

# 07

## ENVIRONMENTAL SERVICES

Analysis of the environmental sector in Spain

FCC business activity

International Environment Division

Technological innovations

Sustainability

Quality, prevention of occupational risks and training

FCC Ámbito



A drone examines the sewage system of Barcelona (Spain).



## ANALYSIS OF THE ENVIRONMENTAL SECTOR IN SPAIN

Over the past year, in total 114 tenders were awarded for urban sanitation services, covering activities related to the collection and treatment of solid waste, street cleaning and sewage network maintenance. This is less than the number of tenders awarded in 2013. The overall contracting volume was 1,220.1 million euros, compared to 1,556 million last year.

The year 2014 has been similar to the previous one, as we are still in the midst of an economic crisis cycle, which affects the number of tenders due to budget constraint criteria. Despite this, the services order book is only 4,7 % less than the previous year.

### Business activity in FCC

FCC provides urban sanitation services in 3,383 municipalities across Spain and serves a population of more than 27 million inhabitants. During 2014, FCC collected 6 million tonnes of waste and treated 7.2 million tonnes.

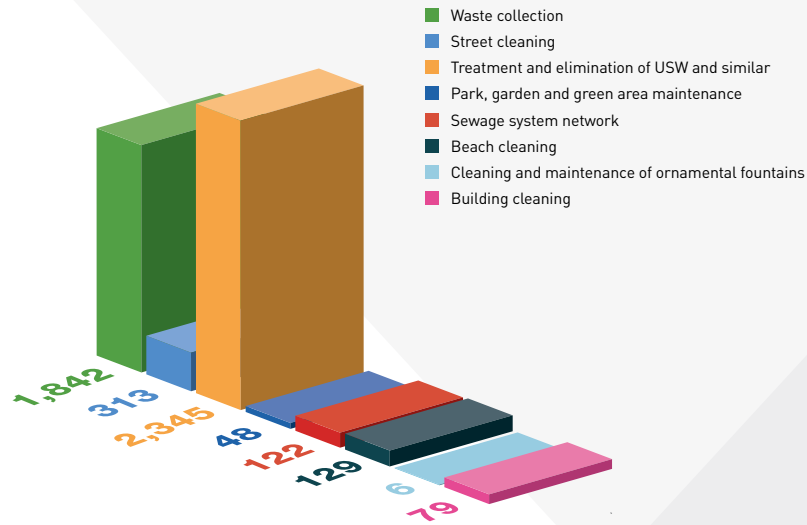
## MAIN CONTRACTS AWARDED IN 2014- FCC MEDIO AMBIENTE - SPAIN

Province	Contract	Convening Agency	Company Awarded Contract	Total Amount of Contract	Term of Contract
Barcelona	Barcelona 15 Sewage Network	Barcelona City Council	Fomento de Construcciones y Contratas, S.A.	94,101,837.53 €	8
Barcelona	Management of the Viladecans transfer plant	Barcelona Metropolitan Area	TIRSSA - Tratamiento Industrial de Residuos Sólidos, S.A.	20,866,352.00 €	4
Balearic Islands	Cleaning of Floating Solid Objects (Mallorca, Menorca, Ibiza-Formentera) 2014	Balearic Water and Environment Quality Agency	Fomento de Construcciones y Contratas, S.A.	2,446,750.00 €	2
Barcelona	Conservation and maintenance services for 318 buildings. Lots 7, 11, 15, 16, 20, 21 & 22	Gestió d'Infraestructures, S.A.	UTE ICAT LOTE 11	12,010,003.57 €	3
Barcelona	ICS Maintenance 2014	Catalan Health Institute	Fomento de Construcciones y Contratas, S.A.	1,163,941.94 €	1
Balearic Islands	RBU - LLucmajor	LLucmajor Empresa Municipal de Serveis, S.A.	Fomento de Construcciones y Contratas, S.A.	8,706,550.20 €	10
Balearic Islands	RBU, street and beach cleaning in Sant Josep de Sa Talaia	San José City Council	UTE ES VEDRA	38,140,639.20 €	10
Balearic Islands	(USW) and street cleaning in Manacor 14	Manacor City Council	LUMSA - Limpiezas Urbanas de Mallorca, S.A.	9,024,327.58 €	4
Balearic Islands	USW-street cleaning-beaches in Alcúdia 14	Alcúdia City Council	LUMSA - Limpiezas Urbanas de Mallorca, S.A.	6,952,472.62 €	4
Barcelona	Mataró gardens	Mataró City Council	Fomento de Construcciones y Contratas, S.A.	825,508.28 €	4
Barcelona	USW, street and beach cleaning in Mataró	Mataró City Council	Fomento de Construcciones y Contratas, S.A.	55,455,133.83 €	8
Tarragona	Ametlla de Mar street lighting	Ametlla de Mar (L') City Council	Fomento de Construcciones y Contratas, S.A.	4,376,470.32 €	15
Lérida	USW and Landfill in Garrigues	Garrigues Regional Council	Jaume Oro S.L.	7,320,057.00 €	10
Lérida	Waste collection in Mollerussa	Pla d'Urgell Regional Council	Fomento de Construcciones y Contratas, S.A.	6,170,615.16 €	12
Valencia	Gardens in north Valencia 2015	Valencia City Council	Fomento de Construcciones y Contratas, S.A.	24,376,039.38 €	4
Castellón de la Plana	Castellón school cleaning	Castellón de la Plana City Council	Fomento de Construcciones y Contratas, S.A.	3,953,027.80 €	2

## MAIN CONTRACTS AWARDED IN 2014- FCC MEDIO AMBIENTE - SPAIN

Province	Contract	Convening Agency	Company Awarded Contract	Total Amount of Contract	Term of Contract
Valencia	Alfajar street cleaning	Alfajar City Council	Fomento de Construcciones y Contratas, S.A.	3,674,047.50 €	10
Valencia	Alboraya street cleaning and USW	Alboraya City Council	Fomento de Construcciones y Contratas, S.A.	6,739,546.08 €	8
Alicante	Castalla street cleaning and USW	Castalla City Council	Fomento de Construcciones y Contratas, S.A.	4,605,012.16 €	12
Alicante	Crevillent street cleaning + USW + ECOPARK	Crevillente City Council	Fomento de Construcciones y Contratas, S.A.	17,568,251.10 €	10
Albacete	Hellin USW and street cleaning	Hellín City Council	Fomento de Construcciones y Contratas, S.A.	10,905,681.70 €	10
Córdoba	Córdoba. Container cleaning, maintenance and replacement lot C	EPREMASA-Empresa Provincial de Residuos y Medio Ambiente, S.A.	Fomento de Construcciones y Contratas, S.A.	778,014.54 €	4
Málaga	Málaga. West Málaga cleaning and sanitation	EMASA-Empresa Municipal de Aguas de Málaga, S.A.	Fomento de Construcciones y Contratas, S.A.	1,721,316.64 €	2
Ceuta	Ceuta. Special cleaning of illegal landfills	Sociedad de Fomento Procesa	UTE Ceuta	311,357.63 €	1
Málaga	Málaga Historical gardens	Malaga City Council	Fomento de Construcciones y Contratas, S.A.	3,259,099.92 €	2
Melilla	Melilla sewer cleaning	Melilla Autonomous City	UTE ALCANTARILLADO MELILLA	2,498,784.40 €	4
Palmas (Las)	Puerto del Rosario street lighting maintenance	Puerto del Rosario City Council	UTE FCC-IMESAPI	43,076,594.56 €	20
Palmas (Las)	Oliva USW, street and beach cleaning	Oliva (La) City Council	Fomento de Construcciones y Contratas, S.A.	15,211,097.33 €	10
Palmas (Las)	Puerto del Rosario USW, street and beach cleaning	Puerto del Rosario City Council	Fomento de Construcciones y Contratas, S.A.	18,792,059.71 €	10
Murcia	Cartagena coastal maintenance and cleaning	Cartagena Municipal Institute of Coastal Services	Fomento de Construcciones y Contratas, S.A.	2,783,040.32 €	4
Ávila	Packaging collection in Ávila	Avila City Council	Fomento de Construcciones y Contratas, S.A.	630,000.00 €	2
León	Cacabelos City Council street lighting	Cacabelos City Council	UTE CUA	2,087,022.60 €	12
Guipúzcoa	San Sebastián municipal buildings cleanings	San Sebastián City Council	Fomento de Construcciones y Contratas, S.A.	4,148,768.75 €	1
Guipúzcoa	Tolosa J.V. street cleaning	Tolosa City Council	LV TOLOSA UTE	4,539,871.20 €	4
Guipúzcoa	Zumarraga J.V. street cleaning	Zumárraga City Council	LV ZUMARRAGA, U.T.E	2,005,962.40 €	4
Guipúzcoa	San Marcos selective J.V.	San Marcos Association	SELECTIVA SAN MARCOS UTE I	12,820,696.56 €	3
Madrid	Madrid outskirts 2014 USW containerization services	Madrid City Council	CONTENEDORES MADRID 2 UTE	8,338,246.33 €	1
Álava	USW and street cleaning in Vitoria	Vitoria City Council	UTE FCC-GSMS	165,965,808.95 €	8
Álava	Operating the USW Gardelegui landfill	Vitoria City Council	UTE GARDELEGUI III	5,500,950.00 €	6

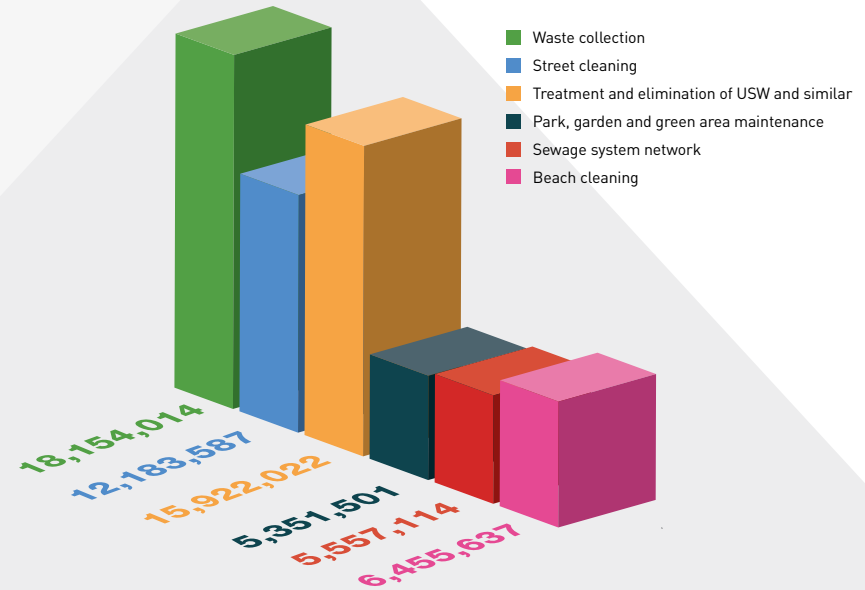
NUMBER OF MUNICIPALITIES SERVED



Summary of number of municipalities served\*: 3,383

\*If several services are provided to the same municipality, the municipality is only accounted for once.

POPULATION SERVED



Summary of population served (total inhabitants)\*: 27,093,747

\*If several services are provided to the same municipality, the population served is only accounted for once.

## WASTE TREATMENT

### Composting Plant and Waste Transfer Station in Epele (Bergara, Guipuzcoa)

UTE PLANTA COMPOSTAJE EPELE, a joint venture established by the companies Fomento de Construcciones y Contratas, S.A., Serbitzu Elkartea, S.L. and Construcciones Murias, S.A., has been awarded the execution of the works and facilities corresponding to the Composting Plant and Waste Transfer Station of Epele in the town of Bergara, together with the start-up of the plant, for an award amount of 5,747,122.36 euros.

The plot on which the plant is located is adjacent to the inert waste landfill of Epele (Bergara) in the community of Debagoiena. Specifically, the facilities are in a valley on the bottom of the Irutontorreta hillside, near the Epele irrigation channel, bordering the municipal districts of Arrasate-Mondragon and Bergara.

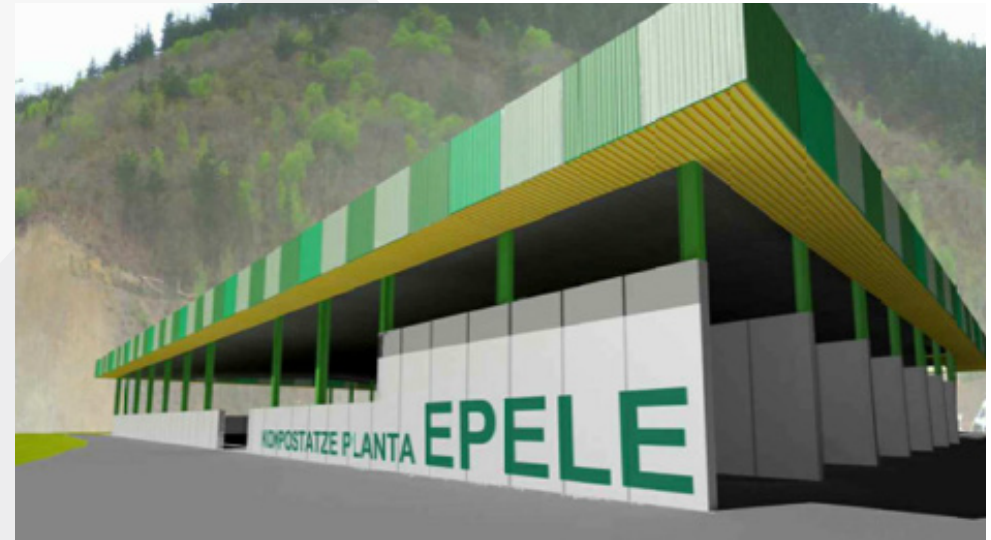
The composting plant will have the capacity to transform 9,000 tonnes per year of bio-waste into compost and, together with the composting plant of Lapatx, all the bio-waste currently generated in Guipuzcoa will be able to be treated. With these 9,000 tonnes of organic matter, around 2,300 tonnes of compost will be produced.

The facilities cover an area of approximately 8,600 m<sup>2</sup> and are comprised of the following buildings:

- Building for the reception and unloading of bio-waste.
- Building for the reception and storage of uncrushed structuring material.
- Building for mixing.
- Bio-oxidation tunnels. There are eight tunnels for the fermentation stage of the composting process. These tunnels are 6 metres wide, 29 metres long,

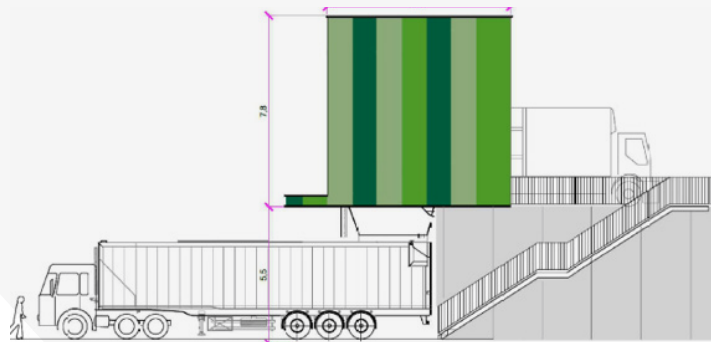
with a 3 metre wall height. The upper part is a dome-shaped PVC coated metal structure.

- Building for maturation. The maturation of the composting process takes place in rows inside this building.
- Building to store the finished product (compost).



In turn, the transfer station will have the function of collecting the rejected material, paper and light packaging materials from Debagoiena, which will then be taken to the corresponding treatment plant.

The station has two platforms with a height difference of 5 metres between them. It consists of three tapered chutes through which the lorries unload their cargo into semi-trailers. The facility has a roof to prevent rainwater from entering the semi-trailers through the chutes.



In addition to these two infrastructures, the following facilities shall be available to service those mentioned above:

- Office building, operating staff services and workshop.
- Building for washing lorries.
- Weighing facility.
- Security booth.
- Development of the entire area.

The roofs of the buildings will be covered with a vertical peen in different shades of green, which provide a material continuity to the entire unit and integrates it into the natural surroundings.



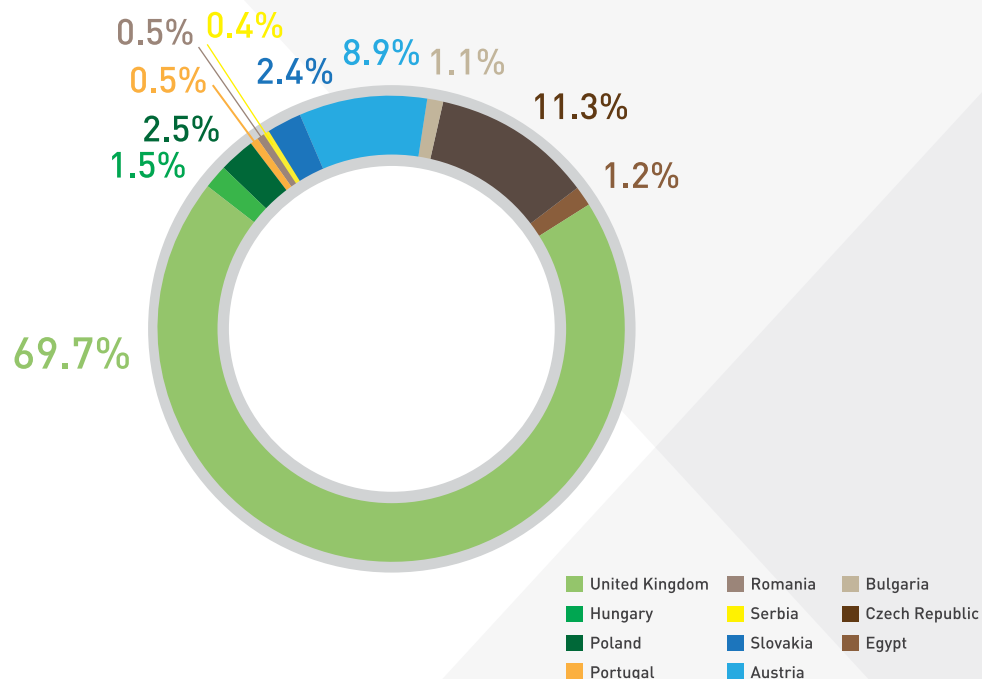
## INTERNATIONAL ENVIRONMENT

**TURNOVER: 1,228.1 MILLION EUROS**  
(Increase of 3% compared to 2013)

FCC's International Environment division is one of the leading European companies in the integrated management of municipal solid waste and energy recovery in the United Kingdom, Central and Eastern Europe and North Africa, with a presence in 11 countries (United Kingdom, Austria, Czech Republic, Slovakia, Hungary, Poland, Romania, Bulgaria, Serbia, Portugal and Egypt).

### International Environment Division - Turnover 2014

Geographical location



During 2014 the International Environment division was awarded 58 tender contracts in the areas of waste collection, transportation, treatment, disposal, recovery of contaminated soils and street cleaning, with a geographical distribution as follows:

### UNITED KINGDOM (FCC Environment UK)

(Data refer to actual tender contracts awarded during 2014)

Contracts awarded:	22
Annual turnover:	92.5 million euros
Contracted order book:	646.2 million euros

(Data refer to contracts provisionally awarded during 2014)

Contracts awarded:	7
Annual turnover:	67.9 million euros
Contracted order book:	835.6 million euros

### CENTRAL AND EASTERN EUROPE (.A.S.A.)

(Data refer only to contracts awarded during 2014)

Contracts Won:	24
Annual turnover:	31.7 million euros
Contracted order book:	57.5 million euros

### OTHER COUNTRIES (FOCSA PORTUGAL)

Contracts Won:	5
Annual turnover:	2.6 million euros
Contracted order book:	9.7 million euros

## MOST SIGNIFICANT EVENTS 2014

### 1. Commissioning of the incineration plant in Lincolnshire (UK)

After signing the DBFO contract with the county of Lincolnshire for a period of 25 years for the treatment by incineration of the county's municipal waste, the plant was definitely implemented on March 5, 2014. This facility is capable of treating 150,000 tpa and generating 13.1 MWe, which represents over 103,000 MWh per year.



Incineration plant in Lincolnshire (United Kingdom).

### 2. Construction of the incinerator in Buckinghamshire (UK)

On April 17, 2013, a DBFO contract was signed with the county of Buckinghamshire for a period of 30 years. Work began in September 2013, and is progressing well, with the incinerator is expected to begin operations in the first quarter of 2016.

The plant will serve more than 478,000 inhabitants, has an incineration capacity of 300,000 tpa and will generate 24 MWe, representing an annual production of more than 187,000 MWh per year, enough to power 37,000 homes.

### 3. Construction of the incinerator in the counties of Herefordshire and Worcestershire by Mercia Waste Management, a 50% FCC subsidiary (UK)

In May 2014 the variation to the contract signed in 1998 with the counties of Herefordshire and Worcestershire for a period of 25 years to build a 200,000 tpa incinerator plant was signed. Construction work began in June 2014 and it is expected to have the plant operational by the first quarter of 2017. The plant will generate 20.6 MWe, which represents over 160,000 MWh per year.

## MOST SIGNIFICANT CONTRACTS AWARDED IN THE YEAR 2014

### 1. UNITED KINGDOM

#### Treatment and disposal contract in Hull & East Riding

On January 10, 2014 a joint contract was signed with the City Councils of East Riding and Hull for a period of 10 years and with an order book of 155.4 million euros.

The contract includes treatment of 60,000 tpa of municipal waste, the management of 300,000 tpa by means of two transfer stations, and the management 13 recycling centres.

The population served is over 590,000 inhabitants.



### Treatment and disposal contract of Wigan

In September 2014 a contract was signed for a period of 25 years with an order book of 279.1 million euros. The contract is for the mechanical treatment of 60,000 tpa of municipal waste, the production of fuel derived from waste, and the management of three recycling centres.

### Contract for municipal waste collection in Herefordshire

Since 2009, FCC Environment Services has provided a municipal waste collection service in Herefordshire, which serves 183,600 inhabitants. This contract has been extended for a period of seven years and has an order book of 32.7 million euros.

### Provisional award of a PPP contract with Edinburgh and Midlothian

In December 2014 the authorities of Edinburgh and Midlothian selected FCC Environment as the provisional contractor for the PPP contract for a period of 25 years. This contract includes the construction and operation of a 150,000 tpa waste incineration plant with power generation (CHP) of 13 MWe, representing more than 103,000 MWh per year.

The contract represents an order book of 729 million euros and will serve a population of over 575,000 people. It is expected that the contract will be signed in June 2015.



## 2. CENTRAL AND EASTERN EUROPE

### Contract for the recovery of contaminated soil in Slovakia

On 29 September 2014 a contract with the Ministry of Environment in Slovakia for the treatment and recovery of soils contaminated by waste from old refineries was signed. This contract represents a turnover of 10 million euros.

### Contract for municipal waste collection in Zabrze, Poland

Renewal of the contract for municipal waste collection and street cleaning with the city of Zabrze for a period of two years, representing a turnover of 8.5 million euros.

Zabrze, located 20 km from Katowice, has a population of over 173,000 inhabitants. FCC also operates a municipal waste treatment facility in this city for the entire region.

### Waste collection and disposal contract in Dobrich, Bulgaria

In September 2014 a municipal collection contract was signed for a period of five years for the separate waste collection of recyclables and landfill elimination for the city of Dobrich.

## 3. PORTUGAL

### Contract for municipal waste collection in Vilareal

In September 15, 2014 the municipal waste collection contract was renewed for a period of nine years. The order book amounts to 7.1 million euros and serves a population of over 52,000 inhabitants.



## TECHNOLOGICAL INNOVATIONS

During the year 2014, research and development has continued to work on electric vehicles, especially in the field of optimising energy consumption, building on the experience contributed by the vehicles currently in service.

The electrical equipment currently in operation stands out for the energy saved in each service; up to 50% can be saved in comparison to equipment with heat engines. This fundamental aspect enhances the current system by incorporating a new technology consisting of a combination of an ultra-condenser and a battery, which is an innovative approach in the field of electric vehicles used for environmental activities. Also research continues on the improvement of energy efficiency in buildings and street furniture.

### Collection and waste compacting vehicle with ultra-condenser technology

Having consolidated the use of electric and hybrid vehicles at FCC, with a fleet of over 325 units operating daily at different Group contractors, work is being carried out on a new collecting vehicle using ultra-condenser technology. It is scheduled to be developed in 2014-2015 and is included in the goal set by FCC in 2006, to develop a fully electric industrial vehicle for urban use.

