

ITACA-TSB

REPORT 2009



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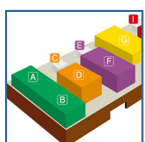
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Dear friends, once again we are both pleased and extremely proud to present the Annual Report for 2009 for Technologies for Health and Well-being of the ITACA Institute at Valencia Polytechnic University.

In this period of economic crisis, when everyone is talking about changes to the production model, we are proud to state that we continue to base our work on innovation, value and commitment to our environment.

As our annual report will show, our activity has continued to grow but I would like to draw attention to 3 things:

- On the 1st of April we received the Technology and Health Foundation prize (collected by Sergio Guillén and presented by Cristina Garmendia, the Minister for Science and Innovation) for our transference and research work in the ICT and health sector.
- The establishment of new synergies and strategic alliances with different organisations, among which the creation of a Research Unit with La Fe Hospital stands out as it gives our business profile a clinical dimension which allows us to face new challenges and better understand the needs of health professionals.

- The consolidation of our spin-off company Technological Solution for Health and Wellbeing S.A. in the market. This spin-off already employs more than 40 people, working for clients such as the Health and Social Politics Ministry, the Valencia Health Agency, Marqués de Valdecilla Hospital, the Health Service of Castilla La Mancha or La Fe Hospital in Valencia, among others.

I couldn't close the introduction to this report without thanking all those who make the day-to-day running of ITACA-TSB possible; the skilled and committed people who work with us, and those who confide in us to continue improving the quality of life in our society.

We're counting on you to ensure that ITACA-TSB continues to be a leader in the market for ICT applications in all spheres of health and wellbeing, always striving for excellence.

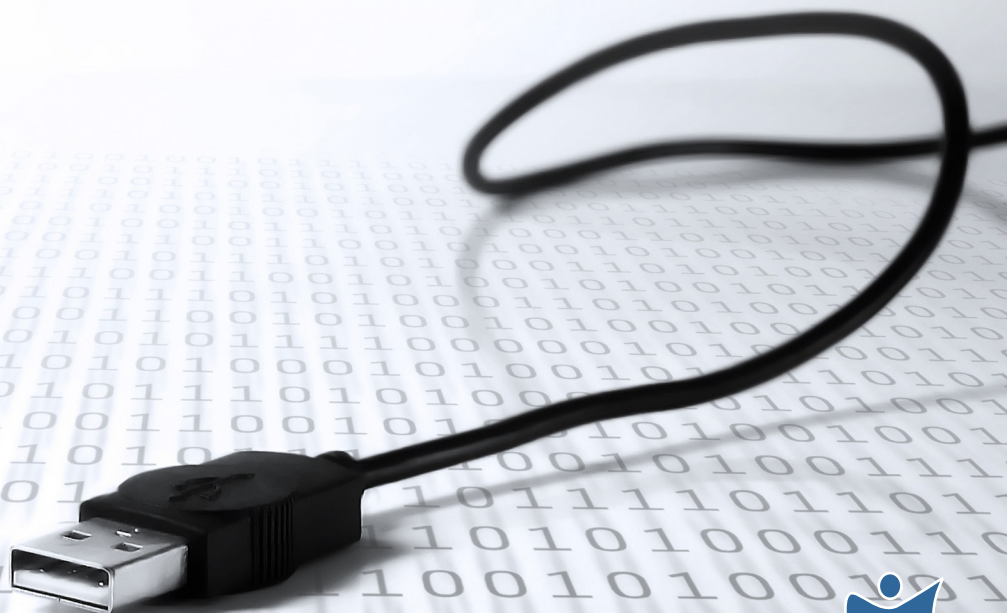
Kind regards



Sergio Guillén



Vicente Traver



Who we are?



Health and Wellbeing Technology (ITACA-TSB) is a part of ITACA (Institute of Advanced Information and Communication Technologies) of Valencia Polytechnic University, dedicated to the investigation and development of new applications for ICT (Information and Communication Technology) in the human health sphere, quality of life and social services.

The activities developed by the group aspire to firstly promote and then carry out scientific research work, concerning technological development and transference in the communication and information technologies field, resulting in an improvement of the health service offered to the citizen be it on behalf of public bodies or private entities, as well as improvements in people's quality of life through the provision of new services or improvements in existing services.

ITACA-TSB also actively encourages the promotion of health initiatives, especially where physical activity and healthy dietary habits are concerned, creating scenarios where telemonitoring of vital signs, knowledge management, strategic motivational applications and environmental intelligence etc become integrated.

ITACA-TSB participates in Research and Development (R+D) programs at both national and regional level, as well as in initiatives on an international level, thereby occupying an important position in the participation in European projects ranking in Marco Program VII.

Given that the essential purpose of the group is innovation, a continuing effort is made to promote the transference of our activities to the market, which has given rise to an important number of agreements and contracts with institutions, companies and the relevant public bodies.



ITACA-TSB in numbers

ITACA-TSB currently has 54 staff including consolidated professionals, young researchers and students in training; among the researchers many have masters or PhDs, and the scientific production is of more than 30 papers produced per year including articles, chapters in books and magazines and papers. The organisation forms an active part of 11 scientific societies and technological platforms, and 5 of its members form part of various editorials and scientific committees.

The organisation currently participates in a total of 26 national and European projects and has 6 ongoing agreements for projects with companies. It has established societies and links with 12 leading entities in the world health and technology sphere and has a business volume of 2,567,646.01 euros.

More than 150 press communications were released by ITACA-TSB during the year 2009, resulting in more than 400 hits in written and digital press, radio and television, in local, national, international and specialist media. 9,255 users visited 15,338 pages on the ITACA-TSB website.



ITACA-TSB organises its activities through Strategic R+D+i programs for e-Health and e-Inclusion



Health and Wellbeing Technology

Strategic R+D+i programs

e-Inclusion



The work in this area concerns the development of products and services which, through ICT applications, allow people with special needs (the handicapped, the elderly) to access information as easily as other people can, and facilitate their right to enjoy a full and independent life. These products and services are also aimed towards those people and organisations who are responsible for the care and help of these sections of the population (members of the family, care workers, public and private entities).

Special consideration is given to AAL services (Ambient Assisted Living or Daily Life Assisted by the Environment), destined to improving quality of life for the elderly, boosting their active participation in society, and improving on their wellbeing in general.

Research centres on the use of technology which allows us to develop Environmental Intelligence, using strategies framed with the Design for All project and strengthening studies on Infoaccessibility. In particular, the program encourages research and development of systems for tracking people unobtrusively, behavioural models, participation platforms based on social webs, distributed computing, personal platforms for the receipt of mobility and architectural services.



e-Health

e-Health represents the group's main field of research. By applying new information and communication technologies for the health sector, the group investigates the possibilities that the new technology can offer to improve quality of life and the range of services offered by public bodies and private entities to the citizen in general, and more specifically to patients and professionals within the health sector.

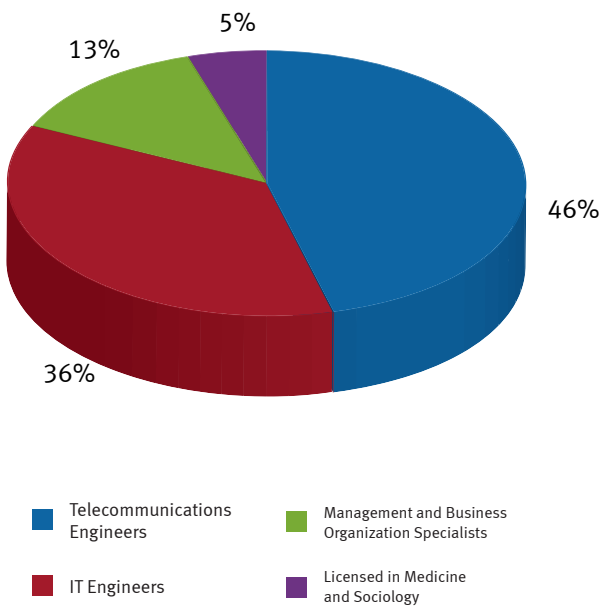
The work involved in e-Health includes the development of web applications which, using broadband technology and videoconferencing, fundamentally provide monitoring of patients, electronic medical history, electronic prescription, scheduling, etc. Wireless and mobile phone communication applications are also developed; providing patient tracking and follow-up and personal health and medical equipment services.

The aforementioned applications and services are specifically designed with the management of healthcare in mind, offering specific solutions for patients with chronic illness, the development of clinical tracts, case management and care offered outside the hospital.

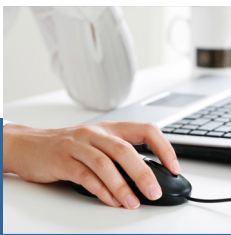
Human Resources

The current number of employees in ITACA-TSB has been maintained at an average of 52 people completely dedicated to the projects being developed, more than 30% of which are women.

The staff is multidisciplinary, as shown in the figure below.



The majority of the staff dedicated to R+D projects are telecommunications and IT engineers, although the group also has specialised management staff at its disposal, as well as medical and sociology graduates, providing expertise in medical content and user requirements.





The staff at the TSB is a combination of experienced professionals in the field of research and innovative technology, and recently graduated engineers who are incorporated into the working world by doing work experience with the TSB while finishing their final degree projects.

During 2009, 5 such students became part of our staff, carrying out their End of Degree Projects within the sphere of the TSB, thereby facilitating contact of final year degree students with the world of R+D.

Two of the aforementioned students received the Bancaja Prize for their theses.



The management of human resources in the centre adheres to the following principles: the continuing training of staff, progressive promotion of staff regarding technical and operational responsibilities, and the flexibility of working conditions taking family life into account.

The foundation of these principles is a shared commitment to the common project of TSB to maintain its position as a market leader in technological transference in the Health and Wellbeing area.

Training

Due to the innovative character of the group, it is of vital importance to keep our knowledge base and the technology that we use for our research up to date.

To this end, we fully encourage the continuous training of all the staff, those working in science and technology as well as management, through internal seminars, external training courses and short stays in other European universities.



Strategy and Objectives



The continuing improvement of our technological skills is crucial to our organisation. Staff training and the strengthening of a nucleus of interdisciplinary, stable and cohesive skills which allow us to face both current and future challenges is the cornerstone of our strategy.

In reality our approach is extremely pragmatic given that a large percentage (65%) of our resources in R+D projects are dedicated to the creation of knowledge in all areas of our interest.

Integrated as we are in the rich environment of scientific and technical knowledge production that is Valencia Polytechnic, we have access to an extraordinary range of educational opportunities and scientific infrastructures; in return we offer the students of said university excellent professional and personal development opportunities within the TSB.

Three plans of converging action have been defined within the TSB in order to constantly adapt to technological advances and respond to the demands of our society.



These plans of action are: the continual improvement of our own technological skills; the identification and study of the problems and challenges our clients face, and the development of strategic alliances in order to facilitate transference of products to the market.

- The continual improvement of our own technological skills.
- The identification and study of the problems and challenges our clients face.
- The development of strategic alliances in order to facilitate transference of products to the market.



Our second priority is to identify the needs of our clients, through studies and research, even before they are conscious of that very need. Due to the wide range of information now available (living, as we do, in the information society), there has been a paradigm shift in which we have seen a progressive change in behaviour: clients look for services and solutions to complex problems before turning to technology and its components.

On the other hand, we have also adapted our transference strategy to this paradigm shift, thus targetting long-term links with companies, R+D institutes and organisations in general involved in the global health and wellbeing business, as opposed to the usual client-service provider relationship of the past.



In this respect, we are excited about the new strategic agreements signed with the Spanish Federation for Rare Diseases, the University of La Serena in Chile, the Norwegian Telemedicine Centre, the Foundation of La Fe Hospital, the Foundation of Peset Hospital, etc, which along with the existing agreements in place, have reinforced our presence in Spain and Latin America, directly contributing to the success of Salupedia, the first Spanish online encyclopedia dedicated to health and written by professionals, accessible to all, which has already generated more than 900,000 hits.



This is one of the principals of organisation in our group, structured around 2 strategic R+D programs applied to e-Health and e-Inclusion, that thanks to the skills and capacities adquired are able to provide efficient solutions to any given problem, making use of the innovative technologies and methodologies to continually focus on the problem to be solved, and not on the technology.

These 3 driving forces of our strategy, the consolidation of the spin-off, and the current developments of Salud 2.0 and Environmental Intelligence through the Living Lab will greatly influence the next few years in the TSB.

In this period of economic crisis, it is necessary to take advantage of opportunities, put our trust in innovation and face up to this delicate period by accepting the relevant and necessary changes but without compromising the quality of the realisation of the projects and agreements in progress.

To this end, we count on the involvement and enthusiasm of all those who form part of the group and the support of those with whom we have already established agreements for collaboration.





e-Inclusion



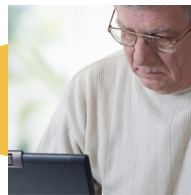
CIAMI



VAALID



OASIS



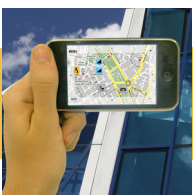
**TELEMONITOR
HEALTH**



PERSONA



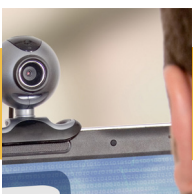
AMIVITAL



VADEO



EMOTIVA

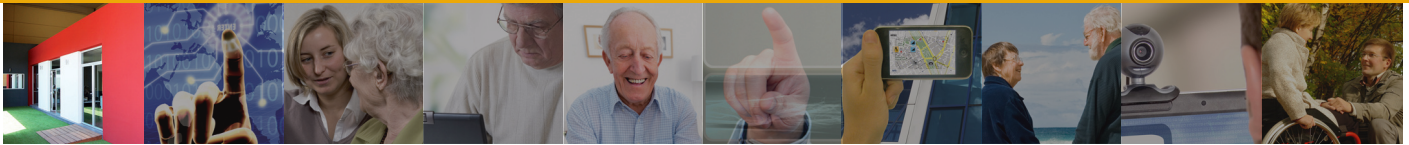


REMOTE



TER-REMOTE

Competitive R+D projects



CIAMI

The CIAmL Living Lab is a laboratory set up to mirror a conventional living area. The aim of such a lab is to reproduce the exact conditions of the technology and applications being developed, both by ITACA-TSB as well as other companies and research centres.

