work start-up for the ATVM project in Saudi Arabia to install city traffic management systems and vehicle monitoring, as well as security and traffic violations detection and management systems in Jeddah, Mecca and Medina.

#### **Environment**

# **Business Evolution in 2007**

In fiscal year 2007 we carried out internal restructuring of our activities, combining resources into a worldwide line that operates through five geographical locations: North America, Latin America, EMEA, Asia and Australia. By doing so, we are able to stay closer to our clients and deliver them the quality service that increases in demand and complexity each day.

For our operations in the Middle East, the year 2007 represented business consolidation in significant geographical locations such as the Asian-Pacific and the Middle East, entry into countries like the United Kingdom and Germany and the achievement of a position of leadership in the aviation meteorology segment.

## Most Relevant Projects in 2007

- Contract with the National Institute of Meteorology (INM), in Spain, to supply and install aeronautical weather equipment for the airports of Seville, Melilla, Murcia, Huesca, Burgos, Valladolid and León.
- Contract with Lucebit GmbH to supply and install an AWOS weather assistance system for the Mengen-Hohentengen airport (Germany). The new system incorporates the latest technological advances and provides crucial information to pilots for ensuring safe plane takeoff and landing maneuvers.
- Contract with Meteoswiss, the Swiss
   Meteorological Institute, in Switzerland, to supply
   25 automatic weather stations that are a part of
   Phase 2 of the SwissMetNet contract. This contract
   includes complete renovation of the Swiss weather
   assessment network and supply of a central data
   acquisition and processing center.
- Contract with Systems Inferface, in the United Kingdom, to supply Revolver Transmitters for the Liverpool (John Lennon) and Doncaster (Robin Hood) airports. Strategically, this represents a very important contract for Telvent, as it is the first contract awarded in the United Kingdom.
- Contract with Eurocontrol, in Belgium, to update the VSAT satellite receiving system and SADIS software in order to comply with the new data format and protocols associated with the second generation of SADIS service with the British Meteorological Office.
- Contract with Alberta Infrastructure and Transportation (AIT), headquartered in Canada, to carry out summer maintenance of the highway weather observation systems (RWIS).
- Contract with the Australian Bureau of Meteorology (BOM), in Australia, for the "New Generation of Automatic Weather Station Networks" project. The purpose of this project is to replace the 650 automatic weather stations that make up the Australian national weather





- observation network, including 50 sea level monitoring stations for the Australian Tsunami Alert System.
- Contract with Comtrol Corporation, in Taiwan, to supply the automatic weather observation system (AWOS) for the network of the air force of the Republic of China (ROCAF).
- Contract with the Meteorological Institute of India to supply integrated aviation weather systems to eight airports in India, including the international airports of Mumbai and Delhi.
- Contract with Kahramaa, the water and electric utility of Qatar, in India, to carry out consulting service for its network of transportation and distribution of drinkable water over a period of four years.

#### **Public Administration**

#### Business Evolution in 2007

Throughout 2007, at Telvent, we consolidated our platform of electronic administration services to become a reference in the extension of the new Law of Electronic Access of Citizens to Public Services (LAECSP), as the electronic signature product developed by Telvent, @Firma, was the tool selected for certifying validity and authenticity of citizens' identities for Administration purposes.

Especially significant is the supply of personalization systems for electronic ID cards; that is to say, equipment and software for laser engraving of people's personal data on electronic national ID cards.

Our technology in the Healthcare segment evolved in production consolidation, which allowed us to offer our clients maximum functioning in both clinical as well as financial and administrative areas. Thus, we must highlight image-based diagnostic system solutions, as well as our projection as suppliers of global regional solutions of even national scope.

## Most Relevant Projects in 2007

- Contract with the Ministry of the Interior General Police Department, in Spain, to develop a system of travel and ID documentation verification at 332 border control points located throughout Spain.
- Contract with the General Department of Heritage and Red.es, in Spain, to supply electronic ID personalization systems; that is, equipment and



software for laser engraving of citizens' personal data on national ID cards.