In that year (2006), FCC developed the project called "Hybrid Electric KB-I", a diesel engine vehicle to collect waste only in town centres that are difficult to access (owing to size and reduced loading capacity). Due to the design and the technology available at the time, the batteries autonomy wasn't long enough to extrapolate the system to all vehicles; the diesel engine had to be used up to four times at the end of each route to recharge the battery.

In 2012 FCC set its sights on making a fully electric heavy vehicle. Two prototypes were developed capable of running in full electric mode during the entire city waste collection route, although the heat engine continued to be used in some stretches to recharge the battery. This consisted of range of large vehicles with a large loading capacity.

The main limitation of this vehicle was the high cost of the investment compared to the heat engine, mainly due to the battery required, both for power and energy reasons.



This project was undertaken with the goal of overcoming this limitation and obtaining the maximum optimisation of these kinds of vehicles.

The project represents an important technological innovation with funding from the Spanish government via CDTI, a body dependant on the Ministry of Economy and Competitiveness.

The general goals of the project are the design, development and validation of an innovative platform for a battery-free hybrid electric heavy vehicle, with an ultra-condenser system for urban services, for the entire range of vehicles necessary for FCC's activities, both in size and in maximum acceptable loads, and with the possibility of admitting any vehicle body suited to collecting urban solid waste, as well as any other urban service (sewage, street cleaning equipment, etc.).

On the other hand, the main technical goals to be developed by FCC are:

- Substantial reductions of hazardous emissions throughout all the activities, especially when the vehicle is at a standstill while collecting waste and when starting up the vehicle in urban areas (pure electric mode).
- Substantial reduction of noise pollution both in electric and hybrid mode (with a natural gas engine).
- Substantial energy saving compared to equivalent diesel or natural gas vehicles.
- Technology innovation to improve the quality and cost of the services.
- Maintaining the same loading capacity as current vehicles, legally increasing the maximum authorised weight of the proposed chassis.

In short, FCC is developing and adapting a newly designed ultra-condenser system with new technology that is specific for this application, making it possible to function in 'hybrid series' when moving around and in 'pure electric' (with the heat engine stopped) when compacting and starting up along an urban route, with enough power and energy to cover the whole waste collection route in the above conditions.

### Energy Capturing Operating Efficiency (ECO-E)

The project, called ECO-E, aims to develop and carry out pilot testing of a new construction system and method for the energy management of buildings, capable of minimising both wiring and consumption needs, thanks to the ability to extract the necessary energy to operate from the excess energy available in the building itself.

The intention is to develop a system capable of interconnecting the network of sensors and actuators that operate on energy consumers (in this case, lighting and air-conditioning) with minimum wiring requirements, and also by harvesting the necessary energy for its operating needs from the surrounding environment (Energy Harvesting). This generates a dually efficient system. On the one hand the energy management of a building's resources is optimised and, on the other hand, a reduced consumption system is obtained that is capable of harvesting energy from alternative sources other than the electric power network.

The solution proposed is sufficiently flexible and adaptable to be used both in newly constructed buildings as well as in remodelling or refurbishing works, minimising installation costs and the ROI period.

### Experimental development of the energy harvesting system for urban environments using state-of-the-art flexible organic photovoltaic technology (ENERCITY)

The ENERCITY project is a direct response to the present and future scenario, in which it is expected that smart cities will require street furniture to be equipped with new technologies (mostly information and communication technologies). These in turn, will need energy sources to meet the environmental challenge required by global energy demand.

The goal of the project stems from two premises, consisting of the development and integration of an organic photovoltaic panel in a street furniture object, with the purpose of supplying energy to a technology that contributes functionality in line with the 'smart city' concept.

### Technological innovations in fixed facilities

To continue the momentum of recent years, 2014 saw the entry into service of the first machinery pool with the highest energy rating, "A".

Work has been done on the pool to improve the building's envelope to reduce its energy demand, trying to make the most of natural lighting.

An innovative HVAC system was designed which combines the harnessing of external weather conditions (sun and wind that affect the building), the most-efficient and least-power-consuming equipment in the market (water-to-water heat pumps and natural gas condensing boilers) to heat the various rooms in the depot, the distribution of heating and cooling using low-temperature and high-thermal-inertia systems and displacement ventilation, in order to ensure conditions of maximum comfort for personnel.

The maximum efficiency has been sought in the lighting installation, both in the offices and in the workshop, using LED technology and seeking efficiencies of at least 96 lm/W.

At the other facilities, equipment and technologies have been selected that make it possible to reach maximum energy efficiency, even though the conditions of use of the facilities may vary, for example using aerothermics for the production of DHS (domestic hot water) at smaller facilities (Tías, in Lanzarote); the savings that are obtained are similar to the use of solar thermal panels, regardless of the actual consumption, providing great flexibility while at the same time, maintaining a high efficiency level.

Energy efficiency is also being improved at other facilities by installing LED lighting, renewable energies (both biomass, photovoltaic and mini-wind farms) and redesigning thermal installations. Measurement and control systems are being introduced to facilitate the implementation of the Energy Management System under ISO 50001.

### Vision projet

FCC Servicios Ciudadanos continues with its Vision Project ("Advanced Solution for the global management of all the processes in Environmental contracts: Vision Project") as part of its focus on technological innovations.

The solution implemented is based on the combination of hardware and software that can support the information system required by FCC Medio Ambiente and its services. From this, a tool will be available with centralised resources, that is secure in terms of access levels and data protection, and that offers a high level of service availability.

In 2014, the company went a step further and implemented new aspects:

- Module to optimise the service programming (allocation of personnel, machinery, frequencies, etc.).
- Integration of image recognition (number plates, despatch notes, etc.).
- Communication systems with town councils (Smart City).
- Systems for synchronising the platform with mobile devices.
- Publication of integrated data with geographical criteria.

- Module optimising the management of work in green areas.
- Mobile application for collaboration of citizens.
- Service quality indicator management.
- Integrated management of service documentation.
- Module for managing preventive and corrective maintenance.

The following milestones are scheduled for 2015:

- Management of the landfill data reporting cycle.
- Integration of the CAN-OPEN data communication system among chassis, vehicle bodies and tools, thereby unifying the systems.
- Data management to analyse efficient driving.
- Calculation of sustainability indicators and management of the carbon footprint.
- The platform will be updated to use the latest technology available.
- Integrated waste management module.
- Adaptation of Vision to the quality management system.
- Legal maintenance management module.



## SUSTAINABILITY: PROGRESS AND RESULTS

The relevant event for the year 2014 was the publication of a sustainability report with a novel presentation format, and especially the announcement of a programme of priority actions and challenges that will drive FCC Medio Ambiente throughout the next two years, to promote and guarantee an efficient sustainable management of the services offered to clients within the framework of the green growth and low carbon economy model, with sights set on Horizon 2020.

To accompany this mutation, the organisation has developed a number of initiatives and has secured the tools which will enable it to:

- Have personnel with the best training and know-how of the environmental aspects of sustainability: eco-efficient personnel.
- Integrate the environmental aspects and their feedback effects in the operational management of services: integrated environmental management.
- Generate environmental information that is interesting and understandable for citizens and useful for general interest projects: involved citizens.

### Eco-efficient personnel

Working groups have been set up to steer the development of the monitoring and calculation methods, allowing to integrate and account for the relevant aspects of sustainable environmental management, in the operational management of the services offered in the new public contracts for urban solid waste collection and treatment services, street cleaning, maintenance and upkeep of parks and gardens and street lighting.

Participants in these steering groups are from the production departments and from different regional offices. Departments from the central headquarters are also involved (studies, treatment and elimination, machinery, and management systems).

Participants will become promoters of a new management model in the field of efficient management of resources (energy, water, etc.) and to reduce greenhouse gas emissions in the local offices where they operate. Their mission is to take this model to stakeholders (collaborators, clients, associations, suppliers, etc.). This provides added value to the management of the services provided and better anticipates the novelties that are to be introduced in offers.

On the other hand, we must stress the integration of the sustainability policy principles of FCC Medio Ambiente in the Human Resources Training Plan programme. The training programmes given by third parties in the field of environmental sustainability (efficient management of resources, i.e. water and energy, calculation of the carbon footprint and KPIs, definition and development of best practices, etc.) will include a specific module designed and taught by FCC Medio Ambiente staff, that will allow the transfer and dissemination of the experience acquired by the organisation in these areas.

Last of all, within the framework of the new hires that is part of the reorganisation of the workforce, there will be a new definition of job functions, seeking new profiles such as that of environmental observer, environmental supervisor and environmental agent. The designated personnel will receive specific training on social and environmental sustainability aspects linked to the services provided, in order to guarantee that the sustainable management aspects committed by contract are fulfilled.

### Integrated environmental management

#### Offer a new environmental consultancy service in public tenders

The SEEUS ® (System for Environmental Efficiency Evaluation of Urban Services) application, which is the software used for the IT development of the method for monitoring and calculating the intensity indicators (KPIs), will be the tool used by contract managers to establish the sustainable environmental performance in the services provided.

This will provide us with the energy performance, water and greenhouse gas emissions indicators, which will allow us to communicate to the parties concerned the results of the monitoring of the environmental efficiency of the services provided,

as well as highlighting the “FCC brand” best practices that are fostered within the framework of a continuous improvement policy.

This new environmental consultancy service has been offered at tenders in Pamplona, El Ferrol, Vitoria and San Sebastian, and it has been implemented in San Marcos and Avila.

FCC Medio Ambiente has established and verified the value ranges of intensity indicators for urban solid waste collection services, street cleaning, and maintenance and upkeep of parks and gardens.



### Registering the calculation of the organisation’s carbon footprint

FCC Medio Ambiente is the first company in the industry to be entered into the Ministry of Agriculture, Food and the Environment’s (MAGRAMA) Registry of the carbon footprint, compensation and CO<sub>2</sub> absorption projects.

The commitment acquired by the Organisation with MAGRAMA is that it will reduce the carbon footprint over the coming years. Therefore, in order to mark out our competitive difference, priority will be given to:

- Service offers including efficient environmental management.
- Promoting the latest technology advances supported by efficient management tools.
- The implementation of best practices and references from our own experience in the responsible use of resources and the reduction of greenhouse gas emissions.

FCC Medio Ambiente is prepared and has the capacity to accompany clients who ask us and help calculate the carbon footprint of municipal organisations; this has occurred with the regional area of Pamplona and with the L’ Hospitalet de Llobregat City Council.

### The award of Proyecto Clima (FES CO<sub>2</sub>)

The FCC Medio Ambiente division has backed MAGRAMA’S Clima Project (FES CO<sub>2</sub>) initiative, which was called in February 2014, thanks to the work developed in the field of calculation and monitoring of greenhouse gas emissions, that began in the year 2002 with the implementation of the EPER Registry (since 2008, the E-PRTR, European Pollutant Release and Transfer Registry). It also uses its know-how and expertise in the degasification of landfills and the recovery of biogas by experts in waste treatment and elimination.

### Involved citizens

Connection to citizens, the third pillar of the corporate sustainability policy, is essential. This has been the great failed challenge of municipal authorities, who idealised the ‘smart city’ concept, basing it almost exclusively on the deployment of technological means (sensors and CITs), which owing to the lack of attractive contents has not managed to attract citizens or involve them in changing their behaviour model, where they would be the first to benefit.

In spite of the difficult beginnings with this concept, the Spanish Smart City Network (RECI), the Spanish Federation of Municipalities and Provinces (FEMP) and other

public and private institutions continue to support the creation of new generation service platforms, the implementation of which will benefit from the financing from FEDER funds for 2014/2020, among other sources, insofar as the municipalities that are interested have prepared their sustainable development integrated strategy plan.

To this end, public and private sector collaboration will be fostered, along with a greater implication of private sector players operating public services. As one of these, FCC must be able to show the results of the efficient management of its services, the feedback of which will favour a more proactive and responsible behaviour because it directly benefits citizens' quality of life.

The dissemination of the environmental efficiency indicators on the services provided is a first stage in this direction that may help to convey to citizens, tangible, specific and easily understandable information on the incidence of the measures promoted by the city council to contribute to the sustainable development of the city. The experience shared with some of our clients, such as the city councils of Avila, Oviedo and San Marcos, as well as the regional area of Pamplona, confirms this.

On the other hand, in their forecasts and planning of general interest actions to adapt to climate change or urban resilience, cities in the medium term will need to integrate the KPIs that are the reference points of our actions, in the evaluation and control systems shared by European and international networks of cities.





## QUALITY, PREVENTION OF OCCUPATIONAL RISKS AND TRAINING

### Quality and Environmental Management

#### Documentation of the management system

Since FCC's main activity is the provision of certain urban sanitation services, the Company's concern is always about their meeting the needs or requirements set by clients, in addition to the legal and regulatory requirements that affect the activities developed and in particular, those referred to the interaction with the environment and energy efficiency. To this end, the Environmental area implemented a management system based on the UNE-EN ISO 9001: 2008, UNE-EN ISO 14001: 2004, UNE-EN ISO 50001: 2011, UNE 187004: 2008 standards and the 1221/2009 EMAS III regulation, through which the environmental and energy performance and the quality of the Organisation will be managed, to provide the services in a satisfactory manner for clients and to create the internal confidence to ensure that what is developed is in keeping with what is established in the rules and internal documentation.

During 2014 there were not any substantial changes in the management system, although some procedures have been included, linked to the management of sustainable initiatives, to the preparation of sustainability reports and to the development of the approach towards new certifications during the year: energy services and integrated management of the municipal electricity facilities.

#### Certification of the management system

Regarding the annual certification process:

- The external audit of part of the Environmental area's management system based on the UNE-EN ISO 9001: 2008 and UNE-EN ISO 14001: 2004 standards was performed by AENOR between 21 April and 14 May 2014. During this period, AENOR audited five of the Central Services Departments and various contracts at nine branch offices. In Central Services, audits were carried out of management, quality management and environmental management,

procurement, machinery and design processes as well as training, legal requirements and compliance assessment processes. In contracts at branch offices, audits were conducted of operational and service delivery processes, as well as of the operational control and the monitoring and measurement of environmental aspects.

In this process, new companies have been incorporated to the certification under the two standards and others have been removed because of lack of activity. During the year 2014 the following certificates were in force:

- FOMENTO DE CONSTRUCCIONES Y CONTRATAS, S.A.
- FCC MEDIO AMBIENTE, S.A.
- ALFONSO BENÍTEZ, S.A.
- SERVICIOS DE LEVANTE, S.A.
- SERVICIOS ESPECIALES DE LIMPIEZA, S.A.
- VIGO RECICLA, UTE.
- UTE MELILLA.
- ECOPARQUE MANCOMUNIDAD DEL ESTE, S.A.
- EMPRESA COMARCAL DE SERVICIOS MEDIOAMBIENTALES DEL BAIX PENEDÉS, S.L. (ECOBP).
- SERVEIS MUNICIPALS DE NETEJA DE GIRONA, S.A.
- SOCIETAT MUNICIPAL MEDIAMBIENTAL D'IGUALADA, S.L.

Regarding the external audit of part of the Environmental area's management system that is based on the UNE-EN ISO 50001 standard: in 2011, between 11 and 13 June 2014, an audit was carried out of the peninsular contracts of the city of Barcelona city and the Balearic Islands regional offices, and the certificate for the company remains in force for the year 2014:

- FOMENTO DE CONSTRUCCIONES Y CONTRATAS, S.A.
- The external audit performed on 12 and 13 May 2014 of part of the management system in relation to the ISO 14001 and Tourist Q Certificates (according to the requirements of the UNE 187004 standard) of Palacio de Exposiciones y Congresos de Granada, S.A., and during 2014, the ES11/10261 and 00861/13 certificates, respectively, remain in force.

- The external validation process of the environmental declarations during May and June 2014 has led to maintaining the EMAS registers of the following regional offices. It should be stated in this regard that for 2013 those corresponding to the Madrid regional office were removed because the contracts covering the declaration were no longer in force, and the declaration registry of the Levante II regional office was suspended.
  - Barcelona, capital city (ES-CAT 000280) file 1994/0241/VM/02), in the name of Fomento de Construcciones y Contratas S.A.
  - Catalunya I (ES-CAT 000315) file 1994/0241/VM/03, in the name of Fomento de Construcciones y Contratas S.A. for the contract for the Collection of Municipal Waste, Sewage Cleaning and Street Cleaning of Urban Refuse Collection in L'HOSPITALET DE LLOBREGAT.
  - Madrid (ES-MD-000147) file 1994/0241/VM/01), in the name of Fomento de Construcciones y Contratas, S.A.
  - Catalunya II (ES-CAT-000415), in the name of Fomento de Construcciones y Contratas S.A. for the Reus Urban Refuse Collection and Street Cleaning contract.

#### Certification of other Quality and Environmental management systems

- In April 2014 an external audit was performed of the management system of the company Sistemas y Vehículos de Alta Tecnología, S.A. (SVAT) based on the UNE-EN ISO 9001: 2008 standard and UNE-EN ISO 14001: 2004, and the ER-0782/1997 and ES034080 certificates remain in force during the year 2014. For 2015 there are plans to include the SVAT management system requirements within the documentation of the general management system of the FCC Medio Ambiente area.
- During 2014 a management system has been developed in the Guipuzcoa-Navarre regional office linked to the use of euskera, the Basque language, audited externally in September and October 2014, obtaining the Bikian black certificate for the company:
  - FOMENTO DE CONSTRUCCIONES Y CONTRATAS, S.A.

#### Occupational health and safety system management

FCC Medio Ambiente's Joint Prevention Service, which was established on 23 March 2011, has been consolidated. It currently groups together 65 companies and has 37 full-time technicians plus 13 coordinators per branch office.

During the year 2014, the Occupational Health and Safety Management System of the 65 companies included in the SPM FCC Medio Ambiente (ES14/16003) was renewed through SGS, as required by the OHSAS 18001:2007 specification.

- Regulatory (legal) audits of the following companies have been performed:
  - EMPRESA MIXTA DE LIMPIEZA DE LA VILLA DE TORROX, S.A. (C-M-141014).
  - EMPRESA MIXTA MA RINCÓN DE LA VICTORIA, S.A. (C-M-141015).
  - LHICARSA (C-M-141023).
  - SERVEIS MUNICIPALS DE NETEJA DE GIRONA, S.A. (C-M-141219).
  - UTE SANEJAMENT MANRESA (C-M-141225).
  - SELESA (C-M-141111).
  - UTE ABSA-PERICA II (C-M-141213).
  - UTE ERETZA (C-M-141211).
  - UTE JUNDIZ II (C-M-141212).
  - UTE JARDINES TELDE (C-M-141114).
  - UTE RBU-LV ALCOY (C-M-141112).
  - UTE TORREJÓN (C-M-141024).
  - UTE CONTENEDORES MADRID (C-M-141016).
  - CONTENEDORES MADRID UTE 2 (C-M-141232).
  - UTE MADRID ZONA 5 (C-M-141113).
  - UTE MADRID ZONA 6 (C-M-141017).
  - ECOMESA (C-M-141110).
  - UTE TXINGUDIKO GARBIKETA (C-M-141218).
- The "AENOR Certificate No. ES-2015/0001" was obtained, according to the "Healthy Company Model", at the Aragon-La Rioja and Soria branch office, while maintaining the prior certification for the Catalunya II branch office: "AENOR Certificate No. ES-2013/002".

- Automation of the risk evaluation procedures and of the hygiene and ergonomics reports.
- Implementation of the cost of accidents calculation in the VISION tool.
- Presentation of FCC Medio Ambiente's Road Safety Strategic Plan for 2015-2018. It contains the guidelines that FCC Medio Ambiente must follow to reduce the number of road accidents and their severity.
- Continuation of the development of the IT tool for the management of the various occupational risk prevention modules, with the development of several specific reports.



## Training

FCC Medio Ambiente's 2014 Training Plan consisted of 695 training activities in total. These are specific activities and they are always designed according to the current

business strategy, as well as taking into account the estimated future development needs via new projects.

The contents of this document comply with article 15 of Royal Decree 395/2007, of 23 March, and applicable related regulations, regulating the sub-system of vocational training for employment, the minimum contents being:

- a) Name, objectives and description of the activities that will be developed.
- b) Target groups and number of participants per activity.
- c) Scheduled execution calendar.
- d) Teaching means.
- e) Participant selection criteria.
- f) Venue provided for the training activities.

Given the variety of groups in this business area, there are activities catering to all the different types of profiles. Notwithstanding other possible classifications, there are 5 major employee groups:

- Managers
- Middle management
- Technical staff
- Skilled workers
- Unskilled workers

The purpose of the Training Plan is to improve, strengthen and/or extend employee know-how and make this have a positive effect on the functioning and results of the company. In this regard, training is a fundamental tool to support the business, the growth and the development of each one of our professionals, as well as of the Organisation itself.

Regarding the prevention of occupational hazards, actions are developed according to law, royal decree or preventive rules that apply to the activity dealt with in the course (risks related to working at heights, handling machinery, driving, etc.), always seeking high standards for requirements and quality.

Within the group, in total 72 business entities are managed, which in the aggregate employ an annual average of 31,994 individuals. It should be noted that 10 of these companies have an average headcount of over 250. The other companies range from an average of 193 to 3 employees.

As far as subsidised training activities, the following data are the most relevant:

- Training activities executed: 212 (if considering the different groups organised for each of these training activities, the total would be 1,403 training activities).
- Trained employees: 10,269.
- Priority groups reached in 97% of the companies.
- Private contribution achieved in 97% of the cases.

Credit consumption in 2014 totalled 58.14%, slightly lower than in previous years. This can be explained by the adoption of a new integrated management partner (subsidised and teaching) for the training at the end of the previous year and the slow transfer of all the tasks.

This year Human Resources managers have had specific training distributed across five modules, with topics such as:

- Legislation. Case Law.
- Use of the Incorpora / SAP application.
- Cost planning and control.
- Recruiting and selection. Job interviews and other selection methods.
- Remuneration policy and job assessment.

21 participants in total obtained the attendance and achievement diploma for all the modules, with a total number of 40 classroom hours and another 42 hours of distance training.

As a pilot experience, several courses were executed focusing on energy efficiency, with the goal of increasing and reinforcing knowledge on energy and energy consumption prospects.

The following courses were taught:

- Auditing of the ISO 50001 energy management system, with 14 classroom hours and training provided to 29 participants divided into two groups.
- Energy efficiency of buildings, with 6 classroom hours + 4 hours of e-learning. Training was given to a total of 15 participants.
- Energy saving and efficiency measures, with 14 classroom hours and training provided to a total of 26 participants.

During the following year the latter project will remain under development, because it is considered fundamental for the business, incorporating training activities such as energy audits, calculating and managing the carbon footprint, course on the Technical Building Code (CTE) and energy certification of buildings, etc.



## FCC ÁMBITO

### SECTOR ANALYSIS

FCC Ámbito operates in the sector of industrial waste treatment and recovery of by-products, positioning itself as a benchmark company for the circular economy. Its customer is preferably private and linked to industrial activity.

### ACTIVITY OF FCC ÁMBITO

In 2014 the company managed to maintain the trend of the previous year and the volume of waste and by-products received at the FCC Ámbito facilities in Spain and Portugal stabilised.

Throughout this year there has been a significant increase in waste received at the non-hazardous landfill site belonging to the subsidiary IACAN in Cantabria, whose facility has a total capacity of 8 million m<sup>3</sup>, strengthening treatment capacity and expanding the services FCC Ámbito offered to the industry.

In the same vein, during 2014, the waste treatment plant in Getafe (Madrid) began its expansion to adapt to the new reality of waste production in the area. Initially conceived as an industrial waste transfer/blending facility for energy recovery, along with the expansion, equipment has been installed for the treatment of another kind of liquid waste. The treatment capacity of waste with high organic load, whose production is very important throughout its sphere of influence, has increased to 50,000 t/year. With this expansion the services offered by FCC Ámbito in the central area have been enhanced, and is another step in the strategic reduction line of the transfer centres and a commitment has been made to higher added-value, such as the final treatment facilities.

During 2014 the inertization and stabilization lines of the Aldeanueva de Ebro plant have also been renewed, adapting one line for the treatment of mercurial waste, with the implementation of the most stringent security measures. Improvements

in this facility are completed by optimising the treatment of effluents generated in the evaporation line by means of biological processes.

Starting this year, FCC Ámbito will have a second hydrocarbon waste treatment facility registered in the Special Taxes Land Registry, which will enable it to carry out activities related to the production and sales of hydrocarbons.

Furthermore, thanks to its extensive network, FCC Ámbito remains the leading manager for companies that have waste production centres spread throughout the country, and who want to simplify management and save costs by hiring one single manager. During 2014 the company was awarded the integrated waste management contract for all Renault factories in Spain.