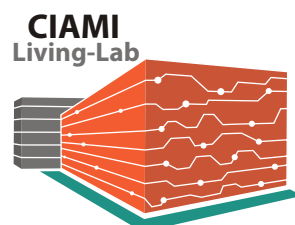
The lab has been designed so that the technology to be tested is easy and simple to set up, and interaction and use of said technology can be tested, thereby verifying the suitability of the solutions proposed.

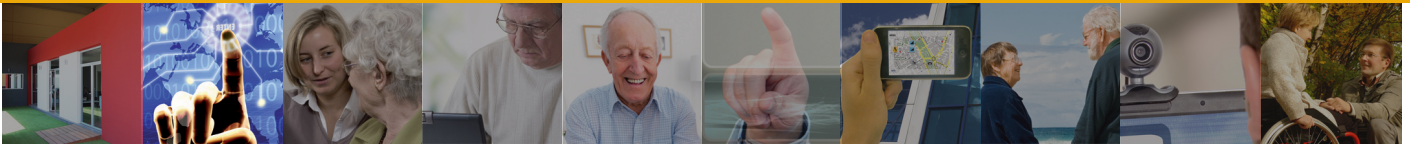
It has been designed to implement the following lines of investigation and development:

- Development of technological solutions for specific needs related to health care, social care and services in the home for the general public.
- Technological evaluation of applications (either of our own, or those of other companies or research centres) using real users in order to allow the validation of the installation and implementation.
- The study and analysis of user needs - especially focussing on old people and those who have a disability - according to the following criteria: social integration and support for daily activities.
- Intensive evaluation for extensive periods of time of those applications which have been developed with the aim of preparing them for commercial launch.

The construction and technical personnel of this infrastructure has been financed during 2007 and 2008 by the Advancement Program of the Ministry of Industry, Tourism and Commerce.

<http://www.ciami.es>





VAALID

VAALID (Accessibility and Usability Validation Framework for AAL Interaction Design Process) is a STREP project of the 7th Marco Program for Investigation and Development of the European Commission, included within the Strategic Objective 'Accessible and Inclusive ICT'; Thematic Priority ICT-2007.7.2, and counts on a global budget of 3,707,395.66 euros, of which 2,737,500 are financed by the European commission.

The project, which began in May 2009, is due to take 30 months and is being developed by a consortium of 8 members, coordinated by SIEMENS. The objective of the VAALID project is to develop new tools and methods which will facilitate and make more dynamic the creative, design, construction, implementation and evaluation processes for technological solutions, within the context of 'Vida Cotidiana Asistida por el Entorno' (literally Daily Life Assistance through Surroundings in Spanish) or AAL (Ambient Assisted Living), thereby assuring the accessibility and usability of the said environment for the elderly. This project is principally directed to those professionals who work in the conception, design and evaluation of the aspects of man-machine interaction for AAL solutions.



e-inclusion

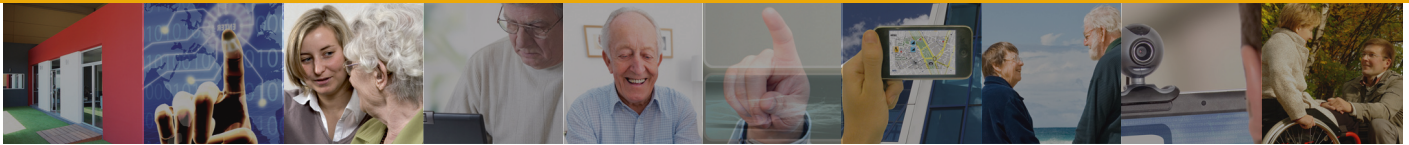
In order to achieve the proposed objectives, VAALID has concentrated on the creation of an Integrated Platform of Development, (IDE being the acronym in English), for the assisted design by computer, the simulation, and the validation of the interaction components between the user and the AAL solution. This platform will allow the professional to optimise the accessibility characteristics of the AAL services for social inclusion and independent life. The VAALID IDE platform consists of 2 environments which cover the different tools available to professionals:

- Creation Environment, which allows one to virtually construct the element forming the interactive structure of the AAL solution.
- Simulation Environment, where the potential users of the solution can experience the various alternatives, thanks to virtual and heightened reality, making crucial information available to professionals in order to ensure the accessibility of their solutions and make them user-friendly.

These new tools proportioned by VAALID will help the European ICT industry, companies specialising in interaction design of users, research centres and universities, to make their business more dynamic in respect to products and services for independent life and inclusion, creating new business opportunities. ITACA is the technical coordinator of the project and one of its major contributors.

<http://www.vaalid-project.org>





OASIS

OASIS (Open Architecture for Accessible Services Integration and Standardisation), is an IP project of the 7th Marco Program for Investigation and Development of the European Commission, included within the Strategic Objective 'ICT and Aging' of the Thematic Priority ICT-2007.7.1, and counts on a global budget of 12,414,061 euros, of which 390,504 corresponds to ITACA. The budget financed for ITACA by the European Commission is 312,688 euros. The project is due to take 48 months and began in January 2008.

The objective of the OASIS project is to create leading architecture, open and innovative, based on ontologies and semantic services allowing new and existing services to connect. The interaction of these services, achieved under the premise of cost effectivity, has the objective of improving the quality of life of the elderly, and promoting independent lifestyles.

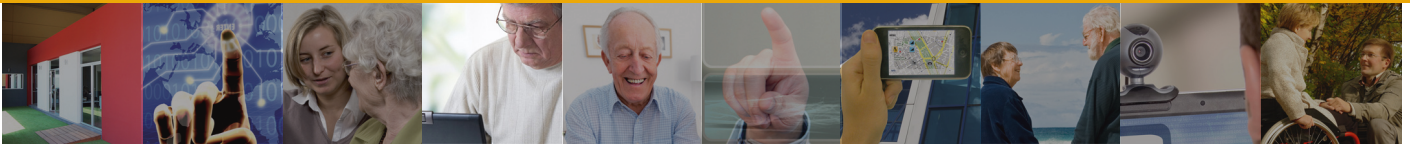
The technological aims of the OASIS system are:

- The interoperability between different web services, either from the same or different application domains.
- The sharing of context information between the different objects and services.
- Connectivity without transition from the hardware to the service, and between different services.

Thanks to this new architecture, the connection of up to 12 different types of services will be made possible, thereby promoting the best possible benefits for the elderly, boosting independent life, socialisation, mobility and job prospects. OASIS aims to promote physical and psychological independence, stimulate personal relationships, and improve emotional wellbeing.

The role of ITACA in this project is of development coordinator for services for independent living, besides participating in a large part of the technological developments.

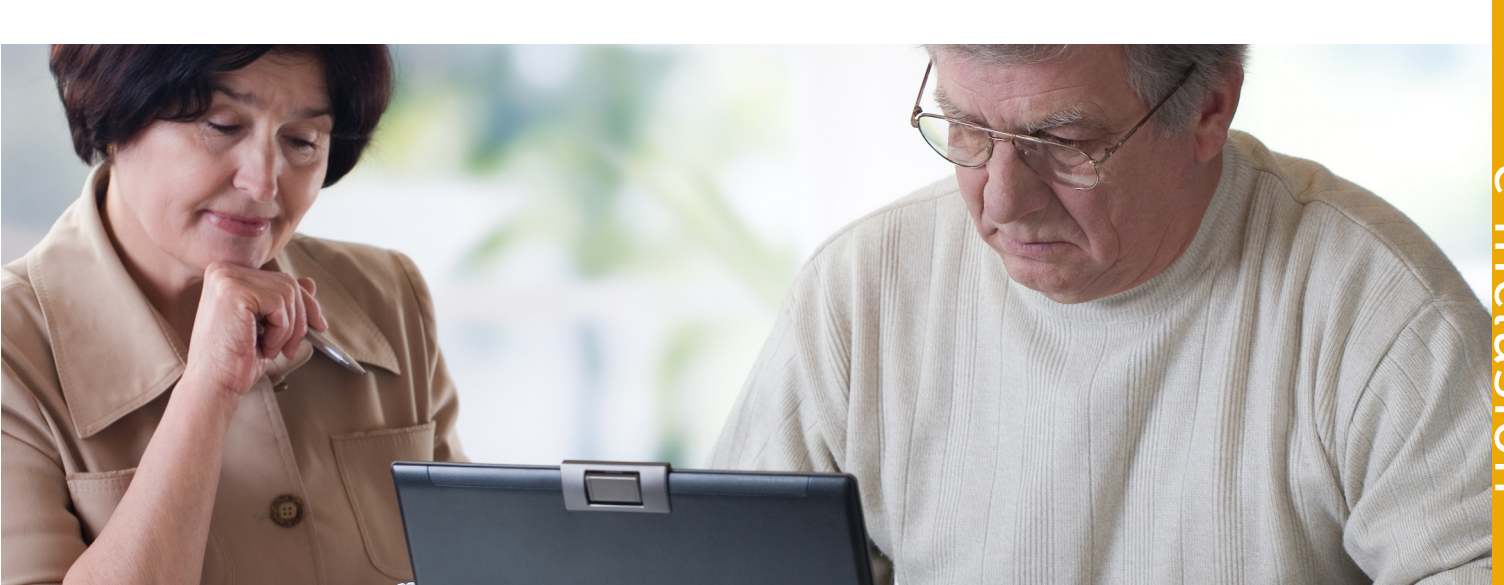
<http://www.oasis-project.eu>



TELEMONITOR HEALTH

Telemonitor Health is part of the program for the financing of strategic action for industrial diversification in Valencia Community. ITACA has been subcontracted by Technical Solutions for Health and Wellbeing (TSB) for 50,000 euros, for the display and testing of the technology developed in the Living Lab.

The general aim of this project is to create, in a period of 21 months, an innovative technological socio-sanitary system which improves the prevention, control and self-management of chronic illness, and the independence of the elderly affected by osteoarticular and cardiovascular illnesses. This system will combine, in a unique scheme, a portable system of control and communication of the state of health as well as patient tracking, in real time, as well as a domotic control system and detection of movement within the home.



e-inclusion

The specific objective of the work that TSB will be carrying out, and which ITACA will support, is to determine the information needs of each one of the implicated agents, that is to say, the patient, the carer and the healthcare professional.

The information needs of each one are different, and must be taken into account both for the management of the system as well as the type of information obtained.

TELEMONITOR HEALTH



PERSONA

“PERceptive Spaces prOMoting iNdependent Aging” (PERSONA) is an Integrated Project of the VI EU R&D Framework Programme, included in the Strategic Objective Ambient Assisted Living for the Ageing Society of the IST Thematic Priority.

The aim of this project is to advance in the area of Ambient Intelligence through use of a combination of AAL (Ambient Assisted Living, or ‘life assisted by the environment’ in Spanish) technologies and concepts.

AAL Services are sustainable and feasible solutions promoting independence and integration of the elderly in social activities, aiming to prolong the time they can live alone in their own homes, thus giving them a marked degree of independence and self-reliance, whilst improving their safety, looking after their health and promoting their social integration.



PERSONA is an open and accessible technological platform which builds and analyses a wide range of AAL Services designed for real users, with the aims of evaluating their social impact and establishing the fundamental business strategies necessary for the development of the proposed technologies and services.

AAL Services are divided into four categories of the needs of the elderly: social integration, support in carrying out daily activities, safety in the home against internal and external threats, and mobility support outside the home.

The project is being carried out by a consortium composed of a total of 21 research groups from Spain, Greece, Germany, Italy, Norway and Denmark. Participating firms include Vodafone Italy, IGD-Fraunhofer Institut, MOTOROLA, the Polytechnic University of Madrid, Centro Superior de Investigaciones Científicas (CSIC), and ITACA-TSB.

The Technologies for Health and Wellbeing Group (TSB) of the ITACA Institute is the Project Technical Coordinator and is therefore responsible for meeting objectives and ensuring that all technology developed is done so in a coordinated manner.

<http://www.aal-persona.org>



PERceptive Spaces prOMoting iNdependent Aging



AMIVITAL

AmiVital (Digital and Personal Environment/Surrounding for Health and Wellbeing) is one of the national strategic projects supported by the CDTI (Centre for Technological and Industrial Development), which, with a budget of 20,613,322.52 euros, aims to create a technological base which will allow the configuration of services for the citizen from a socio-health care perspective.

The consortium for this project is formed by 4 large companies with headquarters in Spain, supported by a group of new business and research groups which form part of the ITACA Institute in Valencia, with a subcontracting budget of up to 590 thousand euros. The project began at the beginning of 2007 and should be finished by the close of 2010. The general aim of the AmiVITAL project is the development of a new generation of ICT technologies and tools for the modelling, design, operation and implementation of Ambient Intelligence (Aml) devices and systems, providing services and personal support for independent living, wellbeing and health.



e-inclusion

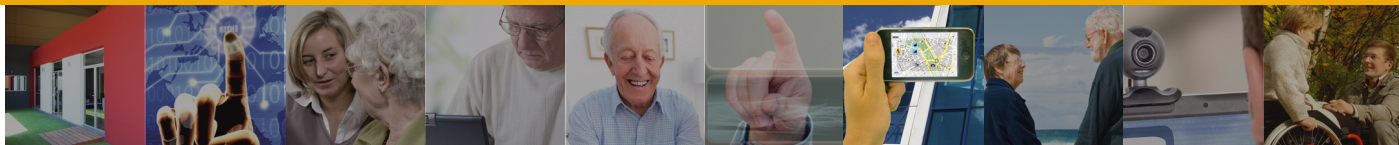
AmiVital promotes independent living and mobility for the elderly, braking the decline of this section of the population and making daily life easier, with special emphasis on those people with chronic illness. The technology also provides support to family members and the professionals involved in the care of the patient.