- The "Online Urban Planning Program Initiative", in conjunction with the Ministry of Industry, Tourism and Commerce, in Spain, aims to facilitate access to different urban planning schemes for city technicians, as well as permit residents to access urban development plans in their towns and cities via Internet. Transparency in public management of the urban planning sector will be promoted through this program, helping to resolve and manage this planning.
- The Identica project, developed for the Ministry of Industry, Tourism and Commerce, in Spain, consists of advanced identify verification by means of biometrics and personal documentation in secure environments, thus facilitating the conventional identification process and incorporating all technological advances and new models for storing identification data.
- The Town of Padrón Avanza project, developed for the Ministry of Industry, Tourism and Commerce, in Spain, a part of the AVANZA Plan, aims to provide a sole integrated system that takes the whole array of management functions of a town's population into account.
- Contract with the Health Council of the Andalusian Regional Government, in Spain, to implement a Healthcare Monitoring Information System.
- Contract with Aena, in Spain, to develop the application for monitoring medical procedures in the Airport Services Division.
- Contract with the Virgen de Valme Hospital, in Seville (Spain), to renovate communications equipment and install new fiber optic trunk lines.





- Contract with SESPAS, in the Dominican Republic, to implement the digital Healthcare strategy, a unique information and affiliation system in the Healthcare segment.

#### **Global Services**

#### Business Evolution in 2007

We experienced one of our greatest transformations in the year 2007. We went from complete reunification of all of our businesses in consulting, infrastructures, communications, systems integration and applications and outsourcing to a single new business unit called Global Services.

We also proceeded in 2007 with the acquisition of 58% of Matchmind, a technological consulting firm, in order to round out all of our capabilities in this area, beginning the processes necessary for its integration with Telvent. We also signed a gradual acquisition agreement for the remaining 42% over fiscal years 2008, 2009 and 2010. Within this strategy of growth in security services for our clients, we increased our shareholding in S21sec, a Spanish company specializing in computer security solutions.

International expansion was another of the critical points in which Global Services begin to develop its strategy in 2007. Apart from our presence historically in Portugal, where Global Services is a reference in IT infrastructure management services, we began construction in the U.S. of our sixth data center. This data center is positioned to offer IT infrastructure and security (disaster recovery) management services to Telvent's large client base in segments as consolidated as Energy and Transportation. We also took the first steps toward positioning ourselves in other geographical locations, such as Latin America, where Telvent has had a historical presence.

# Most Relevant Projects in 2007

- Contract with the Spanish Institute of Foreign Trade (ICEX), in Spain, to manage its infrastructures.
- Contract with Jazztel, in Spain, to upgrade its technological platform, which is currently located at Telvent's Data Centers.
- Contract with the Metropolitan Telecommunications Network of Seville,



Hispalnet, in Spain, for secure access to IP services of the Metropolitan Telecommunications Network of Seville.

- Contract with the Spanish Radio and Television Corporation, in Spain, to create and manage a multimedia web portal. Contract amount: 1,500,000 Euro. Through this project, Telvent's technological capability for designing and managing one of the most innovative multimedia web portals.
- Contract with BT Spain General Systems Integration, in Spain, to expand Telvent resources.
- Contract with the Real Madrid Soccer Club, in Spain, for outsourcing the services of its web portal.
- Contract with the Regional Consortium of Transportation of the City of Madrid, in Spain, for implementation of the Backup Center of its Technological Platform.
- Contract with L'Oreal, in Spain, to house the information systems of its Spanish subsidiary.
- Contract with Telefónica, in Spain, for housing its communications nodes.
- Contract with UNED, in Spain, to outsource, manage and monitor its web portal.

# Research, Development and Innovation in 2007

At Telvent, over 350 people devote themselves to Research, Development and Innovation, distributed among the 9 Product and Competency Centers we have around the world.

The most relevant R&D&I projects in 2007 were the following:

- INL Phase 1. 2007 marked the beginning of a multi-annual research project in critical infrastructure security. The project has already begun to bear fruits with the first report from the Idaho National Laboratory (INL) on the evaluation of the security of our SCADA OASyS DNA 7.5. Given the results, at Telvent we are in a position to assure clients that our flagship is the securest in our history.
- Responder. In 2007 numerous product innovations came to light:
  - 1 The completely redesigned web interface for achieving a new, easy-to-use interface, with reinforced web security and ESRI ArcGIS Server 9.2 connection.
  - 2 The functioning associated with Responder's management by region now permits up to three levels of geographical regions as well as outage forecasts by region.
  - 3 Improved management of likely incidents, crew assignment, risks and incident confirmation, as well as interface improvement for adding trucks to the system.
  - 4 Report generation now includes the capability of generating various kinds of user-defined incident reports.
- Free Flow Toll Solution. Throughout 2007 we continued to perfect detection and classification equipment, and work was conducted on new systems by means of optical stands and piezoelectrics for detection of axles and double wheels, and on a new state-of-the-art telepay tag in conjunction with Delta and Fela. Results are due at the beginning of 2008. The solution is complemented by the development of the Back Office, divided into two projects: CSC (Customer Service Center) and VPS (Violation Processing Center) development. In 2007 the