With regard to glass management activities, the collection and management contract has been renewed for 5 year in the provinces of Valencia and Castellón, as well as winning tenders for collection and management in the regions of Aragón and La Rioja.

Moreover, in the sector of soil decontamination, the contract awarded by the Government of Aragón was performed for the remediation of the old lindane waste repository (toxic and persistent organochlorinate pesticide) located in Sabiñánigo, and its transfer to a new disposal cell. The work has required the extraction and processing of more than 350,000 tonnes of pesticide residue. The work began in the last quarter of 2013 and lasted until the fourth quarter of 2014.

This project, along with the removal and treatment of sludge deposited in the Flix reservoir, constitutes the two major works that have been tendered as public works in the sector of soil remediation in recent years, and places FCC Ámbito as leader in this sector.

With respect to the Flix works, in 2014 a total of 358,056 tonnes of sediment have been extracted and treated. The extraction is planned to continue until the end of 2015.

In the US, following the sale of the business to collect and recycle oily waste, the remaining activities have been focused on the subsidiary FCC Environmental Services, that after its restructuring, was awarded the contract for biosolid waste management in the city of Houston.

Regarding Portugal, the new operations concerning environmental liabilities awarded to the subsidiary ECODEAL have meant the entry of a significant amount of waste, allowing the company to maintain its good results for another year.

## INNOVATION IN FCC ÁMBITO

Regarding the R+D+i activities, work has continued on the RECO2VAL project, the objective of which is to use waste with a high calcium content to capture the CO<sub>2</sub> emitted in fertilizer manufacturing facilities. Work has also continued on the CEMESMER project, focusing on developing a new range of cements that will allow the effective stabilization of mercury present as a contaminant in soil and water.

Within the commitment to the circular economy it is important to highlight the development project for recycled glass applications as a material for building elements with high added value. Satisfactory results have been achieved and some of these materials are used in the manufacture of kitchen worktops, both at home and abroad.

# 08

## WATER MANAGEMENT

FCC AQUALIA MANAGEMENT REPORT  
FINANCIAL YEAR 2014

Sector analysis

Domestic market

International market

FCC Aqualia's activity

Sustainable management initiatives

Innovation at FCC Aqualia

Progress in human resources management

The importance of occupational health and safety

Keys to customer service



Ávila Wastewater Treatment Plant (Spain).





## SECTOR ANALYSIS

During the year 2014 the Water Management sector continued to play an especially relevant part in the agenda of governments and local authorities, who acknowledge the strategic importance of a scarce asset such as water. The exponential increase of human population and the concentration in large cities, the expansion of industrial and farming activity, as well as greater awareness of the possible risks attached to climate change, are leading a number of countries to embark on modernisation plans, involving both their hydraulic infrastructures and the systems for operating and managing them, with the fundamental goal of increasing their efficiency and capacity. In this general framework, at an international level the business opportunities for companies specialising in the integrated management of the water cycle will surely be greater, although the participation models may be different to the currently typical ones.

Private sector contribution to achieve universal access to water, established as one of the United Nations Millennium Development Goals, is likely to be important not only because of the technology and management capacity but also because of its capacity to attract funds for the development of new infrastructures and the maintenance of existing ones. This goal, according to the definition given by the UN, makes it obligatory for governments to seek solutions to provide all inhabitants access to water, and these solutions should contribute to the economic maintenance of the service according to the conditions set by each country.

In recent years, the Public Administrations responsible for water management have reduced their preference for concessional integrated water cycle

management models, seeking instead public and private participation models in a BOT (build, operate and transfer) regime for the construction of new infrastructures. In countries with sufficient budgetary capacity, new infrastructures continue to be built by way of construction contracts, as well as generating new methods for contracting operation and maintenance services according to the specific characteristics of each Public Administration.

There are not many companies competing domestically and abroad, therefore public tenders, whether for operation and maintenance services or for BOT or concessions, hardly ever have more than five bidders. The high integration of FCC Aqualia's services offering, enable the company to adapt to the different contracting models imposed by Public Administrations. Its position as the world's sixth largest operator and the third among private capital enterprises, according to the GWI rankings, enables it to compete on equal terms in any international tender, in a market that is still led by the two large French operators.



Ultrafiltration membrane bioreactor (MBR).



Besides having the Public Administration as a principal client, private industrial companies, especially in the mining, oil and gas sectors, are becoming established as important potential clients for water operating companies, especially for those with the technological capacity to tackle the complex treatment required by the waters used in production processes.

## DOMESTIC MARKET

For the first time since the onset of the economic crisis, in 2014 there was a stabilisation of water sale volumes, which had been declining steadily in previous years.



This change of pattern, however, was accompanied throughout the year by strong social campaigns against the privatisation of public water management services. Thus, contracts awarded for Alcazar de San Juan (Ciudad Real) and El Puerto de Santa María (Cadiz) were finally secured by FCC Aqualia, but not without the significant opposition of certain sectors of public opinion.

Furthermore, none of the Administrations (central government, autonomous communities, municipal governments) are putting out tenders for hydraulic infrastructure investment projects, which added to the current pre-election period

means that 2014 was not a year of significant tenders on a domestic level. Accordingly, in 2015 there will be even fewer public tenders. On the other hand, the central government initiatives to establish an agile, efficient regulatory framework for this sector should be noted. The Ministry of Agriculture, Food and the Environment submitted a preliminary draft of the Water Sector Bill to all the parties involved so that they may analyse it. Meanwhile, the De-indexation of the Economy Act is following the parliamentary procedures and Parliament is dealing with the Bill to amend the Public Administration Contracts Act, which will have a bearing on the sector in terms of the solvency required of bidders and the non-requirement of classification for service contracts.

It is expected that these regulatory measures will boost the private management of water in Spain; it is an activity with increasingly higher technology levels, together with excellent service quality, geared to ensuring the supply of clean, healthy water for human consumption, thus protecting people's health. This was recently acknowledged by the [Spanish] Consumer and User Organisation (OCU), which at the end of 2014 published an independent study on the quality of tap water in 62 towns in Spain, nine of which were managed by FCC Aqualia. In its report, the OCU said the water that was supplied was 'Very good' and 'Good'.

## INTERNATIONAL MARKET

Internationally, FCC Aqualia focuses its sales activity in Europe, Northern Africa, the Middle East, India, North America and Latin America, and it currently has ongoing contracts in Portugal, Italy, Czech Republic, Serbia, Bosnia, Montenegro, Kosovo, Poland, Algeria, Tunisia, Egypt, Saudi Arabia, Abu Dhabi, Qatar, India, Mexico, Uruguay and Chile.

In 2014 the new EU directives on public contracts were published, which especially stress the award of concession contracts to entities operating in the water sector, the contents of which must be transposed to national law by March 2016. On the other hand, a popular initiative called Right2Water reached the European Parliament, which calls for public ownership of water management.

Up until now the decisions passed by EU bodies do not affect the participation capacity of private enterprises in water management, delegating to the Member States

the decision to choose the water management formulas that are best suited to their specific needs. In any event, the situation to change the general regulatory framework is causing difficulties, perhaps only circumstantial ones, to increase municipal service concession contracts, where works contracts or operation and maintenance services are customary.

In Italy, the recent modification of the regulatory framework, due to the appearance of a new national regulator, may generate in the near future new and interesting public-private collaboration opportunities with the Local and Regional Administrations.

In Portugal, the application of the EU recommendations associated to the economic recovery plan may give rise to privatisation operations involving the state water company which, considering FCC Aqualia's extensive experience in the Portuguese market, may represent important growth possibilities over the coming months.

In Northern Africa the most usual business opportunities in the future will be public-private BOT (build, operate and transfer) participation contracts for the construction of large water processing infrastructures, with operating periods

lasting around fifteen years. The performance of the existing contracts in Algeria and Egypt, in spite of the Arab spring, encourages the view that these are stable markets from a contractual viewpoint.

In the Middle East, with population growths of up to 8% per year in some countries and with rising living standards and service quality, a number of important hydraulic infrastructure projects have been announced that will progress slowly and, at least in the near term, restrictions are not expected in connection with the decline in the price of oil. In this market there will also be operation and maintenance service contracts which, with the experience from the contracts developed in Saudi Arabia and Abu Dhabi, shall represent good business opportunities such as the recent one awarded in Qatar.

In India the regional governments have established the priority objective of improving water supply and sanitation, largely boosting infrastructure construction and operation contracts that guarantee continuous supply. FCC Aqualia, together with an important local partner, has secured two of these contracts, allowing it to create a platform to get a better understanding of the country and tackle much larger projects.

In North America, FCC Aqualia intends to consolidate the Mexican market, where it already has significant activity. The Public Administration in Mexico is going to start a programme for the improvement of municipal water supplies, and this will surely enable the company to increase its turnover. On the other hand, FCC Aqualia is opening up a commercial office in the United States to spearhead its entry into a market where some states have the same problems as Spain: obsolete infrastructures, periods of drought, debt-ridden municipal administrations without financing capacity and high environmental demands.

Last of all, in Latin America the growth opportunities for FCC Aqualia have multiplied significantly since FCC left the capital of Proactiva, where the other partner was the French operator Veolia. In the short term, Peru and Chile are the countries offering the best possibilities, and there are also some infrastructure programmes in Paraguay and Panama that are being closely monitored. In the latter market, together with the opportunities detected in Mexico for PEMEX, the oil company, there are particularly interesting contracts for the construction and operation of water processing plants for mining and oil & gas companies.



## FCC AQUALIA'S ACTIVITY

During the year 2014, FCC Aqualia's contracting volume totalled 770.8 million euros, reaching a record portfolio of 15,113.8 million euros in December, representing a 1.7% increase for the same period in 2013.

In the domestic market, the most significant new integrated management contracts awarded were the following:

- Alcázar de San Juan (Ciudad Real), for a 25-year period and a contract volume of 122.1 million euros, awarded to the joint venture Aguas de Alcázar, in which FCC Aqualia holds 52.38%
- La Línea de la Concepción (Cadiz), for a term of 12 years and a contract volume of 58.8 million euros, awarded to Empresa Gestora de Aguas Linenses, fully owned by FCC Aqualia
- El Puerto de Santa María (Cadiz), for a 25-year period and a contract volume of 382.9 million euros, awarded to the joint venture APEMSA, in which FCC Aqualia holds 48.98%. The consolidated contracting volume is 15 million euros.
- Ubrique (Cadiz), for a 25-year period and a contract volume of 22.6 million euros, awarded to the joint venture Aguas de Ubrique, in which FCC Aqualia holds 49%, and the management has been subcontracted to FCC Aqualia.

Furthermore, FCC Aqualia, in a Joint Venture where it has a 22.8% holding, was awarded the contract for batch 3 of the Integrated Energy Management of the urban facilities of the City of Madrid, for a period of eight years, representing a contract volume of 48.3 million euros.

Also, after buying an additional 12.5% of Aguas de Alcalá, FCC Aqualia now owns 50% of this Joint Venture, the same percentage held by Canal de Isabel II. This acquisition represents an increase of 28.2 million euros in its portfolio, considering that this Joint Venture still has 15 years of contract left.

In terms of renewals and extensions in the domestic market, the following should be noted: Salamanca, for a five year period and amounting to 95.7 million euros; San Juan del Puerto (Huelva), for a 25-year period and amounting to 32.5 million euros; Candelaria (Tenerife), amounting to 32.2 million euros over a 10-year contract; Callosa de Segura (Alicante), twelve years and 18.6 million euros contracted; and Cortegana (Huelva), for an additional 25 years and a contract volume of 16.4 million euros.



In the international market, FCC Aqualia was able to increase its portfolio of countries, mainly through the award of new design and construction contracts.

In the European market there have been a number of recent awards in the Balkans region, both for the design and construction of the DWTP (Drinking Water Treatment Plant) of Vrsac (Serbia), amounting to 6.9 million euros, and the design and construction of the WWTP (Waste Water Treatment Plant) of Prizren (Kosovo), amounting to 10.4 million euros. These contracts are a gateway to much larger contracts in the future, setting FCC Aqualia in a good position for forthcoming tenders.

In Northern Africa, FCC Aqualia continues growing after the award of its first contract in Tunisia, for the construction of a Desalination Plant in Djerba, amounting to 31.2 million euros.

Likewise, the company continues to consolidate its presence in the Middle East after entering Qatar with the award of the contract for the construction and operation of the WWTP in Al Dhakira, through the affiliate Aqualia MACE and in a consortium with the South Korean Hyundai group, in a contract totalling 300 million euros.

The company was awarded its first two service contracts in India, in the state of Karnataka: the first one in Bidar and Vasvalyakan; the second one in Bellary, Raichur and Hospet. The two contracts combined mean that the company will manage the water supply for over one million inhabitants. These contracts represent the entry into a large market where access is very difficult.

In addition, FCC Aqualia has opened a commercial office in the United States, a market offering excellent opportunities in which the company is scheduled to secure new contracts in the short and medium term. To this end, the necessary legal procedures have been commenced for the incorporation of a company in the state of Delaware, with an authorised capital of USD 4.9 million. Accordingly, in order for it to be the holder of the shares in the new company, the corporate purpose and the company name have been changed. The group company formerly called Abastecimientos y Saneamientos del Norte, S.A. was renamed as FCC Aqualia América S.A.

In Latin America, the group secured its first contract in Chile, with the award of the construction of the WWTP in Cadellada, amounting to 12.7 million euros. Also, in Mexico, a country where the company is well-established, it secured the contracts for the construction of the aqueduct and electric facilities of Minera Peñasquito, in the state of Zacatecas, totalling 21.3 million euros, and for PEMEX, in this case for the modernisation and rehabilitation of the water entry from the River Mezcalapa, in Tabasco, amounting to 12.8 million euros. With these awards FCC Aqualia strengthened its position as one of the main private enterprises dedicated to water management in the Latin American mining industry, which also benefited from its participation, via Aqualia Infraestructuras, in the fourth edition of Desal 2014, the 4th Latin American Congress on Desalination and Water Reuse, held in Santiago de Chile in October, as well as in the 28th Edition of ANEAS, held in November in Merida (Mexico).



Vigo Wastewater Treatment Plant (Spain).

Last of all, besides direct awards, the company also considers the option of growing internationally through purchases. In this respect, at year-end a non-binding offer to buy the company GS INIMA was made. This company is present in Spain, Mexico, USA, Brazil and Algeria; all of these countries are located in FCC Aqualia's international development zone.

## SUSTAINABLE MANAGEMENT INITIATIVES

Energy efficiency has been one of the salient themes in the sector in 2014, because the UN dedicated the World Water Day to the water-energy binomial.

By calculating its carbon footprint in 2013 in Lerida, FCC Aqualia became the first Spanish company to calculate and certify through AENOR its carbon footprint in a water service. In 2014 the company went one step further in terms of research on how economic development has a bearing on water resources. Thus, in April,

FCC Aqualia and the Botín Foundation signed an agreement to study the water footprint in Cantabria.

This study will show the impact of water consumption included in the goods and services produced and exchanged by Cantabria, a region in which the company has a dominant presence thanks to its activity as integrated water cycle manager.

This study is a pioneering initiative, being the first calculation of the water footprint in Spain, thanks to the collaboration between entities such as the Botín Foundation's Water Observatory and FCC Aqualia.

Regarding energy efficiency, during the year 2014 the certifications in this field were extended to new facilities such as the water treatment plant in Aranda de Duero (Burgos) and the Santi Cazorla Sports Centre in Llanera (Asturias). Also, as a supplement to the calculation of the carbon footprint, the service in Lerida was certified in this field, being the first such service to reach this distinction.

Also, in terms of energy efficiency, during the year state-of-the-art systems have been implemented for the optimisation of energy consumption in WWTPs (Waste Water Treatment Plants). Thus a novel system was installed in the plants in Medina del Campo (Valladolid) and Reinosa (Cantabria), developed by the University of the Basque Country in collaboration with FCC Aqualia, for the automatic control of airing, and in the Lerida WWTP, a smart management system was installed for the entire water treatment process. Depending on the results, the suitability of implementing the system in the rest of the WWTPs managed by FCC Aqualia will be considered.

FCC Aqualia issued the eighth edition of its CSR report in 2014. This document makes the company one of the first organisations to win the Materiality Matters seal, because the report was prepared and verified according to the G4 guidelines of the Global Reporting Initiative (GRI). The report, which is issued in Spanish, English and Portuguese, is articulated around five subjects: company, clients, employees, environment and society.

Furthermore, the Company held the twelfth edition of the International Children's Contest, open to students of 3rd and 4th grade of elementary education in the towns

where it provides services in Spain and Portugal. With the motto "Water needs heroes like you," the contest sought to foster a reflection on the importance of using water responsibly and efficiently.

On this occasion the contest incorporated the novelty of using the Internet to develop the contest, benefiting from the advantages of new technologies and optimising the resources used for this action. The contest had over 30,000 hits and one million pages viewed on its microsite. The contents, available in Spanish, Portuguese, Catalan and Galician, was disseminated over 3,000 times on social media generating over 300,000 positive impacts, given the educational and entertaining nature of the event.



Guillarei Wastewater Treatment Plant in Tui (Spain).

## INNOVATION AT FCC AQUALIA

Innovation was developed at FCC Aqualia during the year 2014 in the areas of Sustainability, Quality and Smart Management included in the strategic planning. This year saw the completion of five projects named Cenit VIDA, ITACA, IISIS, SMARTIC and ALEGRIA, with the following results:

1. Around the middle of the year the Cenit VIDA (Integrated Valuation of Algae) project ended. The consortium developing it, made up by 13 companies and 25 research bodies, was co-financed by the CDTI (Centre for Technological and Industrial Development) via the "National Strategic Consortia for Technical Research" programme. The project tasks have made it possible to shift the paradigm in water purifying and facilitated the development of five All-Gas related bioenergy projects.

2. The ITACA project, included in the Sustainability area, has delved deeper seeking new approaches for the use of waste water as a resource, in the search for energy consumption and emissions reductions and in the exploration of alternative technologies. ITACA was developed as part of the INNPRONTA programme, financed by CDTI and also co-financed by FEDER Funds.

FCC Aqualia's involvement focused on the research of new water purifying technologies which will allow the transformation, in the future, of water treatment processes into self-sustainable systems in energy terms, taking advantage of by-products and improving the quality of purified water so that it may be reused.

3. IISIS (Integrated Research on Sustainable Islands) is one of the leading initiatives of the Company's Smart Management area. The project, led by FCC S.A., featured the active involvement of FCC Aqualia, at the head of the 'Water and the Environment' and 'Integration' tasks. Also, besides the contribution of 22 universities and research centres as well as four companies, FCC Construcción and Cementos Portland Valderrivas are present, making this research an example of synergies and collaboration within FCC Group.

The work carried out under IISIS and the progress achieved have helped to secure a new European project in 2014: the FP7 Urban Water.

The main results of the project are energy savings, savings in sludge production, improvements in operation, leak detection and several software developments. Direct investment of the project in infrastructures managed by FCC Aqualia totalled 700,000 euros.

4. The SMARTIC (Water Monitoring System with Real-Time Smart Technology) project has worked on controlling water quality at the source and when it leaves the DWTP, designing and building several automation systems capable of performing tests that currently have to be done at a laboratory.

The project has been supported by the FEDER INNTERCONECTA Extremadura programme. This body supports the project by providing 40% of the financing required.

After work was completed there have been cost savings in the operation of the DWTP, together with an increase of quality, thanks to the fact that the operation can be adjusted according to the characteristics of the raw water used.

5. ALEGRIA (Algae and Energy to recover waste from the Galician agrifoods industry) project. This project, supported by the Feder-Innterconecta programme, has studied the recovery of industrial effluents.

By combining FCC Aqualia's various ongoing developments (the anaerobia digestion process, with membrane bioreactors, and the cultivation of microalgae for the recovery thereof), the Company is looking for bioenergy and value products. This novel combination could replace the conventional technologies used in industrial WWTPs, leading to cost savings in the operating costs, which currently total 4 euros per cubic metre, with the goal of improving the competitiveness and sustainability of the agrifoods industry.

In the year 2014 development continued on six more multiannual research projects, which will continue to be executed during the following year. The sustainability area has a number of ongoing projects such as All-Gas (microalgae for purifying waste water) and Downstream (improvement of the recovery of biomass). In the quality area, work continues on projects such as Remembrance (reuse of reverse osmosis membranes) and Innova Cantabria (compact purifying facility for waste water from small towns). And in the smart management area, the Smart Water-Smart Citizens project develops its tasks integrated within the Smart Santander initiative promoted by the Santander City Council.

During 2014 FCC Aqualia started seven new projects called Renovagas, Regenera, FP7 Urban Water, Water JPI Motrem, Life Memory, Life Biosolware, and Life CleanWater. The last three projects are included in the Life 2013 programme, where out of 961 proposals only 125 projects were finally accepted. The scope of the various projects is as follows:

1. Renovagas “Renewable Natural Gas Generation Project”, a project financed by the Ministry of the Economy and Competitiveness (MINECO). The goal is to develop a plant for the production of synthetic natural gas using biogas, from the methanation of hydrogen obtained from renewable sources.

The project is led by Enagás and, besides FCC Aqualia, the other parties involved are CHN2, Abengoa Hidrógeno, Gas Natural, SDG, Tecnalia and the CSIC (Spanish Centre for Scientific Research).

2. Regenera, which has the goal of developing a waste water purifying system by cultivating microalgae and using the biomass generated as the raw material for the production of biofertilisers. The research team comprises Aqualia Infraestructuras, Biorizon, the University of Almeria and the Cajamar Foundation.
3. The Life Memory project intends to prove, at an industrial prototype scale, the technical and economic feasibility of an innovative technology, an Anaerobian Membrane Biorreactor (SAnMBR), as an alternative to traditional treatment processes. This technology enables the conversion of the organic matter contained in waste water into biogas, which can be used at WWTPs to generate energy in the form of heat and electricity. The potential benefits of the project are: reduction of energy consumption by up to 70% and of CO<sub>2</sub> emissions by up to 80%, 25% less space requirements than a conventional Aerobic WWTP, the reduction of sludge by around 50%, and the implementation of a protocol for the design and operation of plants based on this technology.
4. Life Biosolware (Biosolar water reuse and energy recovery), led by the French SME Heliopur, with a total budget of 2.3 million euros. This research seeks to prove a new waste water treatment based on a biological and solar purifying technology (BSP). This process allows 80% of the water to be reused, together with the recovery of gases and organic waste.

5. CIP Cleanwater (Ecoproduction of HCLO for safe water disinfection by innovative ion exchange membrane) is a result of the Eco-innovation 2013 tender, where 59 projects were selected from among the 461 proposals submitted. Led by the French SME Ceramhyd, with a total budget of 1.6 million euros, it seeks to prove a new water disinfection technology through three applications: drinking water, desalination and reuse of water.

6. FP7 Urban Water. This project is backed by European funds (it is included in the 7th Framework Programme or FP7) and is made up by eleven partners from seven different countries. It will develop and validate an innovative platform based on information and communication technologies (ICT) that will improve the integrated water management in urban areas, which account for 17% of water consumption in Europe.

The project, lasting three years and amounting to nearly 5 million euros, is focused on developing new solutions for the prediction of water demand and the interpretation of consumption for better water management efficiency, with innovative modules to estimate water availability and supply, the improvement of billing systems and real-time data management, leak detection and decision-making, among other solutions.

7. Water JPI Motrem. The Motrem project seeks to contribute new technologies for water treatment and/or the improvement of existing technologies by developing integrated processes for the control and treatment of emerging contaminants, along the line of current municipal waste water treatment plants, particularly emphasizing water reuse. To this end, the project combines crosscutting and multidisciplinary experience in the design of water treatment processes and in engineering, analytical chemistry and ecotoxicology applied to emerging contaminants, which guarantees the generation not only of new scientific know-how but also provides innovative commercial solutions for the market.

Throughout the year, the members of the FCC Aqualia research team have taken part in many conferences and scientific events. Their work has been recognised at some of them, including:

- International conference on 'Activated Sludge – 100 years and Counting'. The scientific poster presented by Nicolás Morales, an FCC Aqualia researcher in Guillarei (Pontevedra), was chosen by the jury as the best among the 56 that were presented. This event, organised by the IWA (International Water Association) to commemorate the centennial of the activated sludge process, took place in Essen (Germany), from 12 to 14 June 2014. The 200 researchers present included the leading world experts in water treatment and participants from 35 countries throughout the world. The poster presented the latest advances of energetically sustainable treatment, using the ELAN® (Autotrophic Elimination of Nitrogen) technology.



