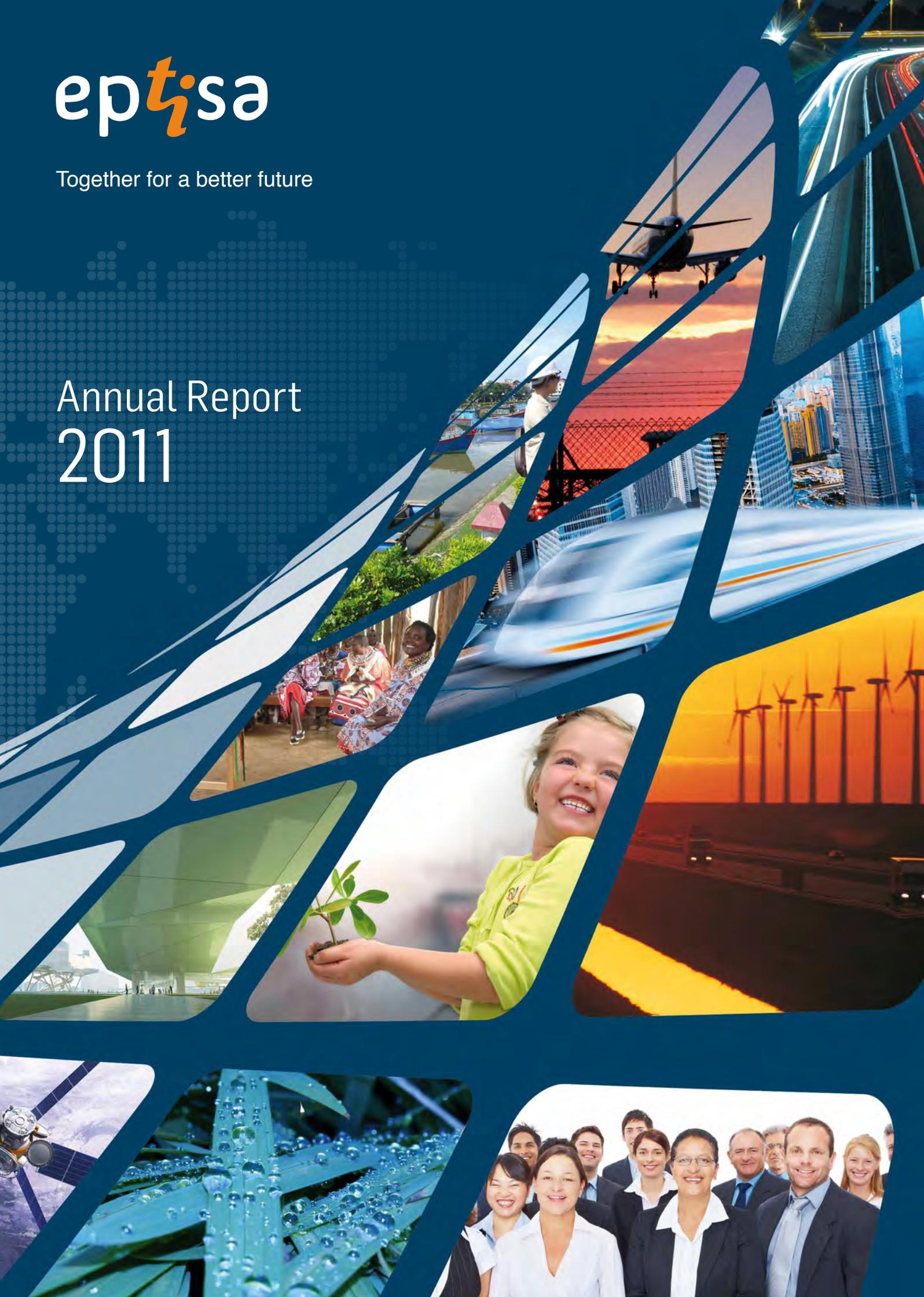


ep*t*isa

Together for a better future

# Annual Report 2011









## Letter from Luis Villarroya Vice-President & CEO

Our continued international growth in the last three years is the result of our international development plan that extends until 2014.

2011 was a year marked by the difficulties and complications as a result of the economic crisis and lack of investment in Spain.

Eptisa's income was consolidated in 2011 at 150 million Euros, over 41% of which was in international projects. The number of employees stayed at 2,157, 611 of whom carry out their activity in offices outside Spain.

In Eptisa, we have considered this social-economic framework not as a crisis but as a new environment and we are adapting ourselves as quickly and efficiently as possible to consolidate our relevant role. The new scenario presents challenges that we tackle firmly and with commitment.

In Spain, the collapse of public investment and decrease in civil works have caused a sharp drop in tender bids for engineering. In an environment of clear restriction of public investment, public-private initiative becomes increasingly important. Although it is true that this approach has been slowed down in Spain in 2011 by the difficulties in financing this kind of initiative, it remains equally true that their growth in other parts of the world is exponential.

We have understood this trend and worked in the specialization, diversification and localization of our products and services in order to be the best partner for the constructor or consortium in any sector or part of the world. The result is engineering services which ensure technical quality and cost control, improving construction processes and supporting risk management.

Throughout 2011, we have collaborated with major concessionaires and constructors on national and international projects. As examples, we carried out several construction designs in the railway and metro sector in Canada, Turkey and Algeria; in the road sector we worked in design projects in Spain, Canada and the United States, and within the building sector, on the roll-out of factories in China.

**Market activity**

The activity of the transport sector in Eptisa has increased up to 34% of the total, because of the introduction of new services related with sustainability. Our experience in the road and railway sector in Spain has also supported us in the new projects achieved internationally during 2011.

In a global world, the mobility of people and goods is vital for society’s social and economic growth. The challenge facing engineering in the 21st century is to keep travel efficient while reducing its economic and environmental impact to a minimum. In Eptisa, we have totally grasped the new needs in the transport infrastructure sector and are working towards efficient and ecologically sustainable mobility.

The Water and the Environment sector in Eptisa grew in 2011 to reach 28% of the total. As well as the projects in Spain, our activity in the water market in Europe allowed us to spread out our services in water projects in Asia and America.

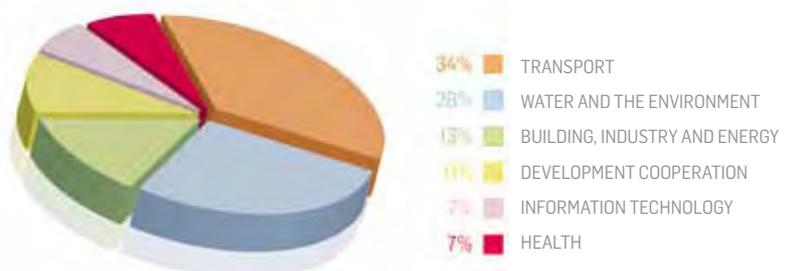
All over the world, Eptisa offers services to improve people’s access to water. We have experience in all the phases of the water cycle, from technical support to public entities to improve the water resources management, through the design and implementation of water infrastructures and water supply and sanitation networks, developing turnkey projects for urban and industrial wastewater treatment plants, to plans for prevention and mitigation of the social and economic disasters caused by flooding of urban and agricultural areas.

Our management capacity has developed into a service that focuses in integral project management. The turnkey projects in water infrastructures, waste management and buildings are our response to the new needs of the clients. In 2011 we have worked on integral project management of infrastructures in Romania, Spain, Serbia and Georgia.

In spite of the serious crisis in Spain, the activity in Energy, Building and Industry sectors in Eptisa has grown to 13% of our total, mainly because of our ability to export know-how to countries with development potential.

INTERNATIONAL ACTIVITY >>

MARKET ACTIVITY >>



Our society faces the challenge to maintain the level of welfare without over-exploiting the Earth's resources. Energy saving and finding new alternative energy sources have been a chance to offer new services aimed at helping our clients to be more ecologically sustainable. We have designed energy-efficient facilities and infrastructures, we have worked with private entities on the development of renewable energies, and we have taken part in incinerator projects in Spain. In Eastern Europe, we are working with public authorities in management and development plans of sustainable energy models.

The Health activity has had a year of growth and consolidation, although the public mental health sector has had its investment frozen. The occupation of our centres remains close to 900 beds. But what we are really most proud of is the therapeutic work of our personnel, which is focused every day in achieving the objectives for the patients.

Casta Salud has become consolidated in Spain as the top company in health management projects. In Madrid we have renewed the contract for managing the supply programme of Methadone Chlorohydrate, which includes the production, prescription and dispensation of the substance in the drug-dependency care centres for the next two years.

In 2011, the work on R&D bore fruit in three innovation projects. The first is the consolidation of the project to incorporate touch-sensitive "pet" robots as a therapeutic tool in the Asturias centre. The second, in collaboration with the Government of Health in Madrid, we developed and published a study titled *Fundamental Aspects of Cytochrome P450*, which collect the latest scientific advances about the cytochrome, a research that open a new perspective for drug treatments. And lastly, at the end of the year, we were awarded with a grant for a research project from the CDTI (Industrial Technology Development Centre).

The information technology activity reached 7% in 2011. In spite of the slow-down in new investment in technology by public administrations, the business stayed stable. The diversification of our product range, the continued loyalty of our traditional clients, and the international expansion of this activity, for example: the projects in Serbia and Georgia, justified our optimism in increasing market share.

## International development

The factor maintaining our activity in stable, even optimistic figures is our decided multinational orientation. The international activity came to 41% of the total in 2011, with over 600 professionals involved in international projects.

We can confirm our horizon thanks the results obtained in international contracts, which grew to reach 58% of the total, with an accrued international backlog of 123 million euros, more than 78% of the total.

Growth is our clients' positive response to our diversification of products and services and the strategies followed by Eptisa's international offices with regard to local adaptation and prioritizing quality of services in order to achieve projects' objectives.

Another key to our international development results is a geographic expansion plan, aimed to increase proximity to clients and open new markets. In just two years we have increased our presence from 32 to 38 countries. The international situation created by the economic crisis is complicated. International requests for tender used to be concentrated in Europe, especially Eastern Europe, but the market for engineering services is developing towards Asia and America. Our competitive edge is based on keeping close to local markets to manage projects and tenders and exploit knowledge gained from successfully completed projects.

In 2011, Eptisa consolidated its position as the leading company in projects financed by the European Commission, the World Bank, the Asian Development Bank and other multilateral

financial institutions, reaching the top position (from over 19,000 bidding consortia) in the ranking of European companies participating in the European Commission’s programmes.

In the development cooperation sector, representing 11% of our activity, two of our most important values come together: management capacity and know-how transfer. We are working in the monitoring management system of the European Union projects in Latin America, the Caribbean and Pacific and Africa. In 2011 we expanded our activity to Mexico and Argentina.

**Corporate Social Responsibility**

Eptisa’s Board is aware of the importance of corporate social responsibility and the matters related with social and environmental responsibility in this new context. Therefore, in 2011 we launched a plan to integrate corporate responsibility values in our company culture and internal processes.

At the end of the year, we obtained the SA8000 certification, guaranteeing the international requirements of corporate social responsibility related with human rights and labour conditions.

Through a cooperation agreement with the Adecco Foundation, we have worked in a initiative to help employees with handicapped family members.

Innovation is a sure way to create value for our clients. Therefore, we continue to invest in R&D as a key factor in the performance of all Eptisa’s activities and our corporate responsibility to society. In the information technology activity we have several projects ongoing, and in the engineering activity we have introduced new technologies for infrastructure auscultation. At last, in the health business unit, we are beginning a new project financed by the CDTI.

“These are difficult times, and every success obtained is the result of a great effort. Even so, I have confidence our strategy will enable us to maintain our activity in Spain, grow and develop internationally and be the best company for our professionals and clients in the future”





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# Governing Bodies

## Boards of Directors

Ángel Corcóstegui Guraya  
President

Luis Villarroya Alonso  
Vice-President & CEO

Ángel Catena Asúnsolo  
Iñaki Echave Larrañaga

Felipe García Berrio

Enrique Leyva Pérez

João Luis Ármalho de Carvalho Talone

## Advisory Committee

Juan Manuel Eguiagaray Ucelay

Martín Eyries Valmaseda

Luis de Guindos Jurado (1)

(1) until 19<sup>th</sup> December 2011

Rafael Miranda Robredo

Pedro Pérez Fernández

Ignacio Santillana del Barrio

## Management Committee

Javier Andreu Posse

Ignasi Cantarell Taxonera

Ángel Catena Asúnsolo

Gonzalo García Alonso

Felipe García Berrio

Olga Ginés Ferrero

Gerardo Roiz de la Parra

Alfonso Rubio Barroso

José Manuel Sampedro Quijano

Javier Sanz Urbina

Luis Villarroya Alonso







# Spain

## Transport

In 2011, we took part in transport infrastructure projects offering engineering services for improving mobility by road, rail, in ports and airports, always paying maximum attention to technical quality, economic optimisation, safety in construction and operational functionality and invariably respecting the environment.

In Spain, most of the investment has focused on the **Railway** sector, where Eptisa offers design, technical assistance, works supervision, quality control and auscultation services.

In March 2011, the new local railway line C5 from Seville to Benacazón was opened. This new stretch of 32 kilometres of conventional railway line has 6 new regional stations, of which 4 have been built for the first time (Camas, Valencina-Santiponce, Salteras and Benacazón) and 2 have been completely remodelled using singular building that already existed (Villanueva del Ariscal-Olivares and Sanlúcar la Mayor). Eptisa has drawn up the detailed design for the Spanish Railway Infrastructure Authority (ADIF), from the infrastructure to the track superstructure, including the electricity power supply and the safety and communications facilities, the building, the urbanisation and the access routes from the different municipalities served by the line. Furthermore, Eptisa carried out the quality control of the works carried out.

On the Canary Islands, we delivered to Gran Canaria Railway Authority, the basic project for the platform of the railway line between Las Palmas de Gran Canaria and Maspalomas, Section: El Berriel (Barranco Hondo) – Playa del Inglés. We also completed the drawn up of the preliminary design of the Platform of South Tenerife Railway Line, Section: From Montaña de Guaza Tunnel – Los Cristianos Tunnel - Las Américas for Metrotenerife.

With respect to projects for **High-Speed Railway** lines in 2011, we completed the Platform construction designs of the New Railway Network in the Basque Country, specifically the section from Andoain to Urnieta and the modified platform construction design of Spanish North-Northwest High-Speed Railway Corridor, Sections: Valladolid - Burgos and Venta de Baños - Palencia. Sub-sections: Junction of Venta de Baños and Valladolid – Palencia – León connection.

During last year we completed the construction design for the High-Speed Railway line Madrid - Alcázar de San Juan - Jaen. Section: Mora - Consuegra, in Toledo.

Our technical skills and experience enabled us to be one of the main collaborators with ADIF, the Spanish Railways Infrastructures Authority, and we signed a framework agreement to draw up construction designs, to carry out project management and other activities at the stations managed by ADIF's Passenger Stations Executive Management.

In 2011, Eptisa provided technical assistance services for construction works supervision on Spain's main high-speed railway lines: HSRL Vitoria Gasteiz –Bilbao - San Sebastián, High Speed Railway Madrid – Galicia, Antequera - Granada, etc.

With respect to **Structures and Special Tests**, in 2011 we continued with the static and dynamic load test for reception of the railway structures on the High-Speed Railway lines: Xativa – Almusafes Section, La Sagrera – Montcad Section and the Ourense – Silleda Section, with viaducts more than 90 metres high. Furthermore, the General Directorate of Railways commissioned us to conduct tests at different points on the Spanish mainland.

Where **Geotechnical monitoring and Auscultation** services were concerned, we worked in the Sorbas Tunnel construction works on the Murcia – Almeria High-Speed Railway Line, carrying out auscultation at the access points to Sants and La Sagrera, and also along the Antequera – Peña de los Enamorados Section of the High-Speed Railway Line. In Asturias we worked on the auscultation on FEVE burial works in Langreo, and in Barcelona on auscultation on the Paseo de Gracia Station works, and in the Basque Country on auscultation on the Albertia Tunnel on the Basque railway network.

One of the most outstanding activities in 2011 was a new auscultation for an experimental section with bituminous sub-ballast on the Villodrigo - Villazopeque Section of the North-Northwest Corridor of the High-Speed Railway Section: Valladolid - Burgos.

In the area of **Freight Transport**, we continue working for the General Directorate of Railways preparing a Preliminary Design of the new Southern railway access to the Port of Castellón. This preliminary design analyses freight transported by rail. It must be pointed out that the Port of Castellón accounts for approximately 5% of the freight traffic of all the mainland ports of general interest.

Quality control of the works at the High Speed Railway Madrid. Section Pinto-Torrejón de Velasco, Madrid



Quality Control of High-Capacity Road Carballo-Fisterra, Galicia



In spite of the reduction in the number of tenders for new projects in the **Roads** sector, we continued to work for the Spain's National and Regional Governments providing our full range of engineering services that cover everything from the planning phase, with the drafting of feasibility and informative studies, the design phase (layout and detailed), the construction phase, during which we provide technical assistance, works supervision and finishing off with the operation phase involving different road safety studies and consultancy services.

Projects were developed, for the Government of Aragon, the Autonomous Regions of Madrid, Valencia, Galicia and Andalusia, as well as giving support for tenders to Private Companies.

In 2011, we finished the Construction Design of the Arquillos Bypass on the A-312 for the Public Works Department of the Regional Government of Andalusia, and the Detailed Design of the M-311 Road upgrade, Section: M-302 to M-404 in Chinchon and the Dual Carriage Conversion Project of the M-121 Road, Section: A-2 – Meco, both in the Region of Madrid.

Reference must also be made to the work done as part of the 2009 Road Safety Study Contract for the General Directorate of Roads of the Madrid Region, developed in 2010 and completed in 2011. At the end of the year, we were awarded the contract for continuing the Road Safety Project from July 2011 to July 2013. In the same area, we carried out road safety studies for the State Highways Department in Castilla-La Mancha.

Throughout the year, we drafted the Preliminary and Construction Design of the CV-70 Bypass, Section: Alcoy - Benidorm in Alicante for the Regional Government of Valencia.

We also made further progress on preparing the feasibility study in accordance with Spanish Law 30/2007 and the environmental impact assessment of the AP-36 Highway extension, Section Ocaña - La Roda to Chinchilla, for the General Roads Directorate of the Ministry of Public Works.

Over the past year, our work increased for Public-Private Partnerships, both domestically and abroad.

We participated in the tender for the construction, maintenance and operation of various sections of the BI-633 Highway, for the Bidding group: FCC Construction S.A. and Construcciones BALZOLA

### Geotechnical Monitoring of the slope and embankments at the road network of Guipuzkoa



S.A.. And we collaborated in other tender projects such the bidding process for the execution, maintenance and operation of the “Autovia de la Plata” A-66 Highway between Benavente and Zamora for the highway “Autovía del Esla” Bidding Group: Vialia Sociedad Gestora de Concesiones de Infraestructuras, S.L., Sacyr Concesiones, S.L., Comsa Emte Concesiones, S.L.U. and Marguerite Silver B.V.

Eptisa, as a specialist in **pavement design**, provided technical assistance to Madrid City Council, concerning the construction of a road surface resistant to hydrocarbon spillage at the Canillejas Intermodal Station, which involved drawing up the specific technical specifications for tender and technical assistance during the works.

The objective for using this type of innovative road surface is to increase the durability and thereby reduce the long-term cost of conservation and maintenance.

Throughout the last year, in **geotechnical applications**, we monitored and controlled slope instability for the road network in Guipuzcoa County. An Auscultation System was implemented in the slopes and embankments of the roads, with a view to supplementing the geotechnical information concerning unstable slopes. It is based on the installing and monitoring of inclinometers, cable extensometers and piezometers. A total of 71 inclinometers, 55 piezometers and 12 extensometers have been placed in 15 roads. They are manually monitored at predetermined periods, but the electric gauges are connected to an automatic data-collection unit. The results are compiled at a data centre area site accessible through a website.

In the field of **technical assistance to construction management**, we worked on the construction works for the GI-632 Bypass, Section: Urretxu / Legazpi - Bergara Link in the Province of Guipuzkoa and on the first generation A-2 Highway from Kilometre 138 to 232.8 along the Section: Soria / Guadalajara - Calatayud in the Province of Zaragoza.

Throughout 2011, and thanks to the official certified laboratories network that Eptisa has, we were able to attend to our clients’ requirements throughout the country and to work on quality control and industrial safety on highway construction projects.

In 2011, we worked on the La Sagra Highway, Section II – A-42-Añover - Borox in Toledo, on the works of the Southwest Bypass Highway and on the works on the Ronda del Tajo and new cable-stayed bridge in Talavera de la Reina providing quality control of the materials.

We carried out technical assistance services, the quality control of the construction materials and the environmental supervision for the Carballo – Fisterra road project in the section Cee – Sardiñeiro in Galicia, that included laboratory tests (aggregates, concrete, soils, steel, etc.) and on site tests (density by the radioactive isotopes method, plate load, retro-reflection on road markings, etc.).

Extension of the dock in port of Brens

In the area of **Ports**, we have provided technical assistance, quality control and environmental supervision. In A Coruña we worked on the enlargements of the wharf at Brens, carrying out the quality control of the materials and environmental supervision of works, that included laboratory tests (aggregates, concrete, soils, steel, etc.) and on site tests (density by the radioactive isotopes method, plate load, etc).

In Andalusia, we worked in the Port of Malaga, on the enlargement works for the San Andrés Dock, where Eptisa provided technical assistance regarding the quality control of the works. The solution adopted for the construction of the breakwater with innovative structures known as Cubipods, made these works a good example of Spanish Civil Engineering R&D.



In the Port of Cádiz, we worked on the Quality Assurance Plan for the new container terminal construction.

In **Airports**, Eptisa signed new contracts and continued working in technical assistance for the development of project design and technical assistance for control and works supervision at the main Spanish airports.

Thus, at *Madrid-Barajas Airport* we worked on two technical assistance projects for the control and supervision works of the new commercial zones in Terminals T1, T2 and T3 and on the works to build the new roads and taxiways accessing the area between runways 18 and 36.

Also in Madrid, during 2011, we conducted a study for the improvement works of the bilge plant at Madrid-Barajas Airport. The project involved conducting an operations study and a proposal with the required actions to improve the operation of the plant through the adaptation of the effluent to the current legislation.

#### Control and supervision works for the new commercial facilities in the Madrid-Barajas Airport



#### Technical assistance for the development of projects in the Palma de Mallorca Airport



At *Barcelona-El Prat Airport* we provided technical assistance for the development of three projects for improving the Push-Back taxiways and adapting the drainage channels and the safety areas at the ends of the runways and the taxiing areas. In 2011, we concluded our technical assistance for drawing up the construction design for the Electricity Power Plant. Throughout 2011, we provided technical assistance for control and construction works of the adaptation of Runways 02 to 20. Midway through the year, we were awarded the technical assistance for improve the management of the facilities and electrical works in the Energy Department of the airport.

At *A Coruña Airport* we provided technical assistance with respect to the design of the airfield upgrading project to bring the mentioned infrastructure into line with the provisions established in Spanish Royal Decree 862 regarding Operational Safety. We were also awarded the technical assistance contract for the control and supervision works of the enlargement of the runway. The works involve the extension of the runway by 400 meters, on an embankment whose average height is 35 meters.

At *Lanzarote Airport* we started to provide technical assistance for the environmental quality system maintenance, with the aim to support for ensuring compliance with the Integrated Quality and Environmental System of AENA.

At *Palma de Mallorca Airport* we are drawing up the construction design for the replacement of transformers and beaconing material in the 06L-24R runway.



^ PLATFORM CONSTRUCTION DESIGN OF THE NEW RAILWAY NETWORK IN THE BASQUE COUNTRY. SECTION: ANDOAIN – URNIETA

Eptisa has drawn up the construction design for the Zizurkil – Urnieta Section, belonging to the Guipuzkoa region. It is a section of High-Speed railway line for mixed traffic, with an international gauge double platform and with a section of track in plate.

This initial section was eventually split into two independent construction projects because of the size and importance of the works that were planned.

The major elements in the second subsection, Andoain – Urnieta, 2.8 km long, are the Andoain Tunnel and the viaducts over the Oria River and over the GI-131 Highway.