The driving concept of Aml is to unite the concepts applicable from an Aml paradigm within the areas of Health and Wellbeing, in such a way that a general service model is obtained using the ideal technology for the person to be cared for. This involves the construction of a technological space which facilitates the development of the European concept of AAL (Ambient Assisted Living) through the design and application of business models for an emerging sector with good future prospects aimed at covering primary social needs.

Within the AmiVital project, the ITACA-TSB group along with Telefónica R+D is the technical coordinator for the mobile platform, being responsible for coordinating the technologies developed, and ensuring that the objectives that have been defined by the project are reached.

<http://www.amivital.es>

Competitive R+D projects



VADEO

Vadeo is a social network where people with reduced mobility share information on the level of accessibility of their urban environment (pavements, public buildings, restaurants, hotels etc.), in such a way that the users can plan their routes avoiding said obstacles.

There are currently a great number of people who have difficulties moving around public spaces, a problem mainly caused by accessibility problems. Vadeo proposes to improve this situation by developping:

- Web version 2.0 available at www.vadeo.es, where the users can consult the information and actively participate.
- An application for the iPhone which offers immediate access to this information from any given location.



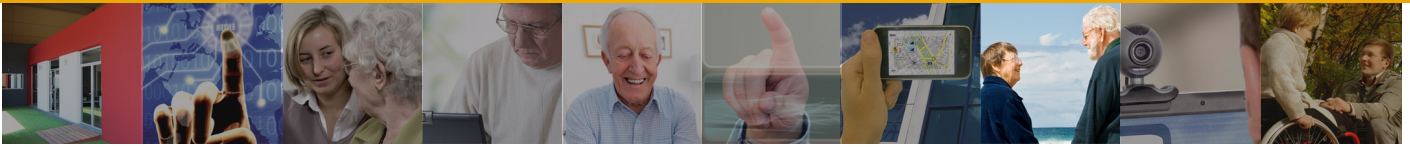
Both solutions provide the user with the following functionalities:

- The ability to see their current location on a map, seeing potential obstacles and points of interest in immediate surroundings.
- Add new obstacles of which they are aware, and define the seriousness of said obstacle.
- Add new points of interest, and define the level of accessibility offered.
- Calculate routes on foot to any destination, and show any obstacles present on that given route.

The application is being marketed and promoted both through traditional means as well as through public bodies, user associations and sector congresses.

<http://www.vadeo.es>





EMOTIVA

eMOTIVA is a project conceived for the motivation and monitoring of people with dementia in homes, financed through the Avanza Plan of the Ministry of Industry. The consortium is made up of the Spanish Society of Doctors in Homes (SEMER), the Polytechnic University of Valencia, La Fe Hospital and the companies TSB and Microart.

eMOTIVA is a tool of the 'Internet of the future', which creates a synergy between the doctors and those elderly persons with cognitive decline caused by illness associated with dementia, in order to encourage social inclusion as a therapeutic method, thanks to the use of digital content as a response to behavioural disorders.

The project aim is for the integration and testing of the necessary infrastructure, for the monitoring and motivation of people with dementia in institutions.



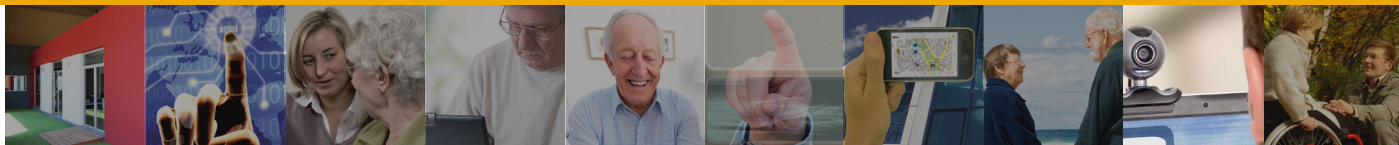
e-inclusion

The infrastructure will allow for the detection of behavioural patterns, such as those linked to possible disorders, and provide the mechanisms for personalised motivation. Current good practices in the care of the elderly are based on the stimulation and maintenance of cognitive processes.

The objects of the project are as follows:

- To create multimedia and innovative motivational tools, which will positively influence the attitude and behaviour of the person with dementia, thereby alleviating the degenerative process.
- To create an Intelligent Environment in order to monitor those people in institutions suffering from dementia.
- To create a network infrastructure of sensors and actuators, using radio interfaces of low consumption, which will facilitate the interconnection of the monitoring and motivational gadgets.
- To provide intelligent tools for the analysis, design and detection of behavioural patterns in those suffering from dementia.
- To test the system with the tools developed in 2 pilot schemes, in those homes where doctors from the SEMER (Spanish Society for Doctors in Homes) are working.

<http://www.proyectoemotiva.org>



REMOTE

The REMOTE project, “Remote Health and Social Care for Independent Living of Isolated Elderly with Chronic Conditions”, is one of the 23 projects approved by the first convocatoria of the AAL Joint Programme (AAL-2008-1) and counts on a budget of 4,082,571.72 euros, of which 2,889,592.94 are financed by the governments of the participating countries, and the European Commission. The consortium is made up of 15 partners and lead by SIEMENS. The project, which began in April 2009, is due to take 36 months.

The REMOTE project centres on defining and establishing a multidisciplinary and integrated focus, for research within the field of Information and Communication Technologies (ICT), taking into account the real needs of the elderly, especially those citizens at risk of social and geographical isolation, combined with the presence of chronic illness (hypertension, arthritis, Alzheimer and Parkinson) and those whose lifestyle makes them part of the at-risk group (the overweight, smokers, alcoholics, patients with poor diet, stress or lack of exercise).



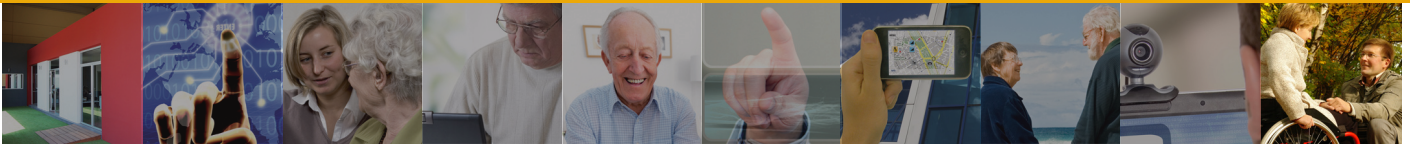
REMOTE is principally directed to those elderly persons displaying signs of chronic conditions, especially if they live in rural or isolated surroundings. The second group of user considered is that of the healthcare professional who would take on the responsibility of attending to those patients.

The project, which concentrates on areas such as remote medical assistance and environmental intelligence, aims to improve the personal surroundings of the patient through audiovisual, and sensorial monitoring, the automatisation of the tracking of vital signs, and the detection of risk and critical situations, such as the provision of tools which will offer an efficient support in the home.

In order to reach these objectives, applications will be developed which will help the elderly patient to manage the risk factors, and will enable that person to assist in their own care and maintain contact with family, friends and carers. Where healthcare professionals are concerned, the applications will allow access to the medical history of the patient, the continual tracking of the clinical measures taken, and the analysis of the information available on the patient's condition, his activity and changes in his surroundings.

The ITACA-TSB group has been subcontracted by TSB Technologies to participate in this project, and is responsible for the technology developed related to remote medical care applications.

<http://www.remote-project.eu>



TER-REMOTE

The “Platform for the despliegue of remote multimedia services for physical rehabilitation therapy” (TER-ReMOTE) is a national project of the Avanza Plan, which belongs to the subprogram Digital Citizenship of the 2009 Congress.

The project is being developed through a consortium, formed by 4 partners: ASPAYM National Federation, ASPAYM Madrid, ASPAYM Castilla y León, the Polytechnic University of Valencia (UPV), and TSB Solutions, the latter employed to give assistance where necessary.

The coordination of the project is being managed by the ASPAYM National Federation, and has a total budget of 477,553 euros, of which 382,039.40 is being financed by the Ministry of INdustry, Tourism and Commerce. The project, which began in July 2009, is expected to take 24 months.



The aim of the TER_ReMOTE project is to design, implement and validate a platform for the display and testing of remote multimedia services with therapeutic applications, concentrating on the sphere of physical rehabilitation. This platform should service as support in the development of new therapies for physical rehabilitation, promoting the possibility of establishing ways to reproduce the current therapeutic techniques in the patients' homes.

The platform could be described as a new service destined to people with bone-marrow problems, who have completed the hospital phase of their rehabilitation, but who are not completely recovered and would therefore benefit from complementary treatment over an extended period of time. The patient will be able to do the rehabilitation from home, when practical, working around their working life, social and family commitments, following supervision by a therapeutic specialist, thereby disrupting as little as possible their reinsertion to normal life.

The platform will be designed with the intention of providing continual care to the patient, as well as making therapeutic rehabilitation techniques more widely available, offering both the patient and his surrounding the access to information on his illness and subsequent therapy, improving knowledge of the same, and encouraging preventative care.

ITACA's role in the project is to coordinate the technical implementation of the platform, using TSB Technologies as a support for carrying out the work related to this development.



e-Salud



METABO



SALUPEDIA



HEARTCYCLE



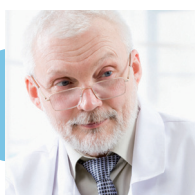
ONCNOSIS



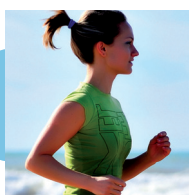
NUADU



CMA MÓVIL



GIPA



FITCONTROL



SIMA



NUTRI-TRAINER



ENJOY-IT!



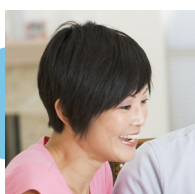
FASYS



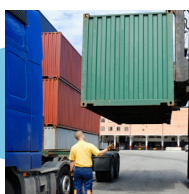
PREVE



APNEA MÓVIL



REALTH



SLIM



METABO

21 partners are involved in the METABO project, from 9 different UE countries, including hospitals, universities and large companies, principally from Italy, Greece and Spain. MEDTRONIC, world leader in medical technology, is the general coordinator of the consortium. The aim of the METABO project is the improvement of clinical management of diabetes, using the latest available technology to define new methods of patient follow-up within the health service, and to help those with diabetes to improve their own management of the illness.

The METABO platform will concentrate on tracking people suffering from diabetes, mellitus, types 1 and 2. The solution that METABO proposes will affect both medical professionals dedicated to primary and specialised care, and the patients themselves, offering tools facilitating communication between the various people involved.



This will be achieved through the development of a technological platform which connects the different factors implicated in collecting the relevant information and the process of data and diagnosis support, thereby permitting the patient and the medical team to manage the illness more efficiently, giving access to a higher level of information in comparison with current medical practice.

The types of parametres that will be the object of said follow-up, besides the traditional clinical parametres, will include the concentration of subcutaneous glucose, energy used through physical activity, blood pressure and weight. During the follow-up the patient's lifestyle, dietary habits, medication and its effects, physical activity and the subsequent changes to daily life will also be monitored.

The ITACA-TSB group is responsible for developping communication using medical monitoring sensors, and also for assisting in the development of applications for monitoring lifestyles.

<http://www.metabo-eu.org>





SALUPEDIA

The Salupedia project was approved by the Spanish Ministry of Industry, Tourism and Commerce (MITYC) during a meeting of the Avanza Plan for Digital Content 2007-08, and concerns a project for the creation of a web platform directed to the user, in which the quality and truthworthiness of the content has been accredited by a social network of healthcare professionals: doctors, nurses, psychologists, nutritionists, physiotherapists, orthodontologists, etc. On the 1st January 2010 over a million hits were recorded, and 400 users had been registered.

Among the project aims the following stand out:

- To offer secure access to trustworthy healthcare information on the net.
- To create a community of users where the professionals (doctors, nurses, psychologists ..) can recommend content already on the net, to patients, family members and users in general, thereby enriching said content with their recommendations and comments.



- To serve companies and professionals within the ICT, and generate the necessary knowledge for the planning and marketing of new services and products, based on the emerging reality of web version 2.0.

The project provides an invaluable tool to healthcare professionals recommending health information, as well as to patients, family members and the user in general, for whom Salupedia is a trustworthy and useful place for finding quality information on the net.

The user has access to trustworthy information on health matters, recommended by professionals. The professional, in the same way, has access to a secure platform where he can interact with his patients and supply them with information.

Salupedia is, therefore, a proper medical encyclopedia which collects, classifies and organises the best health information contained on the net, backed up by a community of professionals and citizens whose varying roles and activities validate and enrich the said information.

Salupedia has been directed by the ITACA-TSB Institute and carried out by TSB Technologies.

The project has received the backing of relevant organisations such as the Spanish Paediatric Association (AEP), the Argentinian Medical Association, the Spanish Society for Family and Community Medicine (Semfyc), as well as the Spanish Federation for Strange Diseases (FEDER) and the Polytechnic University of Valencia.



HEARTCYCLE

HeartCycle is a European integrated project (IP), part of the sphere of 'Personalised Health Systems of the 7th Marco Program for research, of the European Commission. The HeartCycle consortium is coordinated by Philips (a leader in electronic care systems) and includes experts in textiles, ICT, and support systems for user decision and interaction.

The HeartCycle project is due to take 4 years and started in March 2008. The budget is of 20.7 million euros, of which 14.1 million have been financed by the 7th Marco Program.