- IWA World Water Congress & Exhibition, held in Lisbon from 21 to 26 September 2014. A paper titled 'Low Cost Microalgae Harvesting Strategies For Wastewater Treatment Plants', presented by the researcher Zouhayr Arbib, on the cultivation of high-energy microalgae in waste water, was chosen by the participants at the congress as the best scientific poster.
- At the 'Innovation-Sustainability-Network' Awards, organised by the economic and business newspaper Expansión together with Bankinter and E.ON, FCC Aqualia was recognised as a 'Sustainable Large Company' thanks to its ELAN® project. The award was presented by José Manuel Soria, minister of Industry, Energy and Tourism, at an event held on 27 November at the Instituto de Empresa Business School in Madrid.

Last of all, the feature article titled 'IISIS Project, the design of a smart, self-sufficient and sustainable city', published in the first issue of iAgua Magazine, won the iAgua award for the best feature article of the year.

## PROGRESS IN HUMAN RESOURCES MANAGERMENTS

Gender equality policies are applied at FCC Aqualia, among which is the First Mentoring Programme for Women, with a view to boosting female talent within the organisation and facilitating the professional career of the women identified as having potential in the company. In recognition of this effort, the Ministry of Health, Social Policy and Equality extended for an additional three-year period the 'Equality in the Company' distinction granted to FCC Aqualia. By granting this extension the Ministry of Health, Social Policy and Equality recognises and endorses the Company's commitment in the field of diversity and equal opportunities for men and women. It should be noted that many actions have been carried out in support of equal opportunities for men and women, together with actions for awareness and job insertion for women suffering from gender violence.

Furthemore, during 2014 a number of programmes have been applied with a view to transforming FCC Aqualia's leadership style towards a people management model that is more participative, development-oriented and serving as a catalyst for talent, that is able to reinforce team cohesion and supported by a common language shared by all. These programmes include the Otto Walter programme, which addresses middle managers and is meant to strengthen the development of skills and strategic abilities to improve in the fields of leadership and people management.

In the field of awareness, as part of FCC Aqualia's CSR policy, during 2014 there has been collaboration with the new Vice Chancellors Office for Cooperation and Volunteering at the Rey Juan Carlos University in its new activity of creating awareness and disseminating the importance of human rights in present-day society. These are dialogues and colloquia involving renowned experts that explain and debate on major issues in the field of human rights, as well as the obstacles preventing their realisation and the new challenges currently arising.





FCC Aqualia team in Riyadh (Saudi Arabia).

Among the events held was the presentation of the guidelines of the National Enterprise and Human Rights Plan which, yet to be approved, has been drafted by social workers, economic and state representatives. The Ministry of Foreign Affairs and Cooperation was in charge of setting out the strategy lines of the document, and representatives from salient NGOs explained the most relevant projects in terms of human rights training, especially those linked to higher education academic institutions such as the Rey Juan Carlos University.

A second meeting consisted of a discussion forum with the participation of CSR executives from a number of companies including FCC Aqualia. They explained their initiatives in the field of human rights and reflected on the importance of these rights in the corporate world generally and at their organisation in particular.

## THE IMPORTANCE OF OCCUPATIONAL HEALTH AND SAFETY

During 2014 the accident frequency index hiked slightly, the accident severity rate dropped significantly, reaching historical lows, and the absenteeism rate due to sickness was at the target figures established in the annual plan. These accident rate indices confirm the positive evolution of recent years and allow

FCC Aqualia to remain among the companies with lowest accident rates in the industry.

Throughout 2014, a number of workshops and task forces were arranged at FCC with a view to improving the preventive culture among all employees, gaging the perception of the importance of health and safety among members of the company, with the goal of detecting improvement possibilities and defining and implementing an action plan.

Among other measures, activities and initiatives have been arranged for the compliance with the FCC Aqualia Workplace Health Charter, approved by the majority trade unions and the Company's management.

## KEYS TO CUSTOMER SERVICE

FCC Aqualia in 2014 kept its customer service running 24 hours a day 365 days a year, via its Customer Service Centre (aqualia contact), allowing it to reduce to the minimum the response time in solving breakdowns in distribution networks, with the subsequent water savings. The short time a customer has to wait to report a breakdown (38 seconds) allows the company to put into place an agile and efficient action protocol to solve any type of incident in the network, leading to better performance in water distribution. This customer service has allowed the Company to keep the claims rate to below one per thousand, answering 900,000 calls a year and assisting customers in 5 languages (Spanish, English, Portuguese, Galician and Catalan).

The Company currently has a corporate website available in 5 languages providing general information on the company. In addition to this, the Company has different local websites for specific municipalities where FCC Aqualia provides services, with more local, customised information on the Company's presence in the town involved. Also, FCC Aqualia's websites, both the corporate and local sites, provide access to the virtual office aqualiaOnline, which allows users to handle the main formalities related to service.

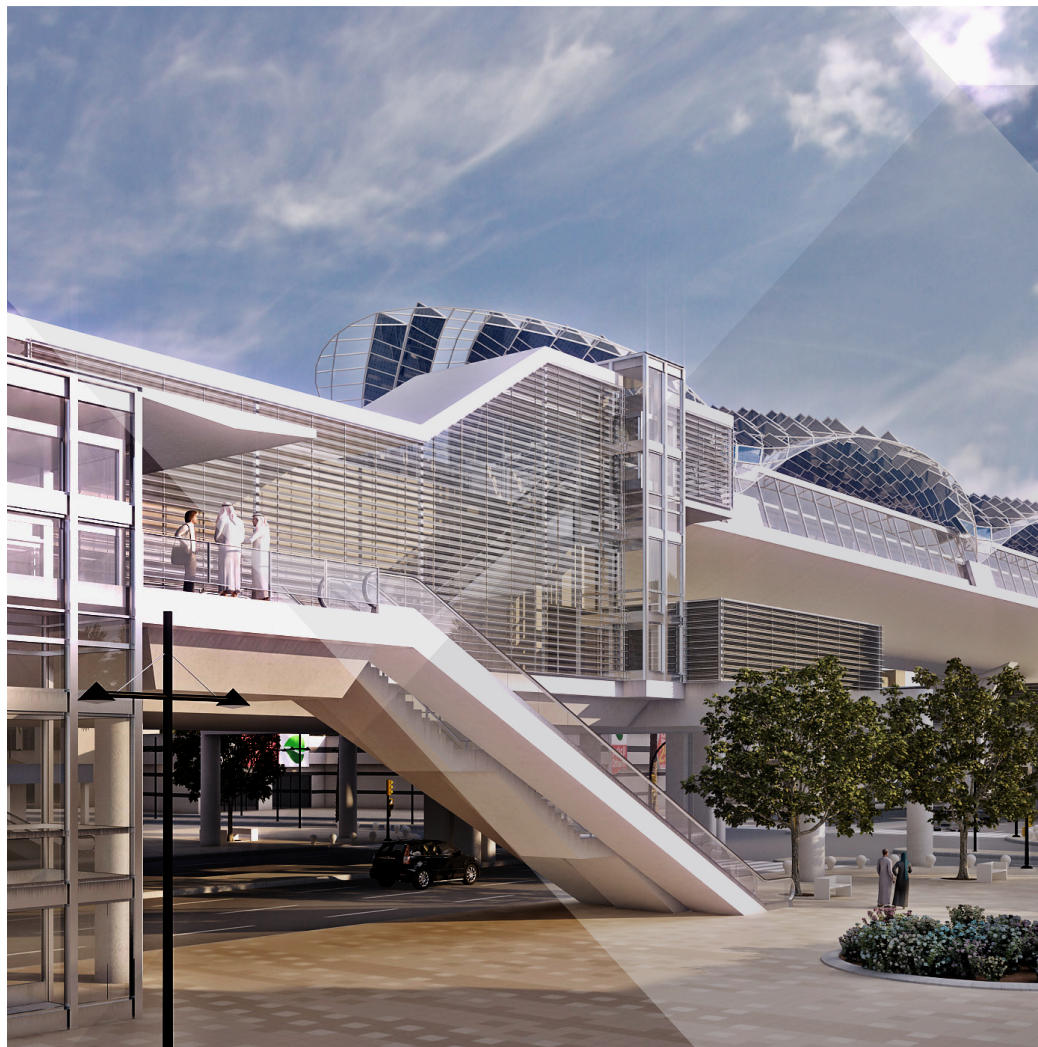
Since 2011, the aqualia contact and aqualiaOnline channels are certified with the UNE-ISO 27001 Standard; "Information Security Management Systems",

complying with the established security goals and ensuring the commitment with our customers' data security, as well as the integrity, availability and confidentiality of said data.

The results of the institutional customer satisfaction surveys yield a very good overall general assessment, slightly higher than the outcome of the previous survey.

The results of the end customer satisfaction survey are slightly below the previous assessment, probably influenced by the prolonged economic situation in Spain, although user perception is more positive than that shown for services such as electricity, gas and telephone.





Riyadh Metro (Saudi Arabia).

## INFRASTRUCTURES

### ECONOMIC SITUATION AND FORECASTS FOR 2015-2016

#### FCC'S ACTIVITY

- Railway Infrastructures
- Motorways, Highways and Roads
- Airport Works
- Hydraulic Works
- Maritime Works
- Non-residential Building
- Residential Building
- Management Systems
- Technological Development. Innovation Department: R&D&i

#### MACHINERY DIVISION BUSINESS

#### INFRASTRUCTURE CONCESSIONS

- FCC Construcción Concessions Department
- Globalvía

#### SUBSIDIARIES AND HOLDING COMPANIES

- BBR PTE
- PROSER Proyectos y Servicios, S.A.
- FCC Industrial e Infraestructuras Energéticas, S.A.
- Megaplas, S.A.
- Prefabricados Delta, S.A.



## ECONOMIC SITUATION AND FORECASTS FOR 2015-2016

### CURRENT SITUATION

The IMF estimates forecasts for growth of the global economy at 3.5% for 2015 and 3.7% for 2016<sup>1</sup>. Although positive, these forecasts have been lowered slightly, by around 0.3%, as a priori a drop in oil prices, largely due to increased supply, stimulates world growth, although this stimulus will be exceeded by negative factors. One of these is investment weakness, as many advanced economies and emerging markets continue to adapt to medium term growth that has less encouraging expectations.

Among large advanced economies, the United States' economy is the most important, as its growth forecasts have improved. According to forecasts, growth will exceed 3% in 2015-2016, with internal demand supported up by oil price reductions, fiscal adjustment moderation and the ongoing support of the accommodative monetary policy focus, despite the estimated gradual increase in interest rates.

In the euro zone, recovery will be slightly slower than estimated, with 1.2% annual estimated growth in 2015 and 1.4% for 2016, largely due to sluggish investment. During the 2014-2020 period, cohesion policy will earmark one third of the European Union's (EU) budget to help achieve growth and employment targets in the EU as a whole that –supported by the drop in oil prices– estimate increased investment activity and growth (Juncker Plan), which could lead these forecasts to be adjusted upwards.

<sup>1</sup> Source: IMF

World economic outlook										
<i>(Percentage variation, unless otherwise indicated)</i>										
	Year-on-year								T4 a T4	
			Forecasts		Difference to WEO report of October 2014		Estimates	Forecasts		
	2013	2014	2015	2016	2015	2016	2014	2015	2016	
<b>World product 1</b>	<b>3.3</b>	<b>3.3</b>	<b>3.5</b>	<b>3.7</b>	<b>-0.3</b>	<b>-0.3</b>	<b>3.1</b>	<b>3.4</b>	<b>3.9</b>	
<b>Advanced Economies</b>	<b>1.3</b>	<b>1.8</b>	<b>2.4</b>	<b>2.4</b>	<b>0.1</b>	<b>0.0</b>	<b>1.7</b>	<b>2.7</b>	<b>2.3</b>	
United States	2.2	2.4	3.6	3.3	0.5	0.3	2.6	3.4	3.2	
Eurozone	-0.5	0.8	1.2	1.4	-0.2	-0.3	0.7	1.4	1.4	
Germany	0.2	1.5	1.3	1.5	-0.2	-0.3	1.0	1.7	1.3	
France	0.3	0.4	0.9	1.3	-0.1	-0.2	0.3	1.2	1.3	
Italy	-1.9	-0.4	0.4	0.8	-0.5	-0.5	-0.5	0.9	0.8	
Spain	-1.2	1.4	2.0	1.8	0.3	0.0	1.9	1.8	1.7	
Japan	1.6	0.1	0.6	0.8	-0.2	-0.1	-0.3	1.6	0.2	
United Kingdom	1.7	2.6	2.7	2.4	0.0	-0.1	2.7	2.7	2.2	
Canada	2.0	2.4	2.3	2.1	-0.1	-0.3	2.4	2.1	2.1	
Other advanced economies 2	2.2	2.8	3.0	3.2	-0.2	-0.1	2.3	---	---	

\*\* Source: IMF

The IMF has estimated the 2015 growth forecast at 2% for our country, with a consolidation of the recovery seen in 2014. Spain's pending issue continues to be unemployment, which closed 2014 at 23.70%, although it merits mention that these figures are somewhat optimistic, as the unemployment rate only fell below 24% for the very first time since the last quarter of 2011.

For Spain, as 2015 is an election year, the large reforms carried out by the present government continue to be consolidated, which include the labour market reform, the Budget Stability Law, financial system restructuring... although one of the most important reforms is still outstanding, namely the public administration reform led by CORA (the Spanish acronym for the commission responsible for this task).

With regard to figures, Spain closed 2014 with 1.4% growth and it reduced its deficit from 90,000 million in 2012 to almost the 55,000 planned at the end of 2014. This represents ending 2014 with a public deficit of 5.7%, thus complying with the demands of European partners.

The total public administrations' debt at year end was 1.033 billion euros<sup>2</sup>, representing 97.6% of the Gross Domestic Product (GDP), according to data provided by the Bank of Spain.

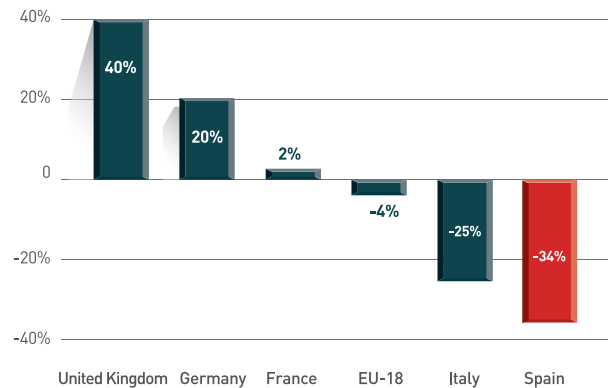
These figures show that debt grew by 67,687 million in 2014, 7% more than the previous year, the lowest annual growth since the crisis started. As a reminder, administrations' public debt closed 2013 at 960,640 million euros, equal to 93.9% of the GDP.

## PUBLIC INVESTMENT: EC FORECASTS IN JANUARY FOR 2014/2016

Bearing in mind surface area and population, between 2014 and 2016 Spain will reduce its investment ratio by 34% with regard to the European average for the 1995-2013 period.

### Public investment: 1995 to 2013 vs 2014 to 2016 periods

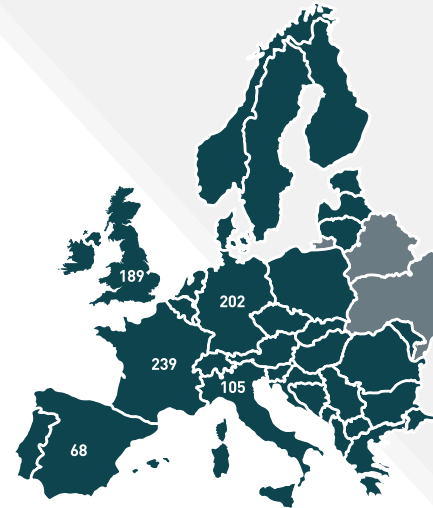
Var. between both periods in % (In terms of surface area and population)



Source: Eurostat EC. Created by SEOPAN.

<sup>2</sup> Source: Bank of Spain

### Total public investment 2014/2016 in thousand million euros



Comparing Spain to other EU countries in absolute real terms, Spanish public investment forecast in 2014-2016 will be approximately € 68,000 million representing:

- 28% of investment in France,
- 33% of investment in Germany,
- 36% of investment in United Kingdom,
- and 65% of investment in Italy.

Source: European Economic Forecast Winter 2015.

## THE CONSTRUCTION SECTOR

The construction sector is facing its eighth consecutive year of declines in production, which affects the four traditional subsectors (residential, non-residential, refurbishment and civil works), with a total production of 97,971 million euros and a negative variation of 2.4%, in real terms, with respect to 2013 (-0.7 in building and -5.5% in civil works).

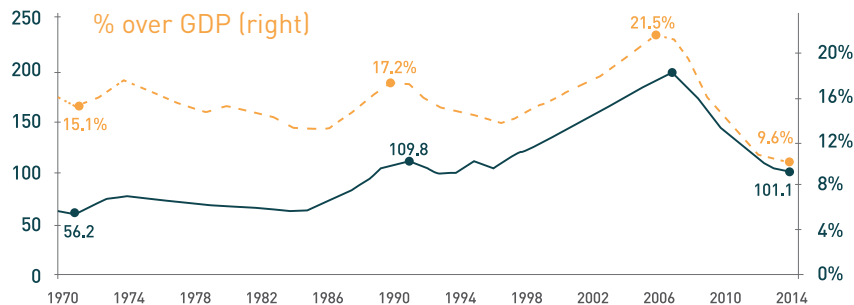
The investment percentage out of the Spanish economy's GDP in construction was 9.6%, which represents a slight decrease with regard to 2013. Historic figures from the past five years show continuous falls, with 15.5% in 2010, 13.6% in 2011, 11.8% in 2012, 9.9% in 2013 and 9.6% this past year.

## MAIN INDICATORS

Indicators	2013	2014	14/13
Production (millions €/ real var.)	100,346	97,971	-2.4%
FBCF Construcción (millions €/ real var.)	103,522	101,084	-2.4%
Investment over GDP	9.90%	9.60%	-0.3 p.p.
Jobs (thousands)	1,103	994	-9.9%
Total jobs	6%	5.70%	-0.3 p.p.
Publics tenders (millions €)	9,172	13,111	42.9%
Concession works tenders (millions €)	388	2,244	478.3%
Housing permits	34,288	36,100	5.30%
Transfer to used housing	168,800	199,900	18.4%
Transfer of new housing	143,800	119,400	-17.0%
IMD (vehicles/day)	13,988	14,158	1.2%

The total ratio of construction investment to GDP in 2014 is considerably lower than the average level obtained since the seventies.

## Construction investment (thousands of millions of current € 2014, left)



## PUBLIC TENDERS

In 2014, public tenders increased three tenths in terms of their overall representation in the GDP; although this is 1.3 points lower than the average of the series available (2.4%) for the 1980-2014 period.

The distribution by ministries and compared to 2008:

- General administration: 5,497 million euros (Public Works and Environment), representing a decrease of -59% compared to 2008 (13,528 million euros)
- Regional administrations: 2,775 million euros, -75% compared to 2008 (11,061 million euros)
- Local administrations: 4,073 million euros, 12% compared to 2008 (3,615 million euros), but -69% compared to 2009

Investment for two main investor ministries:

## MINISTRY OF PUBLIC WORKS

	Programme	2014	2015	(%) 15/14
453B	Creation of road infrastructures	828.67	864.54	4.3
453C	Road maintenance and operation	818.20	856.72	4.7
453A	Rail transport infrastructures	107.37	21.00	-80.4
	Remaining programmes	27.27	28.35	4.0
	Remaining housing programmes	21.97	26.00	18.3
Ministry of Public Works		1,803.48	1,796.61	-0.4
	Companies	2014	2015	(%) 15/14
	ADIF	3,372.47	373.11	-88.9
	ADIF - High Speed	--	3,626.20	--
	ENAIRES	550.31	526.99	-4.2
	PUERTOS DEL ESTADO	776.50	863.86	11.3
	RENFE OPERATOR	240.18	429.51	78.8
Ministry of Public Works companies		4,939.46	5,819.67	17.8
	Companies	2014	2015	(%) 15/14
	SEITT	563.86	477.95	-15.2
Ministry of Public Works companies		563.86	477.95	-15.2
Total Ministry of Public Works		7,306.80	8,094.23	10.8

## MINISTRY OF AGRICULTURE, FOOD AND ENVIRONMENT

Programme	2014	2015	(%) 15/14
452A	245.00	225.83	-7.8
456A	58.70	161.11	174.5
456C	40.88	63.79	56.0
Other environment	104.71	139.91	33.6
Remaining programmes	140.46	155.51	10.7
<b>Ministry of Agriculture, Food and Environment</b>	<b>589.75</b>	<b>746.15</b>	<b>26.5</b>
	2014	2015	(%) 15/14
Autonomous organisations (hydrographic confederation)	503.20	484.29	-3.8
Water companies	660.66	724.45	9.7
<b>Autonomous organisations and organisations of the Ministry of Agriculture, Food and Environment</b>	<b>1,163.86</b>	<b>1,208.73</b>	<b>3.9</b>
<b>Total Ministry of Agriculture, Food and Environment</b>	<b>1,753.61</b>	<b>1,954.88</b>	<b>11.5</b>
<b>Total Ministry of Public Works and Ministry of Agriculture, Food and Environment</b>	<b>9,060.41</b>	<b>10,049.11</b>	<b>10.9</b>



Gerald Desmond Bridge. Los Angeles (USA).

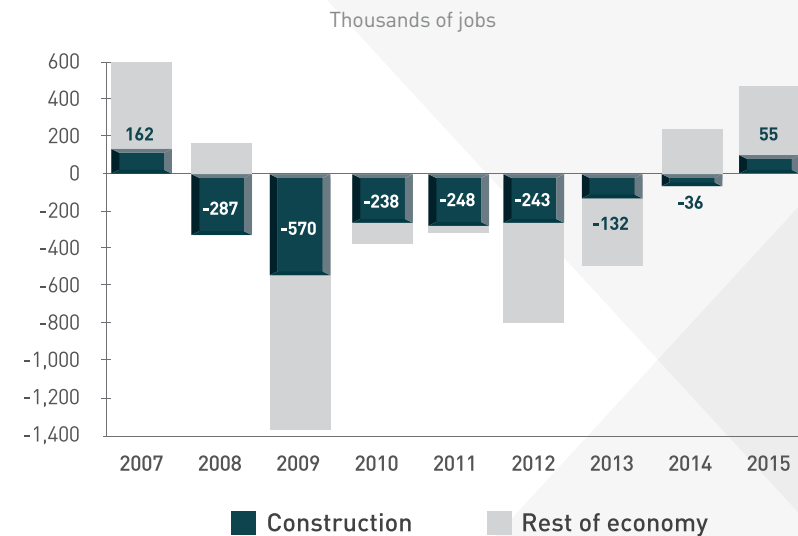
The volume tendered via the concession model, a model the government considers essential for creating new infrastructures, reached 2,244 million euros in 2014, representing a 478.3% year-on-year increase.

In terms of representation of the GDP, state public contracting underwent a very slight increase of 0.2%. It merits mention that the accrued decrease since 2007 is 74%.

## THE CONSTRUCTION SECTOR AND THE LABOUR MARKET

For the period from 2008-2014 with regard to the labour market, the construction sector as a whole, building and civil works, terminated 1,754,000 jobs, representing the destruction of 55% of total jobs.

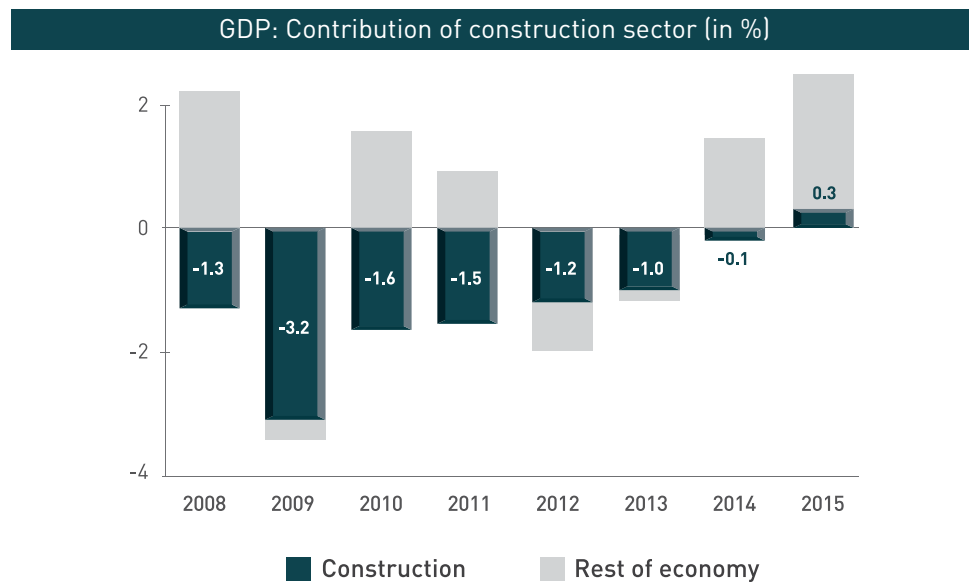
## Employment: contribution of construction sector



Source: EPA (INE). 2015: SEOPAN

## THE CONSTRUCTION SECTOR AND THE GDP

In the period from 2009-2014, the construction sector reduced Spanish economic growth by 9.9 points, or some 100,000 million euros.