- detailed analysis of different operational models of these types of systems was completed in different countries, and requisite and functional specification of the system was carried out. Advances were also made in definition and design of the architecture, and tests were conducted in order to select and validate the functioning of different tools for use in its development slated for 2008.
- SmartTouch. A consortium that aims to integrate the functions provided by contact-free intelligent card-reading, which is in wide use in ticketing systems, for cellular phones. In 2007, we focused on defining scenarios and developing the first models, including the integration of a pre-pay transportation title in the cell phone, recharging via GPRS and its validation and consumption in access equipment. In this way, a user with an adapted phone could enter the transportation system (subway, bus,...) by only having to bring his or her cell phone near the closing device.
- e-trans. The e-trans platform is the basis of our payment system solutions for tollways, ticketing and parking facility management. In 2007 we worked on its evolution, redefining the architecture, with anticipated benefits for our clients, among which the following stand out: solutions with high availability and scalability, multi-platform client support, a more flexible and enhanced user interface, and support of completely centralized systems.
- InTraSy. The aim of the project is to develop the new generation of solutions for city traffic control, both with respect to field equipment, zone regulators and exchanges, as well as the Center's system. In 2007 technical specification of the new RMZ regulator was carried out, including mechanical and electronic design. The project offers significant changes in information structure, connectivity, modularity and in the control capacity of peripherals, which allows a high degree of flexibility for adapting to our clients' present and future needs, thus reducing the necessary investment level during the useful life of the system.

- Shadow Toll. By means of this project planned over two years, 2007-2008, we are developing a Shadow Toll Smart System at Telvent. Different types of sensors for detecting and classifying vehicles were analyzed and selected in 2007, and system specification was completed. Integration of one of these sensors in the remote for data collection was conducted, and the basic software infrastructure that will complete the solution was developed as well.
- m:VIA. Development of a cellular platform permitting vehicle-infrastructure interaction and allowing drivers to receive available information during their trip. The objective of this project, which is backed by the MITandC, is research and development of basic systems for content management, both for loaded elements as well as infrastructure, for traffic and transportation sector applications. It is a research project that will bring about significant knowledge acquisition in cellular communications that may later be applied for creating added-value services in different areas of the traffic and transportation sector.
- Gas Suite. We improved the Gas Suite infrastructure in 2007 to allow better data access control of measurements having financial materiality. GMAS, in particular, is used as an auditing tool to ensure compliance of norms regarding corporate governance, such as the Sarbanes-Oxley Act. We added other innovations to the product, such as enhancement of data treatment so that information arrives first to those involved in decision-making, or the restructuring of the product that lowers cost since it allows for modular installations and facilitates version upgrades.
- SimSuite Integration. SimSuite Pipeline is a key component of the LMS (Liquids Solutions Suite). The SimSuite development program focused on the integration of certain parts in the OASyS DNA 7.5 infrastructure, such as the man-machine interface (ezXOS) or the data access layer (DAL). The objective of this project is to offer our clients an integrated solution which at the same time lowers costs in the long run. Configuration tools and common interfaces assure that the end user need not have to change contexts in moving from one application to another.



- Next Generation Liquids Suite (NGLS). Continuation of the project launched in 2006 with the aim of creating a superproduct based on the solid nature of current products. Throughout 2007, we continued to work on the integration of applications in the OASyS DNA infrastructure: elimination of function duplication, reduction to a minimum of migration effort over the previous one and the division of the applications' components. This effort in technological enhancement of our Liquids Suite applications lets us offer our clients systems for operating and monitoring their pipelines, with the confidence of being based on our solutions that are highly proven by the industry and on which we continue to work in order to improve functioning and flexibility and therefore stay in line with the rapid changes in the oil industry.
- Pipeline Power Optimization. This application is based on the Liquids Suite SimSuite module and determines energy consumption and operating cost of a pipeline at a given moment. This information is used to determine optimal pump configuration in order to minimize costs. The Pipeline Power Optimization solution offers those in charge of the operation and energy management of the line a tool for knowing energy consumption, to improve operation and aid in decision-making, which lead to savings in the energy cost.