The objective of the HeartCycle project is to extend the concept of the management system for chronic disease developed in the MyHeart project, and apply it to specific groups of patients with the emphasis on improving the adherence of the patient to the medication and change in lifestyle.



The system is made up of two interconnecting loops:

- An internal loop, the patient's loop, which interacts directly with him to provide daily treatment. Amongst other things it will show the progress in health, including the adherence to and efficacy of the treatment. If the patient is motivated, the degree of compliance on his part (ie strict adherence to the treatment) will go up and his health will improve. This loop is connected to the information systems in the relevant hospital to guarantee top personalised care.
- An external loop, that of the professional, which involves the medical staff and which controls the cycle of patient care. This loop allows the healthcare professionals to monitor the condition of each patient as well as evaluate the response to the therapy prescribed, in such a way as to create personalised healthcare plans and detect possible deterioration in health (heart problems, for example) which may require immediate medical intervention.

As ITACA has 5,16 % of the budget assigned to this project, it dedicates the relative proportion of its staff and resources.

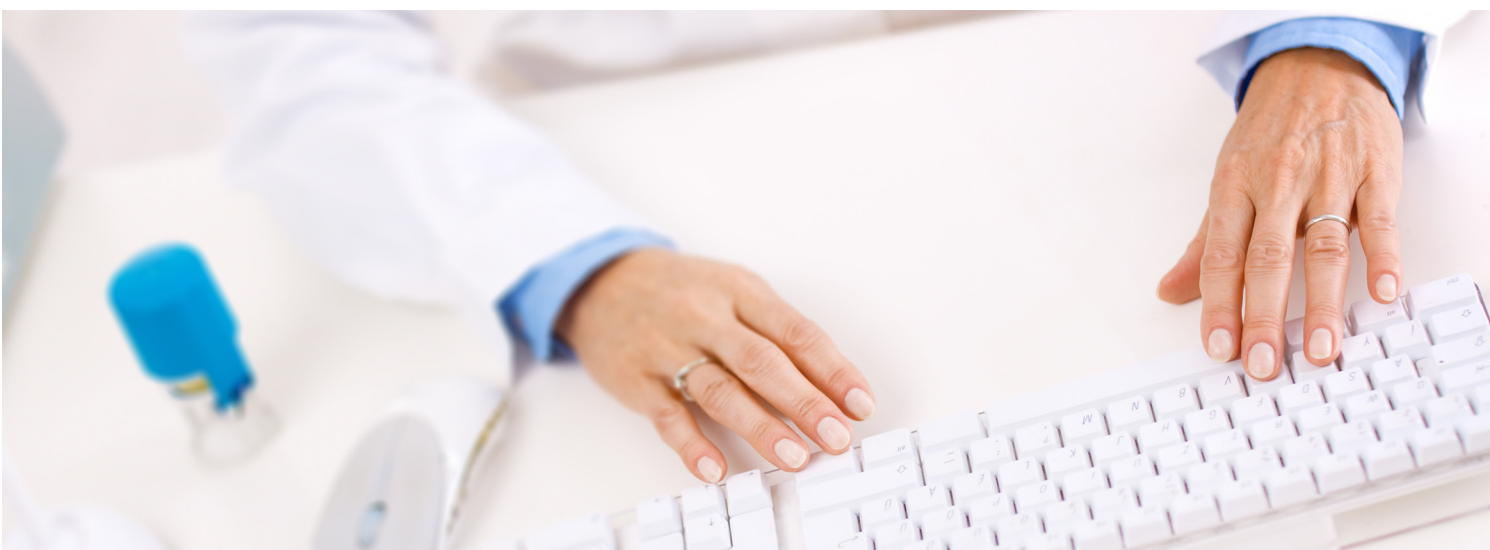
<http://www.heartcycle.eu>



ONCNOSIS

ONCNOSIS is a national project cofinanced with the CENIT program – ‘Strategic National Consortium for Technical Research’ of the CDTI, which in turn is dependent on the Ministry of Science and Innovation. With a budget of around 27 million euros, the project is coordinated by ORYZON genomics and the FERRER INTERNATIONAL GROUP, both partners of ONCNOSIS Pharma. ONCNOSIS also counts on the collaboration of 20 Spanish academic groups, all internationally recognised, from 6 hospitals, 6 universities and 8 independent research centres. The project began in 2006 and should finish by mid 2010.

The aim of ONCNOSIS is to develop new and improved tests for the early detection of oncological diseases, thereby increasing the probability of a cure. The project also aims to develop strategies for treatment of the disease, based on knowledge of changes in cancerous cells. The project will centre its research on advanced genomic and proteomic technology, bio-IT and nanotechnology, in order to develop new tools for diagnosis and therapy.



The different types of cancer to be researched in ONCNOSIS are melanoma (skin cancers), ovarian cancer, cancer of the colon and lung cancer. Each of these types of cancer has been selected for the high prevalence rate in the population, or because of the high mortality rate. Each of the cancers to be studied requires a different detection technique and subsequent treatment.

As part of the project an implantable biosensor will be developed (ONCNOSENSE) for live monitoring for detection of cancer biomarkers. For this work we will use groups of molecular biologists to carry out tests compatible with live detection and nanobiotechnological groups to develop the biosensor with built-in detection systems. Advanced wireless technology will also be developed to transmit the information from the biosensor and make it available to the medical staff responsible for interpretation of the information and using it to design new strategies.

The ITACA-TSB group, as the research entity associated to Siemens Medical for this project, is working on a system of continuous monitored data recording and its transmission to a medical centre for interpretation.

<http://www.oncnosis.com>



NUADU

“Networked healthcare and wellbeing services for people at home and on the move” (NUADU) is a European-wide project qualified with an ITEA label and co-financed by various national programmes. Funding for the Spanish partners involved comes from the PROFIT programme and the Avanza Plan, both belonging to the Ministry of Industry.

The consortium has 25 members from five European countries and has initiated five pilot schemes with different objectives with the common purpose of sharing the best practices and exploiting opportunities for synergy between the members. The project consortium, led by Philips Holland, includes organisations from Belgium, Spain, Finland, France, Italy and Holland. The Spanish representative in the consortium is Telvent Interactiva Company from the Abengoa Group. The project has a budget of 45 million euros, cofinanced by the participating companies and their respective governments, and was developed from 2006 to 2010.



NUADU's objective is to tackle the technological challenges required to develop health-care and wellbeing services that offer better quality of life for consumers and more efficient and cost-effective solutions for service providers.

The selected applications are:

- Monitoring of the lifestyle of the elderly and disabled to facilitate their independence. This application will be evaluated by the French and Italian pilot projects.
- Weight control, monitoring physical activity and nutritional habits, to be evaluated by the Spanish pilot project.
- Control of cardiac insufficiency and monitoring of cardiovascular parameters in chronic patients, to be evaluated by the Spanish project.
- Application of health in the workplace, consisting of management of stress and unhealthy work practices, to be evaluated by the Finnish pilot project.

ITACA has coordinated one of these pilots, developed in the Polytechnic University of Valencia, and has participated in the design, development and validation of the applications related to nutrition, physical activity and the tracking of vital signs.

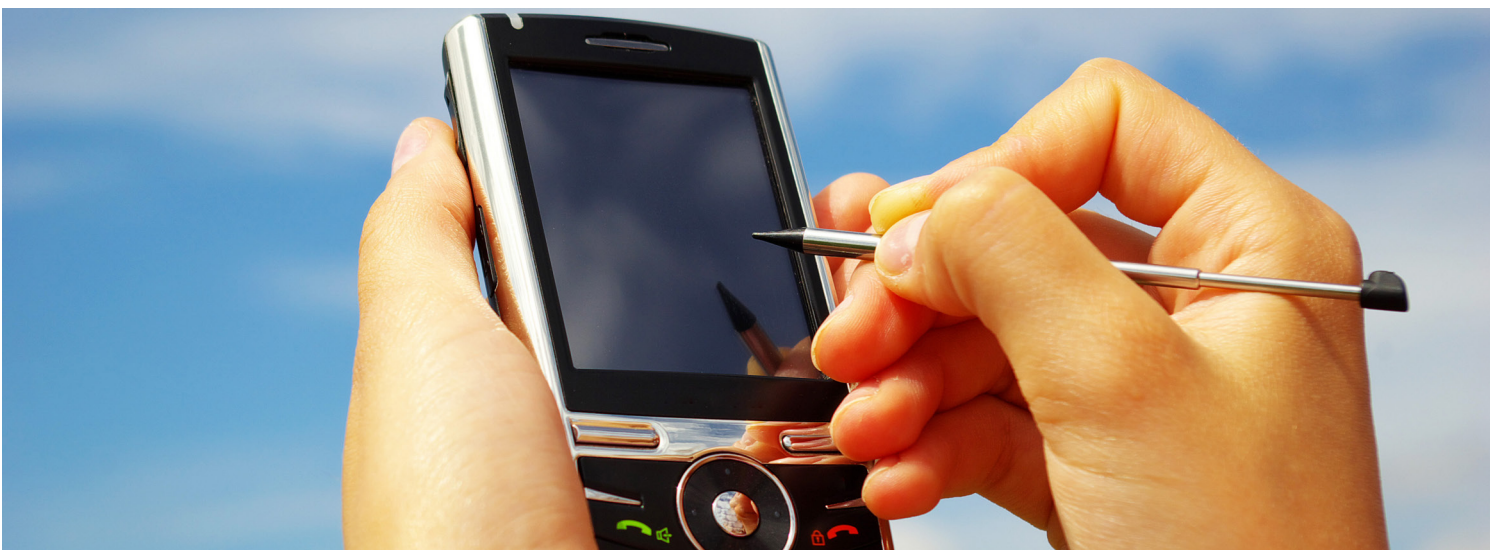
<http://www.nuadu.org>



CMA MÓVIL

CMA Móvil is a project dealing with the evaluation of health technology, financed through an FIS grant from the Ministry of Science and Innovation, through the Carlos III health institute. For this project, the Minor Surgery Unit of Dr Peset Hospital collaborates with the TSB group (part of the ITACA Institute), the latter acting as technological partner.

The aim of this project is to evaluate the impact of the use of the m-Health system (based on the sending of photographs using mobile phones), in post-operative follow-up for a significant number of patients in the Outpatients Surgery. The project hopes to have reliable data and conclusions available on the use and functionality of the m-Health system with an Outpatients unit. During the project, significant statistical data will be collected to support the use of the m-Health system, thereby backing widespread use of the system in other Outpatients Surgery across the country.



The biggest impediment to the incorporation of new CMA procedures lies in the difficulties inherent in post-operative follow-up in the home. Since the year 2000, the CMA unit at the Dr Peset Hospital in Valencia has been using an IT system which allows the management of all information relevant to operations and the follow-up of patients operated on in that unit. Post-operative checks are usually carried out through telephone surveys using prewritten questions, whose responses are quantified through a scoring system.

An m-Health system has been incorporated into this post-operative control, meaning that after surgery in the CMA, the medical team give the patient a mobile phone with integrated camera and gives instructions as to the use and management of the application which allows one to send photos to the hospital from any given location. Once at home, the patient continues to receive calls periodically, during which, apart from answering routine questions on the state of health, he/she is asked to photograph the area which has been operated on, allowing the medical staff to check on the healing process. The patient returns the telephone to the hospital when discharged.

The role of ITACA-TSB is to collaborate with Dr Peset Hospital, with the aim of broadening the study and evaluation of the m-Health system, focussing on clinical evaluation, patient satisfaction and cost, thereby collecting important statistical data to be used as back-up of the m-Health system. In order to carry out the aforementioned evaluation, ITACA is working with a pilot group of patients who will use this system, and whose results will be compared with another group not using the system in question.

Competitive R+D projects



GIPA

“The Integral Management of Assistance Procedures for Chronic Conditions” (GIPA) is a PROFIT project co-financed by the Ministry of Industry, Tourism and Commerce, which began in 2005 with an initial investment of 142,000 euros.

Its main objective is the design, development and assessment of a system that, by making use of ICT, will provide integral and integrated management of care systems in the home, within the framework of the Spanish health system, involving professionals from primary, specialised and hospital health care.

With this in mind the aims are:

- To support and facilitate the adoption of a new model of attention and care for chronic conditions, reinforcing the role of primary health care, and taking the patient and his environment as active factors into account.



- To quantify the expected improvement in care procedures by the development of a pre-market prototype and testing it within a realistic controlled environment.

GIPA provides the solution to the problem of chronic illnesses, focusing on the patient and using the support of ICT to achieve integration of the whole range of health services and change working procedures under the supervision of medical staff.

The project is being carried out by ITACA-TSB and Department 7 of the Valencia Community Health Service, involving the Home Care Unit of the Universitary Hospital La Fe in Valencia and also specialist and primary care centres associated with this hospital.

Department 7 will be responsible for assessment of the project, while TSB is responsible for developing a compatible platform to be integrated with the existing information systems. The platform will be composed of PCs, Tablet PCs, PDAs and telemonitoring equipment, to be used by medical personnel both in hospitals and homes and also by the patients themselves.





FITCONTROL

This project is cofinanced by the Ministry of Industry, Tourism and Commerce as part of the Industrial Development Programme under the title 'Personalised System of Control of Physical Effort during the Practice of Sport' (FITCONTROL). Technologies for Health and Wellbeing and ITACA-TSB both participate in this project. The project has a budget of 500,000 euros and runs from 2008-2010.

The aim of the project is to build a personalised system for each user which advises him on how to control physical strain whilst exercising.

The FIT-CONTROL project is for those who have had cardiovascular problems, or simply for those who want to improve their quality of life, and need the tools, information and services which allow them to exert greater control on their general health, thereby preventing cardiovascular disease through prevention and early diagnosis.



Within the project, new parameters for the control of physical effort are being studied, as well as methods on how to motivate the user, and we are also designing an interconnection model for sporting equipment. To this end we have been developing new sensors for the practice of physical exercise, and integrating the results with the personal training technology and gadgetry already available on the market.