The extensive and extremely difficult geotechnical field campaign conducted to characterise the land crossed is one of works performed as part of the contract. The land is complicated because it is limestone affected by karstic processes.



^ BASIC DESIGN FOR THE PLATFORM OF THE RAILWAY LINE BETWEEN LAS PALMAS DE GRAN CANARIA AND MASPALOMAS. SECTION 6: EL BERRIEL (BARRANCO HONDO) - PLAYA DEL INGLÉS (EL CAÑIZO)

The design developed by the Joint Venture Eptisa-3G is for section 6: El Berriel (Barranco Hondo) – Playa del Inglés (El Cañizo), on the new railway line planned for the eastern shores of the island of Gran Canaria.

The layout studied which is 8.3 km long, runs parallel to the current GC-1 throughout its entire length, and is a railway line of the suburban type with a high performance.

Eight viaducts have been planned, some of which require special structural solutions, and three tunnels, all with their respective installations and the necessary security elements, as well as several smaller structures.

The project also includes the design of the Playa del Inglés Station, which lies at a difficult geographical localization, because of the periodically flood and drainage problems. Therefore, it is necessary to design a channel that runs throughout the entire gully.



<< FRAMEWORK AGREEMENT WITH THE ADIF'S PASSENGER STATIONS EXECUTIVE MANAGEMENT

Eptisa was awarded the Framework Agreement contract to drawing up designs, carrying out project managements for works and other activities in stations managed by ADIF's Passenger Stations Executive Management. The new framework contract will enable ADIF to directly entrust Eptisa with engineering and architectural works in the areas of project management and works supervision in all regions of Spain.

In the final quarterly period of 2011, ADIF commissioned Eptisa to be the Project Manager of the construction design of the additional works of the Zaragoza – Delicias Station, as part of the agreement.

The works to be undertaken include improvements and repairs to the different elements throughout the passenger station site. The Zaragoza - Delicias Intermodal Station is a transit station which offers both long-distance (High-Speed Railway and Spanish broad gauge) and suburban services.

Eptisa's services include the following activities: Works management, Health & Safety coordination, and technical support in structures and facilities fields.



<< TECHNICAL ASSISTANCE FOR THE CONTROL AND SUPERVISION OF THE PLATFORM CONSTRUCTION WORKS OF THE ELORRIO - ATXONDO SECTION OF THE HIGH-SPEED RAILWAY LINE VITORIA/GASTEIZ-BILBAO-SAN SEBASTIAN

The section is 2.6 kilometres long and runs entirely through the Municipality of Elorrio in Bizkaia. Throughout its layout, it is planned that the project will require the construction of the viaducts of Kinatoi (880 metres long), the viaduct over the Zabaleta River (320 metres long) and the Larrazabal River (200 metres long).

The services provided by Eptisa involve analysing the design of the project, technical assistance to the Construction Management, supervision and monitoring the implementation and development of the Contractor's Q.A.P., monitoring and checking the quality control of the works, quantitative control of the completed works, study the modification proposed, support to arranging the expropriation procedures, control and complying with the regulations in force in health & safety matters while the works are being carried out.



<< TECHNICAL ASSISTANCE FOR THE SUPERVISION OF THE PLATFORM CONSTRUCTION WORKS OF THE PORTOCAMBA – CERDEDELO SECTION OF THE HIGH-SPEED RAILWAY LINE MADRID - GALICIA, IN THE PROVINCE OF OURENSE

The Portocamba – Cerdedelo section, which is 2.3 km long, and has a construction budget of 116,670,707.6 €, runs through the municipality of Laza (Ourense). The project includes the construction of the Cerdedelo Tunnels (1,700 m), two independent tubular structures connected by evacuation galleries, and the viaducts of Teixeiras, 530 m long and 110 m high. The layout has been designed for high speed double track with international gauge (1,435 mm).

The services provided by Eptisa involve analysing the design of the project, technical assistance to the Construction Management, supervision and monitoring the implementation and development of the Contractor's Q.A.P., monitoring and checking the quality control of the works, quantitative control of the completed works, study the modification proposed, support to arranging the expropriation procedures, control and complying with the regulations in force in health & safety matters while the works are being carried out.



<<GEOTECHNICAL ASSISTANCE FOR THE CONSTRUCTION OF THE MADRID – VALENCIA HIGH-SPEED RAILWAY LINE. SECTION: ENCINA – MOGENTE

While the platform for the High-Speed Railway Line was being excavated, some hollows were detected under the planned cutting elevation. The surface size of the holes ranged from 20 to 60 cm wide and they were up to 6 metres deep.

They proved to be karstic cavities that were up to 1 metre wide below the track bed. The cavities were studied by drilling down from the surface and a combined study using geophysical, georadar and electrical logging techniques.

The solution adopted was to detect all the cavities both visible and concealed underlying the surface, and jet grouting them with concrete.



<< LOAD TESTS AND INSPECTION OF BRIDGES OF THE HIGH-SPEED RAILWAY LINE MADRID-GALICIA

Eptisa conducted static and dynamic load tests on the railway structures belonging to the recently-opened High-Speed Railway section linking Ourense and Santiago de Compostela. The most outstanding features on this line are the viaducts, which are almost 90 metres high and have very large and singular arches (higher than 70 metres). During the tests, vertical displacement parameters (arrows) were controlled and measured, as well as the stress (vertical) deformations affecting steel and concrete, and vibrations (accelerations).



^ FIBRE OPTIC SENSOR SYSTEM

Eptisa is currently implementing a Monitored Auscultation System for the continuous deformation monitoring of embankment foundations, along the Seseña – Aranjuez Section of the High-Speed Railway Line Madrid - Castilla La Mancha - Valencia - Murcia. The final objective is the continuous, monitored distributed sounding using an automatic and autonomous system, based on new fibre optics sensors pioneering in Spain, which enables the tracking and verification of the stress-deformation behaviour of the tunnel along the full length of the infrastructure during the operation phase.



<< AUSCULTATION OF AN EXPERIMENTAL SECTION WITH BITUMINOUS SUB-BALLAST IN THE VILLODRIGO - VILLAZOPEQUE SECTION OF THE NORTH – NORTHWEST HIGH-SPEED RAILWAY CORRIDOR SECTION: VALLADOLID-BURGOS

In collaboration with the CEDEX and ADIF, Eptisa is involved in implementing an auscultation system in an experimental section with bituminous sub-ballast. This work forms part of a large study initiated by the CEDEX in 2008, with the construction of an experimental section at the CEDEX's central laboratory in Madrid, with which we also collaborate. The auscultation system will enable its users to take deformation measurements in the lower layers of the platform embankment, as well as the stresses that are exerted in the bituminous sub-ballast.



#### << QUALITY CONTROL IN THE CONSTRUCTION OF HIGH-SPEED RAILWAY LINE PLATFORM **PALENCIA - LEON**

Construction of the platform of the N-601-Palanquinos (Leon) Subsection, 8,500 metres long, of the High-Speed Railway Line Palencia – Leon. The works covered the construction of 11 concrete structures consisting of 4 viaducts and 4 overpasses. The work carried out by Eptisa consisted of the quality control of the construction materials (laboratory tests, on site tests, piles auscultation, load tests and geotechnical advice) for the constructor's QAP.



#### << PLATFORM FOR THE ENLARGEMENT OF THE HIGH-SPEED RAILWAY LINE IN **MADRID**

The works involved double tracking the high-speed lines along the section between Atocha Station and Pedro Bosch street, in order to provide services to the High-Speed Railway Lines Madrid-Seville and Madrid-Levante. Among the main activities carried out, stands out the construction of a metal viaduct 127 m long above the Comercio Street, two underpasses and three pile-driven caissons.

The activities of Eptisa consisted of the quality control of the construction materials (concrete tests, identifying soil and sub-ballast, compaction control, pile, water, mortars, steel and ducts auscultation, etc.) with laboratory assembly on site, carrying out the geotechnical campaign to verify the project and studying the environmental characterisation (water analysis and soil analysis).



#### << FEASIBILITY STUDY IN ACCORDANCE WITH THE SPANISH LAW 30/2007 AND INFORMATIVE STUDY WITH ENVIRONMENTAL IMPACT ASSESSMENT. **EXTENSION OF THE AP-36 OCAÑA HIGHWAY - LA RODA TO CHINCHILLA**

Since the AP-36 highway Ocaña-La Roda, which links with the A-31 Highway and the Alicante Highway came into service in July 2006, there has been an increase in traffic on the A-31 Highway. Therefore, an extension has been planned for the AP-36 Highway as an alternative route to the A-31 Highway. The aim of the informative study is to collect and analyse the data required to establish the different potential options for the new layout. A link is also planned between the new highway and the A-30 Highway, which will connect from Madrid to Alicante and from Madrid to Murcia.

The study zone was established and was defined from an environmental perspective. The corridors compatible with the environment were obtained, after which layout options were established, and

these were studied at the next phase of the Study (Phase B). At Phase B, a total of 8 options were developed, all of which were toll highways with a new layout, both to the North and the South of the current A-31. Furthermore, an option of widening the road with a third lane on the A-31 was also studied with a view to complying with the request from the General Directorate of Quality and Environmental Assessment of the Ministry of Environment and Rural and Marine Affairs. After these had been developed and once the residual environmental impact, functionality, cost and investment had been determined (through economic-social and economic-financial profitability studies), a multi-criteria analysis will be used to choose the best option.



^ ROAD SAFETY STUDY FOR THE GENERAL DIRECTORATE OF ROADS OF THE MADRID REGION

The aim of any Road Safety Study is to guarantee that the traffic flow on the roads analysed is as safe as possible, so that the probability of an accident occurring as a result of a poor infrastructure is reduced to a minimum.

The work done began with the setting up of a Database of accidents that had occurred, so that it would be possible to analyse the accident background on the roads being studied. We prepared an annual report of the accident rate, which analysed in detail the accidents and provided some results, about the roads with the highest rate, the causes of the accidents, the factors involved and the types of accidents.

Accident Black Spots were also established and analysed in detail. The causes of the accidents along these stretches were established together with the factors involved, so that it would be possible to propose both short-term and long-term measures to be taken to improve the infrastructure.



<< TECHNICAL ASSISTANCE FOR THE CONSTRUCTION OF AN INNOVATIVE ROAD SURFACE RESISTANT TO THE SPILLAGE OF HYDROCARBONS



^ TECHNICAL ASSISTANCE TO THE CONSTRUCTION MANAGEMENT OF THE LA SAGRA HIGHWAY. SECTION II – A - 42 - AÑOVER - BOROX, TOLEDO

The accidental spillage of fuels, lubricants and certain chemical compounds on a bituminous pavement has an extremely negative effect on the performance and durability because of the high levels of urban traffic flow.

Eptisa has provided technical support to the Madrid City Council, concerning the construction of a road surface resistant to hydrocarbon spillage at the Canillejas Intermodal Station. We were involved in drawing up tenders for specific technical specifications and technical assistance during the works.

The aim of using this type of innovative road surface is to increase the durability of urban pavements, thereby reducing the cost of maintenance and conservation in the long term.

The activities undertaken by Eptisa on the works for the La Sagra Highway, Section II – A-42-Añoover - Borox in Toledo, involved the technical assistance to construction management, coordinating health & safety and environmental supervision. This section is 32.5 Km long with two carriageways and two lanes in each direction. The structures involved are 5 junctions, 11 overpasses, 9 underpasses and 6 viaducts, 4 of which are over streams and 2 over the Madrid – Seville High-Speed Railway Line.



<< QUALITY CONTROL OF THE CONSTRUCTION WORKS OF THE CORUÑA CITY RING ROAD

The tasks performed on the construction works for the third ring road in Coruña along the section: 2.2 of the CP-3002 to Pocomaco, consisted of quality control of the construction materials. Laboratory tests were conducted (aggregates, agglomerates, concrete, soil, steel, etc.), on site tests (density using the radioactive isotopes method, load tests, determining the surface macrotexture, etc.) and installation tests (sealing tests and water supply pipe pressures and interior inspection of the piping with video cameras).



<< MINING RESEARCH TO FIND MAGNETITE IN THE SARRIA-NOCEDA SECTION OF THE HIGHWAY SARRIA-MONFORTE, LUGO

The work done during the course of the research involved drilling mechanical boreholes with core extraction and conducting laboratory tests aimed at establishing the presence of magnetite in the zone concerned (analysis by atomic absorption spectroscopy and crystallography by ray diffraction and determining the carbonate content of the different samples taken).



<< QUALITY CONTROL OF THE ROAD UPGRADING WORKS FOR THE JUNCTION BETWEEN THE M-40 AND THE M-511 IN MADRID

The aim of the works is to overcome the traffic problems that affect the three high-capacity dual lanes that converge at the same point: the M-40 Madrid Ring Road, the M-511 leading to Madrid and the M-501, which is an extension to the M-511 towards the West. This is done by extending the M-511 so that it links up with the M-501 under the M-40 and removing the existing roundabout. Link roads are also created on both sides of the M-40 and M-511/501 to decongest the traffic on the main sections and facilitate the traffic flow on the new link and improve accesses from the M-501 to the Montepíncipe Residential Estate, to the “Ventorro del Cano” Industrial Area and the “Universidad Juan Pablo CEU”.

The work done by Eptisa consisted of quality control of the construction materials (concrete tests, soil and aggregate identification, coated materials, aggregate control, pile, steel, etc. auscultation).



<< TECHNICAL ASSISTANCE TO THE CONSTRUCTION PROJECT OF THE LINK BETWEEN THE A-8 HIGHWAY (SAN SEBASTIAN BY-PASS) AND THE URUMEA HIGHWAY, GUIPUZKOA

Eptisa provided technical assistance services to Bidegi (Infrastructure Agency of Guipuzkoa), for the construction project linking the A-8 Highway (San Sebastian By-Pass) and the Urumea Highway, which also included a complete link with the hospital zone in San Sebastian's sphere of influence, carrying out the Environmental Monitoring Plan and the Coordination and Supervision activities for the Health & Safety Plan prepared before the works got under way.

Eptisa's activities involved the supervision of the geotechnical works (excavations, tunnel and foundations), surveying works (levelling and grading, tunnel, structures and road surfaces), and the quality control of the construction materials. The company was also responsible for preparing the monthly certificates.



^ QUALITY ASSURANCE PLAN FOR THE WORKS AT THE NEW CADIZ CONTAINER TERMINAL

The new container terminal, backing onto the Eastern Breakwater and Dock 5, will replace the current one lying close to the passenger terminal and the city centre. The new terminal, with a mooring line that is 1,000 m long, will be closed on its northern side with an S-shaped rubble mound breakwater, to minimise the disturbance in the entrance to the harbour, and on its southern side, with Dock 5 (Navantia). 38 hectares of fills will be created to be used on the container storage yard.

During the initial phase, the works consisted of constructing a dock comprising prefabricated caissons, a breakwater, creating a yard and general dredging for the manoeuvring zone for the large container vessels in the new terminal zone. The mooring zone for this phase is planned to be 589.50 m. long, and a surface area of yard covering 22 hectares will be created. The dock will be 16.00 metres deep.

To achieve these objectives, Eptisa will carry out the following activities, amongst others: analyse the results of the inspections undertaken for the activities subjected to the QAP, check the suitability of the materials received at the works site, control the performance and the fulfilment of the Inspection Points Programme (PPI) and the Materials and Testing Control Programme and will issue "Non-Conformity Reports" in the event of any deviations from the established objectives.

^ ENLARGEMENT OF THE SAN ANDRÉS DOCK IN THE PORT OF MALAGA

Eptisa is involved in this project by being responsible for the quality control of the works. The aims of the works are to enlarge the Port of Malaga western dock so that it can accommodate the new fishing and recreational facilities, as well as to prepare the dock in the ante-harbour so that vessels can operate on Dock 9 and the northern mooring facilities on the breakwater tip by demolishing the old lee breakwater.

The solution adopted for the construction of the breakwater with innovative structures called Cubipods, makes it a good example of Spanish Civil Engineering R&D capacity. The Cubipod is a new piece of artificial quarry stone for protecting rubble mound breakwater armour, patented by the Universitat Politècnica de València (UPV) and operated by the company SATO (OHL Group).

The Cubipod is an innovative, robust and reliable piece used as a constituent part of the main armour of breakwaters. It is designed on the basis of a traditional block, it is highly robust as an individual element, its hydraulic stability is much better than the blocks traditionally used for the main armour of rubble mound breakwaters and it withstands waves better. Furthermore, it does not suffer from the many drawbacks and disadvantages of the conventional cubic block, the cost of production is less and, so, its energy and carbon footprint for large breakwaters is lower.



### << STUDY ON OPERATION OPTIMIZATION OF THE BILGE PLANT IN THE MADRID – BARAJAS AIRPORT

The project involves carrying out a study on operation optimization of the bilge plant at Madrid-Barajas Airport and making proposals and drawing up a project containing the activities required to optimise the plant's operations, adapting the effluent to the legislation currently in force.

The work done is as follows:

- Preparing a study of current environmental legislation concerning the treatment plant.
- Visiting the current plant and compiling operating data concerning the effluent coming from the aircraft that is discharged in the plant and the treated waste that flows out of it.
- Diagnosis of plant operations that is consistent with the qualities of the waters to be treated and the disposal requirements.
- Studying solutions and proposals for ways of dealing with the problems detected, as well as proposing optimisation and improvements.
- Developing the two options selected at a project level, in compliance with the following criterion:
  - Basic solution, the one that amounts to the lowest investment that enables those concerned to strictly comply with the legislation governing the plant effluent.
  - Optimum solution, which not only complies with the legislation currently in force, but also envisages certain improvements that can be justified.



### << CONTROL AND SUPERVISION OF THE RUNWAY ENLARGEMENT WORKS AT CORUÑA AIRPORT

The works involve extending the runway by 400 metres, this being planned on an embankment whose average height is 35 metres. The runway will be 45 m wide, with 7.5 m margins on either side. The strip associated with the runway will be 300 m wide (150 m on either side of its centreline) running for 60 m before each threshold. A flexible pavement will be used covering a surface area of about 30,000 m<sup>2</sup> for the enlargement of the runway. In the zone beyond the airport site, the CP-3104 road will be relocated, because part of it will be destroyed as a result of the extension.

The restoration and rehabilitation of the elements listed as being of cultural interest and that appear in the Environmental Impact Statement, also fall within the scope of the activities. A series of preventive and corrective actions are planned where environmental matters are concerned, to minimise and/or rectify the effects of the actions on the environment.

The services consists of Construction Management in matters concerning execution, economic and quality control, coordinating health & safety, auditing aeronautical safety, as well as making sure that the deadlines are complied with and supporting the Management of the Report.



### << TECHNICAL ASSISTANCE TO IMPROVE THE FACILITIES OF THE ENERGY DEPARTMENT OF THE BARCELONA AIRPORT

The work includes an initial analysis of the existing electrical facilities, planning works associated with the electricity mains network at Barcelona Airport during the current year, auditing, preparing reports and technical studies to improve the electrical facilities of the Airport at the request of the Airport's own Energy Department.

Eptisa is responsible for the control and supervision of the works and for giving technical assistances with regard to all activities associated with the Energy Department. This includes reviewing the construction design, the quality and quantitative control, as well as coordinate Occupational Health and Safety during the works, making sure that the standards currently in force are being complied. Eptisa also carries out environmental supervision in all the constructions, supervise the operating conditions at the Airport and the physical safety in the areas where works are being performed and facilities are being created, as well as auditing, preparing reports and technical studies for the different aspects in the field of electricity at Barcelona Airport.



# Water and the Environment



Water and Environment activity increased in 2011 reaching 28% of the total. In Spain our work has focused on engineering services for natural resource management and hydraulic infrastructure design in water supply and sanitation networks. In addition to projects in Spain, activity in the water sector in Europe has positioned us internationally as the benchmark engineering Consultancy Company in the sector.

In **Water Infrastructure** the detailed design was completed for the “Iberdrola” construction project for *Gouvães Hydroelectric Plant in Portugal, and the Detailed Design of Girabolhos Hydroelectric Plant on the river Mondego* for “Endesa Generación”, also framed within the National Reservoirs Programme with High Hydroelectric Potential (PNBEPH), which the Portuguese government is developing.

In 2011 we collaborated with “FCC” in the tender for the Fridão Hydroelectric Plant project in Portugal, offering the engineering services to support the drafting of bidding documents of specific works: Spillways of the Fridão dam and downstream dam, Power plant building and auxiliary buildings, urbanization, Landscape Restoration (LRP) and integration, various buildings (Dam Control, Sailing Club and Seismic Monitoring Stations) and Viaducts over dam spillways and bridges.

Also in the past year, we provided engineering services to support “OHL” in the concession tender for the Llanitos-Jicatuyo hydroelectric plant project in Honduras. The Los Llanitos hydroelectric power plant makes use of the Ulua River by the building of a concrete dam 111.25 m high and 628.8 m length. The work done by Eptisa also included a technical visit to the works implementation site and defining the geotechnical study campaign.

The Andalusia Water Agency awarded Eptisa, in a joint venture, a new project for *Technical Assistance to the construction management for quality control and health and safety supervision* of the works in the Negratín dam to improve the functionality of the spillway, recover gallery 618 and consolidate abutments.

With respect to *dam auscultation* works, we have worked in the dams of Puente de Santolea, Rosarito, Artziniega and Maroño, and Alcolea, and in the auscultation system improvements at the Gabriel y Galán Dam. We continue providing our services of maintenance and surveillance of

hydraulics infrastructure for the main Catchment Basin Authorities, Madrid Water Company “Canal de Isabel II” and the electric companies: Iberdrola and Eon.

Eptisa has implemented the *e-SayTI v6 software (SCADA system through Web browser)* and has developed the application for the control, management and implementation of *Emergency Plans* for the Enciso dam at the Ebro River Basin. This project is an example of our capability to develop innovative technological solutions to improve population warning systems in emergency plans for dams.

In *control, improvement and maintenance* of infrastructures we still have many commissions from Spain’s Public Authorities, such as the technical support for the Maintenance, Conservation and Operation of the Automatic Hydrological Information System (AHIS) in the Guadiana River basin. The works being carried out involve the conservation of the structures, as well as preventive and corrective maintenance of the metering and telecontrol systems of remote stations and the maintenance of information and telecommunications systems.

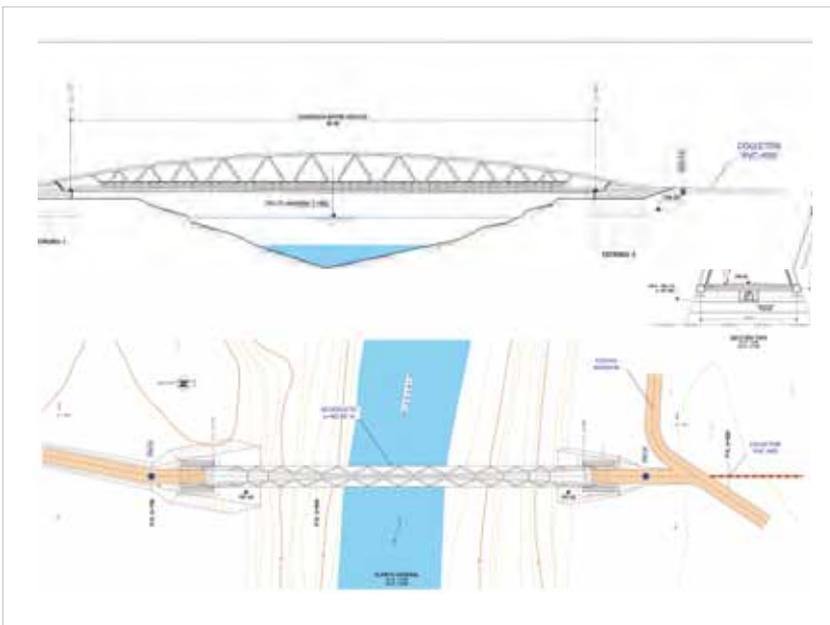
Throughout the year 2011, we have worked for the Public Authorities on the designs of works to improve *Water supply and sanitation infrastructures*.