- Smart Grid Solutions Suite. In 2007 we started up a strategic initiative called the Smart Grid Solutions Suite (SGS) in response to the new challenges facing the industry in terms of efficient and secure network management. Within this range of solutions, our SCADA OASyS, ArcFM Enterprise GIS, Responder Outage Management, DMS Distribution Management, and Titanium Smart Metering Solution are included, as well as new products for automating substations. SGS concentrates its efforts on innovation of both technology and processes that give value to our clients, based on the cohesive integration of our advanced applications and on our base products, thereby creating a highly secure structure that is especially suitable for managing critical infrastructures. SGS will provide, among other advantages, network energy efficiency, improvements in customer service, reduction in the frequency and duration of service interruptions and possibilities for intelligent management of demand which were unheard-of until now.
- Denise. This represents a 4-year (2007-2011) research project, which obtained public financing from the Cenit program of the 2010 Ingenuity Plan. Telvent is part of a consortium comprised of representative companies from the electricity sector and Spanish research centers. The aim is to apply the latest generation of technologies to create a new generation of networks for electric distribution with the capacity to improve the quality of the energy supply, optimize supply and demand management, increase energy efficiency and supply security and support a new generation of energy services. This project fits perfectly within the objectives of our Smart Grid.
- Cirrus 100 Ceilometer. Cirrus 100 is Telvent's cloud height sensor (ceilometer) that includes mechanics based on a double lens system in its development. With this system, the focal distance will be reduced while improving thermal stability, data acquisition with a resolution of 9.8 meters and Ethernet connectivity. This product of high added value will form part of the Telvent product catalogue for aviation meteorology, a key component in airport security, increasing confidence in security during takeoff and landing maneuvers.



- Beftel (optimized control system for desalination plants). The aim of the project is to design and develop an advanced control system that will permit optimization in the operation of a desalination plant. The system integrates the most advanced control and simulation technologies while combining new pretreatments and energy recovery systems for application in desalination plants, providing the necessary efficiency by means of supplying technology geared towards lowering energy consumption and therefore reducing GHG emissions. This project began in 2006 and is being developed in conjunction with Befesa CTA. It is subsidized by the Andalusian Technological Corporation, the MITandC and the Andalusian Regional Government.
- THMDT (Telvent Hydrometeorology Decision Tool). The project aims to design and develop a monitoring and control platform for watersheds, permitting integration of new field technologies for measuring precipitation and hydrological modeling. With this objective, real-time information from hydrological sensors and precipitation data are integrated, for use in a distributed hydrological model, in order to obtain short-term forecasts on river and dams. THMDT therefore represents the development of new technologies linked to sustainable management of water resources. In the development of the project, we are backed by the Hydrometeorological Research Group at the University of Catalonia and aided by the MITandC and the CICE of the Andalusian Regional Government.

- Tesemat. This project puts forth the design and development of a Solar Energy Management Tool for optimizing solar energy generation by means of exploiting an accurate weather forecast adapted to the needs of the operator. With this forecast, solar plants will have a tool for maximizing power level and energy production quality, and improve management of operations and maintenance. Tesemat will allow efficient and sustainable handling of solar plants. The project is developed in conjunction with Solúcar R&D. Subsidies were granted for 2007 and 2008 from MITandC.
- PMAI (Image-Assisted Medical Processes). The PMAI project, which began in 2006, lies within the strategy of developing solutions in the Healthcare sector and, more specifically, in Medical Imaging. In 2007, we succeeded in developing the Medical Image integrated Visualizer in 2-D and 3-D for its flexible application within the TiCares suite for planning and carrying out medical intervention processes (radiation, surgery, ...). Through this project, we seek to increase efficiency of current surgical procedures to achieve more precise and minimally invasive surgery at a lower price. It enjoys a subsidy from the Andalusian Technological Corporation (CTA).
- Amlvital. Project within the Cenit program, with a subsidy granted by the CDTI. Its objective is developing a new generation of TIC technologies and tools for modeling, designing, implementing and operating Environmental Intelligence (AmI) Amlvital systems, the aim of which is to provide personal services and support for independent living, health and well-being.
- Identica. The Identica project arose in 2007 with the objective of constructing an advanced identity verification system through biometrics and personal documentation in secure environments to respond to the current need for unequivocal evidence of a person's identify, while verifying physical presence at the same time. With this project, at Telvent we will develop a simple, light and flexible platform which can, in real environments, respond to the different possibilities for identification and authentication: verification of document authenticity and collection of biometric features and their validation comparing data stored in the bearer's



document or at a remote database. Identica was granted a subsidy from the Ministry of Education and Science (MEC).

• Globe. The Globe (European GLObal Border Environment) project is categorized under the strategic thematic line of e-immigration established by the European Commission, defining a series of Institutional objectives, thus obtaining a global control panel for making strategic (policies and procedures) and operative (tactics) decisions, Information Systems, Normalization and Integration (Identification of users, Identification and analysis of information sources and systems, Identification of needs and Design of the integrated solution) and Technological, with the development of innovative, scalable and reliable solutions.