This will give rise to new ways of controlling health through physical activity, encouraging cooperation between users through the use of social networks. The use of these social networks should result in improved adherence to physical exercise and training plans on the part of the user.

The role of ITACA is to contribute its vast experience in the management of complex research projects, as well as in the development of personalised management systems for sport based on textile technology, and e-health applications related to promoting health and chronic disease management.

FITCONTROL



SIMA

SIMA (Telehelp for Peritoneal Dialysis) is a Mexican-Hispanic project of the National Board for Science and Technology (CONACYT), in collaboration with the Institute for Security and Social Services for Workers of the State (ISSSTE). The aforementioned project, which began in November 2009, has a total budget of 122,000 euros.

This agreement allows for the realisation of a pilot scheme taking place in hospital, wherein a system of follow-up will be in place, through teleconsultancy and telemonitoring, of patients with kidney problems in the relevant area of the hospital. ITACA will be responsible for the development and implementation of the system, given the previous experience of the group with this type of platform. SIMA will allow remote follow-up of patients with kidney problems who administrate dialysis in the home.



The project provides a platform for the telemonitoring, teleconsultancy and follow-up of patients using dialysis. In such a way the follow-up of these patients is improved, allowing them to continue treatment outside the hospital, avoiding transfer of either the patient to the hospital, or specialised medical staff to the home of the patient. Early detection of risk is also achieved, warning the medical staff that action is necessary and avoiding the possible need for administration of more serious treatment.

Through the platform, all measures are revised by the medical staff with the software system of management at their disposal; in the same way, the system carries out a previous analysis which allows one to detect certain anomalies of which the doctor in question is notified through sms.

The medical staff are able to visualise, using the software, all information sent by the patient, graphs of the evolution of said patient, can revise all notes made during teleconsultancy, check the patient's medical history, any complications that may have arisen during dialysis and other points of interest incorporated in the patient's data.

The ITACA-TSB group is responsible for the analysis of the requirements, development of the platform and implementation of the system in Regional 1st of October Hospital.



NUTRI-TRAINER

The 'Nutri-Trainer' project has been financed by the Health Technology Professorship of INDRA, of the Polytechnic University of Valencia. The professorship financed the project for 8 months in the form of a grant. Currently, the Nutri-Trainer platform continues to be developed and improved on by ITACA.

The aim of this project is the creation of an application that will improve the learning of specific aspects related to health and nutrition, in a simple and practical way through motivation, based on the example of solutions such as 'Brain Trainer' or 'Wii Fit'. These commercial products have achieved success on 2 fronts: on the one hand that part of the population lacking technological and computer know-how has started to use ICT platforms that they had never used before (such as video consoles), or use current platforms to develop activities not realised before (through mobiles, for example), and, on the other hand, health concepts and activities have been promoted through interactive games.



The target public for Nutri-Trainer covers everyone aged 8 and over, as the educational character and design makes the platform user-friendly, attractive and available for all the family. One characteristic of Nutri-Trainer that stands out is the database – one of the most important parts of the project – in which, using modular design, the medical content is stored.

The project would be redundant if it were not supported by nutritional experts, to this end ITACA has collaborated with the Department of Food Technology (DTA) of the Polytechnic City of Innovation, said department being responsible for comparing clinical evidence and the content on nutrition which give coherence and sense to the platform.

ITACA has contributed the necessary material and educational resources for the development of the platform. Within these parameters, a functional prototype has been achieved and shown in various events such as the first 'Health and Wellbeing Fair' celebrated in Valencia in November 2009. The prototype was well received by visitors, who were able to test the project. Currently, ITACA-TSB continues to develop this project, with the aim of achieving a finished prototype, tested by a high number of users both qualitatively and quantitatively.



ENJOY-IT!

Enjoy-IT! is a national project, cofinanced in the convocatoria of 2009 of the R+D Avanza Plan of the Ministry of Industry, Tourism and Commerce within the thematic priority of Internet Technologies of the Future. With an approximate budget of 800,000 euros, the partners involved are multidisciplinary, in order to better develop an R+D project combining the most advanced technology with the needs of the users. The project is coordinated by TSB S.A. and the participants are Escola Estiu (Summer School) of the Polytechnic University of Valencia, ITACA-TSB, the Paediatric Unit of Dr Peset Hospital in Valencia through its Research Foundation, and the design company Invitro Design.

The Enjoy-IT! project aims to design, development and validate a leisure platform and advanced content, that will constitute a practical realisation of the new products and services that will form part of the 'Internet of the Future'.



The functionalities used make up only one possible application to the various technologies present in the leisure platform, to support children, sociocultural and events organisers, and organisations and entities specialising in leisure and cultural activities. This platform will allow new aspects to traditional sociocultural activities to be introduced:

- To familiarise children with the use of ICT, preparing them for a possible future dominated by this type of technology.
- To provide new leisure possibilities within the sphere of event organisation, without leaving aside the traditional values of cooperation, trust, creativity, imagination, and the development of physical, motor and intellectual skills.
- Integration of groups of children with special needs (both physical and psychological) who can fully integrate with groups of children without disability through using these ICT. The wide range of possibilities offered by such integration will enrich and encourage the social advancement of these children.

ITACA is responsible for coordinating the design of the system, and capturing and adequately understanding the needs of the users; communicating these needs to the technicians in order that they be reflected in the platform. The organisation is also responsible for the creation of the data structure, and for the intelligent algorithms for the contextualisation of the information, the orchestration of the services and sensors, and the creation of advanced multimedia tools. Finally, ITACA will play a significant role in the technical validation and functionality of the system.



FASYS

'FASyS' (Completely Secure and Healthy Factory) forms part of the 18 large national strategic projects supported by the CDTI (Centre for Industrial Technological Development), of the 5th convocatoria of the Consortium of National Strategy for Technical Research Program (CENIT-E). With a budget of 23.3 million euros, the FASyS project will develop the key technology to construct a model factory; free of accidents, as a fundamental base for improvement in productivity. The project began in 2009 and is due to finish in 2012, counting on the participation of 13 companies and 14 leading research centres, coordinated by NEXTEL.

The main aim of the FASyS is the development of a new factory model, whose design minimalises risk to security and health and, at the same time, guarantees the wellbeing and comfort of the worker when dealing with machines, assembly or handling of goods.



The technological objectives of the project include the development of the following systems:

- Gadgets to track the physical and psychological state of the work, as well as the state of the working environment.
- Systems which efficiently communicate this data in order to improve and enrich the availability of such a working environment.
- Technology which will absorb and interpret the data with a low margin of error, in order to identify the activity of the worker.
- Intelligence to analyse and make decisions.
- Protocol for integral prevention and personalised health monitoring for all workers.
- Manufacturing teams which fully collaborate in the safety of the worker.
- Management of the processes, incorporating the human factor and facilitating information and training on risk in the workplace as part of the end improvement.

ITACA-TSB participates in this project, in collaboration with various companies, in the design and creation of intelligent control systems and integrated management of personalised health plans in the workplace, in forecasting systems and risk planning in the FASyS factory, in tracking solutions and study of the physiological parameters of the works, in the generation of risk indicators and the personalised and affective communication of risk to the workers.



PREVE

'Prevention of Diseases' (PREVE) is an Integrated Project of the 7th Marco Program of Research and Development of the European Commission, included in the Strategic Objective 'Personal Health Systems' of the Thematic Priority ICT. The coordinator of the project is VTT (Finnish Technical Research Centre), and has a budget of 842,253 euros, of which 597,269 euros are financed by the European Commission. The project is due to last 12 months, and began in December 2009.

The project is developed through a consortium, formed by a total of 4 partners: Valtion Teknillinen Tutkimuskeskus (VTT, Finnish Technical Research Centre), Aarhus University in Denmark, the Polytechnic University of Valencia (TSB group of the ITACA Institute) and Fondazione Centro San Raffaele del Monte Tabor (a non-profit making organisation run by one of the most important Italian hospitals (San Raffaele in Milan) and other Milanese organisations).



The main aim of the PREVE project is to identify and analyse the way of research into Information and Communication Technologies (ICT), in the sphere of illness prevention and health preservation. This project is directed to all citizens, with the idea that each individual becomes a productive part of their personal healthcare. The individual therefore assumes responsibility for his own health, backed by personalised use of the relevant ICT, based on PHS (Personalised Health Systems).

ITACA-TSB is involved in all stages of the development of the project: design of illness prevention strategies, design of the profile of the individual, definition of motivational aspects, development of ICT and PHS applications, and creation of business and validation models.

ITACA-TSB will lead the phase 'domain analysis'. Leadership of this phase will include the coordination of the various members of the project, planning, tracking and reporting on the work carried out. For this, the group must ensure regular communication between members of the team, organising meetings and conference calls, as well as maintaining continual contact via email for continuous revision of progress and technical aspects of the project.

ITACA-TSB contributes its wide experience in the application of information and communication technologies (ICT) in the fields of human health, quality of life and social services.

<http://www.preve-eu.org>



APNEA MÓVIL

The objective of this project is to develop a wireless system for registering pulse and arterial oxygen saturation. The measuring of arterial oxygen saturation has become one of the bloodless examinations with the greatest possibility of application, as well as for use in leisure and sporting activities, thereby constituting important feedback for sports enthusiasts. Versatility and independence of the pulsimeters will allow for a rise in the range of applications for which measurement of this parametre will be useful.

The project aims to develop a system which will allow for the use of the pulsimeter for any subject and any situation, with a high satisfaction rate for the user, without interfering in daily activities, permitting the wireless transfer of data, its process and subsequent storage or sending by mobile technology.



The system aims to be polyvalent for:

- Patients suspected of suffering from sleep apnea syndrome.
- Patients who need their arterial oxygen saturation monitored.
- Those who practice sports.
- Doctors and clinical services for Pneumology, Internal Medicine, First Aid as well as Sleep Study Units.
- Pediatric units and services.
- Patients suffering from low concentration spans.

The system will allow for the realisation of a register of data for arterial oxygen saturation and pulse, be it temporary, continual or prefixed, through the use of PDA, allowing for both the follow-up of patient evolution and diagnosis of particular illnesses, as well as the monitoring of physical and aerobic activity in those who practice sports.

Within this project, ITACA will be responsible for scientific planning and its technical development.



REALTH

REALTH (REMOTE HEALTH – Local and remote management of health resources and services, and telehelp) is a collaborative project coordinated by Fuenlabrada hospital with a total of 17 partners, initiated in 2007 and counting on a total budget of 6.5 million euros, 80% of which is cofinanced by the Ministry of Industry, Tourism and Commerce and the Avanza Program.

The consortium, formed by 17 participants, is carrying out a project studying the local and remote management of health resources and services, and telehelp.

This study covers a range of systems, from hospital tracking to telehelp in the home, and a patient follow-up system for health professionals via specialised software on PCs and PDAs.

The aim of the project is to achieve improved social wellbeing thanks to the improvement in health services and resource management.



Specifically, the project aims are:

- Social aim: improved wellbeing.
- Technological aim: To optimise and bring the technology in the health sector up to date.
- To improve patient safety.

And the project aims to achieve this in 3 spheres:

1. Internally in the health centre: relative to the improvement of resource management and internal service in the hospital or health centre.
2. From the health centre to the patient at home, or in a residential home: making adequate health services available to the patient from the hospital or health centre.
3. From the health centre to the public: widening the offer of services from the health centre to society in general, putting special emphasis on groups with disabilities.

During the project, ITACA-TSB has participated in the design of the telemonitoring architecture of the system, as well as carrying out a study of state of the art tracking systems available in the market. This organisation has also contributed various gadgets and the development of the adequate drivers for controlling PDA mobile gadgets.



SLIM

The SLIM project 'Sensory Wireless Platform for Safety in Intermodal Terminals' is a strategic project of the Spanish Technological Platform for Wireless Communication (eMOV), cofinanced with the JSIT program as a Project for Industrial Research, in cooperation with Japan. The project counts on an approximate budget of 2,300,000 euros, and 7 partners in Spain and Japan, and will be developed from 2009 through to 2010.

The SLIM project forms part of a strategy to create new products directed to growing markets, applying R+D to create innovative products based on ZigBee technologies, intelligent sensors, distributed telemetry (WSN) and other innovative concepts. The aim of SLIM is to develop an integral platform of personal safety in intermodal terminals, which will allow for analysis of different situations through sensors, detecting potential risk towards people.



The SLIM project is for workers and companies working in management, logistics and organisation of Intermodal Container Terminals in a maritime environment. The system aims to be compatible with any type of loading terminal, regardless of its focus (maritime, air or ground), given that all have similar characteristics where risk is concerned, the only differences are in the goods to be loaded and the weather.

Also, SLIM needs to be compatible with all elements deployed in the terminal, especially mobile elements such as loading trucks and cranes, and those requiring tailor-made installation depending on the manufacturer and model. SLIM contributes information relevant to potential risk situations, will help to prevent accidents, and will require warning and alarm systems which, on detection of a potential risk, will take the quickest prevention measures possible. For example, on detecting loading movement in one corridor adjacent to another where a vehicle is present, the platform will emit warning signals to stop all movement.

ITACA is coordinator of the work package related to the development and integration of the sensory and interaction systems, and will also contribute to the development of the sensory networks, the wireless communication technology between different nodes, and the design and development of the global architecture of the platform.

Agreements with companies

Educasalud

Educasalud.org is an Internet website for the educational community (parents, students, teachers and other professionals), whose purpose is to inform and instruct on the subject of Health Education in schools.

It is also an interactive platform for all those involved in education, where they can share experiences and information (projects, news, events) and participate as active users in creating the website.

Educasalud forms part of Educared and was developed by ITACA-TSB with the sponsorship of the Telefónica Foundation. It is now recognised as an international leader in the subject of Health in the School and affords a new and innovative multidisciplinary vision.