In Castile and Leon, for the Duero River Basin Authority, we are undertaking the Aranda de Duero Project. The detailed design corresponds to the upgrading of sanitation facilities in the municipalities of Villalba de Duero and Fuentespina, with the construction of collector pipes which, while eliminating existing outflows, will conduct waste water from both municipalities to the Aranda de Duero water treatment plant for proper purification. It also includes works to improve sanitation in Aranda de Duero.

In Madrid, we signed a framework agreement with Canal de Isabel II, the Madrid Water Company, to design water supply infrastructure projects in the Region of Madrid. Within the contract, we developed two construction designs, one for the new discharge from the collection reservoir into the Jarosa and Navacerrada systems, (Villalba pumping station), and the other for reinforcing the east branch of the Torrelaguna system, between Torrelaguna and Valdeolmos-Alalpardo.

#### Aranda de Duero Project. Water Supply and Sanitation Infrastructure

In 2011 the works for the *Infrastructure from the Tajo-Segura aqueduct for supply water resources in the Manchega plain* project were completed, in which Eptisa participated in the infrastructure design, works supervision and providing technical assistance to the construction management. The works correspond to an infrastructure that is part of the drinking water supply to La Mancha plain through provision from the upper basin of the Tajo, and thereby to resolve the problems of a water supply deficient in quantity and quality for the region’s population, while decreasing the operational pressure on aquifers and contributing to their necessary recovery.



The Andalusia Water and Environment Agency awarded us a new contract for the *construction management of a supply network* to Huelva county and Doñana district. The project objective is to provide the necessary infrastructure to implement the transfer of 4.99 cubic hectometres from the Chanzas-Piedra Water System to the Guadalquivir one. This will allow enhanced the guarantee in the supply of urban water to the townships of the region of the Huelva County (over 81,000 inhabitants) and reduce pressure on the Almonte-Marimas aquifer by diminishing withdrawals for irrigation.

The work, which includes more than 19 kilometres of pipeline, will connect the reservoir of Lucena del Puerto with a new pumping station, which will drive the water to a regulation reservoir to be built in Rociana del Condado, with approximately 100,000 m<sup>3</sup> of capacity, to supply the irrigation areas. From there, another pumping station will drive water to the Drinking Water Treatment Plant of La Palma del Condado, to supply drinking water to the population.

In the water resources management field, Eptisa provides engineering services, technical assistance and planning and study support to the main Public Authorities to manage the **Hydrological Plans**, always using the latest technologies.

In the past year we have collaborated with the Duero River Basin Authority in drawing up the Hydrologic Plan Proposal for the Spanish part of the Duero hydrographical catchment area.

In the area of **Flood Risk Prevention**, we have provided technical assistance for the development of the National Cartography System of Flood Areas in the Hydrographical Region of Cantabria. The project responds to the new Royal Decree regulation for the Evaluation and Management of Flood Risks, the tasks being focussed on performing a preliminary flood risk evaluation, and then carrying out historical, geomorphological, hydrological and hydraulic studies to enable the production of hazard and risk maps in that region.

The task given to Eptisa involves the combination of both methodologies historical flood analysis and geomorphologic analysis with hydrological and hydraulic methodologies. The maps of the flood risk areas shall be prepared relying on a high-precision Digital Terrain Model, based on LIDAR technology, which will achieve highly detailed results, and also exploit the full potential of the hydraulic models.

This project is in addition to those already recently performed by Eptisa in Spain, Turkey and in Serbia. This is a growing business area within the company due to the increased flood risk that could result from climate change and the particular sensitivity of the European Union on the matter. In particular, this concern is reflected in Directive 2007/60/EC of the European Parliament and Council on the assessment and management of flood risks.



Landscape Recuperation and Integration project in the construction of Gouvães Hydroelectric Power plant in Portugal

In the field of **Hydro-geology**, we continue working for ADIF, the Spanish Railway Infrastructures Authority, in hydro-geological surveys of high-speed railway infrastructures. Specifically with the Secretary of State for Infrastructure and Planning of the Ministry of Public Works (Spain) we have signed a contract for carrying out field work, hydro-geological campaigns and studies related to railway infrastructure.

In the Basque Country, we are implementing a *Hydro-geological monitoring and control network* of the new Railway, specifically in the "Urnieta-Zizurkil" section.

This year we also worked on the *Study of the Interrelation of Rivers and Aquifers* in almost all the interregional water catchment basins in Spain. Within the contract, we carried out the studies of the water run-off volume of coastal aquifers of the Júcar systems. This study culminated in 2011 with the publication of two technical books.

Searching alternative energy sources and sustainable environmental solutions is one of our main concerns. Eptisa has participated in a hydro-geological study for the use of groundwater for geothermal HVAC systems.

In 2011, we have been very active in works of **Waste Water Treatment Plants (WWTP)**. In Spain we have continued with the activity of implementing and operating water treatment plants, covering the full cycle of a treatment facility, from the design, through detailed engineering, construction, equipment installation to commissioning.

In 2011 the works of the *Cuiña-San Cibrao WWTP* were completed, opened in March by the President of the Cantabrian River Basin Authority, Jorge Marquínez, along with other local government representatives. The Cuiña treatment plant has a capacity of 1,900 m<sup>3</sup>/day for a population equivalent of 8,000 inhabitants, and is equipped with the latest technology.

Eptisa built the Wastewater Treatment Plant, as well as the pumping facilities and storm tanks of the sewage system. The design and build contract carried out consisted in the complete development of the facilities mentioned: process design and detail engineering, construction, equipment installation and commissioning.

This project is the proof of Eptisa's experience in the field of Applied Engineering, which combines technical knowledge with the real implementation.

#### Wastewater Treatment Plant in Totana

The Councillor for Agriculture and Water in Murcia Regional Government, Antonio Cerdá, along with other Government and Municipal Corporation representatives opened the tertiary treatment facility of the WWTP in the municipality of Totana.



The Totana WWTP has a treatment capacity of 6,000 m<sup>3</sup>/day for a population equivalent of 34,000 inhabitants. The new infrastructure will allow reuse of all municipal wastewater for irrigation purposes, a cornerstone in the regional economy. Eptisa's activities included detail engineering of the civil works and equipment, installation and assembly of equipment and the operation.

During 2011 we worked on projects to improve the Water supply of Plasencia in Caceres, the works for remodelling of the filter line II of Carambolo Drinking Water Treatment Plant in Seville and the construction works of the Pontearreas DWTP in Pontevedra.

In Burgos Eptisa is offering consultancy and technical assistance services for prepare the tender specifications and support for appraisal of tenders submitted



Carambolo  
Drinking Water  
Treatment Plant

by bidders for the contract of works, as well as for the drafting of the detailed design, control and supervision works of the enlargement of the *Wastewater Treatment Plant in Burgos*.

The main problem with the current Burgos WWTP is that the treatment facilities do not cover the needs of the inhabitants for which they were designed, due to the population increase in the area. The plot of land on which the enlargement of the WWTP is located is opposite the plot occupied by the existing WWTP, on the left bank of the Arlanzón River. Access to the new plot is via the newly built road that runs from the existing sludge area to the pre-treatment sector of the enlargement (110 m). The river crossing is achieved by building a bridge.

In **Natural Environment** sector, we performed the environmental impact assessments associated with transport and water infrastructures.

During the year, we have conducted environmental noise studies included in the informative studies and detailed designs for roads and railways, such as the noise study of the modified project of the A-22, Lleida-Huesca. Section: Binéfar Bypass, as well as the acoustic impact study of the local commercial project in the township of Vilanova de Arosa in Pontevedra.

In the environmental integration activity, we worked in the *Landscape Recuperation and Integration project* in the construction of Gouvães Hydroelectric Power plant in Portugal.

Eptisa collaborates with public bodies on natural resources management. We are working on the operation of the *Water quality control system in lakes and reservoirs in the Júcar River Basin (JRB)*. The project's main objective is to operate the biological control network in lakes and reservoirs, within the range of the JRB, pursuant to the Water Framework Directive, and it will be carried out between 2011 and 2013.

In Galicia, we are working on the operation of the *Groundwater control system in the hydrographical sector of Galicia-Coast*. The objectives of the consultancy and assistance service conducted by Eptisa consist in determining the current status of groundwater quality, adopting preventive strategies against pollution, systematically monitoring the condition of the groundwater discharge, assessing compliance with current legislation and evaluating the effectiveness of measures taken to control and reduce pollution.

Within the scope of **Industrial Environment**, Eptisa has experience in municipal and industrial waste treatment projects and pollution prevention plans.

In 2011, we worked on studies of the potential for recovery of aluminium residue in incinerators, in research studies of soil contamination in plots for industrial use. As well as offering engineering



services for preparation of the tender for the operation, cleaning and maintenance of the plants of Cerceda environmental complex.

In the field of *quality control and industrial safety* we worked in Galicia in the inspection project of the first phase of decontamination of former galvanizing installations. The work carried out included the drafting and supervision of the waste removal project from facilities of the Agridesa Company in order to ensure proper implementation of this activity and minimize health risks and the environment according to the provisions of the legislation in force.

In Andalusia we are working on the turnkey project of remedial measures in the tailings deposit of the *Río Tinto Mine in Huelva*.

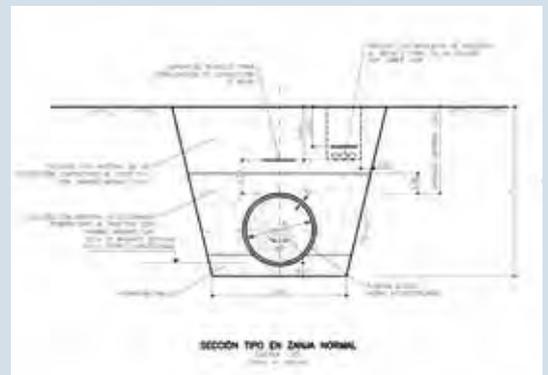
As a result of our commitment to the environment, at Eptisa we approach every project with the aim of finding the most suitable solution for reducing its environmental impact.



<< TECHNICAL ASSISTANCE TO THE CONSTRUCTION MANAGEMENT FOR QUALITY CONTROL, SAFETY AND HEALTH OF THE IMPROVEMENT WORKS AT THE NEGRATÍN DAM, GRANADA

The Andalusia Water Agency has awarded Eptisa, in a joint venture, a new technical assistance project to the construction management for the quality and health and safety control of the works for improving the functionality of the spillway, restoration of gallery 618 and consolidation of abutments at the Negratín Dam. This is a mixed gravity dam of concrete and embankment with asphalt screen, standing 75 metres high with 438.8 m in total length at the top. Its width is 10 m. The total volume of the embankment is 628,447 m<sup>3</sup>, and the concrete work is 432,669 m<sup>3</sup>.

The works supervision includes the consolidation of the left abutment from the Rastrillo Gallery and from the general access gallery and restoration of the left bank gallery.



^ TECHNICAL ASSISTANCE FOR DESIGNING WATER SUPPLY INFRASTRUCTURE PROJECTS IN THE REGION OF MADRID

Within the framework contract we developed two construction designs, one for reinforcing the east branch of the Torrelaguna system, between Torrelaguna and Valdeolmos-Alalpardo, and the other for the new discharge from the collection reservoir into the Jarosa and Navacerrada systems, (Villalba pumping station).

In the first case, the object of the works is the enlargement of the water supply network of the Torrelaguna System to ensure future demand for the 23 system-dependent municipalities with a total population of more than 110,000 inhabitants. Eptisa has designed the reinforcing pipeline of the eastern branch (Main pipeline of the Torrelaguna System).

The second project is aimed for improve and enlarge the upstream supply of the Navacerrada and Jarosa Systems to ensure future demand for 13 system-dependent municipalities, with a total population of more than 114,000 inhabitants. Eptisa has designed the new pumping station in Villalba and connections to the existing pipelines system.



<< AUSCULTATION OF ARTZINIEGA AND MAROÑO DAMS

Eptisa is carrying out the work involved in implementing the instrumentation projects of the Maroño and Artziniega dams in the towns of Ayala (Álava) and Valle de Mena (Burgos).

The project for both dams includes the installation of topographic monitoring instruments, sensors for measuring in foundation, weather stations, video surveillance system, gate states control, control of movements by pendulums, etc. All this is automated by Siemens PLCs and signals are sent to the control centre by telephone line, in addition to managing data locally using the Saytel program developed by Eptisa.



^ IMPLEMENTATION OF EMERGENCY PLANS: FLOOD EARLY WARNING SYSTEM

During 2011, the DSS-SayTL application (Decision Support System) was finished, completing the warning system in the event of severe incidents arising in the dams produced by earthquakes, floods, landslides, etc.

The DSS-SayTL system analyses the values of the representative parameters of the dam behaviour received automatically in the system or manual data entry by the operator. Based on these figures, and taking into account the Emergency Plan existing in the dam, it suggests an action scenario to the person responsible for the dam, guiding him at all times with the actions associated with the proposed scenario (phone calls, faxing, reports, inspection activities, etc.).

When the maximum level of alert is reached, the system can activate all the sirens distributed over the flooded area from the control centre.



^ TECHNICAL ASSISTANCE FOR THE DEVELOPMENT OF THE NATIONAL CARTOGRAPHY SYSTEM OF FLOOD AREAS IN THE NORTHERN SPANISH HYDROGRAPHICAL REGION OF CANTABRIA



^ DESIGN AND CONSTRUCTION OF THE TERTIARY TREATMENT FACILITY IN THE WWTP OF TOTANA, MURCIA

The Totana Waste Water Treatment Plant has an average daily flow of 6,000 m<sup>3</sup>/day to cover a population equivalent of 34,000 inhabitants. The new infrastructure will allow reuse all municipal wastewater for irrigation purposes, a cornerstone in the economy of the region. The treatment system will provide completely clean water, free of pathogens and bacteria, which make its reuse possible.

The project and construction contract carried out consisted in the complete development of the facilities mentioned: process design and detailed engineering, construction, equipment assembly and operation.

The project aims at developing a preliminary analysis of flood prone areas and preparing flood risk maps for the sector covering the Hydrographical Region of Cantabria as designated by Royal Decree 903/2010, July 9, concerning evaluation and management of flood risks.

Eptisa services include the preliminary flood risk evaluation and selection of sections to study over the entire area of the Hydrographical Region of Cantabria, a historical flood study and the compiling of historical information in the sectors under study; performing a LIDAR flight over the stretches of river under study; processing the LIDAR data; geomorphological study of the sectors under study; review and adaptation of existing hydrological studies; the hydraulic study using two-dimensional models; the definition of PHD (public hydraulic domain) and flood prone areas in the study areas and mapping in a format compatible with all the river basins authorities; and drafting and publishing the final report.



<< TECHNICAL ASSISTANCE AND WORKS SUPERVISION OF THE WATER INFRASTRUCTURE FOR SUPPLY WATER RESOURCE FROM THE TAJO-SEGURA AQUEDUCT IN THE MANCHEGA PLAIN

In 2011 was completed the project for the construction of a water infrastructure pipeline from the Tajo-Segura Aqueduct for the supply of water resources to La Mancha plain, in which Eptisa participated in the design and in the technical assistance and works supervision. The total value of the work amounts to more than Euro 157 million.

The works included in this project are the regulation reservoir, the water distribution pipeline system and the infrastructures associated.

Eptisa's activities performed during the supervision works contract were: analysis of the construction design, analysis of works award contracts, preparation of the Quality Assurance Plan, study and supervision of work program, documentation control, follow-up of equipment calibration program, control and supervision of the works, budget supervision, performing contrast testing with own laboratory facility

on site and support the design of modified and complementary projects and technical assistance on geotechnical study: soils, foundations, structures, buildings and facilities...

And we have also provided inspection services for environmental protection in the infrastructure, including: assistance, environmental monitoring and supervision, restoration of the natural environment, conservation of the archaeological and paleontological heritage (Roman ruins of Segóbriga).



<< HYDRO-GEOLOGICAL CONTROL AND MONITORING SYSTEM OF THE NEW RAILWAY NETWORK IN THE BASQUE COUNTRY. SECTION: ZIZURKIL - URNIETA, GUIPUZKOA

The aquifer formations will suffer the impact of the construction process of the High Speed Line in the Zizurkil-Urnieta Section. And it is proposed to prepare a Monitoring and Control Plan to verify and/or correct the conclusions reached in the prior hydro-geological study and continue during the construction phase of the railway platform in order to understand the behaviour and evolution of groundwater in the aquifers crossed in the Zizurkil-Urnieta stretch during the performance of the work.

The objectives proposed are to improve the hydro-geological knowing of the zone, establish the previous state of the aquifer before the works, characterizing its natural variations of phreatic levels and discharge springs, improve the knowledge of the actual use of aquifer resources, and have a control infrastructure that really establishes the effects that the work actually has on the aquifer once it begins, and also to control the recovery of the aquifer's natural state after completion.



<< ENLARGEMENT OF THE WASTEWATER TREATMENT PLANT OF BURGOS

Eptisa is offering consultancy and technical assistance services for preparation of the tender specifications and support in the appraisal of tenders submitted by bidders for the contract of works, as well as for the detailed design, control and supervision of the work to enlarge the Burgos Wastewater Treatment Plant.

The plot of land on which the enlargement of the WWTP is located is opposite the plot occupied by the existing WWTP, on the left bank of the river Arlanzón. Access to the new plot is made via the newly road that runs from the existing sludge area to the pre-treatment sector of the enlargement. The river crossing is achieved by building a bridge.

The solution comprises the following elements: water pipeline, incoming works that receive the collector pipe, sludge line, consisting of various elements (gravity thickeners, floater, digesters), in addition to the structure and the urbanization.



#### ^ WATER QUALITY CONTROL SYSTEM USING BIOTIC INDEXES IN THE JÚCAR RIVER BASIN.

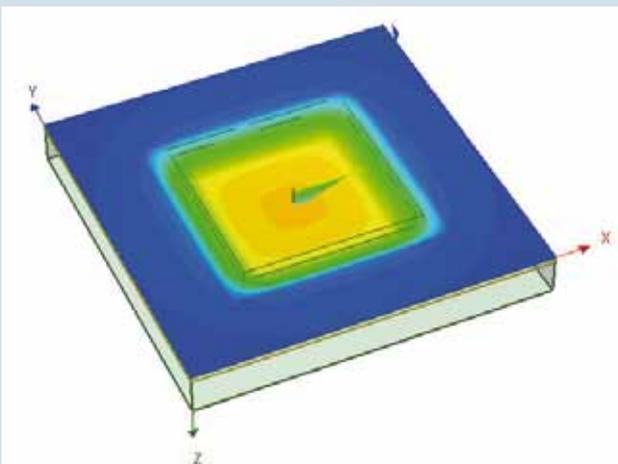
The Ministry of Environment and Rural and Marine Affairs (MARM), through the General Directorate for Water, has awarded to the joint venture formed by Eptisa and Laboratories Vidal the technical assistance for the implementation of the water quality monitoring network project in the area of the Júcar River Basin (JRB).

The work include the implementation of the water quality control and monitoring system in interior lakes (14 control stations) and in the shallow coastal lagoons and wetlands (21 control stations) and the reservoirs network (29 reservoirs by establishing, according to their characteristics, one to three stations per reservoir), in order to perform sampling in the water column, sediment and biota.

In the case of interior lakes and coastal lagoons, they will be monitored twice a year, with samples in the water column, sediment and biota. All stations must measure all biological quality elements. Moreover, in all points with sufficient depth, physicochemical profiles will be developed on site, the Secchi disk depth will be measured and samples will be taken for physicochemical and biological analysis.

Four surveys will be conducted annually in the reservoir control network, together with two other specific summer campaigns in those reservoirs where environmental incidents could occur during the summer.

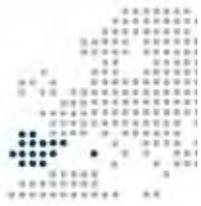
The information obtained will allow determining the ecological status and/or ecological potential of these water bodies, according to the Water Framework Directive and the Spanish regulations.



#### << CONSOLIDATION STUDY AND ANALYSIS OF CONSTRUCTION ALTERNATIVES ON SLUDGE PONDS AT THE AGGREGATES OPERATION CENTRE IN LA PLISAN, VIGO

The work carried out to understand the geological-geotechnical characteristics of the area in order to study the behaviour of the sludge ponds included drilling four boreholes with specimen recovery, the execution of four static core penetration tests with piezocone (CPTU), the performance of static penetration tests (SPT), conducting Vane tests, carrying out laboratory tests (sieve analysis, Atterberg limits, determination of natural moisture content and oedometer tests and organic matter content), the calculation of total consolidation settlement and development time in sludge pond areas occupied by roadways, drainage facilities and electrical conduits and the analysis of potential soil-improvement treatments.





## Building, Energy and Industry

The Eptisa building activity has adapted to the new market needs. Regarding specific actions, over the last few years a move has been made to a service scheme based on engineering intervention such as Project or Construction Management.

We have been expanding our services and now include integrated management of construction projects. This is intended to complete the cycle, including the execution of Turn-key works. We therefore assume full responsibility for the construction process.

In 2011, Eptisa became the client's best partner for guaranteeing installation energy savings and efficiency. The idea is to foster a sustainability model through energy efficiency and the use of renewable energy sources. Some of the actions carried out are searching for techniques to make buildings self-sufficient with renewable energy generators or to propose installation improvements to save electricity. We can therefore affirm that Eptisa is contributing to the task of client installation accreditation in the main certifications in market sustainability, for example Leed.

Throughout the last year, we continue with engineering and architecture projects in the **Industrial** sector, primarily for the aeronautical industry. As an example, we work for Airbus in Getafe, Madrid. This project consists of reconditioning a 7,850 square-metre plant for the implementation of an automatic production line for section S19 of the new A350 model. The Eptisa services include the design of the project and construction management, which includes structure and foundation jobs for the new machinery and installations.

We have continued with the works linked to the execution project of the ITP building for aircraft engine maintenance in the Andalusia Technology Park.

### Aeronautical plant in Getafe, Madrid

In Catalonia, Eptisa has taken on responsibility for the *Movement and Implementation of the warehouse of the German company Mewa* that has been our client since 1998, and therefore its reference engineering company in the implementation in the Catalan market and for the rest of Spain since 2010.



In Galicia, we developed the construction project of twenty industrial buildings, and the "Manzana M50" street in the Porto de Molle business park in Nigrán, Pontevedra. In order to minimise its environmental impact, the roof is vegetable, which means the constructions have an organic behaviour following nature rhythm, which contributes to energy saving. Photovoltaic panels were installed on inclined roofs and natural lighting was provided by windows as well as a skylight.

In the **Logistics** sector during 2011, we completed the construction works for the *Goods and Logistics Platform* for the company Gadsis in Medina del Campo, Valladolid. Three years of work and a four million Euro investment enabled the execution of a project that



The Balenciaga Museum, Guipuzkoa

Central Zaragoza Courthouse

was co-financed by Gadisa, the European Regional Development Fund, the Castilla and León regional government and the Ministry of Economy and Finance. Eptisa was responsible for the management of both the design and construction process.

In 2011, we worked in several projects in the Basque Country within the **Singular Building** sector. *The Balenciaga Museum* was officially opened in Getaria, Guipúzcoa. Eptisa took part in the design of the building structure project and the construction management. This is the first museum that is wholly dedicated to an haute couture fashion designer. The exhibition area is housed in two interconnected buildings; one of them is newly constructed and is joined to the renovated Aldamar Palace.

In San Sebastian we are working in the integrated management for the construction project of the *Cultural Centre at the old Tabacalera* for the International Centre for Contemporary Culture. The works involve the architectonic renovation of the old tobacco factory for its transformation into a cultural centre. The project contemplates several spaces and uses within its 26,000 square metres constructed surface area.

In El Ferrol, we carried out the technical assistance for the Project Management during the construction of the new *auditorium*.

In Barcelona, we participated in the transformation project for the historic Sant Pau and Santa Creu Hospital building, which was declared patrimony of humanity by UNESCO in 1997. In 2009 commenced the project for transferring the clinical activities to the new hospital, thus embarking the rehabilitation of the modernist pavilions and the conversion of the space for cultural use. Because of its worldwide significance, this transformation project is following parameters for the control and efficient use of energy by incorporating the latest, innovating geothermal energy usage techniques.

Regarding the Buildings for Public service, Eptisa is working in the construction management for the reconversion of building constructed for housed international pavilions in the Expo Zaragoza 2008 International Exhibition for use as the Central Zaragoza Courthouse.