Source: INE. 2015 est. SEOPAN

## FORECASTS FOR 2015

Heading the 2015 General State Budget, the investment planned by ministries (Ministry of Public Works and the Ministry of Agriculture, Food and the Environment) for 2015 will be 10,049 million euros, which represents almost a 10% year-on-year increase, although a 57% decline compared to the maximum reached in 2009.

In terms of construction investment variation and its effect on the GDP, after seven consecutive years of negative contributions, the construction sector in 2015 is expected to contribute positively to the GDP, albeit only 0.3 percentage points, or approximately 3,000 million euros, stemming from the building sector.

With regard to creating employment and in contrast to what happened over the last seven years with the ongoing destruction of jobs, forecasts indicate that around 55,000 new jobs will be created in 2015, also coming from building.

In 2015, total activity in the construction sector will increase from 2% to 4% compared to 2014. By type of works:

Work type	2015-2014 variation
<b>Building</b>	<b>2% / 4%</b>
Residential	2% / 4%
Non-residential	2% / 4%
Refurbishment and maintenance	2% / 5%
<b>Civil works</b>	<b>1% / 3%</b>
<b>Total construction</b>	<b>2% / 4%</b>

## FISCAL RETURN AND THE CREATION OF EMPLOYMENT FROM SECTOR ACTIVITY

Investment in infrastructures is an essential variable in the economic recovery process and plays a two-fold role: stabilisation, due to its effect on business and short term employment, and on productivity and medium term growth.

The creation of infrastructures in a country generates wealth and progress, improves citizens' quality of life and makes a state more competitive. It also has a great knock-on effect, given that more than 20 subsectors are directly linked to the construction sector.



According to the employers' organization estimates in the SEOPAN construction sector, with an investment in civil works in Spain equivalent to 1% of the GDP, approximately 10,000 million euros:

### 1. CREATION OF EMPLOYMENT:

	Jobs generated		
	Direct	Indirect	Total
Construction of housing	134,500	62,700	197,200
Construction of infrastructures	117,500	63,100	180,600

### 2. FISCAL RETURN AS A % OF GDP:

Direct revenue: VAT	0.21%
Increased revenue from increased production	
Net taxes on intermediate consumption	0.01%
Income tax on wages paid	0.05%
Social contributions	0.11%
Corporate income tax	0.03%
Unemployment benefits	0.21%
<b>Total</b>	<b>0.62%</b>

Based on the above, 6,200 million euros would revert to the public coffers and over 180,000 jobs would be generated directly and indirectly, extremely convincing figures to bear in mind as a stimulus to resolve the crisis.

## FOREIGN MARKET

Primarily due to the generalised fall in the internal demand for construction, the main Spanish construction companies have strengthened their positions in foreign markets, being the recipients and successful bidders of the main and most important international construction contracts, such as Line 2 of the Lima Metro, an operation valued at more than 3,000 million euros.

In aggregate values and for the main construction companies as a whole, contracting went up almost 22% compared to 2013, with contracting totalling 21,820 million euros. Turnover similarly increased by 3.5%, reaching a figure of 15,527 million euros. The main market continues to be the American continent, with 59% of contracting, followed by the EU with 25%.

Today, large Spanish construction companies are leaders in markets unheard of only less than a decade ago. Their portfolios reveal increasingly more significant participation in works abroad, where they compete under equal conditions with companies from other countries. By way of example, for infrastructure concession management, by number of construction and operation contracts, eight of the 37 largest world operators in transport infrastructures are Spanish, with four of these among the top ten in the world by number of concessions, according to PWF magazine (Public Works Financing). FCC-GVI is in third place in this ranking.

## FCC'S ACTIVITY

All construction business of the Citizen Services Group is centralised with the company FCC Construcción, S.A. which had a turnover of 2,076.1 million euros in 2014, 20.1% less than the previous year. Out of total turnover, 50% was generated outside of Spain. Construction is the second area with the highest quantitative weight in the Group's global invoicing, representing 32.8%.

Gross operating profits totalled 98.2 million euros, representing a 4.1% variation from 2013. With respect to the Group's total EBITDA, the construction business contributed 12.2%.

In 2014, two consortiums led by the construction area obtained combined revenues for works of over 3,800 million euros during the course of the year. Worthy of mention among these works are two metro projects.

As part of consortiums, the contract to design and build Line 2 of the Lima Metro and a section of Line 4 was awarded, totalling 3,900 million euros. The planned construction term is five years, followed by its operation for 30 years. Furthermore, in the Middle East, FCC Construcción heads a consortium that was awarded the construction of the Red Line of the Doha Metro (Qatar), totalling 506 million euros.

Thus, the works order book attributable to FCC Construcción increased to 6,213 million euros at year end, which guarantees 35 months of activity, aligned with a profitable and selective positioning process. Of this order book, 67.5% is for contracts abroad.

Another noteworthy event is FCC Construcción's most important project, the Riyadh Metro, for which construction started in April, thus moving ahead of the schedule submitted.



Panama Metro (Panama).

## RAILWAY INFRASTRUCTURES

The rail transport sector continued to be the most dynamic in 2014, due to expansion plans for the high speed rail network and the construction of new metro lines in cities in the Middle East, North Africa and the Americas.

Notable events during 2014 include:

- The awarding of the Lima Metro and Qatar Metro in March
- The delivery of Line 1 of the Panama City Metro in April
- The foundation stone of the Riyadh Metro, ahead of the schedule programmed

The most important awards in 2014 were:

- **Lima Metro (Peru).** Line 2 and a section of Line 4. A consortium led by FCC obtained the contract for the design, construction, financing, operation and maintenance of Line 2 of the Lima Metro and a section of Line 4, which will be extended to the airport, totalling 3,900 million euros.

The planned period for the construction phase is five years, after which it will assume operations for 30 years. The awarded project consists of constructing 35 underground metro stations joined by 35 kilometres of tunnels.

Line 2 will be close to 27 kilometres long and will cover the east-west axis of Lima from Ate to Callao, where FCC will also conduct conditioning works in the port at this town. Once it is up and running, the 27 passenger stations will provide service to more than 600,000 people a day, saving them up to 90 minutes in their journeys. It currently takes two hours and 20 minutes to do this journey by car.

On its part, the section of Line 4 will link the Peruvian capital to the airport through eight kilometres of tunnel, from Avenida Faucett to Avenida Néstor Gambetta. Eight stations will be built on this route.

The contract also includes the execution of the superstructure, the supplying of rolling stock, the implementation of electromechanical equipment, railway systems and the electric power required to operate the Metro.

- **Doha Metro (Qatar).** FCC was awarded the contract to construct a section of the Red Line of the Doha Metro (Qatar), totalling 506 million euros. This is the first large-scale project that the Servicios Ciudadanos Group will execute in this emirate.

The terms of the contract awarded by Qatar Railways Company establishes an execution period for the works of 31 months and construction will provide jobs for over 1,000 people.

The section of the Red Line awarded to FCC will consist of three elevated stations (named Barwa Village, Al Wakra and Qatar Economic Zone), with a length of 6.97 kilometres. The existing dual carriageway will run underground at the entry to Al Wakra. The total budget for the construction of the entire metro project for the capital of Qatar exceeds 20,000 million euros.

- **Maintenance of infrastructure, track and switches and crossings. Madrid-Seville High Speed Line. Area: Between Mora and Calatrava (Spain).** ADIF awarded the maintenance contract in joint venture to FCC Construcción totalling 27.8 million euros for a four year period.

The maintenance contract required will participate in the following combined concepts:

- General standard based on maintenance principles according to status: surveillance, data evaluation (diagnosis), scheduled short, medium and long term interventions.
- Availability and application of resources to take immediate action for all types of incidents with direct and indirect impacts on operations.
- Setting up a work organisation to support the management and conservation done by and for basic comprehensive maintenance.

The most noteworthy execution works are:

In 2014, the foundation stone was laid for the most important project that FCC has executed to date, Package 3 of the Riyadh Metro in Saudi Arabia, undoubtedly the largest construction project in the world.

- **Construction of the Riyadh Metro (Saudi Arabia).** The Arriyadh Development Authority (ADA) awarded Package 3 to the consortium led by FCC. It consists of the design and construction of lines 4 (Yellow), 5 (Green) and 6 (Purple), which in turn consists of the 25 stations required over 64.6 kilometres of metro tracks, 29.8 kilometres of viaducts, 26.6 kilometres of underground tracks and 8.2 kilometres of overground tracks. For the construction of the three lines awarded, three tunnel boring machines (TBM) will be employed, with diameters up to 10 metres. The trains that will run on these lines have two carriages; they will operate without drivers and will be supplied by Alstom. There will be four types of stations: elevated, overground, underground and transport hubs to connect the different lines.
- **Bucharest Metro (Romania).** The tunnel works for the new Bucharest Metro line, which started on 25 September 2013 with the start-up of the first of the two tunnel boring machines 'Santa Barbara' and 'Santa Filofteia', continue to be executed on schedule.

Construction of the new Line V of the Bucharest Metro, 6.1 kilometres long with nine stations and a cost of 267 million euros. The works are underway for the section between the Raul Doamnei and Hasdeu stations. The work consists of the execution of the civil works for a 6.1 kilometre long section with nine stations. The new line has two parallel tunnels measuring 3.8 and 4.0 kilometres, with a 5.7 metre inner diameter, and a third 260-metre-long tunnel, which will connect lines 1 and 5 at the Eroilor 2 station, adjoining the existing one. The tunnels are being bored with EPB tunnel boring machines with a 6.60 excavation diameter and clad with concrete rings (arch stones) 30 centimetres thick. The new metro line should be up and running by the middle of 2016.

## MOTORWAYS, DUAL CARRIAGEWAYS AND ROADS

The most notable events during 2014 include:

- The delivery and start of operations of the **Nuevo Necaxa-Ávila Camacho Motorway (Mexico)**, 36 kilometres long, which included the construction of the **San Marcos Viaduct**. It is 850 metres long, divided into seven spans measuring up to 180 metres, with the second highest pier in the world, pier four of the bridge, with a maximum height of 225 metres. The project was inaugurated by President Enrique Peña Nieto on 17 September 2014.



San Marcos Viaduct. Nuevo Necaxa-Ávila Camacho Motorway (Mexico).

- The opening in February 2014 of section II of the **Vía Brasil Corridor (Panama)**. Like its predecessor, section I, this project was executed in record time, finished between three and five months ahead of contractual delivery dates. The project consisted of the transformation of single level intersections with traffic lights, double level intersections without traffic lights, via the construction of a depressed underpass and a surface roundabout, in addition to three elevated pedestrian crossings to ensure pedestrians' movement and safety, equipping the streets with new pavements, new lights and road signals.

- Advances in iconic works, such as **Mersey Bridge in Liverpool (United Kingdom)** and the **Gerald Desmond Bridge in Los Angeles (United States)**.

The most important tenders awarded in 2014 were:

- **Coastal Road (Panama)**. The project includes the execution of a 6.6 kilometres long access road that connects the mineral excavation area with facilities on the coast. Two roads will also be constructed: a 1.5 kilometre long road for eastern access to the excavation area and a second 5.5 kilometres road running parallel to the Pipeline corridor, along with the installation of its steel pipelines, which will transport mineral materials from the mine to the coast. Several platforms are also included in the scope of the construction project for the future installation of assorted mining services, as well as the construction of a dam south of the facilities to handle tailings.
- **Reform of the widening of the MA-30 between San Ferriol and Inca road, Balearic Islands (Spain)**. The project consists of widening 3,499.35 metres between the MA-2011 and MA-13, from the roundabout on Sineu road to the roundabout at Pont d'Inca. This work involves total control of access points to the dual carriageway, the construction of the junction on the roundabout that currently intersects the MA-3013 with two exits and two entries and two roundabouts. The contract also stipulates the construction of a bicycle lane and service roads to access the different properties and facilities affected by the works. The client is the Mallorca regional council.

The most noteworthy works currently being executed are detailed below:

- **Construction and improvements to the road on route T-775 (Chile)**. The project encompasses 15 kilometres and entails the remodelling of roadway geometry. To do so, a high volume of earthworks, 250,000 m<sup>3</sup> of embankment, has been considered, as well as the replacement of the 30 metres-long Quillín Bridge and the construction of the 170 metres Rio Bueno Bridge. The latter crosses the river bearing the same name which, due to its flow, means it is necessary to use sheet piling and the creation of peninsulas necessary. At present, some 150 people are working on this project, with 60% of physical work completed.

- **Expansion of the Cañas–Liberia road (Costa Rica).** The project is being executed on National Route No. 1, the North Inter-American Highway, in the northern Pacific region of Costa Rica to link the communities of Cañas, Bagaces and Liberia.

The work consists of the refurbishment of 50.3 kilometres of an existing two lane road to expand it to four lanes (two in each direction) and includes the construction of embankments for the two new lanes, the reconditioning and extension of the drainage system and restoration and construction of pavement using hydraulic cement concrete.

It also includes the construction of new facilities and infrastructures, such as bus bays, pedestrian walkways, pedestrian pavements, bike lanes, animal crossings and road signals.

The modification order awarded in February of this year primarily includes the construction of three overpasses at the intersections of urban hubs, replacing the level crossings initially planned.

Of the planned 50.3 kilometres, 41 kilometres have already been built, with traffic diverted onto completed slabs. The nine remaining kilometres are the three junctions in the modification order for the approaches to the new dual bridges, currently being performed by several construction companies.

At present, 90% of the works have been completed. The delivery date is currently in an addendum process, which considers two additional months from the date established by contract.

- **Mersey Bridge, Mersey Gateway Project (United Kingdom).** Design, construction, financing, maintenance and operation of the bridge over the Mersey River in Liverpool (United Kingdom), 2.13 kilometres long, which will provide service to some 80,000 vehicles per day. The planned date for opening to traffic is at the end of 2017. The most striking feature of the entire contract is the 1 kilometre long cable-stayed bridge, which is 42 metres wide and has a peak height of 125 metres. The project also includes the refurbishment of seven kilometres of

access roads, 2.5 new kilometres of motorway and the renovation of a further 4.5 kilometres of motorway, as well as different transport links.

- **Gerald Desmond Bridge in Los Angeles (United States).** The project includes the design, replacement of the old bridge and construction of the new bridge at the Port of Long Beach in Los Angeles. The new bridge is cable stayed with a principal 305 metre span, located 61 metres above Back Channel in the Port of Long Beach.

## AIRPORT WORKS

The most important awards in 2014 were:

- **Juan Santa María Hangar (Costa Rica).** Design and construction of a hangar for aircraft maintenance and their associated approach, runways, related facilities and services, as well as the supplying of auxiliary equipment for CETAC/DGAC of Costa Rica.

The project has two phases, which structure development into:

- Phase I. Civil Works: Design approved. The starting order is established as 18 March 2015, when earthworks and foundation laying works will commence.
- Phase II. Remaining activities: Pending design approval.

Most noteworthy works being executed:

- **Construction of the new control tower and management centre of Dorado Airport (Colombia).** Located 15 kilometres from the centre of Bogota, the new control tower will be 80 metres high and has an execution period of 40 months. The project also encompasses the construction of the airport management centre, which will be used to ensure the airport's future expansion. This new infrastructure has a constructed area of 16,300 m<sup>2</sup>, which will allow for increased air traffic, to attend to the growth in airport

operations. Around 70% of the work has been completed, and the contractual term ends in the last quarter of 2015.

- **Construction of the technical block and control tower at Oran Airport (Algeria).** The contract includes the construction of a rectangular control tower 47 metres high and a building with the same shape measuring 62.55 x 31.05 metres, with access to the tower. The execution period is 16.5 months.
- **Construction of the technical block and control tower at Constantine Airport (Algeria).** The contract includes the construction of a circular control tower, 46 metres high and a rectangular building measuring 59.3 x 43.2 metres, with access to the tower. The execution period is 16.5 months.
- **Control tower at Argel Airport (Algeria).** Budget of 2,553,833,047.90 Algerian dinars, including an assignment for 10,595,938.30 euros. Execution period: 18 months.

## HYDRAULIC WORKS

The most important tenders awarded in 2014 were:

- **Chucas hydroelectric project (Costa Rica).** This 50 MW project is located between the provinces of San Jose and Alajuela, Costa Rica, employing water from the Rio Grande de Tárcoles. The water flow is diverted toward a compacted concrete gravity dam with a capacity to regulate 14.7 hm<sup>3</sup>/hour, equipped with drainage and overflow structures.

The project includes the following works:

- Construction of a rolled compact concrete (RCC) gravity dam 54 metres high by 230 metres long, with a volume of 190,000 m<sup>3</sup>, built on rock.
- Construction of a spillway in the body of the dam equipped with four radial sluice gates measuring 15 metres by 11.25 metres, four cofferdams and a gantry crane.

The most noteworthy execution works in 2014 were:

- **PAC 4 (Panama).** This project consists of the excavation of a new channel in the Panama Canal, which will link the new sluice gates to Corte Culebra, the narrowest section of this waterway, close to the entry to the Canal on the Pacific. This project consists of the construction of 3.7 kilometres of an approach channel to the sluice gates on the Pacific, 200 metres wide. It includes the construction of a rock fill embankment dam 2.4 kilometres long, the excavation, transport and dumping of some 27 million cubic metres primarily of rocks, the construction of access routes and water deviation drainage canals, the creation of tanks and the cleaning of approximately 80 hectares of firing range.

FCC's participation percentage is 43% and 80% of the project has been completed to date. The planned completion date is the third quarter of 2015.

- **Bajo Frío Hydropower project (Panama).** The project consists of the construction of a gravity dam 56 metres high and 405 metres long, with conventional concrete and roller-compacted concrete blocks, closed on the left bank with a rock fill dam. The dam consists of two spillways, one open channel 90 metres long with a drainage capacity of 2,100 m<sup>3</sup>/s and another double conduit measuring six by five metres with an evacuation capacity of 700 m<sup>3</sup>/s.

The project includes two machinery houses and is completed by the improvement of the dam access roads, one bridge over the River Chiriquí, a 2.1 kilometre long raceway, the loading chamber and intake for the Salsipuedes machinery house, located at the end of the intake chute and a water conveyance channel measuring around 110 metres through which the waters are returned to the River Chiriquí Viejo. The project is 95% completed and conclusion is planned for the third quarter of 2015.

- **Design and construction of the El Realito aqueduct in the state of San Luis Potosí (Mexico).** Work finished and operations started in October 2014, for supplying up to 1 m<sup>3</sup>/s of water. A total of 135 kilometres of aqueduct pipelines have been constructed in steel, reinforced concrete and high density polyethylene in the urban section, with diameters up to 54". It includes three pumping plants to

handle a topographic 947 metre change in altitude, a system exchange tank, a water purification plant, six delivery tanks, as well as a 46.2 kilometre type D service road, the latter being completed at present. Inaugurated on 22 January 2015 by Mexican President Enrique Peña Nieto.

### Hydraulic works in Portugal

Ramalho Rosa Cobetar, RRC, is the representative of FCC Construcción in Portugal. The Group's strategy is to centralise all construction business in the Portuguese market with RRC. This strategy is greatly appreciated by its clients and by other sector companies, which do not hesitate to associate with RRC in the most varied works. At present, RRC is completely integrated and stabilised in the country's market.

- **Hydroelectric use of Ribeiradio-Ermida in Aveiro (Portugal).** The works are broken down into three main groups: Ribeiradio Dam, Ermida Dam and access roads to the dams.
  - **Ribeiradio Dam:** Concrete gravity dam with circular guide vanes, with 262 metres executed at the crest and a maximum height of 74 metres, with a spillway formed by three 13 x 13 metre spans with segment floodgates (TAINTER) and a scour outlet with a 2.5 metre diameter.
  - **Ermida Dam:** Concrete gravity dam with straight guide vanes (175.1 metres at crest) and a maximum height of 35 metres, with a fixed lip spillway, a 1.2 x 1.5 metre scour outlet and a 30 metre stilling basin.
  - **Access roads to Ribeiradio Dam:** they will have a total length of 2,500 metres. The re-establishment of road EM 569, on the right bank of Ermida Dam, measuring approximately 2.35 kilometres, includes the construction of the bridge over the Salgueira riverbank, a viaduct with a curved base with an 84 metre span (26+32+26), 10.50 metres wide, with a section with lightweight post-tensioned concrete slab and a maximum stack height of 27 metres with a shallow foundation.

Works started in 2010 and will finish at the beginning of 2015.

- **Amoreira-Caliços de Alqueva Hydraulic Circuit (Portugal).** The Amoreira-Caliços Hydraulic Circuit consists of a raceway section between Amoreira Dam (existing) and Caliços Dam (to be built by RRC). The works are broken down into three main phases:

- Main pumping station at the foot of the dam, next to Amoreira Dam: 66 metre long and 17 metre wide building, equipped with six electric pump systems for an elevation height of 79 metres.
- Raceway between Amoreira and Caliços Dam, 6,630 metres long with a 2,300 millimetre diameter.
- Caliços earth dam, 10 metres high, and a 24 hectare reservoir.

Works started in 2013 and will finish at the beginning of 2015.

### MARITIME WORK

The most important tenders awarded in 2014 were:

- **Container terminal at Prat wharf (Phase 2). Manoeuvring area at the Port of Barcelona (Spain).** Puertos del Estado awarded the project to a joint venture led by FCC, whose purpose is to complete all actions planned in the non-concession manoeuvring area, except for the paving of the two streets bordering the area not under concession, thus allowing for increased docking capacity. The expansion planned for the manoeuvring area is 511 metres, which can be added to the 970 metres in place on the working face, which were executed during Phase I.

The most noteworthy execution works are:

- **Port of Açú (Brazil).** The project consists of constructing the TX-1 terminal in the Brazilian Port of Açú, located in the municipality of São João de Barra (northeast Brazil), a region that produces 85% of the country's petroleum and gas.

The works include the execution of a 2,438 metre long caisson dock, which will be executed by the production and submerging of 47 reinforced concrete caissons, and a 600 metre sloping breakwater. The client is the company named FERROPORT, made up of Prumo Logística and Angloamerican.



Port of Açú (Brazil).

The scheduled termination date is October 2015 and 87% of works have been completed. Worthy of mention in this project is the construction and transport of 11 caissons constructed in Spain and transferred to Brazil in semi-submergible ships.

- **Expansion of the Port of El Callao (Peru).** Works consist of the expansion of quay 5 (560 metres long) and 11 (280 metres), with the aim of increasing docking capacity and building new facilities (an administrative building, a car park and a leisure centre). The first quay, number 5, is earmarked for handling containers and loading minerals. On its part, quay 11 is equipped with silos with a 25,000 tonne total capacity for agricultural products imported. During the expansion work, FCC will have to conduct dredging to attain a depth of 16 metres and create a superstructure supported by steel piles and concrete beams. The work is 60% complete and part of quay 5 has been delivered and is operational.

## NON-RESIDENTIAL BUILDING

The most significant residential and non-residential (public facilities) building works are detailed below, which were awarded and were being executed in 2014.

The most important awards in 2014 were:

- **Haren Prison (Belgium).** Presently in preferred bidder phase. This project consists of the design, construction, financing, maintenance and operation of Haren Prison, near Brussels (Belgium). The prison, which can house 1,190 prisoners, will consist of 18 buildings and a built area of 108,000 m<sup>2</sup>. Contract signing and the start of construction works are estimated for the end of 2015, after licenses are obtained. The estimated timeline for the work is 32 months.

The most noteworthy works underway are:

- **Hospital Complex in Panama (Panama City).** This project consists of the design, urban development, environmental impact studies, construction, financing and equipping of all facilities at the Hospital Complex in Panama. Health facilities will occupy an area of 220,000 m<sup>2</sup> and will be equipped with 49 operating theatres, over 200 consultation rooms and 1,709 beds, thus becoming a leading reference in Central American in terms of its equipment and functionality. The Hospital Complex is made up of 17 buildings that will house the specialities of paediatrics, cardiology, internal medicine, child and maternal consultation rooms, operating theatres, outpatient departments, as well as a day hospital, several specialised rehabilitation institutes and hall of residence. This health complex will be able to attend to more than 1.5 million people.