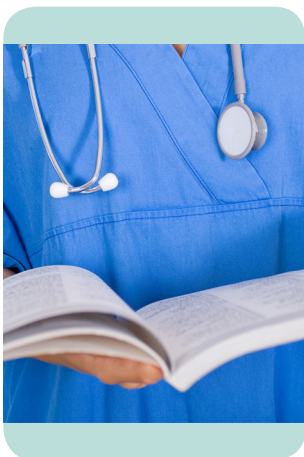
The site covers a wide range of health topics, and includes subjects such as the environment, road safety, accident prevention, humanitarian medicine, health for teachers, teaching health in schools, medical frontiers, skincare, sexuality, healthy habits, nutrition, children's health, etc.

It also offers interactive elements such as forums on certain topics and services like programmes of events, a dictionary of medical terms, information on grants and scholarships, a notice board, etc.

The strict ethical and behavioural code of medical websites is followed to the full and Educasalud has obtained well-known quality seals such as the European HON and the pWMC for Spanish web pages.

<http://www.educasalud.org>

educasalud



Ministerio de Sanidad y Consumo

ITACA-TSB was selected by the Ministry of Health and the Consumer (MSC) to take charge of the Technical Office for the European Commission's epSOS project (Smart Open Services for European Patients), in which 11 other member states are participating.

The aim of this initiative is to firstly define and then to put in place, between 2010 and 2011, a pilot scheme of clinical information exchange (Digital Medical History and Electronic Prescription) for European citizens needing health care in a European country of the EU other than their own.

With the invaluable help of doctors and experts (from the Ministry of Health and the Consumer and from Andalucía, Cataluña and Castilla La Mancha) ITACA-TSB will coordinate Spanish responsibilities on the project and will head the group charged with defining the necessary data to be included in the summarised version of a client's medical history.

<http://www.epsos.eu>

InnovaSalud



Innovasalud

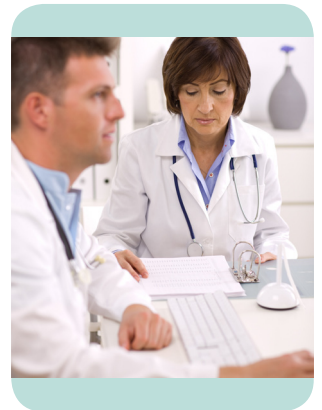
ITACA-TSB is participating in a joint venture with InnovaSalud, a health consultancy services company based in Cantabria, developing various activities across Spain: a consultancy service for the Health Service in Castilla y Leon for their medical encoding and nomenclature, consultancy for the Ministry of Health and the Consumer, training activities etc.

Hospital Universitario Marqués de Valdecilla

The University Hospital Marqués de Valdecilla in Santander is the only hospital in Spain which hosts a Home Hospitalisation Unit, offering a round the clock service, available 24 hours a day, 7 days a week. This unit is reputed to be among the most prestigious in the country.

The Unit has developed and installed ORCONERA, a global management system of the HHD which has permitted the entire unit to be computerised and therefore provide access to the patient's medical history from any point outside the hospital and enabling a much more efficient management of available resources.

The installation of Orconera was completed successfully, being used by the 55 people who make up the UHD staff to attend 200 people a day. The Hospital is currently being provided with an update to the system.



(TSB)



TSB Tecnologías

An agreement has been signed with TSB Technologies for the development of a series of Java modules for a telemedicine platform named NOMHAD. These modules cover functions such as telemonitoring, incident management, care plans, agendas, videoconference and mobile systems.

<http://www.tsbtecnologias.es>

Developing technologies

Development of mobile device applications (J2ME, .Net CF, Android, Objective C)

Development of web technology applications(ASP.NET, J2EE)

Development of desktop applications (JavaFX, wpf, XNA, 3D applications, management applications, tactile interfaces, natural interfaces (NUI))

Wireless technology (Zigbee, Bluetooth, Wimax, GPS, GPRS, UMTS)

Process automisation systems. (jBPM, Workflow Foundation)

Development of web portal 2.0

Software Architecture

SOA architecture (Webservices, OSGI, enterprise service bus)

Client – server architecture

Web architecture

Information Management

ORM (Hibernate, ADO.NET entity framework)

Management and administration of related databases

Data warehousing

Knowledge Management

Reasoning and induction systems (expert systems, motors, intelligent agents)

Knowledge representation

Personalised modelling of human behaviour

Process mining



Professional Health Applications

Management of clinical tracts

Telehelp platforms

Decision support systems

Hospital management systems

Prevention applications

Advanced motivation systems based on natural interfaces

Intelligent systems for nutritional support

Support systems for physical activity

Personalised motivational lifestyle protocol management

e-Inclusion and dependency support applications

Evaluation and accessibility systems

Intelligent Environment Systems

Voice recognition systems

Context Awareness System

Tracking devices

Living Lab

Information and Health Content

Positioning plans and diffusion of web health content

Evaluation of health ethics and quality on the internet

Social networks and health

Document management

Health content



TECNOLOGÍAS PARA LA
SALUD Y EL BIENESTAR

The Company

TSB Technologies for Health and Wellbeing Ltd was founded in February 2008 as a spin-off company of the ITACA Institute at Valencia Polytechnic University. With 10 years of research experience in the social health sector as its behest, and thanks to its infrastructure and links with other departments, TSB Technologies has the capacity to efficiently evaluate and take advantage of business potential, using the results of R+D of most relevance in the sector, putting new solutions and products into the markets which best attend the needs of our clients.

Fundamentally, TSB develops products and services through a range of spheres; from home hospitalisation and management of chronic illnesses, to systems and services for sport and free time, and Ambient Intelligence systems.

Products and Solutions

Our company develops products and services based on information and communication technologies, which improve health care and quality of life.

Among our clients we count hospitals and clinics, both in the private and public health sectors, companies providing services for the health service, medical insurance companies, companies providing services related to sport, leisure and free time, and also users such as medical professionals, patients with chronic illnesses, patients in a rehabilitation process, as well as healthy citizens integrated in preventative medicine programs.

Whilst our first year was dedicated to research, during 2009 we have been able to consolidate various solutions developed, such as NOMHAD hospital v1.0 for the management of Home Hospitalisation Units, DERMAMóvil, for the monitoring of dermatology patients, and Salupedia, the online health and wellbeing encyclopedia.

We have also developed and validated new products and solutions focussing on the health and wellbeing markets such as SPHERAmobile, a powerful tool used for finding and identifying children on excursions or in summer schools and keeping them safe, and SPHERAhospital, a solution which provides hospitals with identification, location, information, clinical security and monitoring of patients and workers.

Our installations include a Living Lab for the development of wellbeing systems, permitting experimentation and validation of new ideas and systems in the Ambient Intelligence (AMI) sphere.

TECNOLOGÍAS PARA LA
SALUD Y EL BIENESTAR



Prizes and recognition

TSB as a company has received a range of prizes during the year 2009, such as the Prize for the Most Enterprising Company, the Ideas Prize for the Best Technological Company, the Impiva Prize for the Company Creation category and the Bancaja Prize for Young Entrepreneurs.



HEALTH

(NOMHAD)
hospital

(MSV)
404+

(SPHERA)
hospital

(DERMA)
móvil

(RITMUS)
mobile

Salupedia

- Management Systems for Hospitals and clinics
- Improve patient-professional communication in a flexible and automatic way during treatments
- Monitor and control chronic diseases and treatments
- Creating virtual community and providing information based on WEB 2.0



WELLBEING

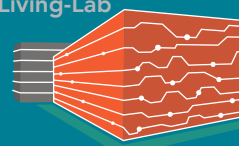
(SPHERA)
mobile

(SPHERA)
care

- Caring for our elders without interfering in their way of life
- Controlling and monitoring people in their leisure time
- Creating a safe and healthy environment



CIAMI
Living-Lab



Experimental Research Center in Applications
and Services for Ambient Intelligence



More information is available at:

<http://www.tsbtecnologias.es>

Partners and Strategic Links

ITACA-TSB has established strategic links with the relevant professional associations, institutions and companies. As well as permitting product development, these agreements have enabled us to set up information channels and develop joint ventures, beneficial to all sides.



The Spanish Paediatrician Association



This association comprises of more than 9,000 professional members (paediatricians and paediatric surgeons). Its aim is to improve patient diagnosis and therapy and encourage high ethical standards and quality healthcare among its members.

A strategic link was established in 2007 between the AEP and ITACA-TSB for collaboration on various projects.

The activities to be developed under this agreement include not only R+D but also the transfer, compilation and establishment of stable information flows in areas related to the application of new technology for the improvement of health and wellbeing in children and adolescents.

<http://www.aeped.es>

The Spanish Society for Family and Community Medicine



The Spanish Society for Family and Community Medicine (semFYC) is a non-profit making scientific society of doctors dedicated to primary healthcare. Their objective is to boost the development of Family and Community Medicine in Spain, as well as developing Primary Healthcare.

The activity of the group is based on cooperative work and prides itself on scientific excellence and leadership qualities.

<http://www.semfy.com>

The Argentinian Medical Association



The AMA is the most important professional medical association in Argentina when number of members, history, associated scientific societies and scientific and educational activities are taken into account.

In 2007 a collaboration agreement was signed to set up a strategic link between AMA and ITACA-TSB, whose aim is to establish a continuous flow of information and strengthen collaboration thereby facilitating future joint ventures and projects.

<http://www.ama-med.org.ar>

Telefónica Foundation



Since 2002 the Telefónica Foundation and ITACA-TSB have collaborated in creating and maintaining Internet spaces for the improvement of health care in the educational community and also for research into the Internet phenomenon and education relating to health. Camposalud.com was established to focus on the university community and has become one of the ten leading Spanish-language health portals, with half a million hits.

In 2007 Educasalud.org was created, within the framework of Educared, to focus on the pre-university educational community. Educasalud deals with the subject of health education in schools and offers information, teaching aids and interactive spaces for parents and teachers.

<http://www.fundacion.telefonica.com>

OVSİ Foundation



ITACA has been working with the Valencian Office for the Information Society (OVSI) since 2003 in areas related to health and wellbeing. Within the framework of the Alcoy – Digital City project, under the direction of the OVSI Foundation and financed by Alcoy Council, the Regional Government of Valencia and the Spanish Ministry for Public Works, the LYRA system was developed and installed to allow integral management of the Home Hospitalisation Unit of the Hospital Virgen de los Lirios in Alcoy.

Since it began, this project has received the support of the Health Department of the Valencian Regional Government, which is now financing the introduction of the Lyra system in the Home Hospitalisation Units of its other hospitals.

<http://www.ovsi.com>

Vodafone Foundation



Collaboration with the Vodafone foundation dates back to 2001 with joint participation in the European project CONFIDENT. The success of that collaboration has made the promotion of other joint European ventures possible (MyHeart, Persona, Heart Cycle,...), as well as training and diffusion activities, such as the Annual Vodafone Conference, where we have been regular invited speakers.

As a result of this strong collaborative link, during 2009 ITACA has been a part of the network of partners associated with the AALIANCE initiative, of which the Vodafone Foundation is a founding partner. (<http://www.aaliance.eu/public/>). ITACA and the foundation in question have further strengthened their collaboration with the aim of advancing joint projects, with the PERSONA project especially in mind.

<http://fundacion.vodafone.es>

The Spanish Federation for Rare Diseases



The Spanish Federation for Rare Diseases is dedicated to integrating those patients with rare diseases into society. The federation is made up of more than 170 associations, representing more than 900 different diseases and fighting for the rights and interests of sufferers with the aim of improving their quality of life.

<http://www.enfermedades-raras.org>

Hospital Universitario Dr. Peset

Hospital Universitario Dr. Peset

We have been cooperating with this hospital since 2002 in ICT applications to solve various problems. The clearest example of technology transfer, with the aim of covering the hospital's needs, is Mobile CMA, an m-health application that improves post-operative follow-up of Outpatient Surgery Units using information exchange (questionnaires and images) between patients and hospital staff.

Using GPRS/UMTS networks and the latest mobile terminals the system provides a high quality and efficient service which allows patients to be continuously monitored whilst at home.

Hospital Universitario La Fe



Cooperation and transference activities with this hospital began in 2000 and our collaboration with the Home Hospitalisation Unit has been especially fruitful. This unit has participated in various R&D initiatives, both Spanish (GIPA), European (Ideas in e-Health and CAREPATHS) and in technology transference (integral Home Hospitalisation Unit management systems).

These activities laid the foundations for the signing of a Cooperation Framework Agreement between ITACA and the Hospital La Fe in 2004, with the following aims:

- To detect and solve, through the use of ICT, social and health problems in the area of home hospitalisation.
- To promote and integrate basic management of care procedures for chronic patients, involving medical personnel from primary, specialised and hospital care units.
- To design, define and implement care paths, facilitating the design and execution of care plans, applied to patients with a particular pathology and a predictable clinical outcome. This system applies Evidence Based Medicine and a patient-based individualised health philosophy with the aim of putting these products and services on the market.

One result of this alliance and synergy during 2009 has been the creation of a Research Unit with La Fe Hospital Foundation, which has enabled our group to understand more fully the needs of healthcare professionals, and confront new professional challenges.

<http://www.fundacionlafe.org>

Hospitales NISA



NISA is the largest private hospital group in the Valencian region and has been cooperating with TSB since 1998.

In recent years, various telehelp services developed by TSB (tele-gynaecology for high-risk pregnancies, tele-dermatology, etc) have been available in NISA hospitals.

The NISA Hospital Valencia al Mar currently has a Teledermatology service for the control and observation of patients with medium and long term illnesses. This service is based on the use of mobile telephones and facilitates a continuous interactive relationship between patients and doctors throughout the therapeutic process.