ADIF, the Spanish Railways Infrastructure Authority has awarded Eptisa, in consortium with “Junquera Arquitectos” and “Calter Ingeniería”, the contract for the preliminary and detailed design of the artistic identity for the new intermodal station project in Lugo, as well the construction management.

With respect to *Quality and Industrial Safety activities*, in the Basque Country, Eptisa has participated in the quality control of the construction materials of the two buildings to house the General Treasury of Social Security in San Sebastian and Vitoria.



“San Ignacio” Sports Centre, Bilbao

In San Sebastian, this is a U-shaped public administration building, with an approximate constructed surface area of 21,000 square metres.

In 2011, Eptisa also took part in two significant works for the adaptation and construction of **Public Spaces** in Madrid and Barcelona.

The *Madrid-Rio project* was designed to provide a gardened surface over the Ring-road “M30” tunnels and was completed in March with the inauguration by the Mayor of Madrid Alberto Ruiz-Gallardón, of the works for the new surroundings to the Hermitage of the “Virgen del Puerto”. Eptisa has been supervising the project since April 2010.

Eptisa continues with the activities in Catalonia that correspond to the integrated works supervision and senior technical architectural management services for the “Illa Guinardó” Project. These works include the construction of a Medical Centre, a Day Centre, and a Home for the Elderly, together with a nursery, a parking, a municipal marketplace, a retail centre, a youth centre, 44 homes and the urban development of the entire 25,922 square metres site.

During 2011, we participated in the works for the “San Ignacio” Sports Centre in Bilbao, Basque Country. Eptisa also carried out the design and works management for the recovery, together with the construction of new tracks and the solar photovoltaic roof. Throughout the project, Eptisa provided project management services and technical assistance for the installation.

We have also developed a project in the Basque Country for the constructions works of the “Portugalete Municipal” Sports Complex in Vizcaya, with 17,144 square metres of buildings and 3,000 of outside sports equipment. The building houses multi-sports tracks, swimming pools, thermal baths, fitness rooms, cafeteria and parking space. There are also outside swimming pools and paddle tennis courts.

In the **R+D** sector, Eptisa has been working on the construction of an experimental infrastructure building for smart electrical grids in the Bizkaia Technology Park. The developed activities involve the detailed study, basic and construction design, works supervision and project management. The laboratory and technical rooms occupy 2,346 square metres, with 511 square metres of offices and 376 of underground parking.

Regarding the **Hospital** sector, in 2011 Eptisa worked for Horizon (a joint venture between FCC, Interserve and John Laing) on the competitive dialogue tender for design, construction, and finance, operate and maintain a hospital in the city of Liverpool (United Kingdom).

Eptisa is responsible for the integrated management of the construction of a health equipment complex made up of two 7-storey buildings in the Sarria district of Barcelona. The first building



will contain the health care centre and the second - with support from the Fundación Auxilia - will include a residence and a day-centre for mentally and physically ill patients.

Eptisa has taken part in the works for the new *Toledo Hospital in Castilla-La Mancha*, carrying out the quality control of the constructions materials. There are 364,142 square metres of constructed surface area, with 774 beds, 36 operating theatres, 200 consultancies, 81 ICU beds and various rooms containing magnetic resonance, CAT and conventional X-ray equipment, together with fully digitised image diagnosis.

Eptisa has worked for the Andalusian Health Service, performing reviews of the execution projects for the new High Resolution Hospital Centre in Torremolinos, Málaga. Also in the new Jerez-2 Health Centre and in the new radiotherapy and teaching building for the Jerez de la Frontera General Hospital in Cadiz.

Within the **Hotel** sector, the Hotel “Alma” of Barcelona was opened in Barcelona in June 2011, in which Eptisa was responsible for the installations project and operations licence.

With respect to **Commercial Distribution**, in 2011 Eptisa carried out the project management for the remodelling works of the Planetocio Shopping Centre in Collado Villalba, Madrid. We also worked on project management for the new Portuguese Sonae shops.

Within the **Residential** sector, Eptisa provided technical advice to financial entities on property promotion - known as project monitoring - Eptisa carried out advance monitoring of the works and verification that the amounts paid by the financial bodies corresponded to the executed work.

In the **Energy** sector, we provided engineering services for the development of alternative energies sources and energy efficiency. Concern for the environment leads new solutions for an environmentally construction, such as green building, the use of renewable energies and efficient and energy savings installations.

During 2011 and within the project management of the works and installations for the El Mirador Shopping Centre in the Jinámar Maritime Park in Las Palmas, Eptisa worked in the installation of a wind turbine energy generator. In addition to this operation, which was exemplary from the perspective of renewable energy usage as well as its original publicity support, management systems were installed for lighting, air-conditioning and ventilation in order to improve energy efficiency of the “El Mirador” shopping centre building.



The General Treasury of Social Security in Vitoria

In the Basque Country and within the Portugalete Sports Complex project, the works management services included the installation of air-conditioning system based in renewable energy to improve energy efficiency of the facilities.

With respect to the development of **alternative energies** sources during 2011, we worked on the construction and putting into operation of the Guipúzcoa Waste Management Centre (GWMC). The Waste Management Centre is made up of a mechanical biological treatment plant (MBT) and a Waste-to-Energy Facility.

In 2011, we also participated in the bidding projects for a COGERSA Waste-to-Energy Facility, in addition to the preparation of the basic project for another one for the GHK energy company.

In the **instrumentation and monitoring services** and within the framework of the construction works for a new parking lot in the centre of Barcelona, Eptisa carried out the surface installation of seismic measurement equipment for monitoring vibration induced in nearby buildings. The results show that those constructions adjacent to the works will not have to withstand any levels of vibration that could affect their structures.



^ MOVEMENT AND IMPLEMENTATION OF THE INDUSTRIAL WAREHOUSE OF THE GERMAN COMPANY MEWA, BARCELONA

Eptisa took on responsibility for the movement and implementation of the warehouse belonging to the German company Mewa. This German firm hires out cleaning cloths, supplies clotting and protection equipment to industry, workshops, catering, commercial premises and public institutions.

Mewa has 4,100 employees working at 41 branches in twelve European countries. Three of these branches are in the Spanish cities of Madrid, Amorebieta in Vizcaya and Viladecans in Barcelona. The Mewa Viladecans branch includes the company headquarters in Spain, together with the warehouse with a total of 2,600 square metres.



^ CONSTRUCTION PROJECT OF TWENTY INDUSTRIAL BUILDINGS AND THE STREET MANZANA M5 IN THE "PORTO DO MOLLE" BUSINESS PARK IN NIGRÁN, PONTEVEDRA

Modular buildings for offices were constructed in Vigo Zona Franca. In order to minimize environmental impact, the roof is vegetable which means the constructions have an organic behaviour following nature rhythm, which contributes to energy saving. This is a common factor in the works carried out by Eptisa in this area and it has a positive effect on oxygen production and building thermal insulation. Thus, it also contributes to energy saving and environmental improvement; two practical examples of this are the inclined roofs, which have photovoltaic panels and allow natural lighting through windows and a skylight.

Eptisa provided technical assistance to the Project Management during works execution. To this end, we have carried out control, monitoring and data collection tasks, together with the supervision of modified design, cost control and execution terms. Lastly we have supervised the control plans, geometric control, reporting and the drawing up of supervision reports at the end of the works.

<< CONSTRUCTION OF A NEW AUDITORIUM IN EL FERROL, A CORUÑA

The auditorium has nine hundred seats installed, all very comfortable, together with all the services associated to the installation. The building includes a meeting room, a choir practice room and preparation cabins, in addition to dressing rooms, wardrobe and cafeteria. The excellent auditorium location, with views over the city of Ferrol and the Atlantic Sea, is aiding the auditorium in becoming the principal cultural infrastructure in the municipality, with the opportunity to house all types of events; from operas to theatre play and rock concerts. All this is framed within a cutting-edge building occupying some 7,000 square metres.

The job carried out by Eptisa was centred on providing technical assistance to the Project Management during works execution.



<< THE HISTORIC SANT PAU AND SANTA CREU BUILDING IN BARCELONA

The historic Sant Pau and Santa Creu enclosure, which was declared World Heritage by UNESCO in 1997, started in 2009 the movement of the clinical activities to the new hospital.

Eptisa has been collaborating with the Sant Pau and Santa Creu Foundation since 2009. The works are mainly centred on the definition of the Electrical Infrastructure Master Plan, the design and execution of over five kilometres of MV distribution wiring and the five double transformer substations. All this is aimed at providing a total proposed power exceeding 5,000 kW. The project contemplates a layout based on prisms that are perimetral to the enclosure in combination with the existing gallery network that used to be the connection between the various pavilions or sanatoriums.



<< THE SOCIAL SECURITY TREASURY BUILDING IN SAN SEBASTIÁN

This is a U-shaped public administration building. The building consists of three basement levels and five storeys above the grade line, together with a roof, with a constructed area of 21,000 square metres. It also has six lifts and includes all the facilities required by a building of this type: lighting and air-conditioning, etc. The foundation consists of cut-off walls and a slab of 1.1 metres thick. In addition, the structure contains reinforced concrete slabs and columns. The facade is a curtain wall and the southeast corner is of prefabricated concrete. The work carried out by Eptisa consisted of quality control for the construction materials.



^ ILLA GUINARDÓ PROJECT, BARCELONA

Eptisa continues with the activities that correspond to the integrated works supervision and senior technical architectural management services for the Illa Guinardó Project. These works include the construction of a Medical centre, a day centre, and home for the elderly, together with a nursery, a parking, a municipal market, a retail centre, a youth centre, 44 homes and the urban development of the entire 25,922 square metres site.

2011 saw the completion of the works for the compact, rectangular and longitudinal building, comprising a ground floor, for a childcare centre, and two upper floors, both for primary care centres. Of all the other works, the foundation and structure stage is finished and total completion is expected in the middle of 2012.

The Eptisa activities, included in the Integrated Works Supervision and Senior Technical Architectural Management services, are technical assistance to the property during the phases of design, construction design review, and works licence management. Eptisa provided technical assistance for the procurement management, carrying out the control and supervision of tender documentation, the bidding document review, and the technical evaluation of tenders, together with contract review. During the construction phase, Eptisa coordinated the works of the technical management, construction company, control and public authorities, and other collaborators and contractors.



^ THE INTERMODAL STATION IN LUGO, GALICIA

ADIF, the Spanish Railways Infrastructure Authority has awarded Eptisa, in consortium with "Junquera Arquitectos" and "Calter Ingenieria", the contract for the preliminary and detailed design of the artistic identity for the new intermodal station project in Lugo, as well the construction management.

The project includes the construction of a new passenger building that will have an approximate area of 1,300 square metres, in addition to a building for the bus station and the redesigning of the railway installation complex to favour intermodal with other modes of transport. Moreover, together with the planned services, in the contract is included the redesign of various installations, such as cafeteria, parking, offices and retail locals.



^ MADRID RIO PROJECT

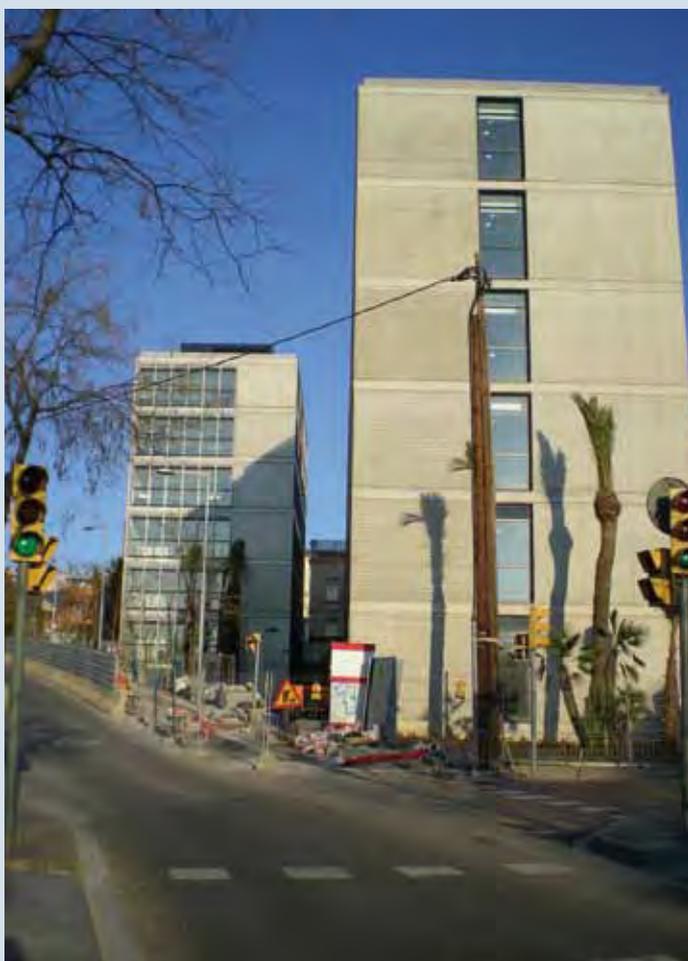
The Madrid-Rio project was designed to provide a gardened surface over the Ring-road "M30" tunnels and was completed in March with the inauguration by the Mayor of Madrid Alberto Ruiz-Gallardón, of the works for the new surroundings to the Hermitage of the "Virgen del Puerto". Eptisa has been supervising the project since April 2010.

The works at the "Ermita de la Virgen del Puerto" have returned 67,000 square metres of public space to the citizens of Madrid. The "Casa de Campo" becomes an integrated park that is accessible from the city. Moreover, the Portugal Avenue is now a boulevard full of cherry trees, the "Huerta de la Partida" is an open plantation with more than 800 fruit trees and the "Ermita de la Virgen del Puerto" is a historic heritage reference. The historical Segovia Bridge will no longer carry traffic, and its views are changing to a landscape of gardens, pools and fountains that lead onto the King's esplanade, which would make an excellent stage for significant social and cultural events.

It is now possible to enjoy 927,000 square metres of Madrid Rio. The project includes 33,000 trees planted and a big space for cultural events in the building of the old slaughterhouse of Madrid. Ten kilometres of cycle paths have been constructed for sports practice. Regarding culture and historic buildings, the project recovered nearly one hundred monuments, such as the "Ermita de la Virgen del Puerto" and the Rey, Toledo and Segovia bridges. Lastly, in the Rio Interpretation Centre the visitors can consult all the information about the new urban space.

Eptisa activities included the works supervision of 85,000 square metres in the new park. These hold parks, a football field, a skating park and an exhibition centre.

<< CONSTRUCTION OF A HEALTH CARE CENTRE IN THE SARRIÀ DISTRICT OF BARCELONA



Eptisa is responsible for the integrated supervision of the construction works for a health care centre made up of two 7-storey buildings in the Sarrià district. The first building will contain the primary health care centre and the second, with support from the Auxilia Foundation, will include a home for the elderly and a day-care centre for mentally and physically ill patients.

Within the integrated works supervision, Eptisa's activities include technical assistance to the property during the project design phase and the project implementation phase, carrying out the coordination between the various collaborating agents: technical management, construction company, control organisations and other collaborators and contractors. Eptisa also provided with construction management services, quality control and technical assistance after the execution, including putting the buildings into operation.



^ ENERGY AND ENVIRONMENTAL SUSTAINABILITY PROJECT, HOTEL ALMA, BARCELONA

^ REMODELLING OF THE PLANETOCIO SHOPPING CENTRE, MADRID

The Hotel Alma-Barcelona is located in the Eixample district of Barcelona, only a few steps away from Passeig de Gràcia, right in the centre of the city. This is a stately building from the beginning of the twentieth century with a facade that has been completely restored. Inside, there are 72 rooms, 16 executive suites and two suites.

Eptisa is carrying out the Project Management of the remodelling works of the Planetocio shopping centre in Collado Villalba, Madrid.

The installations designed by Eptisa combine the implementation of energy sustainability measures using the latest technology equipment that provides excellence in terms of comfort and energy saving, such as the large-scale use of LED lighting, using air-conditioning plants with energy recovery with class "A" efficiency, solar domestic hot water (DHW) production with vacuum technology and high-performance condensation boilers. The combination of these technologies provides guaranteed reduction of CO2 emissions into the atmosphere. Moreover, the building is designed to be centrally managed, making use of optimisation routines that enable constant operating and consumption curve tracking that allows improvements and future optimisation to be introduced.

The aim of the works, that cover an area of 25,200 square metres, is to improve the functionality of the centre, optimising the available spaces and achieve a better usage of the exterior areas.

The first phase has been ongoing since June and consists of various jobs. The 7,200 square metres of the first floor includes new quality finishes and more extensive spaces. The second stage will apply to an area of 7,000 square metres that includes the ground floor and accesses to the parking floors. Lastly, the third stage includes the remodelling of the exterior zone and parking accesses, giving a total of 11,000 square metres.

In addition to the Project Management, Eptisa has drawn up the basic and detailed design, the drawing up of the waste management, health and safety studies and licences management.



^ ENERGY EFFICIENCY ACTION IN THE WORKS EXECUTION MANAGEMENT OF THE PORTUGALETE SPORTS COMPLEX IN BIZKAIA

^ WASTE MANAGEMENT CENTRE IN GUIPUZKOA

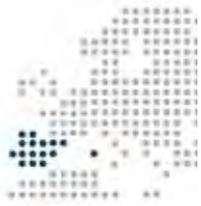
Within the Portugalete Sports Complex project, the works management services included the installation of air-conditioning system based in renewable energy to improve energy efficiency of the facilities.

The Waste Management Centre in Guipuzkoa (CGRG in Spanish) comprises a mechanical biological treatment plant that includes a bio-drying and refining process, in addition to a waste-to-energy plant divided into two evaluation lines with a 320,000 tonne per year capability. The project incorporates the necessary auxiliary installations, such as accesses, weighing machines, water treatment, compressed air, tanks, additive silos, grinder, packer, district heating, etc.

This work refers to the following four systems: Geo-thermal System for the building air-conditioning, Solar Heat Collector on the roof for the DHW production and the swimming pool water heating system, and an integrated management system for the lighting, ventilation and air-conditioning.

The Eptisa activities include the drawing up of the basic and construction design, technical assistance to the Project Management Unit, together with detailed engineering design, as-built documentation and the installation, putting into operation and maintenance.





# Information Technologies



The Information Technology activity in Eptisa represented 7% of the total in 2011. We underwent the decrease of public investment throughout the year, so the work focused on diversifying both products and services, in order to access to new private market. As well as we started the internationalization of the activity.

The Spanish Multi-Sector Association of Electronics, Information and Communications Technologies, Telecommunications and Digital Content Companies (AMETIC) announced that the degree of penetration of the technologies in companies was 43.5 per cent in 2011, which amounted to an increase of 6.5 when compared to the previous year. It is the biggest upward trend in the past four years.

In view of the results, we are confident that the sector will recover over in the next few years. The investment in technology and innovation are crucial factors for a sustained and sustainable growth of our economy.

Our commitment to the client and an ongoing desire to improve yielded a new certificate, which was awarded in 2011, namely the **CMMI Certification (Capability Maturity Model Integration)**, which is a process improvement approach that provides companies with essential elements of effective processes involved in software engineering, system engineering, product development and the acquisition of applications.

At Eptisa, we regard quality as an essential part of the projects that we carry out for our clients, which is why we are proud to have fulfilled our aim, that of implementing CMMI, acquiring a maturity Level 2 for all our project development areas and a capacity Level 3 for the areas that we consider to be key areas: Project Planning, Project Monitoring and Control, Requirement Management, Requirement Development, Technical Solution, Product Integration, Verification, Validation, Configuration Management, Product and Process Quality Assurance, Measurements and Analysis.

A few years ago we initiated the process of internationalising the activity and in 2011 we participated in two projects in Georgia and Costa Rica.

## Geographic Information Systems

Geographic Information Systems manages the geo-referenced information of the organisation, analyze the attributes and display the results on a map that makes the decision-making process easier.

As a result of the work with our partner and leader in technology, Esri Inc, Esri Spain celebrated the 20 years operating in Spain. Our aim is to enhance the use of GIS technology in the society. In 2011, the new and revolutionary version of the products, *ArcGIS 10*, proved to be a success, because it improved the users' experience and increased functionality to create mobile applications and made GIS possible in the cloud: *Cloud GIS*.



European Esri  
User Conference

To coincide with the 20th anniversary, in October we organised the **European Esri Conference** in Madrid. There were more than 3,000 participants, and over 950 organisations and 60 countries took part. From the company's viewpoint, it was a milestone for the organisation, because this event proved to be the biggest GIS encounter in Europe, in view of the number of persons and organisations attending, the quality of the presentations and the exchange of technical know-how.

Where products were concerned, we organised a programme of *technical seminars* aimed to show the innovative aspects of the new version. The fact that a total of 17 seminars were held, and that these were attended by an average of 80 people per day, meant that this programme was a success.

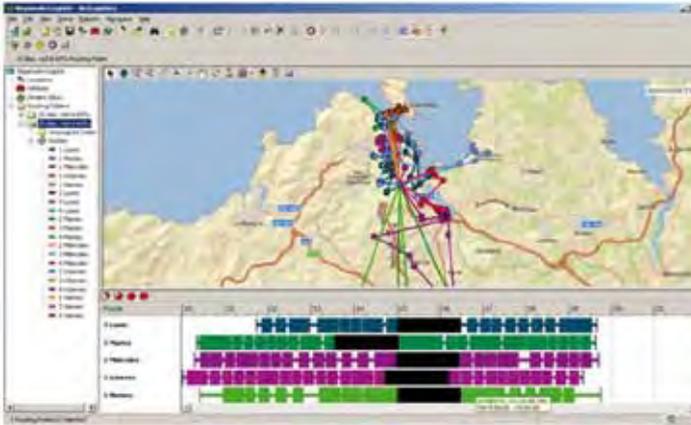
2011 in the **digital content production** was a vital year for generating and sharing maps. After having launched the ArcGIS.com content platform, Esri implemented a collection of social maps. The first one, entitled *Votes and Figures* and the second one, the map monitoring the Lorca earthquake, revealed the value of the portal and the cloud architecture for monitoring events that have an effect on society.

*Votes and Figures* became the project of the year. On the occasion of the general elections and the Regional Elections, a cloud solution was developed that enabled its users to follow the elections results. The visor, which can be accessed via [www.votosycifras.com](http://www.votosycifras.com), was used by the mass media, for example by El Mundo, which amounted to a considerable step forward where the value of GIS to the media was concerned.

On a technical view, *Votes and Figures* stressed the importance of the cloud architecture in Geographical Information Systems. The application, which supported peaks of 4,000,000 accesses, was awarded a prize by Esri Inc. at the International Conference of Esri Users, which was held in July in the Californian city of San Diego.

2011 was also a major year for **training services**, because we put into practice the first edition of Master GIS and also AularGIS, an on-line platform through which our users can access a wide range of training material.

In 2011, even though the new applications and projects in the **public sector** suffered a major disinvestment, it continues to be our principal market. The corporate agreement is a solution that makes it possible to access software and services at a fixed price. This help to keep our users loyal and existing applications updated.



GIS Application for routing



Social Map: Votes&amp;Figures

The National Institute of Statistics (INE) commissioned a Joint Venture (UTE) comprising several companies, including Eptisa, to carry out the services for developing and putting into production the information system for collecting data for the Population and Housing Censuses (2011), whose data collection phase commenced in 2010. Furthermore, Esri technology was selected to process the information.

The 2011 Census is the seventeenth one to be conducted in Spain. On this occasion, there are included a new digital mapping and advanced GIS tools. Furthermore, a multi-channel and multi-language platform has been made available to the general public.

Where logistics are concerned, the INE also includes important new innovations such as the use of mobile devices and georeferenced information, which makes it possible to improve the activities of those who conduct the census, optimising time and costs. These innovations include the synchronisation of the collected data in real time, the geo-referencing of all the buildings and encouraging the use of information from administrative records.

In 2011, in the **public safety** sector, the Traffic General Directorate (DGT) selected us to develop and implement the first version of the Geographical Information System for the Road Traffic Management (GIS-GTM).

The application provides functionalities for querying, location, classification, trend, distribution and modernisation.