At present, works are 35% complete and the estimated end date is December 2017.





Hospital Complex in Panama (Panama City).

- **Luis 'Chicho' Fábrega Hospital, Veraguas (Panama).** The new Luis 'Chicho' Fábrega Hospital, constructed in Veraguas Province, and delivered in December 2014, has an area of 46,460 m<sup>2</sup>. The health centre, with a 330 bed capacity, houses central services on the ground floor and basement. The five storey building is for hospitalisation and on-duty doctors. The building has a shallow foundation and facades created with concrete and glass panels with inverted roofs. There are three main driving routes that will act as the backbone for the building:
  - A ring road for visitors and outpatients.
  - An inner driving route restricted to diagnosis and treatment areas, located in the central building.
  - And another inner route exclusively for employees and service personnel.

## RESIDENTIAL BUILDING

- **210 houses in Arroyofresno, Montearroyo, Madrid (Spain).** Works consist of the construction of 210 houses with two underground car parks, a semi-basement, garages and business premises. The foundations and structures will be reinforced concrete with a pile wall. The floors will be constructed from one-way joists and slabs.

## Building works in Portugal

Through subsidiary Ramalho Rosa Cobetar (RRC):

### Schools

- **Campelos and Ponte de Rol schools (Torres Vedras, Portugal).** The two schools in the same council district are some 30 kilometres apart. A two storey building with a 2,000 m<sup>2</sup> area and a single level 500 m<sup>2</sup> building are being added to the school in Campelos. In Ponte de Rol, a new 2,500 m<sup>2</sup> school will be built. The town council will have a total of 18 new classrooms.

### Cultural, sport and leisure centres

- **Water Museum (Lisbon, Portugal).** The purpose of this project is to refurbish the museum to house administrative personnel offices and museum exhibitions. This 100-year-old building is classified as a building of public interest, as it includes the former Barbadinhos Steam Pumping Station, which was turned off in 1928. The works will take some six months and will include structural reinforcements, in addition to the renovation.

## MANAGEMENT SYSTEMS

With FCC Construcción's international lines of business well established, its management and sustainability systems have been successfully implemented and certified in the large projects in progress. To this end, procedures, software applications, formats and records have been adapted to handle the needs that arise from this activity in the international arena. Our priority continues to be customer satisfaction beyond their expectations, with the commitment to fulfil quality assurance requirements that is so characteristic of us. Furthermore, and with the aim of providing greater credibility to our quality management, the system has been certified in 24 countries, representing over 97% of our total activities.

Percentage of activities certified				
Management area	Certified	Total	Scope [% of certified activities]	
			National (Spain)	International
Quality	ISO 9001	97.4%	100.0%	94.6%
Environment	ISO 14001	77.4%	99.9%	53.6%
Information security	ISO 27001	36.1%	70.3%	0.0%
GHG emissions	ISO 14064	36.1%	70.3%	0.0%
R&D&i management	UNE 166002	36.1%	70.3%	0.0%

Part of our commitment to clients concerns information security. FCC Construcción, the only Spanish construction company with the ISO 27001 certification for its Information Security Management system, uses indicators to measure the suitability of the countermeasures established from a security standpoint, in order to have possible threats to our information assets under control and to protect our clients.

**Risk management**

Promoted by senior management, risk and opportunity management was established systematically at FCC Construcción this year. The adoption of procedures based on risk management makes it possible to identify opportunities that are not visible a priori, to transform threats into opportunities, and fully or partially prevent any possible losses, strengthening our business strategy and differentiating ourselves from competitors.

Based on a reliable and internationally recognised methodology, detection and assessment of risks, and their subsequent control, are an ongoing review process, applicable to all phases of each project. In terms of contracts, it facilitates entry into new markets with very demanding clients, thus strengthening the company's objective to develop international business and the firm commitment to a global future.

**Environment**

To obtain balance between upholding profits and reducing environmental impacts, the Environmental Management System has been certified by a third party pursuant to ISO 14001 in 19 countries, which means that 66% of turnover is certified.

In assuming its responsibility, FCC Construcción considers that the achievements obtained and the processes developed should be a behavioural standard and part of the culture of the global construction sectors. In light of this goal, it leads and participates in a slew of technical committees, both national (AEN/CTN 198/SC2 Infrastructure Sustainability, on which it is the chair) and international (CEN-TC 165 Wastewater Engineering; CEN/TC 350 Sustainability of Construction Works, on which it chairs the WG6; ISO/TC 59/SC 17 Building Construction/Sustainability in Building Construction, on which it chairs the Sustainability Committee for Civil Works (WG5) and ISO/TC 207 Environmental Management). In addition, it participates actively in the technical associations most relevant to its lines of business (Scientific/Technical Association of Structural Concrete, Technical Association of Ports and Coasts-PIANC, Committees on Large Dams, chairing the Technical Committee, Engineering Activities in Planning for SPANCOLD and is the Spanish representative at ICOLD internationally, etc.).

In its firm commitment to sustainability and framed in a strategy defined to combat climate change, FCC Construcción became the first Spanish construction firm to verify its greenhouse gas (GHG) emissions report, later being awarded AENOR's Carbon Footprint certificate 'Environment CO<sub>2</sub> Verified', which accredits calculation veracity and shows that the company has included greenhouse gas management in both its system and strategy.

**Occupational risk prevention**

In line with the FCC Construcción's continuous international business growth in 2014, its international activity on occupational risk prevention has grown accordingly.

The Occupational Risk Prevention Management System under the OHSAS 18001 standard has been definitively implemented in several countries, where certification according to this standard was obtained in 2014. Implementation continues in other countries with the aim of successively certifying systems.

Nationally, the Occupational Risk Prevention System has been fully implemented according to OHSAS 18001 certification in the construction division. Worthy of mention is that all external audits to renew OHSAS 18001 certification have been conducted at all companies in this area with optimal results. The legal audits required by regulation were also carried out in 2014, which companies passed with the same excellent results.

Moreover, the system has an optimal prevention management tool that incorporates a scorecard to measure performance, which streamlines the control and substantially optimises the monitoring of objectives in this division.

The reduction of accident rates continues to be a priority objective. Given that the profiles of accidents in the industry are changing as the activities, personnel and global circumstances change, the information obtained daily from the Accident and Incident Reports received by FCC Construcción is especially valuable, and is a basic work tool to achieve '0 Accidents'. Limiting how FCC Construcción achieves reductions in line with its goals, the values obtained with regard to frequency, seriousness, incident and absenteeism rates do nothing but further strengthen the organisation's control of accident rate trends locally and internationally.

Defined as an essential resource to attain its targets, managing training is a fundamental indicator in planning the company's preventive activities at all organisations. During 2014, the objective of 'road safety training' was maintained and the training established in the General Agreement on the Construction Sector continued.

Related to the start-up of preventive programmes and actions, one of the objectives established in 2014, which will continue in 2015, was to draw up preventive best practices at several offices, both nationally and internationally. A large number were taught, both on prevention management and active safety on worksites. The most interesting will be analysed and passed on to the organisation.

In the scope of Research, Development and Innovation (R&D&i), FCC Construcción has participated in projects and training activities that were significantly technical, focused on reducing accidents at linear infrastructures (PRECOIL Project), at

buildings and infrastructures with structural faults (SETH and SORTI Project), in different construction sector settings (SEIRCO Projects) and on jobs with ergonomic risks (SENSORINZA).

These were all done in collaboration with high level state institutions (Ministry of Science and Innovation), research centres (CSIC, IBV, CARTIF), universities (UPM, University of Vigo) and other companies.

The company has also worked closely with universities on occupational risk prevention training in their final years of study, including the Road, Canal and Port Engineering School at the University of Cantabria.

In addition, FCC Construcción actively participates in and collaborates with the most outstanding agencies and platforms in the field of health and safety both nationally and internationally, such as the National Commission on Occupational Health and Safety, the National Institute, the Regional Institute, the European Agency, the ENCORD Platform, culminating in the decision-making process at European level through the chair of the European Construction Industry Federation (IFAC), a social partner officially recognised by the European Commission.

## TECHNOLOGICAL DEVELOPMENT. INNOVATION DEPARTMENT: R&D&i

FCC Construcción promotes an active policy for technological development and is constantly incorporating innovation into its works, as part of its firm commitment to research and development, to sustainability and to contribute to the quality of life of society as a competitive factor.

### R&D&i

Development and the use of innovative technologies to execute works entails a significant contribution of added value and a differentiating factor in the modern-day market, which is highly competitive and internationalised.

In this regard, its active participation is well worth pointing out in European R&D&i organisations such as the European Construction Technology Platform

(ECTP), the E2BA Association (Energy Efficient Buildings Association), the reFINE initiative (Research for Future Infrastructure Networks in Europe), both connected to the European Horizon 2020 programme and the ENCORD network (European Network of Construction Companies for Research and Development). In 2014, the process, now complete, was driven forward to integrate the E2BA Association with the European Construction Technology Platform. Nationally, FCC Construcción participates in the Spanish Construction Technology Platform, and is active in the Spanish Construction Technology Platform Foundation, its standing committee and its working groups, and Seopan's R&D&i committees, chaired by FCC Construcción since 2012, as well as the Spanish Confederation of Employers' Organisations (CEOE).

The aim of all these organisations is to clearly define the company's role as a driving force in R&D&i in the construction sector, in accordance with the approaches of the European H2020 programme and the Spanish Strategy of Science, Technology and Innovation 2013-2020. The company is also active in ADIF's Railway Technology Centre in Malaga.

FCC Construcción and its subsidiaries carry out a large number of R&D&i projects, some of which are in partnership with public administrations, including its work with ADIF in the European LIFE Zero Impact project, awarded in 2013.

Projects started in previous years have continued, including Integrated Research on Sustainable Islands (IISIS per its Spanish acronym), developed with majority participation from the different business areas of the Servicios Ciudadanos Group; Sustainable Building Refurbishment (RS per its Spanish acronym); NEWCRETE, on new concretes; APANTALLA, on new nanomaterials with improved screening properties for electromagnetic radiation; the Expert Smart System to Assess Risks in different areas of the Construction Sector (SEIRCO per its Spanish acronym); BOVETRANS, development of a system of vaults with light transition in road tunnels to take advantage of natural sunlight.

The national projects started in 2014 are: DOVICAIM, on reinforced concrete floating caissons, led by FCC and directly focused on the current challenges of international maritime works and SORT-i on safety.

On a European level, work continues on the following projects: BUILDSMART, energy efficient solutions ready for the market; CETIEB, cost effective tools for better indoor environment in retrofitted energy efficient buildings; SMARTBLIND, development of an active film for smart windows with inkjet method; and eco-innovation REWASTEE, related to incorporating recycled items into construction products.

In addition, innovation that is detected within the framework of the Company's ordinary course of business is structured and its value is enhanced by the corresponding certification processes.

### Materials technology

The actions below are some of the most significant in 2014:

- Riyadh Metro: Definition of durability standards applicable to concretes, pursuant to regulations considered in the projects and guidance on concrete designs. *In situ* tests for batching two-component mortar used in tunnel construction.
- Doha Metro: Advice on the design of concretes for the work and creation of procedures to execute the embankment on which Qatar Rail's future maintenance workshop facilities will be situated.
- Chucás Dam: Plant and laboratory tests and management to approve the batching of roller-compacted concrete for the dam body.
- Coordination for the implementation and later monitoring of laboratories at the Enciso and Yesa Dams.

In collaboration with the R&D&i Department and Cementos Portland Valderrivas, participation has continued on projects including CEMESMER, CEMESFERAS and NANOMICRO.

FCC Construcción and SEOPAN are represented via seats on several AENOR standardisation and certification committees, participating on committees, subcommittees and work groups on concretes and cements:

- TSC (Technical Standardisation Committee) Concrete: Subcommittees SC 10 and SC 11 respectively on durability and concretes.
- TSC 146 Aggregates: Subcommittee SC 6 (tests) participating in the working group on Aggregate-Alkaline Reactivity.
- TCC (Technical Certification Committee) 015 Cement.
- TCC 079 Concrete under Spanish code EHE.

## MACHINERY DIVISION BUSINESS

### MARITIME WORKS

- From April to the end of July, nine caissons were produced at the **Mar de Teide Dock** for works at the Port of Granadilla. The caissons were manufactured at the Port of Santa Cruz in Tenerife and are awaiting towing to Granadilla.
- The Mar del Enol and Mar del Aneto floating docks have been stationed at the **Port of Açú, Brazil**, producing a total of 38 caissons, 19 by each dock. At the Port of Algeciras, 11 caissons were produced (nine by Mar del Aneto and two by Mar del Enol), which were later transferred to Brazil in semisubmersible vessels. The process employed by the Mar del Enol to produce the caissons consisted of installing a weather protection umbrella with the pertinent slip form paving machines, assembling on the dock 703,000 kilos of metal structure, 240,000 kilos of formwork, 48,000 kilos of auxiliary equipment and a hydraulic lifting system employing 28 jacks with a total capacity of 2,800 tonnes.

For the same project, the Acanto split barge has dumped some 1,424,766 tonnes of material for the caisson banks.



Port of Açú (Brazil).

### BRIDGE WORKS

- The execution of the viaducts over the River Cabra were finished in the first half of the year, belonging to the subsection of the Cantábrico Dual Carriageway between Pendueles and Unquera, with the movable formwork A-60 for onsite concreting, owned by FCC. Tasks to turn the formwork were undertaken at the beginning of the year at the end abutment of the first viaduct, so that the second viaduct could be executed without having to go back to initial assembly again, thus reducing total project time.
- In accordance with project scheduling for the elevated section of the **Red Line of the Doha Metro**, the technical definition, selection of suppliers and purchase of moulds were done in 2014 to execute the prefabricated segments and two segment launchers, specially designed to attend to clearance limits imposed for the project. To complete work needs, a segment launcher owned by FCC was also modified and reconditioned, adapting the machine to the geometry of project spans and weights.



Viaduct over the River Cabra. Cantabrian Highway (Spain).

## HYDRAULIC WORKS

- The laying of the concrete started for the **Enciso Dam (La Rioja, Spain)**, where two concrete plants have been installed with production capacity of 450 m<sup>3</sup>/h. As the roller compacted concrete technique is being employed, the concrete is laid using a Rotec conveyor with a climbing formwork, which can cross 60-metre spans without supports. Its slope can also be changed by +/- 22° to supply concrete to any height of the curtain.
- To execute the **Chucás Dam (Costa Rica)**, a 200 m<sup>3</sup>/h concrete plant was installed, which can make both vibrated and compacted concrete. For laying the RCC, a 24" Rotec tripper conveyor system was installed, set up inside the body of the dam and able to climb and adapt to changes of altitude of the works being executed at any given time. Vibrated concrete will be laid both via pumping, using a hydraulic distribution arm with a 42-metre scope, and by hydraulic bucket, to which end a 305-tm tower crane was brought onsite, which can also be employed for transporting supplies to the worksite.

- **Yesa Dam (Spain):** The assembly of the aggregate plant to produce filters and drains for the dam started in February 2014, with an estimated total production of 480,000 tonnes. Nominal production of the plant is 200 t/h. The plant is made up of:
  - Primary: Reception of gravel from the borrowed fill and re-grinding of larger sizes.
  - Washing and sorting: Two stone washers clean organic and clay matter from the gravel. A screening tower made up of two sieves, sorts the gravel into five fractions.
  - Product restructuring: Filters and drains are restructured using a dosage hopper system. The gravel fractions may be amassed to produce concrete; excesses are ground in a sand mill.
  - Recycling of water: To reuse wash waters, a clarifier separates the water from sludge and mud.



Chucás Dam (Costa Rica).

## UNDERGROUND WORKS

• **Valerio–Campobecerros section of the Madrid–Galicia High Speed Rail (Spain).** In 2014, the construction was completed on the first of the two routes for the high-speed rail (Spanish acronym AVE), with a 9.9-metre excavation diameter and a length of 6,780 metres. The tunnel boring machine employed in the project was being disassembled at year end and its components inspected to start excavation of the second line.

FCC also contributed and adapted its tunnel conveyor belt for this work, which has a total length of 6,800 metres, a 1,000 millimetre wide belt and power of 1,070 kW, which has assisted greatly with the extraction of materials.

• **Riyadh Metro (Saudi Arabia).** After being manufactured, the two 9.77 meter diameter tunnel boring machines were received in 2014 that were designed to excavate around 13 kilometres of tunnel for the construction of Line 5 of the Riyadh Metro. At year end, the machines were transported to the worksite to start assembly operations.

In addition, FCC has contributed four 380 kW locomotives to this project. During 2014, they were repaired and adapted at the machinery facilities so that they were apt for this new project.



Tunnel boring of Riyadh Metro (Saudi Arabia).

• **Lima Metro (Peru).** In 2014, FCC was awarded the project to execute lines 2 and 4 of the Lima Metro. Two 10.25 meter diameter tunnel boring machines were bought that will handle excavation, boring a total of 17,510 metres for Line 2 and 7,330 metres for Line 4. The construction of the tunnel and stations, about 1,000 metres apart, shall consist of works below ground water level in gravelly and sandy soils. To this end, fines injection equipment has been adapted and machine materials conditioned to facilitate excavation tasks.

• **Bucharest Metro (Romania).** FCC is working on the execution of Line M5 of the Bucharest Metro, consisting of the excavation of two parallel tunnels with a total project length of 12,000 metres. Works are being done with two tunnel boring machines with 6.6 metre excavation diameters.

Construction on the first section of both tunnels is complete and, at year end, the boring machines were undergoing complete disassembly and inspection tasks, in order to continue their excavation of the metro line.

## INFRASTRUCTURE CONCESSIONS

In this section, we must distinguish between the activity of the Concessions Department on the one hand, which is part of FCC Construcción S.A. and on the other, the work of the subsidiary Globalvía, performing a separate analysis of the management carried out throughout 2014 by each of them.

### FCC CONSTRUCCIÓN CONCESSIONS DEPARTMENT

The Concessions Department has carried out its activity in 2014, following the guidelines set out in the Group's Strategic Plan of March 2013 in relation to:

- a) Generating enough cash to be able to reduce the Company's net debt. To this end, special consideration has been given to divestment activities for existing

contracts. In this regard, 2014 was a particularly intense year for contacts with several investment funds, in order to explore possible divestment in specific concessionaire companies. This process was not concluded before year end.

- b) Managing existing contracts in order to generate recurring EBITDA and/or minimise contributions from shareholders. With regard to the first point, improvements (rebalancing) are being negotiated with the awarding administration of the contracts at several concessions and the necessary actions are being carried out to improve project cash flows, with the aim of restructuring them and optimising value for possible divestment. With respect to the second, a clear example of applying these new directives was the signing of the agreement with 3i on the Mersey Bridge, which is detailed below.
- c) Bidding for international projects in solvent and safe markets with medium-term growth perspectives, in line with the general strategy set out by the FCC Group. Likewise, bidding for contracts with solvent partners and submitting bids that are more solid and can be financed, under the premise of bringing investors (investment funds, public pension funds...) into the consortium through the sale of our stake (or part thereof) so that the overall cash flow for the Group is not negative. The awards of the Lima Metro and the aforementioned action with the Mersey Bridge are in line with these goals.

The most relevant events with regard to new projects in 2014 are:

• **Line 2 of the Lima Metro, Peru (18.25%)**

On 28 March 2014, the PROINVERSION Committee on Road Infrastructure, Rail Infrastructure and Airport Infrastructure Projects (Peruvian Agency to Promote Private Investment) awarded the new Lima Metro Consortium, in which FCC participates, the concession contract for the 'Line 2 and Av. Faucett – Av. Gambetta Section of the Basic Network of the Lima and Callao Metro' Project for the design, financing, construction, electromechanical equipment, systems equipment and supplying of rolling stock, operation and maintenance for a 35-year period. Five years of this are planned for the construction phase and the foundation stone was laid at the end of 2014.

With a total of 35 kilometres of underground track and 35 stations distributed over 13 districts of the Peruvian capital, estimates predict that the Lima Metro Line 2 will service some 665 thousand passengers per day. Total travel time will be 45 minutes, saving around 90 minutes for daily commuting. Today, it is the most important work in Peru and the surrounding region.

• **Mersey Bridge (Liverpool, United Kingdom)**

The financial closure and signing of the contract took place in April 2014. In parallel, the agreement was signed with the 3i infrastructures fund, for which FCC managed its 25% stake in the concessionaire, with this fund remaining with the financial rights linked to this holding.

#### CONCESSION ACTIVITY

The concession companies in which FCC has holdings, along with the most important events in 2014, are detailed below:

##### National

• **Murcia Tram (50%)**

In April 2009, the Murcia City Council awarded the construction, maintenance and operation of Line 1 of the Murcia Tram (17.76 kilometres and 28 stops) for 40 years. The contract was signed on 7 May 2009 and total investment is 185 million euros.

Operations started on 28 May 2011 after works had finished and the rolling stock and operation, electrification, ticketing and communications systems were integrated. Since that time, there have been more than six million passengers, with monthly demands surpassing 400,000 travellers and a current ramp up close to 30%.

The tram operated normally in 2014, with demand secured. Worthy of mention is that the City Council publicised its extension to the El Carmen neighbourhood at the end of 2014, for which the tender is expected during 2015. This section is key for closing the project and equipping it with greater content.



#### • Zaragoza Tram (16.60%)

The Zaragoza City Council awarded the TRAZA consortium, in which FCC participates, the tender to select the partner for a joint venture in charge of constructing, starting up, maintaining and operating Line 1 of the Zaragoza Tram that runs along 12.8 kilometres, for a 25-year period.

This joint venture company will be represented 20% by the Zaragoza City Council and 80% by TRAZA. Total investments are 342.2 million euros. The new service is considered to be the most modern in Spain due to its technology.

As all works on Line 1 were completed at the end of 2013, 2014 can be considered as the first year it is fully operational. The number of users on workdays is around 90,000 passengers, with peaks up to 105,000 travellers per day on certain dates.

#### • Urbicsa (29%)

This Company was awarded the public work concession contract to construct, maintain and operate the buildings and facilities in the Barcelona and Hospitalet de Llobregat City of Justice Project. The project consists of buildings with areas reserved for the use of the Catalan Autonomous Government (159,878 m<sup>2</sup>) and complementary uses, offices and retail premises (26,628 m<sup>2</sup>) and a 45,628 m<sup>2</sup> car park with 1,750 spaces.

The main management activities in 2014 for the maintenance of the Barcelona and Hospitalet de Llobregat City of Justice complex focused on the development of information tools to support the services, as well as activities to save energy, improve comfort and re-organise maintenance services.

#### • Cuenca Dual Carriageway (100%)

In 2007, the Ministry of Public Works awarded FCC Construcción the public work concession contract to conserve and operate the section of the A-3 and the A-31 that runs through the province of Cuenca for a 19-year period. Maintenance works have been done since the contract was signed.

Approximately 98% of the works had been executed at the end of 2014, with plans to finish in the first quarter of 2015. The concessionaire continues to operate smoothly and maintain the dual carriageway while it executes the planned works.

The most notable event last year was the financing contract closure with the European Investment Bank in April 2014, which let the concessionaire obtain the funds needed to finish the works under normal conditions.

#### • Torrejón de Ardoz Hospital, Madrid (5%)

In August 2009, the Autonomous Region of Madrid awarded the 30 year contract for the total management of Torrejón Hospital. It is the second hospital in the region in which both healthcare and non-healthcare services are included in the contract. It will have a surface area of 62,000 m<sup>2</sup>, 240 beds and will provide services for 133,144 people. The total investment amounts to 101 million euros, 63.5 million euros of which correspond to the construction work. Servicios Ciudadanos Group represents 66.67% of the construction company. FCC has a 5% stake. Torrejón Hospital provides necessary healthcare to the towns of Torrejón de Ardoz, Ajalvir, Daganzo de Arriba, Ribatejada and Fresno del Torote.

Construction works finished in June 2011 and operations started in October, so that 2014 was its third year of full operations.

#### • Majorca Healthcare Centres (33%)

At the end of 2009, the Healthcare Service of the Autonomous Balearic Islands Region awarded the public works concession contract for the construction, conservation and operation of five healthcare centres and five basic healthcare units to the consortium, in which FCC Construcción participated.

The service levels required have been successfully met since operations began, which shows that the management of the work defined in the contract and the resolution of incidents raised have been a success.

#### • Cedinsa Eix Llobregat (34%)

In November 2003, Cedinsa was awarded the concession for the construction and operation of the shadow toll road between Puig-Reig and Berga, and the conservation and maintenance of the Sant Fruitós Bages - Puig-Reig section, all along the C-16 road (Llobregat Intersection). 2014 is the seventh full year of operation, where these sections have an average daily traffic intensity of 18,433 vehicles.