<http://www.hospitales.nisa.es>

Gobierno de Neuquén - Argentina



In 2006 an agreement was signed with the government of Neuquén (Argentina) for the testing, installation, investigation, use and joint management of innovative services and advanced Telemedicine systems developed by the TSB Group.

The idea behind the agreement was to facilitate the work of health professionals and improve the quality of life of the population of Neuquén province through the application of these technologies. They are currently using our ARGO system, which connects various primary care centres to the main hospital.

<http://www.neuquen.gov.ar>

Siemens



ITACA has been collaborating with SIEMENS since 2003, when both organisations began work on the development of a domotic system, Telemedicine and Creative Leisure, which was aimed at groups with special needs. Since then, their common interests have led to participation in European projects such as ASK-IT and OASIS. The former has been in operation for three years and the latter is expected to begin in January 2008. The ASK-IT project aims to facilitate the access of persons with reduced mobility to a wide range of services when they are travelling. These include: medical assistance, guidance, information concerning accessible transport, hotels and restaurants and many other services.

The OASIS project will provide care and attention to the elderly in their daily activities. Siemens and ITACA are the technical directors for the development of solutions in nutrition, healthy living, leisure and communication. The latest, and perhaps the most ambitious, joint project is AMVITAL in the CENIT programme of the Ministry for Industry. Siemens' participation in the project is considerable, with a budget of over €20m. Together with Telefónica I+D, Telvent Interactiva, Ericsson and various other firms they aim to develop an integral solution for the field of home care. The program foresees that part of the R+D activity will be subcontracted to leading research centres in the field. ITACA has been chosen by Siemens for this work.

Another result of this collaboration has been the European project VAALID in which the coordination and technical direction has been shared respectively between the two companies.

<http://www.siemens.es>

Telefónica Móviles



In September 2005 a Memorandum of Understanding was signed between ITACA and Telefónica Móviles España S.A.U. (TME) with the aim of working together and exploiting the technological know-how of both companies to create and promote new products for the mobile telephone market, with special emphasis on the health sector.

The collaboration between TSB and the Vertical Applications Department of TME focuses on the search for new mobile services and/or improvement to existing services for both patients and professionals in the e-health field. The main research areas are: home care, SMS reminders (medicines, appointments, etc.), health promotion campaigns, post-operative follow-up, remote monitoring systems, handling of emergencies, tracking and mobile telehelp.

The first project to come out of this collaboration has been an application developed by TSB for the control of dermatology patients in their homes through the transmission of photos and questionnaires by mobile phone.

Currently, work is in progress on new R+D initiatives using latest generation mobiles to provide social services.

<http://www.telefonica.es/moviles>

Scientific Activity 2009



Articles in conferences
Posters in Conferences
Articles in magazines
Chapters in books
Scientific Societies

Consultancy Activities
Committees and Editorials
Teaching Activity
Papers
Conference Organisation

Articles in conferences

D. Domínguez, T. Meneu, V. Traver, C. Fernández, R. Serafín, S. Guillén

Title: Life Assistance Protocols (LAP) – A Model for the Personalization of Lifestyle Support for Health and Wellbeing

Conference: eTelemed 2009

Cancun, Mexico, February 2009

J. C. Naranjo, C. Fernández, P. Sala, M. Hellenschmidt, F. Mercalli

Title: A modelling framework for ambient assisted living validation

Conference: 5th International Conference, UAHCI 2009, Held as Part of HCI International 2009

San Diego, USA, July 2009

P. Sala, J. P. Lázaro, J.A. Serrano, K. Müller, J. C. Naranjo

Title: Methods for user experience design of AAL services

Conference: 5th International Conference, UAHCI 2009, Held as Part of HCI International 2009

San Diego, USA, July 2009

C. Fernández, J. P. Lázaro, J. M. Benedí

Title: Workflow Mining Application to Ambient Intelligence Behaviour Modelling

Conference: XIII International Conference on Human-Computer Interaction (HCI 2009)

San Diego, USA, July 2009

M. J. Nodal, E. Montón, M. P. Argente, J. Viñoles

Title: Resultados y encuestas de satisfacción del sistema Mobile-CA (Cirugía Ambulatoria) Results and satisfaction questionnaires for the Mobile-CA (Mobile Surgery)

Conference: 9th National Conference for Major Mobile Surgery
Salamanca, Spain, October 2009

E. Montón, M. J. Nodal, M. P. Argente, J. Viñoles

Title: Diseño y Arquitectura electrónica del sistema Mobile-CA (Cirugía Ambulatoria) Design and Electronic Architecture of the Mobile-CA (Mobile Surgery) system

Conference: 9th National Conference for Major Mobile Surgery
Salamanca, Spain, October 2009

A. Martínez, C. Marín, T. Meneu, V. Traver

Title: Sistema Móvil de apoyo a la gestión de la diabetes diabetes (Mobile System for Diabetes Management Support)

Conference: CASEIB 2009

Cadiz, Spain, November 2009

M. A. Llorente, J. P. Lázaro, V. Traver

Title: Análisis, desarrollo y evaluación de aplicaciones AAL basadas en tecnologías NFC para el apoyo a la vida diaria (Analysis, development and evaluation of AAL applications based on NFC technology to support independent daily life)

Conference: CASEIB 2009

Cadiz, Spain, November 2009

M.A. Llorente, J.P. Lázaro, V. Traver

Title: Analysis, development and evaluation of AAL applications based on NFC technology to support independent daily life

Conference: Workshop IntTech09, at Aml09

Salzburg, Austria, November 2009

J. Schäfer, F. Schätzlein, J. Maly, A. Unger, P. Sala, F. Mercalli

Title: Evaluation of the VAALID authoring user interface

Conference: 3rd European Conference on Ambient Intelligence
Salzburg, Austria, November 2009

Posters in Conferences

R. González, J. Bayo, P. García-Segovia, J. Martínez-Monzó

Title: Validación de un cuestionario de frecuencia de consumo de alimentos (CFCA) cuantitativo auto administrado por Internet (Validation of a questionnaire on the frequency of quantative self-administered food consumption (CFCA) through the Internet)

Conference: VI Conference for the Spanish Society for Basic and Applied Nutrition

Cordoba, Spain, March 2009

V. Traver

Title: The Paradigm Shift: The Roles of Patient 2.0 in Today's Healthcare Systems

Articles in magazines

A. Sanna, T. Meneu, E. Del Hoyo, J. Ngo, S. Guillén, M. Demeester

Title: New Technologies for promoting a healthy diet in active living

Magazine: Nutrition Reviews, Volumen 67, Pages 107-110
Year 2009

M.A. Llorente, J.P. Lázaro, V. Traver

Title: Analysis, development and evaluation of AAL applications based on NFC technology to support independent daily life.

Magazine: Manfred Tscheligi et al. (eds): Roots for the Future of Ambient Intelligence, Adjunct Proceedings 3rd European Conference on Ambient Intelligence (Aml09), Salzburg, Austria, 2009, ISBN 978-3-902737-00-7, Pages, 281-284
Year 2010

M. Tazari, F. Furfari, J. P. Lázaro Ramos, E. Ferro

Title: The PERSONA Service Platform for AAL Services

Magazine: Handbook of Ambient Intelligence and Smart Environments (ISBN: 978-0-387-93807-3)
Year 2009

C. Fernández, J. P. Lázaro, J. M. Benedí

Title: Workflow Mining Application to Ambient Intelligence Behavior Modeling

Magazine: LNCS: Universal Access in Human-Computer Interaction. Intelligent and Ubiquitous Interaction Environments ISSN 0302-9743, Volume: 5615/2009
Year 2009

P. Abril-Jiménez, C. Vera-Muñoz, M.F. Cabrera-Umpiérrez, M.T. Arredondo, J. C. Naranjo

Title: Design Framework for Ambient Assisted Living Platforms

Magazine: LNCS 5615, Volume: 5th International Conference, UAHCI 2009, Held as part of HCI International 2009, San Diego, CA, USA, July 19-24, 2009. Proceedings, Part II, Pages: 139 - 142
Year 2009

J. C. Naranjo, C. Fernández, P. Sala, M. Hellenschmidt, F. Mercalli

Title: A Modelling Framework for Ambient Assisted Living Validation

Magazine: LNCS 5615, Volume: 5th International Conference, UAHCI 2009, Held as part of HCI International 2009, San Diego, CA, USA, July 19-24, 2009. Proceedings, Part II, Pages: 228 - 237
Year 2009

P. Sala, J.-P. Lázaro, J.A. Serrano, K. Müller, and J.-C. Naranjo

Title: Methods for User Experience Design of AAL Services

Magazine: LNCS 5615, Volume: 5th International Conference, UAHCI 2009, Held as part of HCI International 2009, San Diego, CA, USA, July 19-24, 2009. Proceedings, Part II Pages: 238 – 247
Year 2009

S. Guillén, I. Basagoiti

Title: Salud 2.0: Una oportunidad para la información directa al paciente (Health 2.0 – An opportunity to inform patients directly)

Magazine: Contrastes. Volume: 55, Pages: 51 - 55
Year 2009

S. Guillén, I. Basagoiti

Title: Salud 2.0: Una oportunidad para la información directa al paciente (Health 2.0 – An opportunity to inform patients directly)

Magazine: eSalud. Volume: 5, nº 19
Year 2009



Scientific Activity 2009

Chapters in books

S. Guillén

Book Title: Information and communication technologies for active ageing. Opportunities and Challenges for the European Union

Assistive Technology Research Series, volume 23, edited by Marcelino Cabrera and Norbert Malanowski - IOS Press
Year 2009

S. Guillén, V. Traver

Book title: Telemedicina, ingeniería biomédica. Colección Ciencia y técnica nº56 (Telemedicine, biomedical engineering. Scientific and Technical Collection no 56)
Chapter: Conceptos básicos de e-salud y telemedicina (Basic e-Health and Telemedicine concepts)

ISBN: 978-84-8427-631-9. Editorial: Servicio de Publicaciones de la Universidad de Castilla-La Mancha
Year 2009

S. Guillén, J. P. Lázaro

Book title: Telemedicina, ingeniería biomédica. Colección Ciencia y técnica nº56 (Telemedicine, biomedical engineering. Scientific and Technical Collection no 56)

Chapter: Servicios avanzados de teleasistencia en entornos de inteligencia ambiental (Advanced telehelp systems in Ambient Intelligence Environments)

ISBN: 978-84-8427-631-9. Editorial: Servicio de Publicaciones de la Universidad de Castilla-La Mancha
Year 2009

Papers

Dr. V. Traver

Title: Las ICT al servicio de la Salud: Telemedicina y e-salud (ICT supporting the Health Service: Telemedicine and e-Health)

Conference: SICARM-Telecoforum 2009
Cartagena, Spain, April 2009

Juan Pablo Lázaro

Title: AAL: PERSONA como nueva generación de servicios de cuidado social a personas dependientes (AAL: PERSONA, offering a new generation of social care services to dependent people)

V Conference for socio-sanitary nursing, Vodafone Symposium Albacete, Spain, May 2009



Dr. S. Guillén

Title: Personalisation of health in Heart Failure and Coronary Artery Disease patients via closed loop systems. The Heart Cycle approach

Conference: pHealth 2009
Oslo, Norway, June 2009

Dr. S. Guillén

Title: Healthcare Information Systems & Telemedicine for EMBC09

Conference: IEEE EMBS
Minneapolis, USA, June 2009

Juan Pablo Lázaro

Title: AAL. Arquitectura de referencia y sistemas de primera generación (AAL – Relevant Architecture and First Generation Systems)

Summer University of the Polytechnic University of Madrid
La Granja, Segovia, July 2009

M. J. Nodal

Title: Resultados y encuestas de satisfacción en un sistema de telemedicina aplicado a la CMA (Results and Questionnaires on client satisfaction of applied telemedicine systems in Mobile Surgery)

Conference: 9th National Conference for Major Mobile Surgery
Salamanca, Spain, October 2009

Juan Pablo Lázaro

Title: Evaluación de la experiencia de usuario en AAL: PERSONA (Evaluation of user experience of AAL: PERSONA)

JornadasSYM09
Granada, Spain, October 2009

I. Basagoiti, M. Traver, C. Sabatini

Title: Salud 2.0: Una oportunidad para la comunidad educativa (Health 2.0 – An opportunity for the educational community)

Conference: 5th Internacional Conference Educared
Madrid, Spain, November 2009





Participation in Scientific Societies and work groups

The TSB is aware of the importance of participation in scientific societies and work groups.