The GIS-GTM is a vital tool for enabling the DGT personnel to improve decision making when it comes to road traffic management. It also enables the user to improve the detection of accident black spots and find out about the situations affecting roads in real time anywhere in the country through an easy-to-use interface. The GIS-GTM includes routing tool, a map-viewer and printing functionality.

The Emergency and Public Safety General Directorate of Madrid City Council has also put its trust in us to manage the maintenance of the Geographical Information Service of the CISEM (Madrid Integrated Emergency and Safety Service), which includes the updating of the geographical information that is associated with the emergencies, as well as for developing and evolving the applications used.

In the private area and for the **logistics** sector, we were awarded the contract by Begano, one of the seven companies that bottle products under the brand name of the Coca-Cola Company. Its activities focus on manufacturing, selling and distributing soft drinks. We have helped its marketing department with a GIS tool for planning optimised routes for its sales and marketing force.

By using the GIS System, Begano can plan the most efficient routes to visit many locations and fulfilling its business requirements. Therefore, the company can improve the efficiency of its sales force.

In the **Water** sector, we continue working for the Water Agency of the Region of Madrid, *Canal de Isabel II*, which entrusted us with the maintenance of all its GIS and mobility applications for the next two years.

In the **Health** sector, Eptisa forms part of a consortium, which collaborates with the University of Salamanca and the Health Department of the Region of Castilla y Leon in developing a pioneer project "Higia": an intelligent platform for managing and monitoring patients, health personnel, and assets, in hospitals. The aim of which is to improve patient health care and help the management of health care personnel.

This application enables its users to centralise and manage intelligently and more efficiently the information about the patients and the various health resources by integrating its geographic location in the management system. This leads to an optimisation of both physical and human resources, thereby bringing about economic saving and improving health care quality.

### IT Solutions: Enterprise Search and Content Management System

Throughout 2011, our alliances with Microsoft and Google consolidated our position to offer our clients the best solutions.

The years of experience with search technology have enabled us to develop a solution for analysing the positioning of a brand in the internet environment. The product provides all the functionality to the corporate communication managers for monitoring the brand perception in the social networks, blogs, etc. All that is needed is a browser to follow on-line the comments made about our products and the way they are perceived by internet users. So that advertising campaigns can be planned taking all this into account.

In collaboration with Google, in 2011, we designed a campaign for promoting Google Apps technology-based products. The solution enables the user to access to email and search tools and company management application at a price that small and medium-sized companies can afford. Eptisa adapts these solutions to the companies' requirements and their necessities, regardless of their size and giving them added-value services.

In Spain, we are still the benchmark company in the implementation of both Intranet and Web search solutions. One of the most remarkable projects in 2011 was the implementation of a search engine for the Real Madrid Sports Club Intranet.

### R&D&I

We are in a highly competitive and constantly changing environment therefore it is necessary to make a great effort to remain ahead when it comes to the very latest technological breakthroughs. This not only guarantees the survival of the company, but also ensures that it keeps its position on the market. That is why Eptisa makes permanent investments in solutions provided.

The fierce competition in the technologies sector has forced the approach of the R&D investments in a multidisciplinary way, involving and coordinating activities in a wide range of company departments.



European Esri User Conference

At Esri Spain, have launched a solution for Local Administration in order to help in the management and optimization of urban resources and improve the citizen services.

In order to optimize the geographical information management and maintenance, the tool is based upon thematic modules based on ArcGIS Desktop data model. The main characteristics of the solution are that it is modular and functionally scalable, including a specific module for the cadastre information and the integration in National Land Registry Data Base, but also providing tools for editing and managing the work flow for maintaining territorial information.

**MAPABase** is a digital content solution, that it includes a Spain basemap, imagery, socio-demographic and lifestyle data, ready-to-use for GIS visualization and analysis projects. In 2011, Esri Spain launched MAPABase 2.0, which has updated the content tools, map service and web viewer.

The MapaBase is a collection of data designed and configured to be used with GIS application. Thereby, the solution helps to reduce costs and time of the project implementation.

We also developed a Web viewer to be used to display and query data about the **SIOSE** project, the Land Use Database of Spain.

In the **Telecommunication** sector in 2011, we developed a technological solution that features a tool for inventorying and planning radio-electrical networks, using the Esri GIS platform. The aim of this solution is to enable the user to suitably plan the radio-electrical spectrum, so that the radio-electrical resources and control over telecommunications investments can be optimised. Thanks to many years of experience with Esri technology solutions, Eptisa detected the need to have available network planning tools that can be integrated into a company environment.

Eptisa offers three R&D solutions in the telecommunications sector: document management, the geographical dashboards and the development of Web viewers for sharing visual information with the general public, suppliers and other departments within the company.



<<POPULATION AND HOUSING CENSUS 2011, NATIONAL INSTITUTE OF STATISTICS (INE)

The Population and Housing Census will include an exhaustive Buildings Census with all the buildings located on a map and the data collection of the survey to find out the characteristics of the people and the housing.

The INE incorporates the use of mobile devices in its census work. The information systems developed make easier the work of the people conducting the census, and guarantee the consistence of the data sources and update the information in real time. Furthermore, the field agent can optimise their routes and be aware of the status of the tasks that are to be conducted.

In addition with mobile device, the field work can modify the data directly on the map, add new constructions that did not appear before, thereby to obtain an exhaustive geo-referencing of all the buildings. The information will be updated on-line in the central databases.

A web application has been developed for monitoring and controlling the census, which will enable the INE project management to access all the census information. This GIS viewer will make it possible to analyse in real time, and on an intelligent map, all the data collected.

The National Institute of Statistics (INE) commissioned a Joint Venture comprising several companies, including Eptisa, to carry out the services for developing the information system for collecting data for the Population and Housing Census 2011.

The 2011 Census is the seventeenth one to be conducted in Spain. On this occasion the new breakthroughs included are a new digital mapping and advanced GIS tools. Furthermore, a multi-channel and multi-language platform has been made available to the citizens.



<< SIOSE WEB VIEWER

The purpose of the SIOSE project is to integrate the official land use information in database and cover all the Spanish territory.

It is currently possible to use the SIOSE 2005 information through our new SIOSE viewer, which is a tool that enables the user to display and query data, as well as to add ArcGIS Server services.



<< MAINTENANCE FOR THE GIS OF CISEM, MADRID SAFETY AND EMERGENCY CENTRE

The Madrid Safety and Emergency Centre (CISEM) needs to maintain and manage the geographical information associated with the emergency and civil defence services in the Borough of Madrid, as well as to develop the applications that are used to display and manage that geographical information.

The maintenance services will include preventive, corrective and evolutionary actions. All of this will be done with a view to ensuring that the operations update the geographical information, guarantee the management and processing of that information using GIS application, preventing errors and rectifying any potential risks, so that the geographical information systems operate correctly.

<< MAPABASE 2.0



MAPABase is a digital content solution, that it includes a Spain basemap, imagery, socio-demographic and lifestyle data, ready-to-use for GIS visualization and analysis projects. In 2011, Esri España launched MAPABase 2.0, which has updated the content tools, map service and web viewer.

Into the Web viewer we incorporated a new tool for add in map new layers, new data collections like the Padrón 2009 and SIOSE; new functionality to print the layout in PDF format, to cut and export an image directly from the map and markers to speed up the work.

As it can be implemented rapidly, simply and without risks, MapaBase is a platform certified by Esri, able to serve raster information and vectorial information with ease. It is also a scalable and collaborative platform that enables users to create their own tools.



<< SEARCH ENGINE FOR THE REAL MADRID SPORTS CLUB INTRANET

The aim is to analyse, develop and implement a search engine based in Google Search Appliance technology for the Real Madrid Intranet. This will enable the club to have one single information access point, bringing together a variety of sources of data from documents, audiovisual aids and staff and to offer a user experience similar to an Internet search engine such as Google.com.

The work developed by Eptisa involved the implementing from the system, searches from Windows 7, indexing from the Intranet, indexing Real Madrid's internal system, (shared folders, videos, etc).



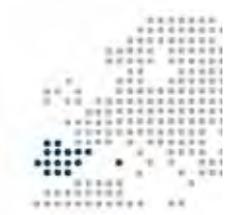
<< NETWORK PLANNING AND INVENTORY TOOLS

The aim of this solution is to enable the user to suitably plan the radio-electrical spectrum, so that the radio-electrical resources and control over telecommunications investments can be optimised.

The solution provides an answer to the main problems affecting the current market. One is the development on standard non-proprietary GIS technology, which makes it possible to integrate with other technology Systems abroad the company. The tool is the only technology platform on the market that integrates the inventory of fixed networks with the inventory of mobile networks.

The functionalities developed are incorporated into the following tools: workflow for managing projects during their life cycle, a viewer that integrates the inventory of fixed and mobile network, network layout and the module for radio network.





# Health

## Casta Salud, leaders in applying new, robotics-based therapy

In just under eight years, we have consolidated ourselves as the largest private company in the mental health and psychogeriatric services sector in Spain. Casta Salud is currently managing four centres and has reached an offer of 1,000 beds, which covers all of Spain.

By following the 2011 objectives, we consolidated the two centres open in the second half of 2009. During the year, we achieve the goals marked for Casta Asturias and Casta Guadarrama, obtaining the public administration contracts and keeping up the rest of the activities developed in the Health care area.

The Casta Salud management model is supported by a highly-motivated professional team and a high degree of commitment to achieving objectives.

We also take advantage of the synergies deriving from the collaboration with Universities and Foundation, through signing collaboration agreements for work training experience at undergraduate and postgraduate levels in disciplines, such as psychology, occupational therapy, speech therapy or nutrition and dietetics. Lastly, there is the conducting of studies and reports from the health activities of the various units.

### RESIDENTIAL MANAGEMENT

#### *RESIDENCIAS NOSTEM*

We are responsible for the management of 372 beds in the Arrigorriaga and Balmaseda centres, both in the Basque Country. During 2011, we consolidated the agreements with the public government "BIDEAK", which involved 80% of the total occupancy capacity.

Thus, in Arrigorriaga, both public funded and private places are all fully occupied, while the daycare places have around 80% occupancy.

In Balmaseda 100% of public funded residential places are occupied, as well the daycare places and the private places have 60% occupancy.

#### *CASTA ASTURIAS-LANGREO*

During the 2011, we achieved the objectives for the year and started an R+D project in order to provide solutions in the therapeutic treatment of people with mental illness. Along these lines, the company has consolidated the position in the mental health sector employing innovation.

We signed all our proposed agreements. Thanks of this, at the close of the financial year, we had 72% occupation of the residence in Asturias. The number of places sold during the financial year enabled us to begin 2012 with the centre's occupancy level at 80%. Now, in addition to maintaining the agreement with "ERA", the public institution in Asturias, we have increased the number of places contracted with the Social Welfare Council by five, making a total of fifteen.

At the same time, as an essential value of our activity in this area, we have developed our first **R+D Project**. As a result of the professional's work of our centre and for the first time in Spain, we have introduced a new robotics-based therapy. The project, named **Nuka**, incorporates touch-sensitive "pet" robots as a therapeutic tool.



Casta Guadarrama



Casta Arévalo

Nuka is a robot modelled after a baby harp seal, with five sensors that respond to the human senses. Three of these react to light, touch and sound and two respond to learning through punishment and reward, and in the field of behaviour through imitation mechanisms. Working with the robot in therapy takes place in the area of cognitive stimulation with simulation exercises, and emotional resources for enhancing relations and communication.



Nuka, R+D Project



Casta Asturias - Langreo

### ***CASTA GUADARRAMA***

Regarding the established objectives, it is the same as the previous case; the goal is linked to achieving the proposed objectives. Although the current economic situation is having serious effects caused by the reduction in public administration budgets, the current occupation is 70% thanks to the enormous commercial efforts made. This means a total of 110 occupied places at the close of the financial year.

Moreover, continuing with our efforts, we reached collaboration and agreements with the following public and private organisations:

- AMTA: The Madrid Agency for Adult Guardianship
- SESCOAM: Castilla-La Mancha Health Service
- Foundations: “Fundacion Madrid”, “Fundación Familia”, “Fundación Madre” and “Fundación Manantial”
- ADESLAS: Insurance company

### ***CASTA ARÉVALO***

The Arevalo Centre, in Avila, has kept its occupancy rate at over 90% throughout the entire year. It has also renewed its agreements with the public administration and insurance companies. The collaboration work with the Universities of the region has led to training programmes in psychology, occupational therapy and speech therapy. Likewise, there is the possibility of grants for specialised courses and master’s degrees.

### ***CASTA FONTIVEROS***

The Fontiveros Centre, in the province of Avila, has maintained its occupation above 90% throughout the year and renewed its agreements with the public administration.

## PHARMACY UNIT

Within the specialised health consultancy, we continue with the development of the contract for managing the supply programme of Methadone Chlorohydrate, by which Casta Salud manages the production, preparation and dispensing of this substance.

Within the project scope our team have the responsibility to manage the Drug-dependency Care Centres (CAD) for establishing the quality assurance standards to apply for their daily operations.

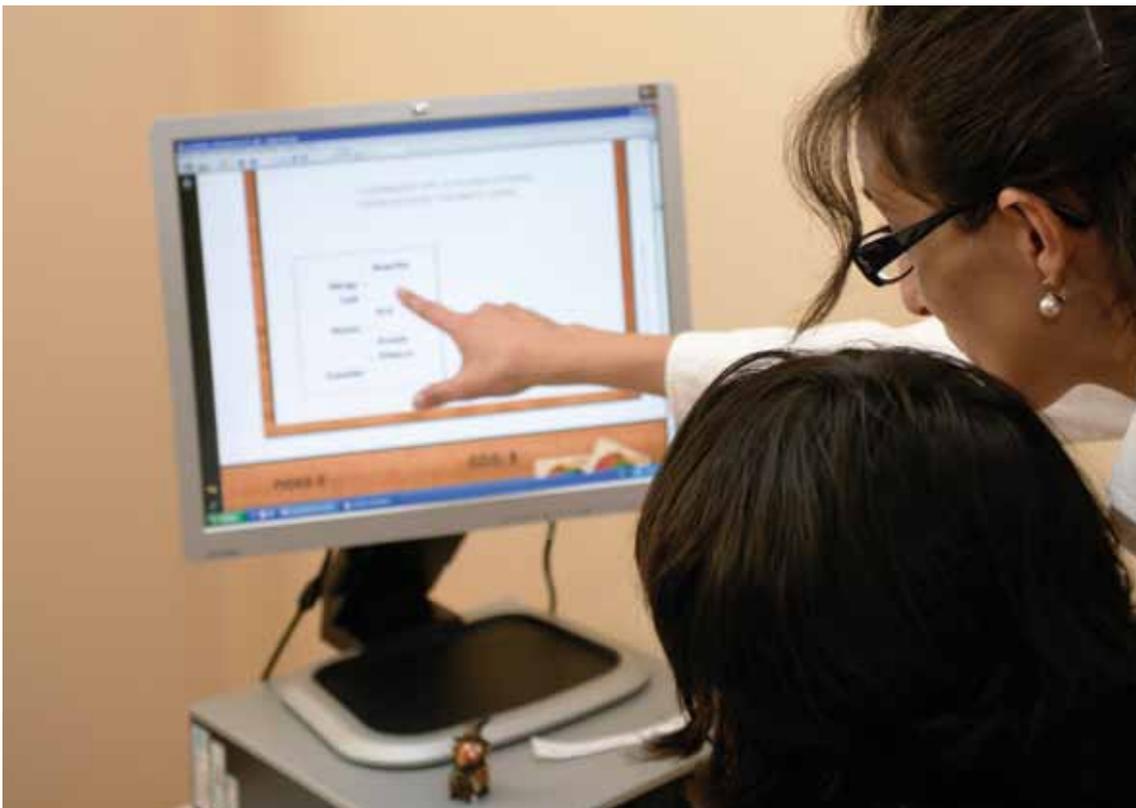
Key data for this year are as follows:

- Number of doses administered: 518,770
- Number of visits by pharmacists to centres: 280
- Number of methadone distributions: 815
- Number of attended patients: 17,065, where this amount is the sum of the mean number of patients between January and December, calculated from the number of administered doses and the mean dose.

In response of our high quality services provided, the governing body of the Madrid Council has approved the extension of this project until the end of 2013. Which involves a methadone production and distribution contract for the Drug-dependency Care Centres (CAD). The Dependency Institute of Madrid considers this service essential for patients' treatment in which opiates are replaced by other pharmaceuticals, such as methadone.

This year, thanks to the work and efforts of the Casta Salud professionals, we published our second technical publication, titled "Fundamental Aspects of Cytochrome P450". It is the result of the excellent work carried out by the Pharmacy Unit.

We have also organised the "II Seminar on Clinical Toxicology and Drug Addictions".



Therapy

## TRAINING

Continuous training and the development of improvement plans for our team of professionals is one of our main priorities. It is also one of the values that have positioned Casta as the largest private company in the mental health sector.

Throughout 2010 the Continuous Training Plan classified by centre was:

### ***CASTA GUADARRAMA***

COURSE / TITLE	TRAINING CENTRE	HOURS	PERSONS	TOTAL HOURS
Professional Expert in the Management of Geriatric and Residential Centres	UNED	650	1	650
Social Work Today: New Contexts, New Commitments, New Challenges	COLEGIO TS	24	2	48
Course on Memory Contention	FEMAREC	8	24	192
Workplace Risk Prevention Course	FREMAP	1	50	50
First Aid Course	FREMAP	8	15	120
Restraint Course	FEMAREC	8	24	192
Reasons for Promoting Psycho-education in Bipolar Illnesses	REBIPMA4	4	4	16
Workshop on prisons today: mental health and social exclusion – a Challenge for Society	Prisons Public Institution	8	1	8
Food Disorder Controversies	FITA	8	2	16
Stitching Techniques	INTERNAL	1	18	18
The Nurse's Role in Mental Health	NURSING COLLEGE	6	2	12
The Rights of Handicapped Persons	FUNDACIÓN AEQUITAS	20	3	60
Treatment, Work and Rights	AMSM	4	2	8
		<b>750</b>	<b>148</b>	<b>1,390</b>

### ***CASTA ARÉVALO***

COURSE	DATES	TRAINING CENTRE	HOURS
Techniques of communication with dependent persons in residences	16 <sup>th</sup> of may to 8 <sup>th</sup> of June	CONSULTORES S.L.	50
Support in the organisation of activities for dependent persons in residences	3 <sup>rd</sup> to 6 <sup>th</sup> of October	ACALERTE	70
Social animation of dependent persons in residences	17 <sup>th</sup> to 28 <sup>th</sup> of October	CCOO	30
Maintenance and improvement of daily activities of dependent persons in residences	2 <sup>nd</sup> to 16 <sup>th</sup> of November	ACALERTE	70
Emergency and first aid in mental health	12 <sup>th</sup> to 16 <sup>th</sup> of December	FEMAREC	20
		<b>TOTAL</b>	<b>240</b>



## Therapy

### GRANTS

Additionally to the training plan, the agreements between Casta and the training centres include the following grants:

- Two annual grants for the postgraduate Occupational Therapy programme at the University of Salamanca.
- Two annual grants for the postgraduate Psychology programme at the University of Salamanca.
- One annual grant for the postgraduate Speech Therapy programme at the Universidad Pontificia of Salamanca.
- Two grants for the Occupational Therapy programme at the Complutense University of Madrid. This year, we have increased the number of persons trained at our centres to ten.
- Two grants in the Nutrition programme at the Complutense University of Madrid.

### PUBLICATIONS

In 2011 a team of experts from the Pharmacy Unit and Guadarrama Centre worked on a scientific publication, published under the title of **“Fundamental Aspects of Cytochrome P450”**. The advances in the knowledge about drug metabolism, especially in phase I, reveals the great significance acquired by better awareness of CYP 450 intervention and its families and subfamilies, together with the associated polymorphisms. All this begin to suggest new and future applications for clinical use that will have significant social and health repercussions. The publication is structured according to their most important aspects, with an up-to-date literature review to provide the very latest advances in this area.

Our research team published a second publication about Cytochrome P450

With this second scientific publication, we can say that we are the only one undertaking research material on this question. This is complementary to an R+D project that is currently in the development stage. We will be working on this until 2013.



II Seminar on Clinical Toxicology and presentation of the publication

## CONGRESSES AND SCIENTIFIC PAPERS

During 2011 we organised seminars and workshops, in which experts from the sector shared experiences, knowledge and good practices.

We took part at the **XXXVIII National Seminar on Society, Drugs & Alcohol**, in Madrid between the 6th and 9th of April and we presented the paper; “The Society, Drugs and Alcohol”.

We were also at the **XIV National SET Congress**, held in Bilbao on the 1st, 2nd and 3rd of June 2011.

Moreover, our personnel organised and presented the **I Seminar on Applied Toxicology for clinical assistants**: “Methadone, review and updates”. This meeting took place on the 26th and 27th of October 2011 and was specially designed for CAD personnel at the municipal network of the Madrid Health Addictions Institute.

We participated at the **Cannabis Consumption, Youth and Gender Workshop**, held in Granada on the 28th of October.

We organised and presented the **I Seminar on Applied toxicology for senior laboratory technicians**: Pharmacology basic principles. It took place on the 16th and 17th of November and was specially designed for CAD personnel at the municipal network of the Madrid Health Addictions Institute.

We also took part at the **II International Congress on Dual Pathology**, held in Barcelona from 4th to 8th of October, with the presentation of our poster entitled the “II International Congress on Dual Pathology”.

We participated at the **Congress on Abused Drugs. Updates and Future Perspectives**, in the Madrid on the 16th of December. We were responsible of a round table and the workshop: “Abused Drugs, Updates and Future Perspectives”.

Finally, our personnel attended the **Seminar for Senior Laboratory Technicians of the European University of Madrid on Abused Drugs** as teaching staff, held in Madrid on the 20th of December.

# Europe

ESPEL. Restoration of Archaeological Spaces Project. Greece



Improve water quality management in the Kura River Basin



# Europe

## GREECE

During 2011, in **Greece**, we conduct the auditing and quality control of the works in the projects co-financed with European funds and the task of institutional assistance to the client and the Ministry of the Environment, Physical Planning and Public Works in the process of improving works supervision and quality procedures, through the contract *E.S.P.E.L. (Specialized Consultant for Quality Control)*. Eptisa has carried out projects in different sectors, which will be explained below.

As part of this contract, Eptisa has been responsible for the quality control of several works of Transport infrastructures. On the one hand, the improvements made to the access road and the extension of the visitor's route of the Archaeological Area of Kassopi. On the other hand, the construction of the *Lachana – Riziana - Strimoniko section* of the arterial road 60 "Derverni – Serres – Promachonas Highway", which forms part of the European IV arterial road.

In the **Railway** sector, Eptisa has been involved in the works of the Extension of the metro line 3 in the Aigaleo – Chaidari zone, the transit station from Chaidari and the train depot of Elaiona as well in the reconstruction project for the Saint Stefanos Tunnel on the Piraeus – Plateos railway line.

In the field of **Tourism and National Heritage Conservation**, we have been involved in the assistance and quality control for the following projects: *Restoration of the Archaeological Space of the Roman and Medieval Aqueduct in the city of Patras*. We have also played an active role in the *Restoration of the Medieval Tower at the village of Politika* in the Region of Evias. And finally, we were involved in the *Recreation and emergence of the Archaeological Space of the Roman Ring* at the city of Chalkida.

We also collaborated with the restoring and protection of two monuments located in the *Fortress and Sanctuary of Poseidon and in the Sanctuary of Athena*.

Furthermore, Eptisa took part in the equipment project of the room for multiple uses of the new *Archaeology Museum of Nikopolis* and in the improvements works of the infrastructures at the *National Park of Samarias*. These include the construction of three reservoirs in the regions of *Xyloskalo, Sykia and San Nicolás*, the water transport network and the bridges, pathways and cabins.

In the **Environment sector** we were involved in the *Land reclamation project of Vathipedo Amoudia in the Prefecture of Prevezas*, that includes all the works necessary for the area's drainage with downgrading of the level of the underground horizon with the final objective to serve the farmers and the important reduction of the losses of water.

Finally, in the **Water sector**, Eptisa carried out the quality control of the construction works of the Wastewater treatment plant of the municipality of Astakos.