#### • Cedinsa d'Aro (34%)

In December 2005, Cedinsa was awarded the concession for 33 years of the shadow toll for the 27.7 kilometres of the Maçanet-Platja d'Aro dual carriageway, which consists of the design, construction and operation of sections of the C-35 between Vidreres and Alou and Maçanet and Vidreres, the Alou-Santa Cristina d'Aro section of the C-65 and the Santa Cristina d'Aro-Platja d'Aro stretch of the C-31. 2014 was the sixth full year of operation, reaching an average daily traffic intensity of 24,977 vehicles.

#### • Cedinsa Ter (34%)

In 2006, Cedinsa was awarded the shadow toll dual carriageway concession for the 48.6 kilometres of the Centelles-Vic-Ripoll section, of which 25.2 km are new. The concession period is for 33 years, with a 3 year construction period and a 30 year operation period. On 30 July 2011, the 3B section (the section of the C-17 main road, between Sora and Ripoll) was inaugurated and fully opened to traffic. Average daily traffic in 2014 was 23,236 vehicles. Cedinsa Ter was the only one of four Cedinsa concessionaires not financed at completion (it had five year financing with maturity date on 31 December 2014) and refinancing has been under negotiation with the Catalan Autonomous Government during 2014, which should be finalised during the first semester of 2015.

#### • Cedinsa Eix Transversal (34%)

In June 2007, the 33 year concession was awarded for 150 kilometres of the shadow toll dual carriageway corridor, for an investment of 838 million euros. The contract consists of the definition of the design, construction and operation of the Cervera - Caldes de Malavella (C-25) section, and most of the work is related to the widening of the current C-25. 2014 can be considered the first full year of operation of the dual carriageway, with average daily traffic of 12,027 vehicles. A notable event in 2014 was the financial start-up of the concession in May.

#### • Line 9 of Metropolitan Barcelona Metro (49%)

In late 2008, IFERCAT (Rail Infrastructures of Catalonia) awarded the 32 year contract for the construction, maintenance and conservation of 13 stations and the associated ventilation shafts on section I of Line 9 of the Barcelona Metro. The total investment amounts to 1,000 million euros, of which 876 million are for construction works. The concessionaire will be remunerated with an annual fee.

The construction work was completed in 2012 and all the stations of this public works concession are now in operation. In 2014, rebalancing was finalised with IFERCAT, which lets the public entity finance and undertake pending works (outside of the scope of the contract), so that all of section I is operational. The planned start-up date is February 2016, coinciding with the Mobile World Congress event in Barcelona.

#### • World Trade Center Barcelona, S.A. (16,52%)

Centre in the Port of Barcelona, which has an area of 31,000 m<sup>2</sup> of offices and retail premises, 9,000 m<sup>2</sup> of conference and meeting rooms and a 280 bed hotel.

#### • Metro de Málaga (10,01%)

Concessionaire Company responsible for administrative concession for the design, construction and operation of Lines 1 and 2 of the Malaga Metro.

The complete infrastructure is 14.5 kilometres long, of which 71% are underground, with 20 stations. It is worth mentioning that the concessionaire is responsible for the complete operation of the line, but is only responsible for constructing an initial phase (approximately 78% of the total section), where the Regional Government of Andalusia is in charge of the remaining sections, which will be incorporated to the concession perimeter as they are finished.

To this end, modifications to the concession contract were signed with the Regional Government of Andalusia in 2014. This agreement governs the parties' contractual relationship until the infrastructure is completed, estimated for 2017. The section constructed by the concessionaire that is 11.4 kilometres long with 18 stops, started operating in July 2014, with more than two million passengers last year.

#### • Ibiza-San Antonio Dual Carriageway (50%)

Construction and shadow-toll operation of the Ibiza-San Antonio widened road. One unique feature of the project is the burial of 1.3 kilometres of the dual carriageway in the San Rafael area. The road is 14 kilometres long and the concession is for 25 years. Average daily traffic in 2014 was 32,500 vehicles.

- **Marina Laredo, Cantabria (50%)**

After entering voluntary bankruptcy proceedings in 2013, the Company is currently being wound-up.

### International

- **Underwater tunnel in Coatzacoalcos, Mexico (85.59%)**

In 2004, the concession contract was signed for the construction, financing, maintenance and operation of the underwater toll tunnel in Coatzacoalcos in the state of Veracruz (Mexico), which connects the city of Coatzacoalcos to the Allende greater urban area. The tunnel is 2,280 metres long, of which around 1,200 metres are underwater. The concession is for 37 years and works began in 2007. Linked to this infrastructure is Coatzacoalcos I Bridge, where toll revenues form part of the viability of this great work.

Design and execution of the underwater tunnel project represents the first work with these characteristics done in Mexico and, indeed, the first of this size anywhere in Latin America. The tunnel showcases technological innovation in the construction sector, using the immersed tunnel method technique, which enables sections of the reinforced concrete for the tunnel to be prefabricated in a dry dock, preparing them for flotation, towing them and placing them at the bottom of the riverbed. Scheduling of construction tasks is essential, as progress largely depends on opportune weather conditions, the flow of the River Coatzacoalcos, navigability and other factors. It is therefore a living work that requires attention at all times, given the permanently changing conditions of the natural setting in which it is located. The infrastructure has been designed to have a 100 year useful life.

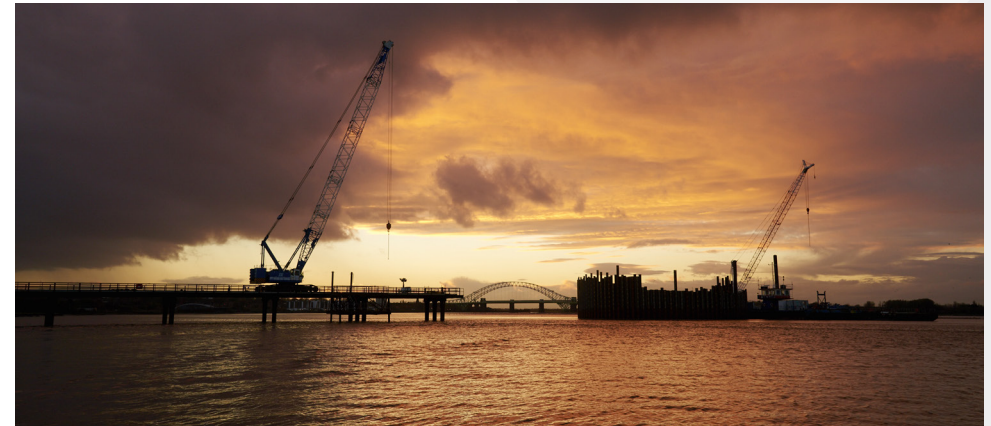
The process of submerging the caissons used to make the underwater tunnel, the most complex milestone, was successfully completed in 2013-2014. The underwater tunnel is planned to start operations within 18 months.

- **Mersey Bridge in Liverpool, United Kingdom (33.33%)**

Contract for the design, construction, financing, maintenance and operation of the bridge over the Mersey River in Liverpool (United Kingdom). The most striking feature of the entire contract is the cable stayed bridge, with a total length of 2.13 kilometres

(where the main bridge is 1 km and the approach viaducts measure 1.13 km), which will provide service to some 80,000 vehicles per day. The project also includes the renovation of 7 kilometres of access roads, 2.5 new kilometres of motorway and the renovation of a further 4.5 kilometres of motorway, as well as different transport links. The works are estimated to take 3.5 years, so that the date planned for opening to traffic is the end of the first semester of 2017.

The financial closure and signing of the contract took place in April 2014. In parallel, the agreement was signed with the 3i infrastructures fund, for which FCC managed its 25% stake in the concessionaire, with this fund keeping with the financial rights linked to this holding.



Mersey Bridge, Liverpool (United Kingdom).



## GLOBALVÍA

Globalvía's important news in 2014 was the start of its sales process by its two shareholders: FCC and Bankia. The management presentation took place in November for potential buyers, during which company information was set out in greater detail. This process is still underway in 2015 and should be concluded within the first semester of the year.

With regard to milestones in business developments, the purchase of the Seville Metro is surely the year's most important event. With this purchase, Globalvía is established as the first national private passenger railway operator.

The transaction entailed the acquisition of 32.77%, 34.01%, 11.15% and 10.30% of Sacyr, Iridium, Gea 21 and CAF, respectively, for a total figure of 159 million euros. The Public Works Agency of the Andalusian Regional Government kept its 11.77% holding.

The Seville Metro covers 18 kilometres and has 18 stations in operation, crossing through the municipalities of Mairena del Aljarafe, San Juan de Aznalfarache, Seville and Dos Hermanas. The suburban line started running in April 2009 and had 14 million users in 2012. The sales agreement was authorised by the Andalusian Government and the European Investment Bank (EIB).

Another important acquisition was the Barcelona Tram. On 30 June, Globalvía successfully concluded the acquisition of 11.78% and 12.88% of Acciona's holdings in the companies that operate the two tram lines in the city of Barcelona, Tramvia Metropolitana S.A. and Tramvia Metropolitana del Besòs S.A. Thanks to this transaction, Globalvía increased its participation, now controlling 42.44% and 43.05% of these companies. At the end of December 2014, it acquired a further 0.95% in both companies, so that its holdings as of 31 December 2014 were 43.39% and 44% respectively.



Seville Metro (Spain).

The purchase of 3.53% and 5.30% of holdings in the Sóller tunnel also took place in 2014. The auction was held on 26 March, at which 97,839 shares representing 3.531393% of the concessionaire were acquired, for a value of 350,548.04 euros. On 3 November, the share purchase agreement was notarised, through which 146,705 shares were acquired, representing 5.295158% of the Sóller tunnel for a total value of 701,249.90 euros. After both acquisitions, Globalvía's percentage holding in the company is 98.055765%.

Under the divestment heading, Globalvía sold 55% of its stock in Phunciona. In April, it sold 55% of Globalvía Infraestructuras S.A. shares in Phunciona (Hospital del Sureste) to the investment fund LBEIP, owned by Lloyds Bank.

Globalvía Infraestructuras continues to hold an 11.67% stake in this concessionaire.

The liquidation of Concesiones Aeroportuarias also took place, through which GVI received the pertinent sum from Aerocas.

Meriting mention with regard to construction milestones are:

- The inauguration of **Section 1 Nuevo Necaxa-Ávila Camacho (Mexico)**. On 17 September 2014, Mexican President Enrique Peña Nieto inaugurated the Nuevo Necaxa-Ávila Camacho section (TC1) of the 37 kilometre Mexico-Tuxpan motorway, which started operating the next day, 18 September.

The TC1 consists of six tunnels with a total length of 8,047 metres and 12 bridges spanning 3,165 metres, of which the Ing. Gilberto Borja Navarrete Bridge over the River San Marcos is noteworthy, with a height of 225 metres, making it the second highest viaduct in the world.

The motorway was built employing the latest and most modern traffic and safety management systems and was nominated as Mexico's first smart motorway by the Secretariat of Communications and Transport (SCT).

This last section of the Mexico-Tuxpan corridor reduces travel time from the country's capital to the Gulf of Mexico from 6 hours to 2 hours and 45 minutes, thus becoming the closest maritime port to the Valley of Mexico with regard to the time the journey takes.

- Signing of the Supreme Decree that gives the green light to the **Urban Sector Project in Chile (Chile)**. The Supreme Decree was signed by the President of the Republic in February, starting the project tender phase.

With the official publication of the Supreme Decree at the end of October, the final tender stage started, which has involved continuing technical tasks with the six companies invited to participate –after a previous prequalification period– to subsequently start the awarding process, which is expected to conclude in March 2015. Thus, the construction phase will start at the end of the first quarter of 2015.

A total investment of 215 million US dollars is estimated, including civil works, toll systems and traffic management, as well as the installation of an electronic collection system using a free flow TAG device.

The conversion of this section to meet urban standards involves, among other advances, the expansion of the roadways to four lanes on the first 4.5 kilometres, six new crossings, complete continuity of the one-way service roads in both directions and the construction of bike lanes and pedestrian walkways.

Both involve safety works on the motorway with continual video surveillance along the sector. There will be new service areas and emergency care.

Lastly, the modification of the Lampa toll plaza, in which each direction will have three lanes with a free-flow system, while the side areas of the toll plaza will have three manual payment booths, thus becoming the first concession to change the current toll payment system to the free flow system.

The construction period will be 28 months, with completion thus scheduled for the first semester of 2017.

- Opening of **Cuesta Las Chilcas (Chile)**. This section's opening to traffic has entailed substantial improvements in safety along this strip and much less traffic congestion.

Improvement works resulted in the road now having two lanes running north (toward the coast) and three lanes toward the south and Santiago de Chile.



Malaga Metro (Spain).

- Inauguration of the **Malaga Metro**. On Wednesday, 30 July 2014, the Malaga Metro was inaugurated, making this city the sixth in the country with this mode of transport. The section that has started running is lines 1 and 2, connecting the city's sports pavilion to the El Perchel interchange station, located next to the Renfe station. The section is 12 kilometres long with 17 stations, representing 81% of the total network planned.

Under the heading of new management features of each of the assets, we would like to point out the following:

- Concesiones de Madrid and Ruta de los Pantanos finally had their rebalancing right recognised, owing to the higher cost of expropriations.
- The MOU was signed by Scutvias. After the implementation of the free-flow toll on the Beira Interior, Abrantes-Guarda motorway by the Administration, the concessionaire started its rebalancing process. On 23 June, agreement was reached with the Administration, resulting in the signing of a new contract, which entailed changing from a revenue scheme with traffic risk (shadow toll) to one that combines availability payments with explicit tolls, including a guaranteed minimum revenue mechanism. We must point out that this agreement is pending approval by the financing syndicate.
- The Malaga Metro signed the rebalancing of the concession contract and novation of the financial agreement. The signing on 16 July cleared the way for the inauguration and operational start-up at the end of the month.
- Lastly, the novation of the financial agreement for Metro Ligeros de Madrid took place in December, which involves the delay and mitigation of the execution of the original guarantee.

Along other lines, in 2014 Globalvía continued to consolidate its international leadership position in transport infrastructure management, holding the top places in the ranking published by the magazine *Public Works Financing*.

## CONCESSION ACTIVITY

Concessions that Globalvía has on 31 December 2014 include:

### • Itata Motorway, Chile (100%)

Holder of the 13 year concession for the construction and operation of the Concepción-Chillán toll motorway, with a length of 98 kilometres. It is operational and had average daily traffic in 2014 of 15,224 vehicles.

### • Aconcagua Motorway, Chile (100%)

Concession company responsible for the 30-year administrative concession for the construction and operation of the toll along the Route 5 Santiago-Los Vilos stretch of motorway, with a total length of 218 kilometres. There are three main toll plazas that handle traffic in both directions. Average daily traffic in 2014 was 21,990 vehicles.



Aconcagua Motorway (Chile).

### • Concesiones de Madrid, Spain (100%)

Administrative concession of the section of the M-45 ring road to Madrid between the O'Donnell junction and the N II, it has a total length of 14.1 kilometres, the concession is for 25 years and will be operated as a shadow toll road. The concession has been in operation since 2002 and in 2014 had average daily traffic of 75,357 vehicles.

- **Ruta de los Pantanos de Madrid, Spain (100%)**

This 25-year concession is for the construction, management and maintenance of the 21.8 long duplication of the roadway on the M-511 and M-501 roads between the M-40 and M-522 in the Autonomous Region of Madrid. The concession has been operating since 2002 and in 2014 had average daily traffic of 37,484 vehicles.

- **San Jose – Caldera Motorway, Costa Rica (100%)**

Concession company in charge of the administrative concession to construct and operate the San Jose-Caldera toll motorway, which connects the country's capital with one of the Pacific's major ports. The road is 76.8 kilometres long and the concession is for 25 years. It became operational in January 2010 and average daily traffic in 2014 was 45,989 vehicles.

- **Sóller Tunnel in the Balearic Islands, Spain (98.06%)**

Concession company responsible for the administrative concession to construct and operate the Sóller toll tunnel that passes through the Alfabia Sierra on the Palma de Mallorca to Sóller corridor. The tunnel is 3.1 kilometres long and the concession is for 33 years. The tunnel has been in operation since 1989 and in 2014 had average daily traffic of 4,355 vehicles.

- **Envalira tunnel in Catalonia, Spain (80%)**

Concession company responsible for the administrative concession to design, construct and operate the Envalira toll tunnel motorway that links the winter resort of Grau Roig with Pas de la Casa, as well as improving transport between Andorra and France, on the Barcelona-Toulouse route. The tunnel is 2.9 kilometres long and the concession is for 50 years. The tunnel has been in operation since 1998 and had average daily traffic of 1,679 vehicles in 2014.

- **Autopista Central Gallega, Spain (61.39%)**

Company responsible for the administrative concession to build and operate the Santiago de Compostela-Alto de Santo Domingo toll motorway for a period of 75 years. The road is 56.8 kilometres long and it became operational in 2005. Average daily traffic in 2014 was 4,894 vehicles.

- **Autoestrada, Portugal (50%)**

Holder of the 30-year concession for the construction and operation of the mixed toll motorway between Vilareal and Braganza, running for 194 kilometres. It became fully operational in September 2013, with average daily traffic of 4,844 vehicles.

- **M-407, Madrid, Spain (50%)**

This concession company is responsible for the design, construction, maintenance and operation of 11.6 kilometres of the M-407 between M-404 and M-506 as a shadow toll motorway. Concession awarded in August 2005 and operational since 2007, with average daily traffic in 2014 of 30,313 vehicles.

- **Nuevo Necaxa-Tehuacán, Mexico (50%)**

This concessionaire company is responsible for the design, construction and operation of the 85 kilometre Nueva Necaxa-Tehuacán motorway located between the states of Veracruz and Puebla and is part of the main thoroughfare linking Mexico City and Veracruz. This dual carriageway is divided into two sections: TC1 Nuevo Necaxa-Ávila Camacho, 36.6 kilometres long, with four lanes, to be constructed and operated via availability payment, and TC2 Ávila Camacho-Tehuacán, 48.1 kilometres long, 2 lanes, to be operated under a user toll scheme. The Ávila Camacho-Tehuacán subsection, which is co-owned by Globalvía and Grupo ICA, was inaugurated on 25 November 2012. The following day, 26 November, the section opened to traffic and began operating under the user toll scheme in the Mihuapan toll area. On 17 September 2014, the new Nuevo Necaxa-Ávila Camacho section (TC1) of the 37 kilometre Mexico-Tuxpan motorway was inaugurated, and started operating the next day, 18 September. In 2014 it had average daily traffic of 3,594 vehicles.

- **M-50 Dublin, Ireland (50%)**

Concession awarded for the construction and 35-year operation of the M-50 motorway, Dublin's main ring road. The project consists of the maintenance of 31 kilometres of motorway. This was executed on an availability payment basis that began operation in September 2010. In 2014 it had average daily traffic of 113,569 vehicles.

- **N6 Galway-Ballinasloe, Ireland (45%)**

Company awarded the concession for the construction and operation of the N6 Galway-Ballinasloe motorway along the east-west strategic corridor from Galway

to Dublin, fulfilling the requirements of the National Development Plan. This toll motorway is 56 kilometres long, with a 30 year concession period. It became operational in December 2009 and average daily traffic in 2014 was 10,819 vehicles.

• **Costa Cálida Motorway, Murcia, Spain (35.75%)**

Company awarded the administrative concession for the construction and operation of the Cartagena–Vera toll motorway for a period of 36 years. The toll road is 98 kilometres long, and there are a further 16 kilometres of toll-free road for internal traffic on the Cartagena ring road. Average daily traffic in 2014 was 1,767 vehicles.

• **Alicante ring road, Spain (25%)**

Concession company awarded the construction and operation of the 28.5 kilometre Alicante ring road motorway for 36 years. The concession has been in operation since December 2007 and in 2014 had average daily traffic of 4,795 vehicles.

• **Scutvias, Autoestradas da Beira Interior, Portugal (22.22%)**

Concession company responsible for the administrative concession for the construction and operation of a shadow toll motorway between Abrantes and Guarda. The road is 178 kilometres long and the concession is for 30 years. It includes the operation of three petrol stations. It has been operating since 2005 and average daily traffic in 2014 was 5,565 vehicles.

• **R-2 Henares Motorway, Madrid, Spain (10%)**

Company awarded the contract to construct and operate the R2 toll motorway which runs for 62 kilometres between the M-40 and Guadalajara. It has two sections: the inner section, from the M-40 to M-50, is the alternative to avoid traffic jams on the A-1 at San Sebastian de los Reyes and Alcobendas; the outer section is the alternative to the heavy traffic on the A-2 between Guadalajara and the M-50. The concession is for 24 years and average daily traffic in 2014 was 4,325 vehicles.

• **Autovía del Camino, Spain (9.1%)**

Company awarded the contract to build and operate the Pamplona–Logroño dual-carriageway under the shadow toll system. It has a total of 70.25 kilometres and has been operating since late 2004. Average daily traffic in 2014 was 11,457 vehicles.

• **Barajas Metro in Madrid, Spain (100%)**

Concessionaire responsible for the administrative concession for the development, construction and operation of the Barajas–New Terminal Building T-4 metropolitan metro section of line 8. The track length is 2.5 kilometres and the concession is for 20 years. It has been in service since 2007 and in 2014, the number of passengers was 1,720,578.

• **Parla Tram in Madrid, Spain (85%)**

Company awarded the 40-year contract for the construction, supplying of rolling stock, operation and maintenance of the 8.5 kilometres of two-way track for the Parla Tram. The concession was awarded in 2005 and began operating in June 2007, with annual traffic of 4,620,692 passengers in 2014.

• **Transportes Ferroviarios de Madrid, Spain (49.37%)**

Holder of the 32-year concession to extend Line 9 of the Madrid Metropolitan Metro between Vicálvaro and Arganda, which is 20 kilometres long, has three intermediate stations and was used by 5,870,049 passengers in 2014.

• **Metro Ligero de Sanchinarro, Madrid, Spain (42.5%)**

In 2006, Metro Ligero de Madrid, S.A. was awarded the 30-year concession contract for the operation and maintenance of 5.4 kilometres of the Pinar de Chamartín–Sanchinarro–Las Tablas light railway line that connects Lines 1 and 4 of the Madrid Metro. This line has been operational since May 2007 and the concession period is 30 years. In 2014, 4,410,638 passengers used the light metro.

• **Tramvia Metropolità–Trambaix, Catalonia, Spain (43.39%)**

The Baix Llobregat line runs along Avenida Diagonal, passing through Sant Feliú de Llobregat to Cornellá. The project was awarded in 2000 by the Barcelona Autoritat del Transport Metropolità (ATM) and began operating in 2004. This infrastructure has 29 stops, 3 interchange stations with the underground metro system and one with Renfe railways and a total length of 15.1 kilometres. In 2014, it was used by 16,343,197 passengers.

• **Tramvia Metropolità del Besos–Trambaix, Catalonia, Spain (44%)**

This tram links the north-eastern part of Barcelona with the neighbouring cities of Sant Adrià del Besòs and Badalona. The concession was awarded by ATM in



2002. The first phase began operation in May 2004 and the complete system began operation in 2008. It has 27 stops, eight interchange stations with the underground metro system and one with Renfe and a length of 14.1 kilometres. In 2014 it was used by 8,150,521 people.

• **Malaga Metro, Spain (15.03%)**

Concessionaire responsible for the administrative concession for the design, construction and operation of Lines 1 and 2 of the Malaga Metro. The length of the tracks is 16.5 km, of which 71% are underground with 19 stations along the route. The partial inauguration of the line took place on 30 July 2014 and has had over 2 million passengers between this time and the end of 2014.

• **Seville Metro, Spain (88.23%)**

Concession company responsible for the administrative concession for the design, construction and operation of Line 1 of the Seville Metro. The length of the tracks is 18 km, of which 60% are underground with 22 stations along the route. In 2014 it was used by 14,451,702 people.

• **Terminal Polivalente de Castellón, Spain (78.68%)**

Company awarded the contract for the construction and operation of a 9.5 hectare terminal in the Port of Castellón to handle containers and general cargo. It has been operating since 2005 and 154,960 containers were shifted in 2012.