As a result, we are currently hold an active role in the following:

- International Telecommunications Union – Study Group 16
- eHealth Standardisation Coordination Group (eHSCG)
- Spanish Society for Health IT (SEIS)
- HL7 Spain
- European Technological Platform eMobility
- National Technological Platform eMov
- National Technological Platform eVIA
- National Technological Platform Prometeo
- Ethical Review Seventh Framework Programme (EC-DG Research)
- Quality Medical Website Project (pWMC): Support and participation in this project which is dedicated to quality evaluation and ethical criteria for those web pages dealing with human health issues in the Latin American area
- ENoLL: European Network of Living Labs

Consultancy Activities

- Participation in the OPTI prospective study on absorbed systems
- Participation in the events of PHS 2000

Membership of Committees and Editorials

- J. C. Naranjo - member of the Scientific Committee for Workshop on interaction techniques and metaphors in assistive smart environment (2009)
- J. C. Naranjo - member of the Program Committee for OASIS 1st International Conference (2009)
- Ignacio Basagoiti - member of the Program Committee for International Joint Conference on Biomedical Engineering Systems and Technologies (BIOSTEC 2009)
- Dr. Vicente Traver - member of the Editorial Board for IET Communications
- Dr. Vicente Traver y Dr. Sergio Guillén - members of the Scientific Committee for the 6th International Workshop on Wearable Micro and Nanosystems for Personalised Health 2009
- Dr. Vicente Traver - member of the Scientific Committee for the CASEIB Conference 2009
- Dr. Vicente Traver - member of the conference program committee for eTELEMED 2009
- Dr. Vicente Traver - member of the editorial committee for the International Journal on Advances in Life Sciences (IARIA Journals) – eTelemed (2009)
- Teresa Meneu - chairman of the posters session of e-Health for the eTelemed conference 2009
- Teresa Meneu - member of the Scientific Committee for the following conferences: International Conference on eHealth, Telemedicine, and Social Medicine - eTelemed (2009)

Scientific Activity 2009

Teaching activity

Members of our group currently give classes on the following subjects:

- Telemedicine Systems, in the Telecommunications Engineering Technical School at the Polytechnic University of Valencia
- Information Systems and Medical Communication Networks, in the Masters course for Biomedical Engineering
- Telemedicine, a distance learning course run through Chiapas University in Mexico

During 2009 2 other courses were given:

Dr. S. Guillén

Title: Domótica, sistemas de información y diseño para todos en ambientes inteligentes para la salud y el bienestar. Fusión del mundo real y el mundo virtual en los ambientes asistidos del futuro

Course imparted in La Granja, Madrid – Polytechnic University of Madrid + Vodafone Foundation
Madrid, Spain, July 2009

Dr. V. Traver

Title: Consideraciones para implementar proyectos en Telemedicina

Conference: Nodo Tecnológico TICs en Medicina

Conference Organisation

- INFODAY: Open day informing on the VII Marco Program for Research of the European Community
Valencia, Spain, July 2009



Participation in Fairs and Conferences using Display Stands

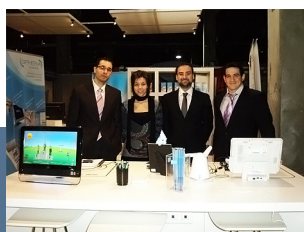
Health and Wellbeing Fair

Valencia, Spain, November 2009

The first official congress of the Health and Wellbeing Fair counted on the collaboration of more than a hundred exhibitors, presenting a wide range of products and services to encourage healthy lifestyles.

ITACA-TSB of the Polytechnic University of Valencia, and the spin-off company Technological Solutions for Health and Wellbeing S.A. (TSB) presented their most innovative applications at the fair, which was held on the 26-29 November at Feria Valencia.

Visitors to the fair had the opportunity to discover what an 'intelligent house' is like – enjoying the most advanced Intelligent Environment devices available – to use a geolocalisation obstacle platform 'Vadeo', to register in Salupedia.org – a social information web on health, directed to the public – or to check in person the use of solutions such as NUTRITRAINER, PERSONA or OASIS.



FERIA
DE LA
**SALUD Y EL
BIENESTAR**





Infoday Valencia

Last July, the Polytechnic University of Valencia, in coordination with the CDTI and the ITACA Institute, held an Information Day for the 7th Marco Program for Research, of the European Union.

The event took place at Innovation City at the Polytechnic, at the Polytechnic University of Valencia, on the 14th of July.

CDTI experts, official from the board of DGINFO of the European Commission, and experts from universities, companies and technological centres from Valencia Community participated in the program, which allowed us to learn first hand what the policies and strategies of the European Commission are relating to R+D+i, and the services and support that national and regional institutions will put at the disposal of companies and research centres to encourage and achieve further participation on behalf of companies and entities in Valencia Community for what is leading research at European level.

The program also included round tables on each of the points to be discussed to allow those attending to debate on possible projects, define common interests and establish lines of cooperation.

Amongst those collaborating, the following stand out:

- Valencia Council
- FIVEC
- IMPIVA
- European Centre for Business and Innovation (CEEI)
- Valencia Nanophotonic Technology Centre (NTC)
- Research Association for the Textile Industry (AITECH)
- Technological Platform AETIC
- Technological Platform eVIA
- Official School of Telecommunication Engineers in Valencia Community (COITCV)



- IT Engineering School in Valencia Community (COITCV)
- Technical School for Advanced Telecommunications Engineering (ETSIT)
- ETRA
- IBERDROLA
- WearTech

The open day was warmly received by the visiting public, a success that was reflected in both the written and digital press.





Prizes



Prizes 2009

The ITACA-TSB group and its spin-off have received 5 prizes in 2009, in recognition of its work and effort in the field of technology for health and wellbeing:

Prize for Technological and Health Foundation (April 2009)

The Technological and Health Foundation (an entity promoted by the Spanish Federation of Technological Health Companies) awarded ITACA's work in the application of technology to health. This recognition, prized with 24,000 euros, has served as a back-up to the R+D+i work currently being developed in the Technology for Health and Wellbeing Group of the Institute of Applications of IT and Advanced Communication Technology (ITACA).

The aim of this prize is to recognise the work of those people, companies, entities, organisations and public and private institutes which contribute to transmitting the value of health technology, with the object of recognising and giving support to scientific excellence, and, in this way, encouraging high quality research which is of a preclinical and clinical character.

This prize was awarded on the 1st of April 2009 in the annual act of the Foundation, which was celebrated in the headquarters of the Advanced Centre of Scientific Research (CSIC), presided over by the Minister of Science and Innovation, Cristina Garmendia.

The Prize for the Best Company on Enterprising People Day (July 2009)

TSB received this year's prize for the best company on Enterprising People Day in Valencia Community, thereby recognising the work of all those who have fought to bring an idea to life, converting it into reality, into an actual project. In 2009 prize ceremony, 622 potential winner were evaluated, and 90,600 euros shared out in prizes.

Bancaja Prize for Young Entrepreneurs (July 2009)

Technological Solutions for Health and Wellbeing (a spin-off company of the ITACA Institute) has been awarded the Bancaja Prize for Young Entrepreneurs during the XV edition of the awards ceremony, for their dedication to the creation of products and solutions for health and wellbeing based on the application of technological and scientific knowledge, their investment in R+D and their innovative solutions. The Bancaja Prize for Young Entrepreneurs is the oldest competition for help for new ideas in the field of company creation, as well as one of the biggest economic prizes in the country.

The Ideas for Business Prize (October 2009)

Technological Solutions for Health and Wellbeing (a spin-off company within ITACA Institute) was presented with the first prize in the category 'Research-Based Company'. The Prize Institute IDEAS, which counts on the sponsorship of the Bancaja Foundation, was created in 2007 with the aim of 'encouraging the development of companies that were created with our support and which enrich the Valencian and national business network', said José Millet, director of the IDEAS Institute. This was the third time that the IDEAS prize has been presented, and 22 companies took part.

IMPIVA Prize in the Business Creation Category (November 2009)

The Institute for Small and Medium-sized Industry in Valencia Council (IMPIVA), has also recognised the implantation and development work done by TSB on new technologies for personalised health care, awarding the IMPIVA prize in the Business Creation category. IMPIVA is the public law entity of Valencia Council assigned to the Chancellor of Industry, Commerce and Innovation, whose function consists of developing policies for promoting innovation in Valencia in the sphere of small and medium-sized companies.





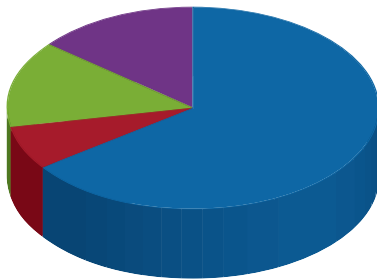
The budget for the ITACA-TSB group for 2009 was 2,567,646.01 euros, which was an increase of 12% on the previous year.

In spite of the fact that the raise in the budget was less than in previous years, the current budget is still a larger investment than in other R&D centres, both private and public, in the area.

For this reason, thanks to the volume of activity in ITACA, during 2009 we have been fully recognised as a technological centre on behalf of the Ministry of Science and Innovation.

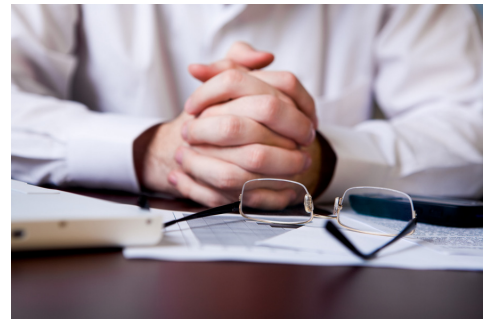
The budget has been split in the following ways:

CATEGORY	TOTAL
PERSONAL	1.643.956,75 €
TRAVEL	198.304,83 €
OTHER EXPENSES	365.384,42 €
INVESTMENTS	360.000,00 €
	2.567.646,01 €



PERSONAL TRAVEL OTHER EXPENSES INVESTMENTS

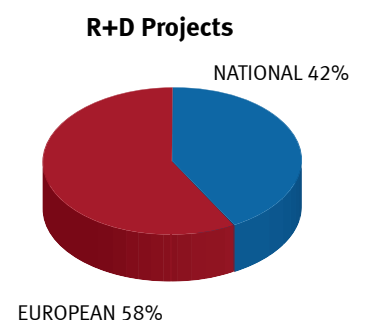
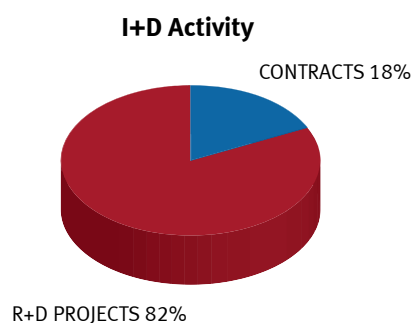
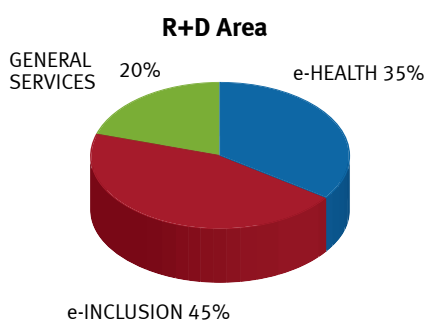
The principal objective of the group is to develop R&D precompetitive projects, both at European and national and regional level. Therefore, the group has not given up its activities providing made to measure services and developments for public and private companies.



In 2009, ITACA-TSB has established the projects initiated in 2008 in order to begin new support infrastructure for the R+D projects in the AML sphere.

Following the investment made into the design and creation of the Environment Laboratory or 'Living Lab', we have improved on the existing infrastructure with the aim of incorporating the aforementioned laboratory to different projects in which ITACA-TSB is participating.

Amongst those, the PERSONA and VAALID projects stand out.



Press diffusion and impact

During the year 2009, the ITACA-TSB web page <http://www.tsb.upv.es>, has enjoyed the following success:

- Users: 9.255
- Pages visited: 15.338
- 30,41% of direct traffic
- 49,89% through search engines
- 37.000 entries for ITACA-TSB in Google
- 195.000 entries for ITACA-TSB in Yahoo

We have continued to post interviews and reports on our group on our You Tube video channel (<http://www.youtube.com/tecnosaludybienestar>), a channel which has enjoyed 4863 hits during 2009.

We have also created a page for our group in Facebook. We currently have 110 fans and use the page to inform on events and news on the ITACA-TSB group.

The company has also recently opened an account on <http://www.slideshare.net>. This is a web application where you can store and share presentations and archives, as a result all users interested in health and wellbeing technology can access scientific presentations made by our group, providing yet another channel through which we can share scientific knowledge.



www.youtube.com/tecnosaludybienestar



www.tsb.upv.es



Press diffusion and impact

During 2009, ITACA-TSB has given special attention to the task of disseminating news of its activities to the press. To this end, the group has participated in fairs and events, written statements to the press, actively participating in all media, both the written press as well as radio, television and digital, covering local, national, international and specialised media on the subjects of health inclusion and technology.

As a result of this effort, the following impact was registered:


- 106 articles in magazines and digital newspapers
- 71 articles in the written press
- 11 television reports
- 18 radio reports

Among the events which had most impact on the media, it is worth mentioning our participation in the Health and Wellbeing Fair, held in November in the Feria Valencia. Other news which has been widely reported on in the media has been the creation of Salupedia (a virtual online encyclopedia) and the prize for recognition received by ITACA-TSB on behalf of Health Technology, and the application of technology to the health service.

A great press impact was caused by the presentation of a pioneering system, using wristbands, which allows for the localisation and identification of children.



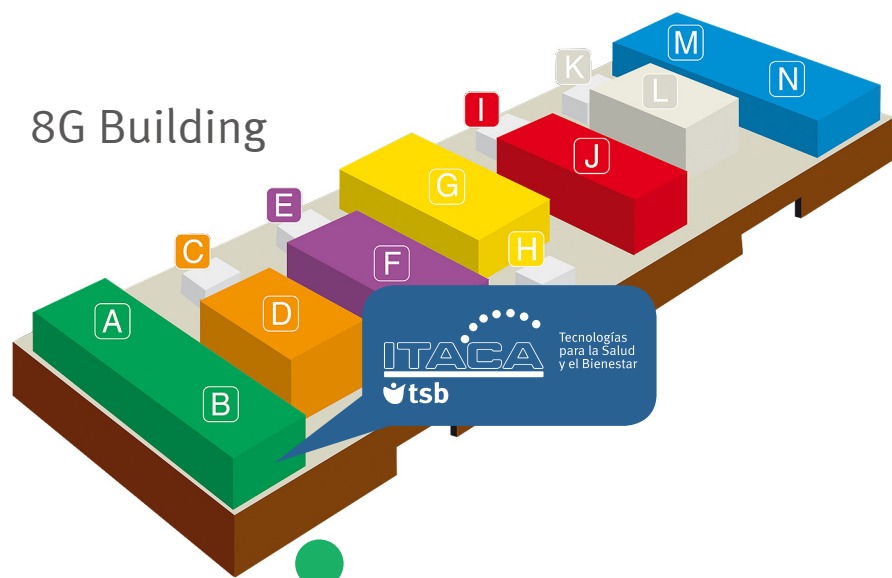
ITACA-TSB

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