# Romania

Waste Water Treatment Plant  
Craiova

## PORTUGAL

The activities that we undertook in the neighbouring country in 2011 in the Transport and Water sector were carried out with the aim to improve mobility and hydraulic infrastructures.

In the **Transport** sector, Eptisa worked on the *Construction Design for the Algarve Litoral Sub-concession*, awarded to the “Grupo Rodoviario Algarve Litoral”. The project involves not only the construction of new sections of the highway, but also the upgrading existing ones.

With respect to **Water**, we finished the *Detailed Design of the Gouvães and Padroselos Hydroelectric Plant Project*, located in the water catchment basin of the River Tâmega. As part of this, we carried out the *Landscape Recuperation and Integration Study* in the areas affected by the construction of the hydroelectric plant in Gouvães and Daivões.

In hydraulic infrastructures, Eptisa was commissioned by “Endesa Generación” to design its *Girabolhos Hydroelectric Plant* on the river Mondego, which also falls within the National Program for Reservoirs with High Hydroelectric Potential (PNBEPH), developed by the Portuguese Government.

## ROMANIA

In 2011, Eptisa enlarged its traditional activities in Romania by expanding to the energy sector and widened to a stable growth on the solid waste management sector, while continuing to strengthen its leadership position in the water engineering. Furthermore, it was the first year of presence on the Republic of Moldova consultancy market with activities managed directly from Romania, for three newly awarded projects.

In Romania, we managed projects contracted in the water and wastewater infrastructure, environmental consultancy and institutional strengthening, civil constructions, transport infrastructure, solid waste management, turn-key projects and energy sector. Eptisa is evolving to a very broad presence at national level which allowed the company to become one of the most distinguished and important engineering consultants in Romania.

In the **Water** sector, Eptisa has been awarded two new large projects by the same Regional Operator, *Doj County Water Company*, a client of Eptisa since 2002. These projects, which include design, project management and supervision of water/wastewater works, allowed us to make a



step forward in strengthening its position as reliable, trustful, traditional and proficient consultant in the South-Eastern region of Romania, ensuring continuity with the Client for 15 years, providing assistance in the implementation of EU-funded investment programmes.

In the City of Iasi, Eptisa opened a regional office and was awarded with three important contracts. The first of these was to provide *Technical Assistance for design, project management and supervision of the works for extension and rehabilitation of the water and wastewater infrastructure* in Iasi County, this being the second project implemented with Iasi Regional Water Operator.

Throughout 2011, Eptisa successfully handed over two EU ISPA projects in the water and wastewater sector.

One of these projects involved the *Technical Assistance and FIDIC Works Supervision during ISPA project implementation in Bistrita* for the rehabilitation of the drinking water treatment plant and rehabilitation and extension of 112 km of pipes network for drinking water supply and 144 km of sewerage pipes network.

The other project was the Continuation of works supervision – ISPA Iasi for the improvement of the drinking water and wastewater systems at county level, with a beneficiary population of 340,000 inhabitants.

Furthermore, several works supervised by Eptisa have been successfully delivered in large infrastructure projects, such as:

The *Technical Assistance and Supervision of ISPA contracts in Craiova* for the rehabilitation and modernisation of Craiova WWTP for 385.000 EP and for the rehabilitation of 30 km and extension of 55 km of the sewer network and rehabilitation of the drinking water supply system of approximately 50 km of network.

The *Continuation of works Supervision - ISPA Timisoara* for the rehabilitation of Timisoara Wastewater Treatment Plant, with a capacity of 440,000 EP and for the rehabilitation and extension of 28 km of sewerage network.

And the *Technical assistance and Supervision of ISPA contracts in Suceava* for improving the treatment system and drinking water distribution as well as the wastewater collection networks for a beneficiary population of 140,000.

# Romania

## Improvement of tourism infrastructures Phare Program



Our activities have developed also in south-east Romania, providing *Technical assistance for works supervision for the extension and rehabilitation of the water and wastewater infrastructure* in Buzau County.

With regard to the **Turnkey projects** portfolio, Eptisa continued in 2011 both the construction design as well as works execution for the *Extension and Modernisation of Wastewater Treatment Plant in Zimnicea and Wastewater Treatment Plants in Agnita and Dumbraveni*. The outstanding work done throughout 2011, gives Eptisa the guarantee for a successful expansion in 2012 into the water/wastewater turnkey projects.

Regarding **Urban Infrastructures**, in the City of Iasi, Eptisa was involved in the *Supervision of the works for the rehabilitation of the district heating system*, which was the first project of Eptisa in Romania in the energy sector. Eptisa will act as “The Engineer” under the FIDIC Red and Yellow Book Conditions of Contract.

While referring to **Waste Management** sector, Eptisa has awarded in 2011 another *Supervision project for the construction works related to the integrated Waste Management System in Salaj County*, which strengthened our position also in the Central region coordinated from the Cluj-Napoca regional office.

Eptisa is acting as supervision consultant for works and procurement contracts within the project *Integrated Waste Management System in Botosani County*.

Another of the waste management projects involves the *Supervision of works for the Integrated Waste Management System in Bistrita-Nasaud County* for the implementation of an integrated waste management system in order to eliminate the environmental impact and the risk on the human health, for a beneficiary population of 300,000 inhabitants.

One of the most important projects to be implemented in Romania in the **Building and Civil Works** sector is the *Site Supervision of Civil Works – Judicial Reform Project*, a World Bank financed project for rehabilitation and construction of 12 courts of law for the Ministry of Justice.

Also in the building sector, Eptisa was awarded a World Bank-financed project with implementation in 22 sites located in 16 counties across Romania. The company will act as the Consultant for the Ministry of Health to supervise the construction works for the rehabilitation of neonatal units and maternity hospitals.

In the **Regional Development and Tourism sector**, we implemented the *Management and Site Supervision of works financed under Phare 2005 ESC*, for 10 works contracts for rehabilitation and construction of the tourism, transport and business infrastructure, historical monuments and road works for the Ministry of Regional Development and Tourism.

In 2011, we have a new contract for *Supervision Services for works contracts financed under Phare 2006 CES Program*, this being the third project developed in the sector for Large Regional

Infrastructure Projects, once more technical assistance to the Ministry of Regional Development and Tourism for the supervision of 19 works contracts from 5 development regions in the field of tourism, leisure and business-related infrastructure, rehabilitation of historical monuments, construction and rehabilitation of roads.

In the **transport** sector, we are working in the project for *Auscultation of the works in the access to the viaduct over the River Danube*, to make it suitable for road and rail traffic. The aim is to link the Bulgarian town of Vidin with the Rumanian town of Calafat. This project involves installing and monitoring more than 250 instrumentation and surveying devices during the construction.

## MOLDAVIA

Eptisa has successfully converted its efforts developing its services on the Republic of Moldova **Water and Environment** market by winning three projects with a three-year implementation timespan.

First one, the *Technical Assistance for the implementation of Sector Policy Support Program in the water sector*, financed by EU ENPI Programme with the Ministry of Environment as beneficiary.

The second one is the *Moldova Water Utilities Development Program* – Program implementation support financed by the EBRD for the Ministry of Environment and six regional water operators.

And the last, is the *Modernisation of Communal Services: Quality monitoring and Management consulting for the provision of local communal services*, financed by the GIZ.

## THE WESTERN BALKANS

2011 has been a positive year for the consolidation of Eptisa in the Western Balkans region. Our contracts in the region have covered a wide range of technical disciplines, from transport engineering to environmental infrastructure, and from energy to public administration reform services. In addition to several new important contracts, the implementation of nine projects was completed with a remarkable success. We start 2012 with 28 projects under implementation.

It is also important to highlight that during 2011 Eptisa set up a local company in the Republic of Serbia and initiated the procedure to establish a second one in the Republic of Croatia. This permanent presence provides us with a very valuable knowledge of the local idiosyncrasy, of the organisation of the different authorities, and also of the design and construction standards in the whole region.

## REPUBLIC OF ALBANIA

During the past year, we were awarded with a very important contract in the field of **Transport Infrastructure**. Thanks to this, Eptisa provides now technical support to the Albanian Roads Authority for the implementation of the major road investments and construction contracts in the country. In more detail, we offer expert advice on project implementation and contract management related to roads investment and construction projects, we deliver continued on the job training to project managers tasked with project implementation, and we assist in the preparation of future road investment projects.

In the field of **Environmental Infrastructure**, we continued working in a contract in which we undertake the supervision for the construction of the sewerage systems in Velipoja and Shkodra. The project envisages the construction of a new sewerage system and a wastewater treatment plant in the city of Velipoja, and a new sewerage system in the industrial area of Shkoder, in the north-west of Albania.

## BOSNIA Y HERZEGOVINA

In 2011 Eptisa signed two important contracts in Bosnia and Herzegovina. The first one, entitled *Strengthening of Bosnia and Herzegovina's Environmental Institutions and Preparation for Pre-*

*Accession Funds*, is funded by the European Union and aims to strengthen the technical, administrative and programming capacities of all the institutions involved in the management of the country's natural resources.

The second project, in the **Social Sector**, aims to improve the institutional capacity of the labour market management institutions and the employment services, by strengthening their human capacities, eventually facilitating that the labour market works effectively.

Besides, in the **Energy** sector we advanced with the implementation of the contract "*Technical Assistance for the Implementation of the Energy Community Treaty for South-Eastern Europe, with a Particular Focus on Energy Efficiency and Renewable Energies*". Here, a team of experts from Eptisa are working on addressing the policy and legal gaps in the fields of energy efficiency and renewable energy by supporting the implementation of pilot measures and capacity building at a local level. Additionally, we are implementing campaigns aiming to raise the awareness about the practical implementation of energy efficiency and renewable energy measures.

Last, Eptisa is also participating as a partner in the *Technical Assistance for Capacity Building to Promote Exports and to Develop the Export Base*. The ultimate objective of the project is to strengthen the capacities of the export development and promotion institutions.

## REPUBLIC OF CROATIA

In Croatia we are currently implementing two projects. The first contract is in the Primorsko-Goranska County, where Eptisa is managing a public relations campaign for the construction of the Marišćina sanitary landfill.

The second assignment is the *Supervision of Works for the Construction of the Water Supply and Sewerage System and Wastewater Treatment Plant in Slavonski Brod* where Eptisa is acting as the Engineer following FIDIC Conditions of Contract. The new facility will have a capacity of 80,000 P.E., contributing to the overall protection of the water resources in this municipality, the seventh largest in the country.

It is also important to mention that in the course of 2011, and thanks to the different running contracts, Eptisa initiated the procedure for the establishment of Eptisa Adria, with its sit in Zagreb.

## KOSOVO (under UNSCR 1244)\*

During 2011 Eptisa has participated in several important contracts in Kosovo. First of all, we provide a wide range of engineering services for the development of socio-economic infrastructure in several municipalities, being involved in all stages of the project implementation, developing detailed designs and technical specifications, and supervising the construction works until the handover and final acceptance.

In the **Environment** sector, we provide technical support for the Preparation of the *Environmental Strategy and Environmental Action Plan*, facilitating the alignment with the relevant EU standards and international conventions in the field of environment.

Last but not least, in 2011 we successfully finalised the implementation of a project aimed to strengthen the institutional capacity of the Ministry of Energy and Mining in the planning and setting up of their energy strategy.

## FYR OF MACEDONIA\*

Eptisa initiated the implementation of the *Technical Assistance for Strengthening the Capacity of the Institutions to Manage and Implement the Operational Programmes*. The project, financed by

\*Eptisa takes a neutral position vis a vis the political issues within the region of the Western Balkans, fully supporting the policy of the EU in this regard.

the EU's Instrument for Pre-Accession (IPA), is designed to further strengthen the administrative capacity of the institutions entrusted with the management of the EU pre-accession financial assistance in order to achieve a sound and efficient management of all the funds.

In the **Transport** sector, Eptisa continued working in the preparation of the *Feasibility Study for the Eastern Section of the Pan-European Railway Corridor VIII*. Here, we are conducting an economic and financial analysis of the various alignment alternatives, are assessing the environmental and social impacts, and are undertaking the conceptual design for the selected solution.

## MONTENEGRO

Thanks to a newly awarded contract, Eptisa is assisting the Government of Montenegro in raising the awareness of the population on environmental and sustainable development issues. We are providing technical assistance in establishing an efficient and sustainable system for the implementation of activities on environmental awareness. We will also prepare and deliver environmental awareness campaigns and will design and implement education activities on environmental issues targeting students in all the municipalities throughout the country.

## REPUBLIC OF SERBIA

In the field of **Building and Architecture** Eptisa signed the contract *Support to Ministry of Science for the Implementation of the Research and Development (R&D) Facility*, becoming the main technical advisor in the implementation of the R&D Infrastructure Investment Initiative and in the tendering and construction of all the related buildings and facilities. Within this contract, a multidisciplinary team from Eptisa provides architectural, engineering and management support services for the design and construction of several buildings and a wide range of research-related infrastructures.

In the **Transport** sector Eptisa continued with the implementation of two very important contracts, the *Supervision of Construction Works on the Belgrade By-Pass (Section A)*, and the *Supervision of Construction Works on the Highway E-80, Prosek - Dimitrovgrad*. Being part of the Trans European Corridor X, both road sections are of a great national and international importance since their construction will boost the economic development in the region while decreasing the number of casualties due to traffic accidents.

# Belgrade

R&D Infrastructure



# NIS Countries

Improve water quality management  
in the Kura River Basin



In the **Water and Environment** area, Eptisa signed a contract with the European Commission for the third phase of the *Municipal Infrastructure Support Programme*. All together, the three phases of this Programme represent a technical assistance of €18.6 million, aiming to assist Serbia in the improvement of its municipal infrastructure services, in the enhancement of the human capacities of its local governments, and in the improvement of its people's living standards. A team of experts of Eptisa is giving technical support in the preparation and prioritisation of municipal and socio-economic infrastructure projects. We are also undertaking a number of feasibility studies, we are providing supervision services for several construction projects, and we are offering advice and support for the improvement of the technical and financial management of several public utility companies.

Also in the field of water and sanitation, Eptisa continued with the preparation of the *Sewerage and Wastewater Master Plan for the Region of the West Morava River Basin*. Within this assignment, we are also preparing a set of tender documents for the construction of a pilot wastewater treatment plant.

Additionally, Eptisa is the leading company in a project financed by the EU that aims to prepare the *Flood Risk Maps and Flood Hazard Maps* for certain river basins. The set of maps are based on GIS technologies in order to facilitate their easy integration into the national Water Management Information System, also created by a consortium led by Eptisa as part of another EU-financed project.

It is also important to emphasise the participation of Eptisa as the leading company in the EU-funded *Technical Assistance for the Development of an Environmental Approximation Strategy*, where we give support to the Government of Serbia in designing and developing a roadmap for the transposition of all the EU Directives in the field of environment, in calculating the costs and benefits of this approximation process, in the transposition and implementation of legal acts, and in the design of new financial instruments.

Finally, in the field of waste management, Eptisa advanced with the preparation of the feasibility study, the detailed design, and the tender dossiers for the construction of the first *Hazardous Waste Management Facility* in the country.

In the **Energy** sector, Eptisa was awarded an EU-funded project entitled *Sustainable Development in the Energy Sector*. Its main objective is to improve the institutional capacities for the implementation of the Kyoto Protocol and for the improvement of the quality of both mineral fuels and biofuels.

In parallel, we continued with the implementation of the project *Technical Assistance for the Promotion of Renewable Energy and Energy Efficiency*, aiming to consolidate a more efficient use of the renewable energy sources, mainly in the fields of geothermal energy and combined heat and power schemes.

Last but not least, Eptisa is providing engineering services within the *Supervision of Works for the Vranje and Leskovac Substations and Related Transmission Lines*.

In the **Social and Public Administration Reform** sectors, we are leading the project *Supporting Access to Rights, Employment and Livelihood Enhancement of Refugees and Internally Displaced Persons in Serbia*. The objective of this intervention is to improve the capacities of refugees and displaced persons to obtain long-lasting employment opportunities.

Eptisa is also part of an international consortium that is implementing a project that offers support to the Government of Serbia in the development of its administrative and technical capacities in the area of EU funds management and in the process towards the total decentralisation of all the future EU assistance.

Finally, in the course of 2011 Eptisa effectively finalised the implementation of the EU-funded *Support to National Investment Planning and Implementation*. The objective of the project was to facilitate the socio-economic development of Serbia by improving the capacities in the fields of national public investment and budgetary planning.

### FORMER SOVIET UNION (NIS COUNTRIES)

Eptisa consolidated the presence in the region with the development of several major trans-boundaries projects. The first of these is the *Programme for the Prevention, Preparedness and Response to Man-Made and Natural Disasters in the ENPI East Region*. As part of the programme,

Eptisa provides technical assistance to contribute to the development of civil protection capacities of the Partner Countries: **Armenia, Azerbaijan, Belarus, Georgia, Moldavia and Ukraine**. The programme tackles the risks at the level of preparation, preparedness and mitigation and response management. The main objective is the progressive association of the partner countries with the European Mechanism of Civil Protection.

## Uzbekistan

### Surkhandarya Water and Sanitation Project Implementation Assistance



Eptisa also developed in the **Waste Management** sector in 2011, the second regional project for *Waste Governance within the countries of the European Neighbourhood and Partnership Region (ENPI East)* with the duration from 2009 – 2013. This is one of the main components of the Indicative Programme for the eastern zone of Europe. Its main aim is to reduce the risks of contamination arising from the inappropriate management of solid waste in **Armenia, Azerbaijan, Georgia, Belarus, Moldavia, Russia and Ukraine**. The main focus during 2011 period was to develop the waste management strategies and update the registers of illegal waste disposal sites.

At the end of the year, due to successful completion of Kura River Basin Project Phase II, European Commission has awarded to Eptisa a service contract to improve water quality in the Kura River Basin Phase III, which is one of the most critical issues for the countries of the South Caucasus. Kura River is the largest trans-boundary river in the Caucasus region; its basin is shared by five countries – Georgia, Turkey, Armenia, Azerbaijan and Iran.

The long-term objective and the main purposes include support of the establishment of a trans-national common approach to water quality assessment in the Kura River basin which would improve integrated water resources management.

## Azerbaijan

Integrated Solid Waste Management Project



## Belarus

Design and supervision of works waste separation facility in the city of Grodno



### UZBEKISTAN

Eptisa has worked in the **Water** sector on the project *Surkhandarya Water and Sanitation Project Implementation Assistance*, financed by the Asian Development Bank. The services provided focused on project management support to the project management unit and project implementation unit. The main aim is to improve the quality of life and the health conditions in the City of Termez and seven rayons of Surkhandrya oblast through the improvements of basic potable water supplies.

### AZERBAIJAN

The Government of Azerbaijan through the Ministry of Economic Development has retained the services of a joint venture lead by Eptisa to support implementation of the *Integrated Solid Waste Management Project* which is to improve and support modernization of the **Solid Waste Management** System in Baku. The overall objective is to support the reform of the Baku solid waste collection and disposal operations into an effective and sustainable system in the fields of improving environmental conditions at the existing waste disposal sites, building-up operational, management and communication capabilities, rollout of collection services, and data collection and planning.

### BELARUS

In 2011, Eptisa received the award for a new **Waste Management** project financed by the World Bank: *Design and supervision of works concerned with the construction of mechanical waste se-*

*paration facility in the city of Grodno.* The purpose of this project is to increase environmental benefits of integrated solid waste management in the City of Grodno through recovery and reuse of recyclable materials and strengthen national capacity to manage hazardous waste associated with Persistent Organic Pollutants (POPs).

## GEORGIA

We are working in two projects in the **Transport** sector. The first one is the development of a *Road Safety Management Plan for the Kakheti regional roads*. The aim of the project is the preparation and implementation of a road safety management plan for the roads circuit Vaziani-Telavi-Gurjaani-Vaziani. This section is subject to substantial improvement under Kakheti Region Road Improvement Project, remaining sections will be subject to low cost road safety improvement measures, aiming to reduce deaths by 30% by 2013 compared with 2008.

Furthermore, at the beginning of 2011, Eptisa was awarded the *Preparation of Detailed Design and Bidding Documents, for Construction of the Ruisi-Rikoti Section of the E-60 Highway*, a 49 km two-lane carriageway road, which passes through mountainous and flat terrain.

At the end of the year, in the **Information Technologies** sector, we were awarded a project for implementing a *Geographical Information System for the Management of the Urban Transport* for eight cities in Georgia. The work includes collecting field data and designing and developing the information system with databases, desktop applications and web-viewer.

In the **Water** sector, we worked in the Development of a *Geospatial Urban Water Supply and Sanitation Utility Management System* for six cities (Kutaisi, Zugdidi, Poti, Mameuli, Anaklia and Mestia). The aim of this project is to improve the planning and development of the water supply and sanitation infrastructures.

## TURKEY

Eptisa became established in Turkey in 2006, and now has more than 70 professionals working in its central offices in Ankara and Istanbul. Eptisa is the best company to develop businesses and invest in the country, because it combines experience and know-how in the engineering sectors.

In 2011 Eptisa concentrated its efforts on developing the Building and Transport sectors.

Within the **Transport** sector, Eptisa was awarded the *Construction Design of the Gebze-Haydarpaşa, Sirkeci-Halkali Commuter Rail Upgrading and Railway Bosphorus Tube Crossing Construction*, better known as Marmaray, by the OHL-Dimetronic joint venture. This Project is one of the major transportation infrastructure projects in the world at present. The entire upgraded and new railway system will be approximately 76 km long. The project consists of the developing connection of the rail lines between the European and the Asian side in Istanbul through an underwater tunnel in the Bosphorus Strait. Eptisa will be responsible for designing the 43 km on the Asian side.

We have consolidated our benchmark position in the **Building** sector. In 2011, we completed the *Design and Reconstruction Supervision of 40 schools in the City of Istanbul*. The purpose of this project is to rebuild and strengthen the structures of the 40 schools to extend their capacity and earthquake resistance. The project is a result of the Istanbul Seismic Risk Mitigation and Emergency Preparedness (ISMEP) Agreement to strengthen the structures of public and administrative buildings in Istanbul - schools, hospitals, etc. -. In the event of their being demolished, the budget includes earthquake proof reconstruction.

As part of a consortium, Eptisa has also been awarded a new project financed by the EU, to provide the *Supervision Services for Construction of Forensic Laboratories in the Cities of Istanbul, Izmir, Diyarbakir and Adana*.



# America

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## UNITED STATES

In 2011, Eptisa completed three projects in the United States, all associated with the **Transport** sector. The first two were carried out in the County of Monroe, Florida, on two sections of the SR 5/ Overseas Highway. The first section runs from Whale Harbor MM 84.04 to MM 85.5 at Smugglers Cove, and the second one from Jerome Avenue MM 81.42 as far as Whale Harbor Channel MM 84.045. Eptisa designed the signing and pavement markings for both projects.

The third project was implemented on the SR 968/ SW 1st Street Highway, from West Flagler as far as West 17th Avenue. Eptisa prepared the pavement type selection report for its reconstruction and resurfacing of the two sections concerned.

In Tallahassee, Florida, we completed the preliminary design and specification development for an inverted “U” shaped Box Culvert with slap on tops in the *Boulevard Franklin Drainage Improvements* project. This configuration is non-standard and required unique consideration.

In Orlando, we worked on the design of possible alternative for the *SR 429 Extension* from Boy Scout Road to the North of US 441. Eptisa provided MOT and structural plans.

We set up a new office in California, in the County of Los Angeles.

## CANADA

In 2011 we consolidated our presence in Canada, thanks to the setting up of a new permanent office, plus the fact that we were awarded our first construction design in the **Transport** sector. This is the *Detailed Design of York Spadina Subway Extension Project, Ontario* (Canada), where we designed the enclosure to house one of the stations, the building for an emergency exit and the shaft for extracting the tunnel boring machines that were used to excavate the works for the line.

We also collaborated with several tender projects in the roads sector. In the first one, Eptisa provide technical assistance from a technical, economic and environmental viewpoint, for optimising the sizing of the pavements for the *Edmonton Ring Road Tender Design in Alberta* (Canada), which was awarded to the Concessionaire ACS Infraestructuras.

As part of the Pavements Design Team of the Consortium formed by the following companies: OHL Concesiones, S.L. - Globalvia Infraestructuras S.A. - Borealis Infrastructure Management



Inc. – Con-Drain Company Ltd – Coco Paving Inc, we worked on the preparation of the *Tender Design of the Highway East 407 Extension, Section: Brock Road - Harmony Road, Ontario*. Eptisa optimised the design of the pavements from a technical, economic and environmental viewpoint, taking into account the fact that they will be exposed to extremely low temperatures, –as low as 17° C below zero.

We also collaborated with the bidding team in preparing the technical proposal, the study of the different options for optimising the works in the Economic Proposal of the *Tender Design of the Highway East 407 extension in the Region of Durham*.

## HAITI

In 2011, after we had opened our first office, we were awarded a new contract involving the *Preparation of the Regional Master Plan for Drinking Water Supply and Sanitation* for the South and West zone of Haiti. The project includes the preparation of feasibility studies for nine cities in the zone. The aim of the Master Plan is to provide each one of the four Regional Office Drinking Water and Sanitation (OREPAs) a development scheme for the short-, medium- and long-term.

Eptisa has offices in Port-au-Prince with a team of experts and local engineers.

## DOMINICAN REPUBLIC

In 2011 we began the technical assistance project for the *Support Programme for Public Administration Reform*. Its aim is to contribute to the strengthening governance, social cohesion and modernisation of the government through the professionalization of the civil service, the quality of public services and the institutional strengthening. Eptisa supports the Ministry of Public Administration (MPA) for the implementation of the key elements of its Strategic Plan 2009 - 2012 in at least six State institutions. These were selected under the surveillance of the civil organisations inherent to Dominican society.

## MEXICO

Towards the end of 2011 we were awarded the new project to provide technical assistance for the *Integrated Program of Social Cohesion Mexico – European Union. Lot 2: Mexico – European Union Cohesion Laboratory*. The aim of the project is provide technical assistance and support to the execute management and the program team, as well as to the public institutions involved and to communities or target groups of the programme. All of this is being done in order to establish, implement and strengthen a integrated participatory model of sustainable local development in Selva and Sierra regions in the State of Chiapas.

## GUATEMALA

In 2011, we continued providing technical assistance services to the Government of Guatemala in the implementation of the *Food Security National Policy Programme* (PESAN in Spanish), by contributing to reducing poverty, food insecurity and chronic malnutrition. The programme is being coordinated by the National Food Security Department and the Ministry of Public Finance.

We also support the financial management support project in Guatemala, the aim of which is to strengthen the Ministry's of Public Finance capacities to improve the transparency and credibility of the Public Administration through a better coherence and efficiency in public expenditure management. The project will enhance the relationship between planning and budgeting, making it easier to elaborate and implement integrated programmes and strategies, that are in keeping with the development and social cohesion targets.

## EL SALVADOR

In El Salvador we are still providing technical assistance services to the Government in the implementation of the "Projóvenes II" Project, whose aim is to promote social cohesion and to mitigate the risks factors of violence and youth delinquency. Eptisa is working on different activities associated with the National Justice, Public Security and Coexistence Policy, and the National Strategy to Support Local Governments in the Avoidance of Violence.

## NICARAGUA

In 2011, we successfully completed the second phase of the Institutional Strengthening Programme of the Government of Nicaragua for supporting the development of a Mid-Term Expenditure Framework (MTEF), financed by Swiss Cooperation.

## COSTA RICA

At the end of the year, we were awarded the contract for a project co-financed by the Inter-American Development Bank for the Cadastre preparation and compatibilization for Cadastre and Registry information for Zapotal Area. Through this project, which is included in the Cadastre and Registry Regularization Program, Eptisa supports the Government to improve legal security and the real property rights. All of this helps to improve both private and public investment.

## PANAMA

In 2011, we continued working on the project Urban Cadastre in the Metropolitan Area of Panama, under the direction of the National Land Administration Programme, financed with Inter-American Development Bank funds. Since 2003, we have been carrying out cadastre projects on surface areas covering 750,000 hectares and 170,000 areas, both rural and urban. The latter figure accounts for 17% of the cadastral surface area in the country. Thanks to these projects, Eptisa kept its position as the leading company in the area of Cadastre.

We also carried out topography works for the construction of road junctions in the Vía Brasil Corridor and the River Mataznillo. Both activities are included in the projects that are being performed by the company FCC for the Ministry of Public Works, as part of the road restructuring plan of the Panama City.

## COLOMBIA

In consortium with three local companies, Eptisa has been selected by the European Union, the Presidential Agency for Social Action and International Cooperation of Colombia, to provide the technical assistance for the *New Territories of Peace*. This aims to contribute to the consolidation of their safety and development by promoting socioeconomic initiatives, which are conducive to a culture of peace, democracy and a State of Law. This encourages decent living conditions and equal opportunities for all citizens.

## BOLIVIA

In 2011, we continued to offer our technical assistance services for two projects financed by the European Union:

The first of these projects is to provide assistance and operational support to the Ministry of Mining and Metallurgy, through the *Improvement of Work Conditions and Employment Creation in the Mining Regions of Bolivia* (EMPLEOMIN in Spanish). The aim of this is to contribute to economic,

# Panama

Urban Cadastre in the  
Metropolitan Area



social and environmental development in these zones, as well as to create employment opportunities by developing the artisanal mining sector and by diversifying the economy activity.

In the second of these projects, and as part of the consortium led by Eurecna, we are offering technical assistance to the project supporting the PRO BOLIVIA agency and other beneficiaries identified on the *Program for supporting the Productive Development with Decent Employment Sector Plan*. The aim is to improve productivity and employment quality in the Small and Medium Enterprises (SMEs) in prioritised sectors, through the improvement of management capacity, promotion of productive development and institutional strengthening.

**BRAZIL**

We have kept on working in the **Water** sector for the company “Empresa Paranaense de Participações – EPP Energía”, on the Hydroelectric Inventory Study of the Cuiabá River on a 170 km tranche between the intersection with the Manso River and the City of Cuiabá.

**ARGENTINA**

At the end of 2011, Eptisa was awarded the technical assistance for the Project to Improve Regional Economies and Local Development. The aim of the project, which is to last 39 months, is to contribute to improving the quality of life in the community and to carry out local development in 10 disadvantaged regions in the country – located in the north-west and north-east -. This programme will help to strengthen the capacities of the National Industrial Technology Institute (INTI), whose purpose is to bring technology closer to the Small and Medium Enterprises (SMEs) in the most underdeveloped regions.

# Bolivia

## Improvement of Work Conditions and Employment Creation in the Mining Regions of Bolivia (EMPLEOMIN)





# Asia

## VIETNAM

In 2011, Eptisa was awarded its first project in this country. It is associated with the **Water and Environment** sectors and is financed by the World Bank. The aim is to implement the second phase of the *Construction Supervision for the Environmental Sanitation in the city of Dong Hoi*. In this project, Eptisa is continuing with the flood protection and drainage works commenced under Phase I. The company is also supervising the construction of the sewers network, including the interceptors and wastewater collectors, as well as the construction of a wastewater treatment plant (10,000 m<sup>3</sup>/d), with an aerated pond system. Finally, Eptisa is responsible for developing an improved solid waste management system. All these improvements benefit a population of 112,000 people in the city of Dong Hoi.



Vietnam

## INDIA

In 2011, we made arrangements for setting up a new permanent office, which became established at the end of the year. Eptisa combines its technical know-how with local resources in order to offer specialist engineering services and an awareness of social requirements.

## CHINA

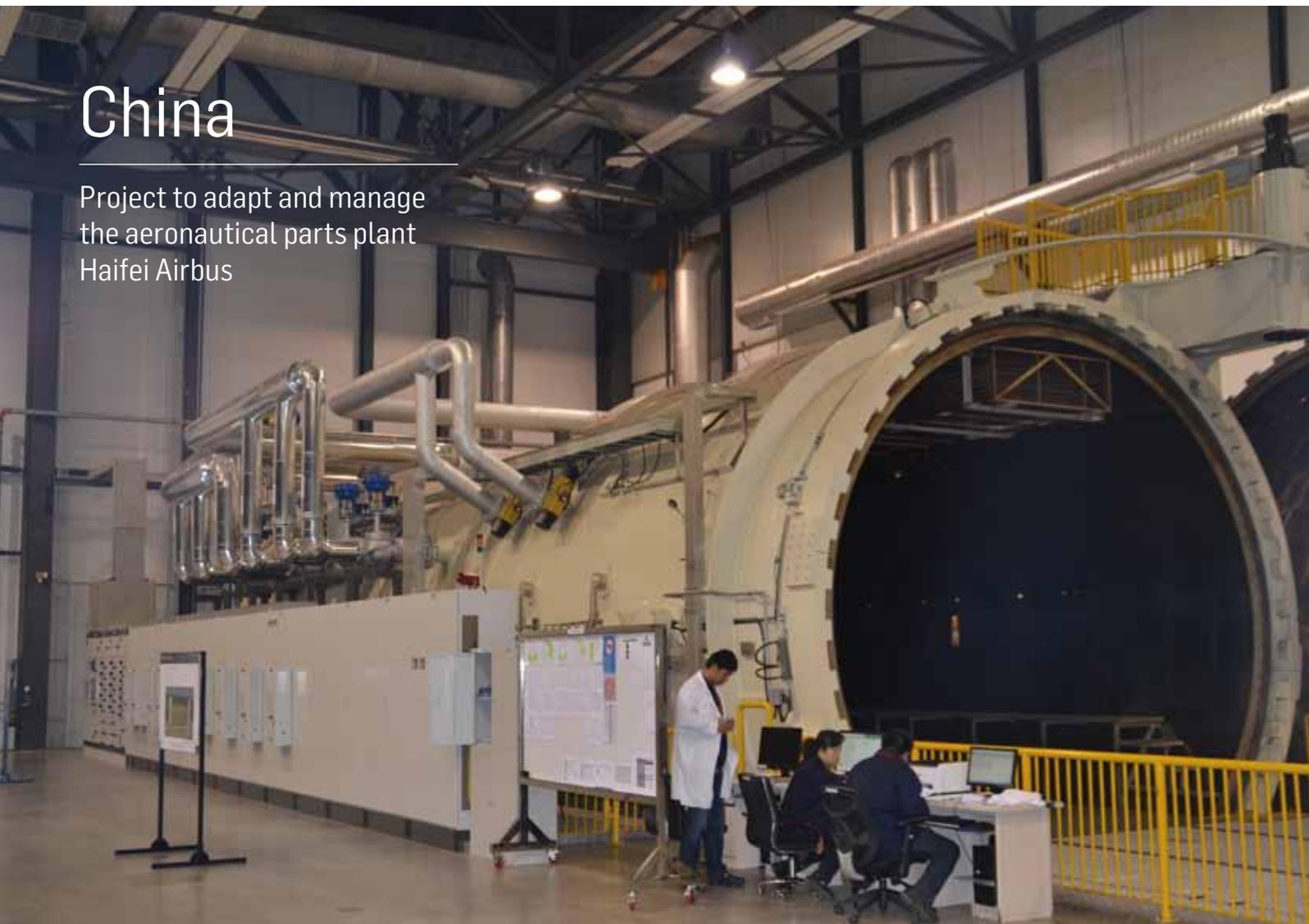
After opening the Hafei-Airbus manufacturing aeronautical parts plant in Harbin, Eptisa played an active role in commissioning and adjusting all the items of equipment at the plant. The activities performed included cooperation, analysis and technical assistance for the new projects generated by the plant. We have drawn up, developed and managed a variety of projects with a view to adapting the facilities to the needs of the manufacturing processes.

Eptisa has also been promoting an effective model for the building maintenance and all its systems. This was carried out according to the high production standards required in the aeronautical sector and was aimed to cooperate with the clients in achieve the quality management system of the product.

After two years in China, Eptisa is considered a benchmark company in the engineering field by the local partners. Our local experience and know-how in the **industrial building** has enabled us to take part in the new project for the business park at Harbin.

# China

Project to adapt and manage  
the aeronautical parts plant  
Haifei Airbus





## Africa

Eptisa has carried out in Africa the first missions concerning the monitoring contract based on ROM methodology (Result-Oriented Monitoring) of the cooperation programmes and projects developed by the European Union. As consultants, we are responsible for organising the monitoring of each project and for preparing the reports concerned. The aim of this activity is to guarantee an objective, impartial and rigorous quality control over the results of the European Union Aid and Cooperation Programmes in Africa. As part of this programme, we monitored projects in Angola, Cameroon, Eritrea, Mali and Senegal.

## Africa

### Projects Monitoring services in Africa

#### MOROCCO

In 2011, was completed the monitoring of the Sector Policy Support Programme in the field of adult education. After nearly two years, we have been offering technical assistance services to improve the economic, social and political participation of the most disadvantaged segments of the population, as well as the preparation for the future sector evolution, placing emphasis on the relationship between vocational education and employment development sector.

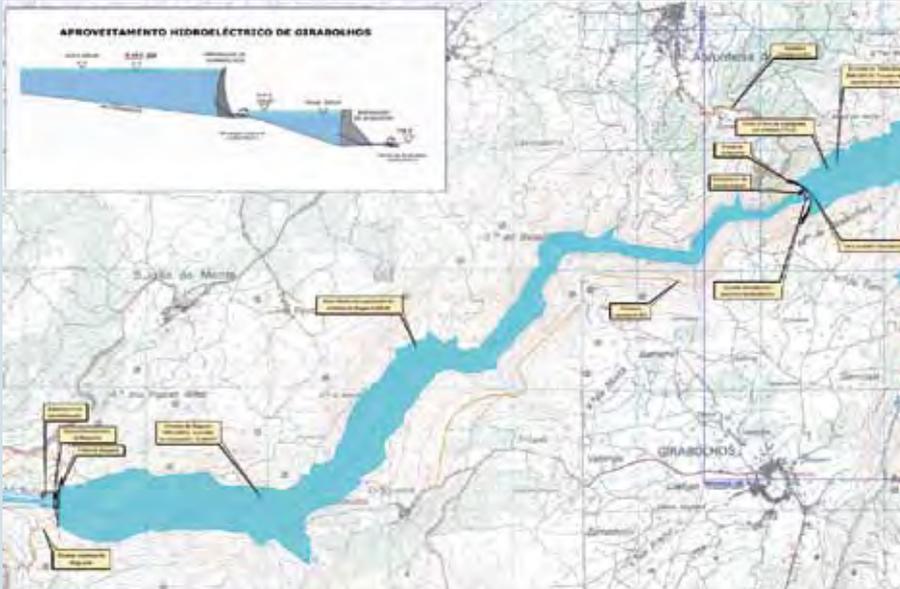
#### SOUTH AFRICA

The technical assistance project for *Monitoring and Learning Facility (MLF) for the Programme to Support Pro-Poor Policy Development* came to a successful conclusion at the end of the year. It was carried out within the consortium led by the company Eurecna, with the aim to improve the Government's institutional capacity to monitor and evaluate the policies and programmes that concern poverty.

#### ALGERIA

We were awarded the contract for the *Construction Design of a 32.5 km section of the new railway line*, which will be 185 km long and will link the cities of Relizane, Tiaret and Tissemsiltde. The project was awarded to the Algerian – Spanish consortium ETRHB-FCC by the country's Authorities. It is a single-track section that is planned to be made double track, not electrified, and designed to be suitable for both passengers and freight, with a maximum design speed of 160 Km/h. It will have 7 stations.





<< DETAILED DESIGN OF GIRABOLHOS HYDROELECTRIC PLANT PROJECT. PORTUGAL

The works planned consist of two dams and their respective hydroelectric power plants. A first arch dam 105.5 metre high (Girabolhos) creates a reservoir of 138 hm<sup>3</sup> and downstream there is a counter-reservoir (Bogueira) holding 57 hm<sup>3</sup> of water behind a 77 metre high arch-gravity dam. Both have a hydroelectric plant at the foot of the dam. In addition to the dams and power plants, Eptisa has also designed the access ways and the replacement of two roads flooded by the project, in which there are two viaducts over the Girabolhos Reservoir, one 300 m long and the other 80 metre long. The project involved both the previous studies (surveying, geotechnical study, hydrology, etc.) and developing the detailed engineering design.



<< TECHNICAL ASSISTANCE AND SUPERVISION OF ISPA WORKS IN CRAIOVA, TIMISOARA AND SUCEAVA. ROMANIA

The objective in Craiova was the rehabilitation and modernisation of the wastewater treatment plant for 385,000 EP, the rehabilitation of 30 km and the extension of 55 km of the sewerage network and rehabilitation of approximately 50 km of the drinking water supply system network.

In Timisoara, the works consisted of the rehabilitation of the wastewater treatment plant with a capacity of 440,000 EP and the rehabilitation and extension of the sewerage network by 28 km.

And Suceava, the aim was to improve the treatment system and drinking water distribution, as well as the wastewater collection networks for a beneficiary population of 140,000.



<< GEOSPATIAL URBAN WATER SUPPLY AND SANITATION UTILITY MANAGEMENT SYSTEM. GEORGIA

The project involves the development of a Geospatial Information System for the management of water supply and sanitation infrastructures in the cities of Kutaisi, Zugdidi, Poti, Mameuli, Anaklia and Mestia. Eptisa had collected water and sanitation asset data for the six cities, and integrated them in a database and developed a Web Based Geographic Information System for further planning and development of WSS Infrastructures.



^ CONSTRUCTION SUPERVISION FOR THE ENVIRONMENTAL SANITATION OF THE CITY OF DONG HOI. VIETNAM

The urban environmental sanitation infrastructures in Vietnam's cities have been lagged behind the pace of fast growing urban population. Given environmental and health hazards for residents and the obstacle this represents for the economic development of Vietnam, it has become an increasing concern and priority.

The first phase, completed in August 2010, included drainage works in the areas of Dong My, Nam Ly and Dong Phu, wastewater collection in Dong My and Hai Dinh Wards; and dredging and embankment improvements works along the Cau Rao River, the Phong Thuy Canal and Ly Nam Lake.

The second phase, awarded to Eptisa in 2011, continues with the flood protection and drainage work commenced under Phase I, and involves supervision of the construction of sewers network, interceptors and wastewater collectors, building a wastewater treatment plant of 10,000 m3/d with an aerated pond system and development of an improved solid waste management system. All these improvements benefit a population of 112,000 people in the city of Dong Hoi.

^ PREPARATION OF THE REGIONAL MASTER PLANS FOR DRINKING WATER SUPPLY AND SANITATION FOR THE SOUTH AND WEST ZONES OF HAITI

In 2011 Eptisa was awarded a project to develop the Drinking Water Supply and Sanitation Master Plan in the West and South of the country. The project is financed by the Spanish Cooperation Fund for Water and Sanitation and will be managed by the Haitian DINEPA. The overall objective of the Master Plan is to provide each of the four Regional Offices (OREPAs) with a development scheme for the short, medium and long term. The project includes the preparation of feasibility studies for nine cities located in these zones to provide data for investment proposals in drinking water supply and sanitation systems within the minimum possible delay.

As part of the scope of works, a national inventory of water resources and water infrastructures is being carried out. In addition socio-economic surveys is being realised to obtain the information related to population and water use and demand. Eptisa will then establish a diagnosis of the situation and prepare proposals for the network improvement and management of investments in cooperation with the National Directorate of Drinking Water Supply and Sanitation.

Based on the data obtained, Eptisa will prepare a digital hydrogeological map of the zone studied, as well as quantify and prioritize the investments in water infrastructure and sanitation on the whole territory, in both urban and rural and also prepare feasibility studies for priority cities in the National Strategy against Cholera.



<< SUPERVISION SERVICES FOR CONSTRUCTION OF FORENSIC LABORATORIES IN DIYARBAKIR, ADANA, İSTANBUL AND İZMİR . TURKEY

The subject of the contract is to provide supervision services for the construction of model forensics laboratories that will be established in Adana, Diyarbakir, Izmir and Istanbul. Construction area to be supervised for each site is approximately 7,000 m2. Eptisa act as the 'Engineer' in FIDIC terms and provide supervision services with full responsibility for the execution of all works compliant to contract conditions, as well as to ensure the provision of the services necessary during the defects notification period. Related works contracts are going to be organised in 4 lots and are based on the FIDIC conditions of contract for construction (Red Book).



<< SITE SUPERVISION OF CIVIL WORKS - JUDICIAL REFORM PROJECT. ROMANIA

A project funded by the World Bank for the rehabilitation and construction of 12 courts of law (Client Ministry of Justice).

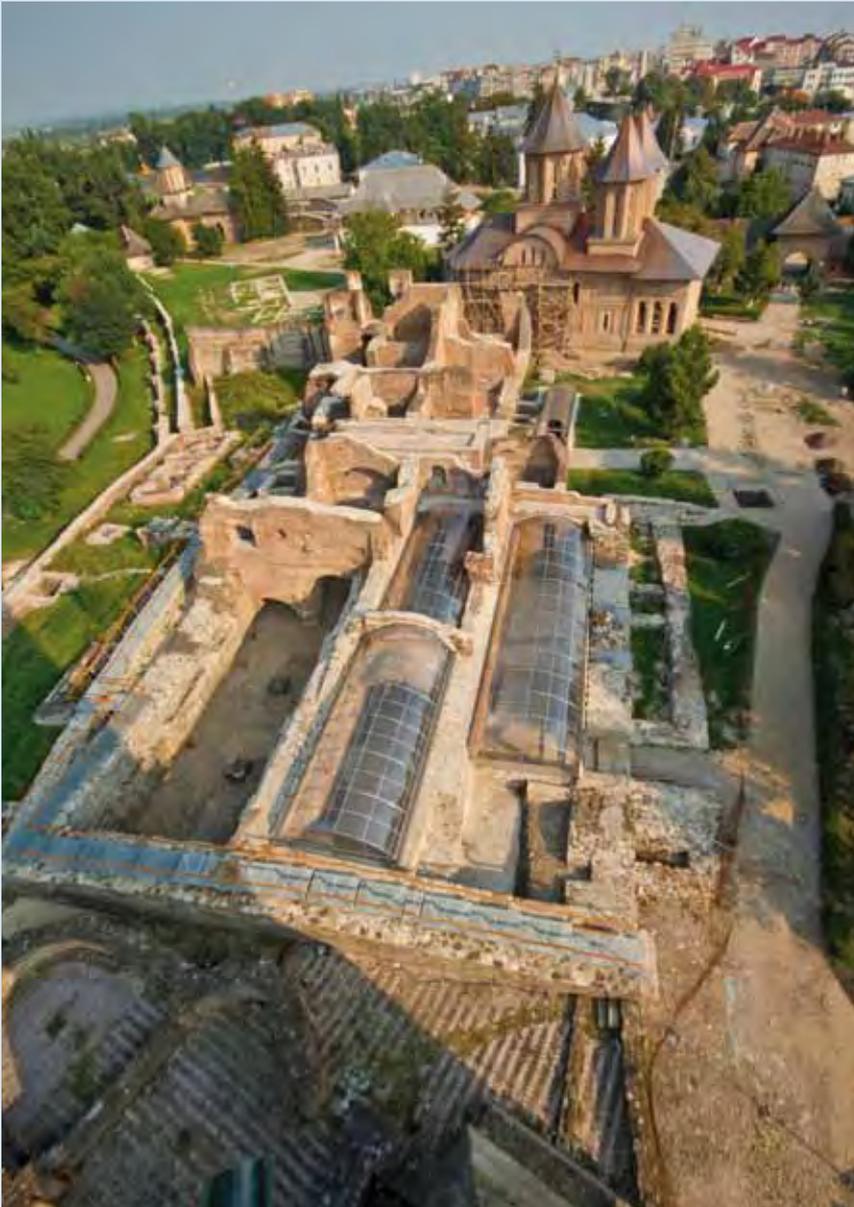


<< SUPPORT TO THE MINISTRY OF SCIENCE AND TECHNOLOGY FOR THE IMPLEMENTATION OF THE RESEARCH AND DEVELOPMENT (R&D) FACILITY. REPUBLIC OF SERBIA

The R&D Infrastructure Investment Initiative of the Ministry has a total of 400 million Euros after signing a loan with the EIB and the Council of Europe Development Bank. The objective is to enhance the research and development capabilities in the country. This initiative includes the construction and renovation of buildings and infrastructures related with R&D.

The Government established a Project Implementation Unit, responsible for all duties in connection with the preparation, publication, evaluation and award processes of all tenders, the co-ordination of activities and administrative support to the awarded contractors, the management of the disbursement process, and the provision of progress reports to the IFI's.

Eptisa provide technical support to the Project Implementation Unit, with architectural, engineering and management support services for the design and construction of several buildings and a wide range of research-related infrastructures.



<< SUPERVISION SERVICES FOR WORKS CONTRACTS FINANCED UNDER PHARE 2006 CES PROGRAMME.

ROMANIA

It is the third project developed in the sector of Large Regional Infrastructure Projects, and once more concerns technical assistance to the Ministry of Regional Development and Tourism for the supervision of 19 works contracts for the development of five regions in the field of tourism, leisure and business-related infrastructure, rehabilitation of historical monuments, construction and rehabilitation of roads.

✓ TECHNICAL ASSISTANCE FOR THE CONSTRUCTION OF SOCIAL AND ECONOMIC MUNICIPAL INFRASTRUCTURE. KOSOVO\*

Thanks to this EU-funded project, Eptisa is providing a wide range of engineering services for the development of socio-economic infrastructures in several municipalities across Kosovo. The indicative number of projects to be implemented is 20, from the three main sectors of local infrastructure: socioeconomic development (schools, health services and sport and youth facilities), infrastructure (roads and municipal buildings); and environment (water supply and sewerage systems).

Eptisa is involved in all the stages of project implementation, including the provision of assistance to municipalities to prepare their project fiches, the preparation of detailed designs and technical specifications for the selected projects, the delivery of support in the implementation, and the supervision of construction works until handover and final acceptance.





^ EUROPEAN MUNICIPAL INFRASTRUCTURE SUPPORT PROGRAMME - PHASES I, II, AND III. REPUBLIC OF SERBIA

The Municipal Infrastructure Support Programme (MISP) for the Republic of Serbia was initiated by the European Commission in early 2008 aiming at two main objectives: on the one hand, to provide technical support to all municipalities in the planning and implementation of municipal infrastructure projects, mainly related to water supply, wastewater treatment, and to the collection and disposal of municipal solid waste, and, on the other, to provide legal, managerial and technical support to Public Utility Companies in charge for the delivery of municipal infrastructure services.

Acknowledgment for the job well done is the award in 2011 of the third phase of the Programme. In which Eptisa assist the Serbian authorities in the preparation and prioritisation of municipal and socio-economic infrastructure projects. The team will also undertake several feasibility studies for the construction of environmental and socio-economic infrastructures. Additionally, Eptisa provide supervision services for three construction projects (two regional water supply schemes and a wastewater treatment plant). Finally, we continue providing advice and support for the improvement of the technical and financial management of several public utility companies.



^ PROGRAMME FOR THE PREVENTION, PREPAREDNESS AND RESPONSE TO MAN-MADE AND NATURAL DISASTERS IN THE ENPI EAST REGION

The programme mainly focuses on natural and man-made disasters identified as a priority in the ENPI East region (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) such as seismic risks, hydro-geological events, forest and ground fires, urban/industrial disasters, road accidents and disasters caused by extreme meteorological conditions.

The overall objective of this project is to contribute to the peace, stability, security and prosperity of the Eastern Partner Countries and to protect the environment, the population, the cultural heritage, the resources and the infrastruc-

ture of the region by strengthening the countries' resilience, preparedness and response to man-made and natural disasters.

The programme tackle all levels of preparation, preparedness and mitigation, and response management, to achieve an improved knowledge base concerning the current state of play, a strengthened prevention, preparedness capacities and response (from the administrative, operational and legislative perspectives), and increased information and awareness.



^ SUPERVISION OF WORKS FOR THE INTEGRATED WASTE MANAGEMENT SYSTEM IN BISTRITA-NASAUD COUNTY. ROMANIA

The project aims to implement an integrated waste management system in order to eliminate the environmental impact and risk on the human health, for a beneficiary population of 300,000 inhabitants.



<< STRENGTHENING OF BOSNIA AND HERZEGOVINA'S ENVIRONMENTAL INSTITUTIONS AND PREPARATION FOR PRE-ACCESSION FUNDS. BOSNIA AND HERZEGOVINA

The project will contribute to the sustainable development of Bosnia and Herzegovina by bringing the country closer to the European Union's environmental standards, by strengthening its administrative structures, and by fostering an approximation with the requirements of the Acquis Communautaire in the field of environment. The main objective of the intervention is to enhance the technical, administrative and programming capacities of all the institutions involved in the management of the country's rich natural and environmental resources.

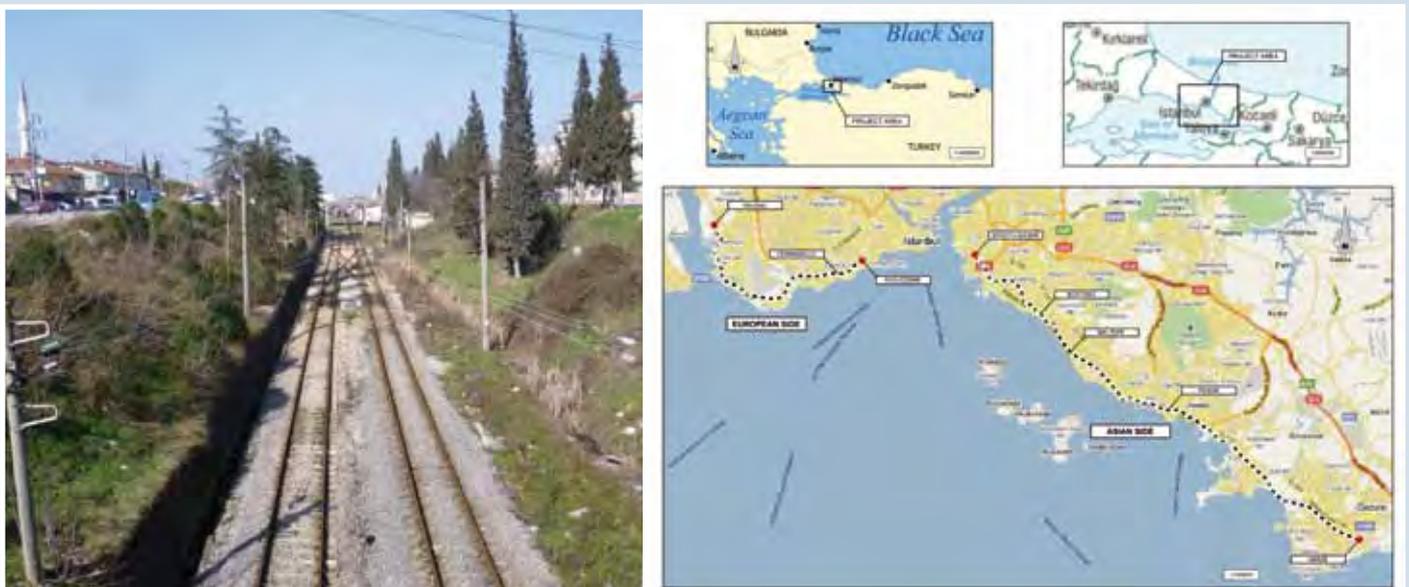
Eptisa provide technical advice in order to improve the capacity of the State authorities in environmental and natural resources management to perform their prescribed competencies, aiming at preparing the country for an effective transposition of the Acquis Communautaire, and promoting an improved implementation of the international agreements in the field of environment. The intervention also aims to further stimulate the investment climate in environmental infrastructure in Bosnia and Herzegovina.



<< WASTE GOVERNANCE FOR ENPI EAST REGION

The objective of the project within the environmental and forestry programme is to reduce pollution risks arising from inadequate management of solid waste in the six countries comprising the area of actuation: Azerbaijan, Armenia, Belarus, Georgia, Moldova, Russia and Ukraine.

The main focus during 2011 period was to develop the waste management strategies and update the registers of illegal waste disposal sites. The latter was successfully completed and transposed into a digital GIS database format for four of the Partner Countries (Armenia, Georgia, Moldova and Ukraine) and into a graphical format for Azerbaijan and Belarus. With respect to the former, important milestones achieved included the development of 15-year waste forecasts for the majority of the Partner Countries. In addition, the implementation of awareness raising and capacity building activities were successfully carried out.



^ GEBZE-HAYDARPAŞA, SIRKECI-HALKALI COMMUTER RAIL UPGRADING AND RAILWAY BOSPHORUS TUBE CROSSING CONSTRUCTION (MARMARAY), TURKEY

Eptisa, in consortium with the Turkish company Prota, has awarded the contract by the OHL-Dimetronic joint venture, which will carry out the construction of this railway line in Turkey. The Marmaray project consists of the developing connection of the rail lines between the European and the Asian side in Istanbul through an underwater tunnel in the Bosphorus Strait. This tunnel will allow the transit of high-speed, commuter and freight trains between the two continents.

The implementation intends to use the existing railway corridor and adapt it to accommodate two tracks for internal Istanbul traffic (Commuter Rail) plus a third line on which interurban traffic will run (Intercity). Furthermore, the railway corridor has to be suitable for the movement of goods both on the dual track (CR) and on the two-way single track (IC).

Eptisa, among other activities, will carry out detailed design and earthworks, geology and geotechnical matters, drainage, structures (overpasses, bridges, and drainage works), and track superstructure, of the Asian side (44.499 km).



#### ^ DETAILED DESIGN OF A NEW RAILWAY LINE LINKING THE CITIES OF RELIZANE, TIARET AND TISSEMSILT. ALGERIA

The construction of the new railway line of 185 km between the towns of Relizane and Tissemsilt, was awarded by the ANESRIF to the FCC-ETRH consortium. The project for this line has been divided into 17 sections. The platform will be built for non-electrified single track, except in areas where structures are present to enable future doubling of the track.

During 2011 Eptisa was awarded the construction design of sections 2B, 3A and 7A, with a total length of about 32 km.

The scope of works consists to develop the construction design: layout and earthworks, drainage system of the new platform; rerouting of highways, roads, local ways, track superstructure, railway and non-railway track facilities; structures for gas pipelines; stations including architecture, structure and planned and future facilities, parking areas, etc.



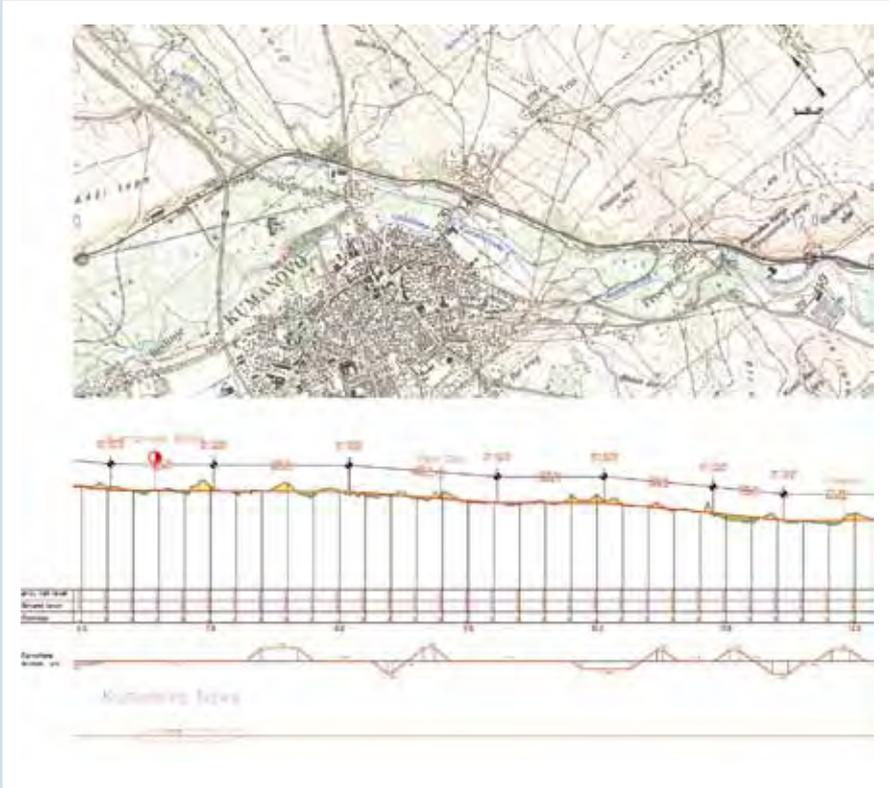
#### << DETAILED DESIGN AND BIDDING DOCUMENTS FOR CONSTRUCTION OF THE RUISI - RIKOTI SECTION OF THE E-60 HIGHWAY. GEORGIA

The Roads Department of the Ministry of Regional Development and Infrastructure of Georgia has awarded us a new contract co-financed by the Georgian Government and the World Bank to improve a section of the East-West Highway.

Eptisa is developing the detailed design of the enlargement from two-lane carriageway into four on the mountainous section of Ruisi-Rikoti (45 km) of the Georgian East-West Highway.

The improvement of the transport system has a double purpose. On the one hand, it will reduce the cost of transport by road and stimulate trade with neighbouring countries, as well as attract foreign investments. On the other hand, this project will help decrease congestion delays and improve road safety in the section crossing populated areas (villages and the city of Kashuri), and consequently the well being and safety of the population affected.

This work includes the preparation of detailed design for all elements of road works including detailed analysis of all junctions, drainage system, safety facilities, etc.; topographical surveys and review of all hydrological, drainage and any other relevant data required; and a detailed Resettlement Action Plan and Environmental Assessment. Eptisa will also prepare the tender documentation for the procurement of works contracts.

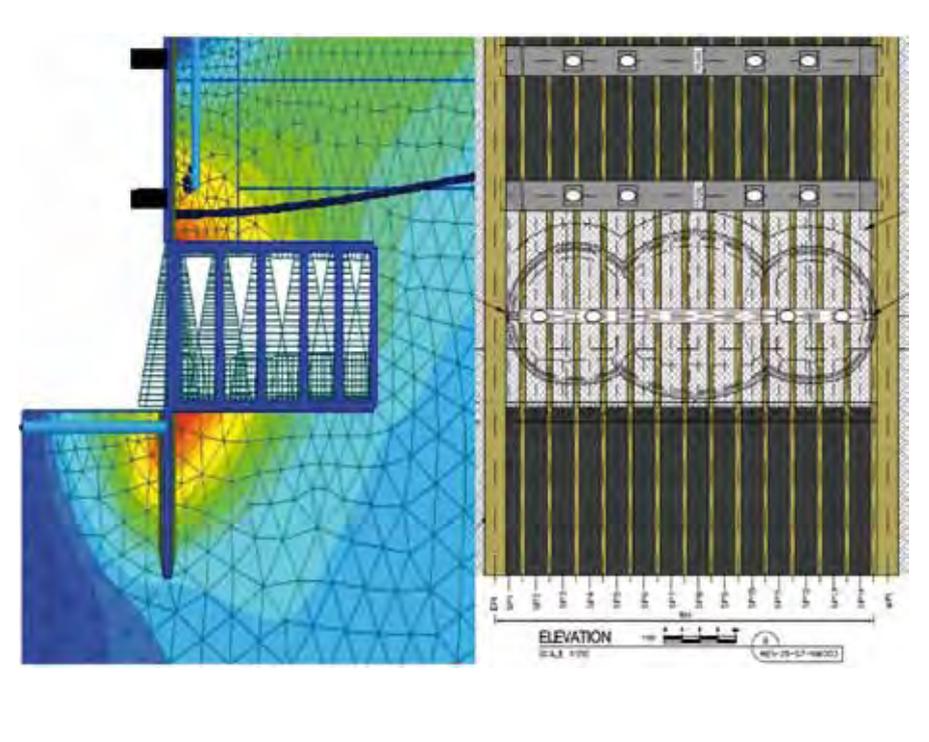


<< FEASIBILITY STUDY FOR THE EASTERN SECTION OF THE PAN-EUROPEAN RAILWAY CORRIDOR VIII. FYR MACEDONIA \*

The Pan-European Corridor VIII is the infrastructure axis connecting the Adriatic with the Black Sea, through Italy, Albania, the FYR of Macedonia and Bulgaria. It spans over the South Eastern European area where rail infrastructure is rather weak and where some crucial links are still missing, while the existing ones are insufficient. Within FYR of Macedonia, about 90 kilometres of the Rail Pan-European Corridor VIII remains to be constructed in the eastern section, between Skopje and Bulgaria, and about 66 kilometres in the western link with Albania.

In order to facilitate the preparation of bankable projects that will eventually make possible the finalisation of the missing sections, the EBRD granted funds for the preparation of a Feasibility Study and an Environmental and Social Impact Assessment Study for the eastern section of the Corridor (sections Kumanovo – Beljakovce - Kriva Palanka - Deve Bair). A consortium led by Eptisa was selected to implement this challenging engineering services contract.

Eptisa is providing technical support to the Ministry of Transport and Communications in the preparation of rail traffic and revenue forecast for the next 20 years. The team is also assessing the environmental and social impacts and is undertaking the conceptual design for the proposed alignment.



<< DETAILED DESIGN OF YORK SPADINA SUBWAY EXTENSION PROJECT. ONTARIO, CANADA

Included within the Toronto subway extension works, Eptisa has designed the enclosure to house one of the stations, an emergency exit building, and the station tunnel boring machine shaft.

The enclosure of the main station (York University Station) measures 170 m x 30 m and has an excavation depth of 22 m.

The biggest challenge has been to optimise the construction process in order to minimize the impact on the surface and the effects on third parties (adjacent buildings and buried utilities).



<< SUPERVISION OF CONSTRUCTION WORKS ON THE HIGHWAY E-80, PROSEK - DIMITROVGRAD (CORRIDOR X), REPUBLIC OF SERBIA

Despite its national and international importance, nowadays few sections of the Corridor X in Serbia are dual carriageways, hindering the economic development in the region and increasing the number of casualties due to traffic accidents.

A consortium led by Eptisa is providing supervision services for all the works contracts in connection with the construction of the new highway E80 in Serbia. The contract has a value of 8.5 million Euros and the overall value of the construction works is estimated at 600 million Euros, to be financed by the European Investment Bank, the European Bank for Reconstruction and Development and the World Bank.

Eptisa is supervising the works performed by several international contractors working in nine different subsections in the Dimitrovgrad – Prosek section, all the way to the border with Bulgaria. The new highway, which will become a crucial part of the main route from Central Europe to Turkey, consists of 60 kilometres and includes 43 bridges and viaducts, 4 tunnels, and 3 interchanges.



^ AUSCULTATION IN THE CONSTRUCTION PHASE OF THE VIADUCT OVER THE RIVER DANUBE TO LINK THE CITIES OF VIDIN IN BULGARIA AND CALAFAT . ROMANIA

In the construction of a large viaduct suitable for road and rail traffic over the river Danube linking the towns of Vidin and Calafat, located in Bulgaria and Romania respectively, Eptisa is responsible for the auscultation of various access embankments to the viaduct. To do this, during the construction phase, we are installing a total of 8 Intensive Instrumentation Sections, for monitoring several parameters. This auscultation project involves the installation and monitoring of over 250 instrumentation and surveying devices during the construction phase, with the aim of keeping them working during the subsequent operating phase.

# Corporate Responsibility

In 2011, Eptisa's Board implemented an action plan to integrate corporate responsibility values in our company culture and internal processes. In the new economic-social context CR is acquiring importance in the matters related with sustainability, the respect for the environment and the social development. Therefore we are working in three main lines towards to increase our responsibility for the social development, our commitment to our professionals, and respect for the environment.

## Commitment to our professional

All Eptisa's professionals all over the world have the support of a technical team of engineers, architects, economists, geologists, chemists, doctors, biologists, programmers, etc. working to innovate and improve services and place them at the service of the organization as a whole.

All Eptisa's employees have a **personal professional development plan** based on the skills and functions of every job. Individual Training programme and the Talent management programme help in the development of the professional career of each of the organization's employees.

Throughout the organization, knowledge management plans encourage training, creativity and synergy among professionals to improve efficiency and productivity.

The purpose of the **Health and Safety policy** is to prevent accidents and improve the welfare of people in the workplace.

**The Equal Opportunities Policy** intends to raise awareness of male and female personnel right's and all issues related to equality. The implementation of an equal opportunities principle promote the professional development of women in Eptisa and establish conditions that allows and favour effective conciliation of professional and family life.





In 2011, through a cooperation agreement with the Adecco Foundation, we have worked in an initiative to help employees with handicapped family members.

We have added this programme of the Adecco Foundation (which is specialized in the integration of handicapped people in the labour life) to our conciliation programmes. The initiative, called Family Plan, consist of support employees with handicapped children, spouses, brothers or sisters aged between 0 and 65 with a accompaniment plans by the Addecco Foundation's selection consultants.

The personal attention to each beneficiary consists of orientation, assessment and the design of actions adapted to the needs of each participant covering these areas: clinical/medical, family, social, training and labour integration.

This initiative comes from the company's social strategy in terms of **diversity** to include values favouring the social and labour integration of handicapped people both in society and in our company.

### Commitment to the social development

Knowing that social responsibility and working conditions have a fundamental importance for the organization's development while respecting national and international laws regarding working conditions labor – this is the responsibility of every employee of the organization and also of the entire community.

Therefore, in 2011, Eptisa took the decision to implement a management system in accordance with the SA 8000 standard requirements. At the end of the year, we obtained the SA8000 certification, guaranteeing the international requirements of corporate social responsibility related with human rights and labour conditions.

The company is a leading agent in the development of society, through the services, equipment and projects it provides and the transfer of technical know-how, technology and management capabilities to the most impoverished parts of the planet.

With this reality in mind, the main aim of Eptisa's **development cooperation** activity is to combine business opportunities which benefit both the company and society as a whole. It is now a point of reference in multilateral fund management and works with the main international development agencies.

Cooperation has many objectives, basically focussed on the fight against poverty, the scope of which needs the capabilities of different agents, such as those of a highly technical nature, where engineering companies have very extensive know-how.

Eptisa's strong points are its technical and management capabilities, the ability to identify and define technical solutions, its contribution to the improvement of the physical capital of people's environment and swift response to requirements in the most demanding circumstances.

In addition, in developing countries there are no purely technical projects: technical problems are always related with social problems. It is necessary, therefore, to understand how local social and cultural factors (which are different in each different place) function so that the technical solutions proposed are adequate in all their dimensions.

Eptisa's business responsibility focuses on respect for a series of principles in their actions and projects, for example, esteem for local human and material resources, the population's sense of appropriation, empowerment of Meta groups, awareness and consensus of the various local participants, compatibility with local development processes and conservation of natural resources.

Eptisa's professionals understand the great importance of being complementary to other participants who provide local knowledge such as consultants, research centres, public institutions or universities. And of the role of NGOs, who have experience and knowledge of the dynamics of society, the ability to understand and relate to the needs of the population, experience in the design of social intervention and normally knowledge of appropriate local techniques/technologies.

### Respect for the Environment

Eptisa is committed to the new challenges to engineering in the 21st century, which are to keep the efficiency of travel while reducing its economic and environmental impact and to maintain growth of the welfare state without overexploitation of the Earth's resources.

For that reason, in the transport infrastructure sector we are working on efficient, ecologically sustainable mobility, and in the building and energy sector on energy saving and the search for new energy sources.

In 2011, Eptisa began to offer services aimed at helping our clients be more ecosustainable. We have designed energy efficient infrastructures and systems, worked with private institutions on the development of renewable energies, and we participate in incinerator projects in Spain.

Water is a vital resource, essential for the development of human beings. Eptisa is committed to improving people's access to water all over the world by providing engineering and project management services.

Within the internal environmental programme, goals were defined in 2011 in the framework **Reuse, Recycle, Recover and Reduce**.

Because of the increased awareness of staff, paper consumption was reduced by two per cent in seventy-five per cent of Eptisa's centres. And eighty-five per cent of paper consumed in fifty per cent of offices was selectively recovered.

Another goal was the one per cent reduction of electricity consumption in sixty-two per cent of centres.

The programme included the drive to reduce the purchase of little needed or unneeded products including elements which will become rubbish after a time, such as, for example, products with too much packaging. The idea is simply to reduce the problem and the environmental impact.

We have worked to reduce water consumption in all work centres to cut it by two per cent.







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