• **Phunciona Gestión Hospitalaria, S.A.-Hospital del Sureste, Madrid, Spain (66.66%)**

Concession company responsible for the administrative concession to construct and comprehensively manage the preventive and corrective maintenance and replacements; cleaning service; collection of urban and medical wastes; internal-external transport; porters, administrative, reception, IT and switchboard personnel; surveillance and security; sterilisation, laundry, restaurant/catering, pest control; warehouse and distribution management; and road and garden upkeep. The hospital had 110 inpatient beds in 2007, which can be increased to 148 in 2017 and an estimated area of 37,000 metres. It has been in operation since 2007.

• **Son Dureta Hospital in Palma de Mallorca, Spain (33%)**

Company awarded the contract for the construction and operation of a new leading hospital in the Balearic Islands. The hospital has a surface area of 193,088 m<sup>2</sup>, 1200

beds and will provide service to over a million people. The concession is for 30 years and was opened to the public in 2010.

• **Port Torredembarra, Tarragona, Spain (24.08%)**

Concession company responsible for the administrative concession to build, operate and maintain a 714 berth marina in the city of Torredembarra, plus retail space and ships' stores. Currently being operated.

• **Santiago de Chile Airport, Chile (14.78%)**

Concessionaire responsible for the administrative concession of the construction and operation of the Arturo Merino Benítez International Airport in Santiago de Chile. The second runway built by the Ministry of Public Works entered into service in September 2005, leading to improved airport operations. During 2014 the airport registered 15,350,500 passengers.

To summarise, the table below shows all the infrastructure concessions managed by Globalvía and FCC as of 31 December 2014:

CONCESSION	COMPANY	TYPE	INVESTMENT (M of €)	DURATION (YEARS)
Autopista Central Gallega	Globalvía	Toll motorway	303	75
Autopista de la Costa Cálida (Murcia)	Globalvía	Toll motorway	649	36
San José-Caldera Motorway (Costa Rica)	Globalvía	Toll motorway	264	25
N6 Galway-Ballinasloe (Irlanda)	Globalvía	Toll motorway	340	30
R-2 Autopista del Henares	Globalvía	Toll motorway	563	24
Alicante Ring Road	Globalvía	Toll motorway	445	36
Seville Metro	Globalvía	Railway infrastructure	634	37
Túnel d' Envalira (Andorra)	Globalvía	Toll tunnel	54	50
Sóller Tunnel	Globalvía	Toll tunnel	51	33.5
Autovía del Camino (Navarra)	Globalvía	Shadow toll motorway	356	30
M-45 (Madrid)	Globalvía	Shadow toll motorway	214	34
M-407 (Madrid)	Globalvía	Shadow toll motorway	74	30
M-404 (Madrid)	Globalvía	Shadow toll motorway	162	30
Ibiza-San Antonio widening	FCC	Shadow toll motorway	101	25
Autoestradas da Beira Interior (Portugal)	Globalvía	Shadow toll motorway	933	30
Ruta de los Pantanos	Globalvía	Shadow toll motorway	107	25

CONCESSION	COMPANY	TYPE	INVESTMENT (M of €)	DURATION (YEARS)
Coatzacoalcos Tunnel (Mexico)	FCC	Toll tunnel	185	30
N. Necaxa-Tehuacán (Mexico)	Globalvía	Toll motorway	493	30
M-50 Dublin (Ireland)	Globalvía	Availability payment motorway	419	35
Itata Motorway (Chile)	Globalvía	Toll motorway	198	15
Aconcagua Motorway (Chile)	Globalvía	Toll motorway	457	13
Trasmontana Motorway (Portugal)	Globalvía	Shadow toll and real toll motorway	706	30
Cedinsa Eix Llobregat	FCC	Shadow toll motorway	174	33
Cedinsa d'Aro	FCC	Shadow toll motorway	54	33
Cedinsa TER (Vic-Ripoll)	FCC	Shadow toll motorway	221	32
Cedinsa Eix Transversal	FCC	Shadow toll motorway	712	33
Conquense Dual Carriageway	FCC	Shadow toll motorway	120	19
Parla Tram	Globalvía	Railway infrastructure	104	40
Baix Llobregat Tram	Globalvía	Railway infrastructure	249	25
Besòs Tram	Globalvía	Railway infrastructure	225	27
Murcia Tram	FCC	Railway infrastructure	183	40
Zaragoza Tram	FCC	Railway infrastructure	345	35

CONCESSION	COMPANY	TYPE	INVESTMENT (M of €)	DURATION (YEARS)
Line 9 of Madrid Metro	Globalvía	IRailway infrastructure	124	32
Barajas Metro	Globalvía	Railway infrastructure	47	20
Malaga Metro	FCC/Globalvía	Railway infrastructure	504	35
Sanchinarro Light Metro	Globalvía	Railway infrastructure	293	30
Line 9 of Barcelona Metro	FCC	Railway infrastructure	1,000	32
Laredo Marina (Cantabria)	FCC	Marina	70	40
Port Torredembarra	Globalvía	Marina	15	30
Terminal polivalente de Castellón	Globalvía	Logistics port	35	30
Port of Gijón Bulk Terminal	Globalvía	Logistics port	17	30
Santiago Air Terminal (Chile)	Globalvía	Airport	249	21.5
Hospital del Sureste (Madrid)	Globalvía	Hospital	71	30
Son Dureta Hospital (Mallorca)	Globalvía	Hospital	243	31.5
Torrejón Hospital	FCC	Hospital	137	30
Mallorca Health Centres	FCC	Healthcare building	22	11
World Trade Center Barcelona	FCC	Services building	134	50
Barcelona City of Justice and Hospitals (URBICSA)	FCC	Services building	263	35

## SUBSIDIARIES AND HOLDING COMPANIES



### BBR PTE

Throughout 2014, BBR PTE, the Group company specialising in post-tensioning and special techniques, continued working on developing and implementing building solutions and processes, including the work done on the following construction projects:

#### Arch Bridge in Almonte (Spain)

The temporary cable-stayed arch system for the viaduct in Almonte is composed of a total of 208 non-simultaneous temporary cables made of a variable number of strands, divided into two branches (north and south) each comprising two pulling bundles and two retaining bundles. The bottom ends of the cables are anchored to the arch by the pulling cables and the retaining cables are anchored by the footings of the two piers closest to the start of the arch. On its part, the top ends of up to the first eight sets are anchored to the head of the arch pier and the rest are anchored to a temporary metal tower.

After having placed the first cable sets that are anchored to the pier, the two metal pylons were raised by turning or rotation. After the temporary pylons were in place, tasks to finish installing the cables can continue.

For raising the two towers, 55 metres high and weighing some 500 tonnes, two heavy-lifting jacks were employed, each with a 230 tonne capacity and acting as pulling devices. Another two jacks, each with an 85 tonne capacity, were employed as safety restraints at the end of the operation.

### LNG tank in Pori (Finland)

BBR PTE SL is working on the construction of a new LNG tank in the Port of Pori in Finland.

The post-tensioned concrete tank is 35.1 metres high with a 41.9 metre diameter. Post-tensioning is comprised of 42 horizontal rings and 72 vertical loops. The entire structure has 185,000 kilos of post-tensioning.



LNG tank in Pori (Finland).

### Pedestrian walkways in Doha (Qatar)

BBR PTE S.L. is taking part in the construction of footbridges in Doha (Qatar). This work consists of two identical cable-stayed footbridges. Each footbridge has two pylons with a total of 92 stainless-steel locked coil cables.

After completing post-tensioning tasks, the cables for both footbridges were installed during 2014. The different tensioning stages were executed after the initial assembly, as well as their final adjustments.

## PROSER

PROYECTOS Y SERVICIOS, S.A.

### PROSER, PROYECTOS Y SERVICIOS, S.A.

#### ENGINEERING

The company Proyectos y Servicios, Proser, performs studies and drafts engineering reports for civil works and supervises them. Among the contracts awarded during the year, apart from the different support jobs performed for FCC Construcción, the following are the most outstanding:

#### Hydraulic works

- Project for waste discharge collecting and basic WTP project for San José del Valle, Cádiz, for the Environmental and Water Agency of the Andalusian Regional Government. The area of the plot for the future WTP is around 8,500 m<sup>2</sup> and is being designed for a population equivalent of 5,700. The waste discharge area has sewage pipes running for more than three kilometres.

#### Work control and supervision

- Control and supervision of works for their inspection related to the concession: Execution, maintenance and operation of La Plata Dual Carriageway (A-66) between Benavente and Zamora. Sections: A-6 Castrogonzalo-Santovenia del Esla, Santovenia del Esla – Fontanillas de Castro and Fontanillas de Castro-Zamora. Zamora Province. The total length of the section is 49 kilometres, with seven junctions and a project execution period of 24 months.



La Plata Highway A-66 between Benavente and Zamora (Spain).

## R&D&i

- **Internal R&D&i projects.** In 2014, PROSER executed the tasks for the project 'New criteria for decision-making on underground civil works projects in a globalised market', which consists of creating a methodology that facilitates decision-making due to defining and assessing the possible risks stemming from underground works on international projects. This project is finished and in the final certification phase.
- **National R&D&i calls for tenders.** In 2014, PROSER participated on several national tender submissions, generally in consortiums with FCC Construcción and FCC Industrial. These included participation on the Accessible Citizen Project for the national Innterconecta-Andalucía R&D call for tenders and its role as FCC's advisor in designing tunnels for the INGETUR Project on the CIEN call for tenders.
- **European R&D&i programmes.** A Throughout 2014, PROSER participated on important projects, including In2Rail, part of the H2020 Framework Programme, with over 50 participants, for the comprehensive improvement of European railway infrastructures. PROSER's contribution was also significant in the consortium on the Green Toll Project of the LIFE+ Programme and the IRISMART proposal, a project led by ADIF within the H2020 Framework Programme.

## FCC INDUSTRIAL E INFRAESTRUCTURAS ENERGÉTICAS, S.A.

FCC Industrial is the Servicios Ciudadanos' Group company that specialises in the design and execution of industrial works. In 2014, the consolidation took place of the merger of FCC Actividades de Construcción Industrial (FCC ACI) and FCC Servicios Industriales y Energéticos (FCC SIE) to form the company FCC Industrial e Infraestructuras Energéticas, S.A. which operates under the name of FCC Industrial.

After the merger, the company has worked on the following lines of business:

- Turnkey projects (EPC).
- Industrial construction.
- Electromechanical facilities.
- Maintenance and energy efficiency.
- Systems.

Company operations are divided into four broad divisions::

- LNG Projects and Industrial Construction Division.
- Oil & Gas Logistics and Warehousing Division.
- Electrical Distribution Grids Division.
- Electromechanical Installations, Maintenance and Systems Division (IMS).

In turn, FCC Industrial has staff divisions that provide support to production activities and an operating division in the Americas, with permanent offices in Mexico, Panama and Colombia.

Each of the operating divisions is equipped to provide its services within the company's different lines of business. Thus in 2014 and by way of example, electric grid projects were executed, both as turnkey projects (EPC) and as installation and assembly or maintenance for electric companies.

2014 was also the company's year to consolidate its international presence, with projects open in Mexico, Panama, Peru, Chile, Colombia, Algeria, the United Kingdom, Portugal and Finland.

EIn 2014, FCC Industrial had turnover of 172 million euros, a 21% year-on-year fall. International business accounted for 23% of turnover.

This figure was affected by Matinsa's deconsolidation from FCC Industrial in the last quarter of 2014.



Gross operating profits were 6.24 million euros, representing a 52% decrease compared to 2013.

During 2014 FCC Industrial obtained contracts totalling 227 million euros, with an order book backlog of 186 million euros. Of this portfolio, 40% is for contracts abroad.

Noteworthy projects on which FCC Industrial participated in 2014 include:

#### Turnkey projects (EPC)

- Double-containment LNG cryogenic tank with a 30,000 m<sup>3</sup> capacity in Pori (Finland) for Skangas.
- Expansion of a regasification plant to increase its production capacity by 50% in Quintero (Chile) for GNL Quintero.
- Increased LPG storage capacity at Callao Terminal (Peru) for Vopak Peru, with the installation of three LPG storage spheres of 30,000 bls each, as well as the auxiliary and tank loading facilities and an LPG pipeline to connect to port cargo facilities.
- Expansion of the zinc leaching plant in Gazahouet (Algeria) for Alzinc.
- Underground high-voltage double-circuit 115 kV line that is 4.65 kilometres long; 2 MV lines 2.7 kilometres long; and a GIS substation with three bays in Veracruz (Mexico) for CFE.
- Underground high-voltage double-circuit 115 kV line, 14 MV lines and a GIS substation with five bays in Campeche (Mexico) for CFE.
- Simple circuit 500 kV high-voltage aboveground line, with 114 metal towers and 45 kilometres of conductors and fibre optic in Colombia for EPM.
- Modernisation of the two 115 kV substations in Colombia for ESSA (EPM subsidiary).

#### Industrial construction

- Musel-Llanera gas pipeline, Otero section for Enagas.
- Mariña-Lucense gas pipeline in Lugo (Galicia) for Gas Natural Fenosa.
- Intersection by horizontal directional drilling, River Tagus, Estremera for Enagas.
- Coslada Theatre and Cultural Centre (Madrid) for Hipercor.
- Data centre in Murcia for the Iecisa/Sixsigma joint venture.
- Refurbishment of buildings at Castellana 278 and 280 in Madrid for Metrovacesa.
- Structure for Hotel Ayre in Atocha, Madrid, for El Corte Inglés.

### Assemblies and facilities (integration of electromechanical installations, control, communications, fire-fighting protection and safety)

- Refurbishment and modernisation of facilities at several hotels belonging to the H10 Hotels chain.
- Rehabilitation of the old Palacio de Albaida, for the conversion into the new headquarters of Omega Capital, S.A. on Fortuny Street in Madrid.
- New headquarters of the General Treasury of the Social Security in San Sebastian.
- Refurbishment and expansion of the National High Court building on Génova Street in Madrid.
- Expansion of airfield beacon installation at Malaga Airport for AENA.
- Comprehensive rehabilitation and upgrade of the cooling system equipment in the Torre Picasso to new standards.
- Montilla Secondary School (Cordoba).
- Buildings and substations for Orange.
- Electrical installations, systems and signage in the tunnels on the A8 stretch of the Muros-Dueñas motorway in Asturias.
- Catenary for the Atlantic high-speed railway line for ADIF.
- Lines 1 and 2 of Malaga Metro, delivery of work and start-up.
- Vigo-Maceiras civil protection facilities for ADIF.
- Signalling on the Tarragona-Vandellós section for ADIF.
- New Luis 'Chicho' Fábrega Hospital in Panama.
- New Hospital Complex in Panama.
- Vía Brasil, Panama City.

### Maintenance and energy efficiency

- Renewable energies
  - Operation and maintenance of the 50 MW solar thermal plant in Palma del Río (Córdoba) for Guzmán Energía.
  - Operation and maintenance of the 50 MW solar thermal plant in Villena (Alicante) for Enerstar Villena.
  - Operation and maintenance of a 20 MW photovoltaic power generation plant in Espejo (Córdoba).

- Comprehensive facilities
  - Cervantes Institute headquarters on Alcalá Street, Madrid.
  - Torre Madrid in Plaza España, Madrid.
  - Abbot Laboratories and Amo (Famar) Pharmaceutical Laboratories.
  - Southern Regional Air Navigation Control Centre for AENA.
  - Terminal 2 at Barcelona Airport for AENA.
  - Palma de Mallorca Airport for AENA.
  - Silken Hotels throughout Spain.
  - Torre Castellana.
  - Treasury of the Social Security in Granada.
  - Treasury of the Social Security in Cordoba.
  - Prisa Group
    - Sogecable production centre in Tres Cantos.
    - Storage and distribution warehouse for Santillana publishing house.
    - Headquarters of El País newspaper and the headquarters of Cadena Ser radio station on Madrid's Gran Vía.
  - Realia
    - Eisenhower Business Centre, Madrid.
    - East Tower (KIO Towers).
    - Méndez Álvaro Business Centre.
    - Ferial Plaza Shopping Centre in Guadalajara and Plaza Norte in Leganés.
  - Systems and power in galleries and tunnels at Barajas Airport for AENA.
  - Several motorways in Catalonia for Cedinsa.
  - Motorway and tunnels in Madeira.
- Energy efficiency
  - New Tres Cantos (management for private developers). These are global, integrated actions for the maintenance and operation of street lighting for town councils, with planned investments aimed at improving the energy efficiency of the installation through actions aimed at saving, measuring and monitoring energy consumption.
    - Madrid City Council, Lot 3.
    - Cadiz City Council.
    - Los Palacios City Council (Seville).

- Villafranca City Council (Seville).
- Totana City Council (Murcia).

### Electric grids

- Maintenance and construction of new works for MV/LV distribution grids in the following areas of Barcelona: Districts 5, 6, 7, 8, 9 and 10 - St. Adrià - Sta Coloma - Badalona (Catalunya Centros Division) to be done for Endesa Distribución Eléctrica during the June 2013 - May 2016 period.
- Maintenance and construction of new works for MV/LV distribution grids in these areas: Pozuelo/Villalba, Albacete, León, Zamora, Levante and Toledo for Iberdrola. Awarded framework contract for the next three years.
- Maintenance and construction of new works for MV/LV distribution grids and substation maintenance for Gas Natural Fenosa, in the areas of Madrid, Toledo, Ciudad Real and Segovia.
- Placement of digital measurement equipment in central Seville and Valladolid.
- Reform of aboveground 33 and 11 kV power lines in Scotland.

### Systems

- Creation of replicas of vehicle gunner controls, equipped with electronic cards developed by FCC Industrial specifically for these controls that enable interaction with the Steel Beasts simulation software, which is the simulation software most commonly used by NATO armies.
  - Production of 83 replicas of gunner controls for Centauro vehicles.
  - Production of 24 replicas of gunner controls for Pizarro vehicles.
  - Production of 5 replicas of gunner controls for RG31 vehicles.
- ITS systems in the Muros-Dueñas tunnels in Asturias.
- ITS systems in the EIX-Transversal tunnels in Catalonia.
- ITS systems in the Nuevo Necaxa tunnels in Mexico.
- ITS systems in tunnels in Madeira.



### MEGAPLAS S.A.

Megaplas S.A. is the FCC Group company that provides corporate image services for interior and exterior elements within a Europe-wide scope. Services are implemented and provided via its two production and management centres in Madrid and Turin.

In 2014, the company had turnover of 9.1 million euros, a 5.3% year-on-year increase. International business accounted for 46% of turnover.

The gross operating profit amounted to 0.1 million euros, representing an increase of 267% compared to 2013.

During 2014, Megaplas S.A. obtained contracts totalling 9.9 million euros, with an order book backlog of 1.3 million euros. Of this order book, 15% is for contracts abroad.

Within the diversification of services that the company provides to its clients and in line with its philosophy of focusing on customers' needs, Fiat Industrial chose Megaplas as its image suppliers for the interiors of their NH Agriculture brand dealerships. The implementation of this internal identification programme started in Spain in 2014, and will be extended over the next two years to the rest of Europe. Actions range from interiors and emergency signage to furniture, as well as all merchandising products.

In the Las Caletillas Service Station on the island of Tenerife, Megaplas installed the first Disa BIRD image on its two canopies. Each canopy, fully technically developed by Megaplas, is a separate element made of fibreglass and decorated with Disa colours and the Disa logo and lit by LEDs 10 metres long, a height of nearly 8 metres and two-sided fuel pumps.





Megaplas has supplied and installed the internal signage inside the Malaga Metro's Line 1 and 2 stations.

The Fiat Group remains one of Megaplas's key accounts, as it is the exclusive supplier of exterior images for all its brands (Alfa Romeo, Fiat, Lancia, Jeep and Abarth) in Spain, Portugal, France, Belgium, Holland, Italy and Greece, besides being an approved supplier for the sale of their logos worldwide. At the beginning of 2014, Metaplas Italia SPA was awarded the tender contract for the interiors of the Fiat Group's European authorised dealers, which involves more than 500 dealers.



### PREFABRICADOS DELTA, S.A.

Prefabricados Delta S.A. is the FCC Group company that produces prefabricated concrete and GRP pipes at its two permanent production centres in Humanes (Madrid) and Puente Genil (Córdoba).

In 2014, the company had turnover of 22.5 million euros, a 51.4% year-on-year increase. International business accounted for 3.6% of turnover.

The gross operating profit amounted to 2.2 million euros, representing an increase of 76% compared to 2013.

During 2014, Prefabricados Delta S.A. obtained contracts totalling 23 million euros, with an order book backlog of 21.6 million euros. Of this portfolio, 0% is for contracts abroad.

The 2014 production of Prefabricados Delta factories experienced clear recovery compared to the previous year, focused primarily on the increase of both fibreglass-reinforced polyester as well as pipes made of steel-jacketed concrete. Thus, the global production for the year by product type was as follows:

- Over 35 kilometres of steel-jacketed concrete pipes.
- 25 kilometres of fibreglass-reinforced polyester pipes (GRP).
- 154,000 concrete sleepers of different types.

The most significant supplies per industrial sector were:

- Supplies for hydraulic lines.

During 2014, 60 kilometres of pipelines were manufactured and supplied, which can be broken down into pipe type:

- 28,822 metres of glass reinforced plastic (GRP), where Prefabricados Delta production of this type has exceeded 550 kilometres of pipes.
- 29,221 metres of post-tensioned steel-jacketed concrete pipes with elastic gasket.
- 6,337 metres of reinforced steel-jacketed concrete pipes with double elastic gasket, this pipe represents a new development at Prefabricados Delta.

The most important works include the following:

- Supplying of reinforced steel-jacketed concrete pipes and elastic gaskets for the works to modernise irrigation in the area with waters from the Páramo Bajo Canal (León), sector VI (phases I and II) and sector III (phase II). 6,337 metres of concrete pipes with double elastic gasket and a 2,200 mm inside diameter have been supplied for SEIASA.
- Supplying of post-tensioned steel-jacketed pipes with elastic gasket for the improvement and consolidation works of the irrigated lands in El Fresno Irrigation Community, in Condado district (Huelva). The contract consists of the production and supply of 9.5 kilometres of post-tensioned pipes with 800 and 600 mm inside diameters and maximum design pressures of up to 10 atmospheres.
- Supply of 2,846 metres of post-tensioned steel-jacketed pipes with elastic gaskets and 1,800 mm inside diameter with design pressures between 4 and 6 atmospheres for the project Empreitada de Construção das Infraestruturas de Rega Viarias e de Drenagem dos Blocos 4 e 5 de Baleizão – Quintos, which has involved supplying post-tensioned pipes once again for EDIA (Empresa de Desenvolvimento e Infraestruturas do Alqueva, S.A.) in Portugal.
- For the irrigation works for the Sector III Irrigation Community of the Guadalquivir Valley midlands, 2.7 kilometres of glass reinforced plastic (GRP) pipes were supplied with diameters ranging from 600 to 700 mm and nominal pressures from 6 to 10 bar.
- Supplying of glass reinforced plastic (GRP) pipes for the project to modernise irrigation in La Concepción irrigation community in Tamarite de Litera (Huesca), with nominal diameters ranging from 500 to 1200 mm and nominal pressures from 6 to 10 bar. For this work, 12.5 kilometres of pipes were manufactured.

### Supplying railway sleepers

In 2014, 136,409 prestressed monoblock sleepers were supplied, both for the AI-04 (standard gauge sleepers) and PR-01 (standard and national gauge type), as well as 17,805 polyvalent bi-block sleepers for ballastless track (BPP-14), where the latter are a new innovation developed by Prefabricados Delta.

The most important works were:

- Supplying of polyvalent monoblock sleepers for the La Robla – Pola de Lena section of the North – Northwest High-Speed Corridor, with 55,000 sleepers ordered.
- Supplying of bi-block reinforced concrete sleepers with polyvalent width for ballastless track on the La Robla – Pola de Lena section of the North – Northwest High-Speed Corridor, with 17,805 sleepers ordered.

### New developments

In the constant search for improvements and innovation that is one of Prefabricados Delta's working priorities, the company developed two new products in 2014:

- Double elastic gasket for steel-jacketed concrete pipes.
- Polyvalent bi-block sleeper for ballastless track.



## MATINSA, INFRASTRUCTURE MAINTENANCE

The FCC Group operates in the sector through Mantenimiento de Infraestructuras, S.A. (MATINSA) in the following lines of business:

### Motorways and roads

Maintenance of 4,720 kilometres of roads and 87 kilometres in the Spanish metropolitan network, belonging to several public administrations (Ministry of Public Works, autonomous regions, provincial and county councils), as well as 1,700 kilometres of roads in Portugal.

Meriting mention is the maintenance services for ring roads in Barcelona, the Ronda de Dalt and the Ronda Litoral, where the traffic along these roads exceeds 270,000 vehicles per day.

Notable works in 2014 include:

- The awarding of two new maintenance contracts in:
  - Malaga, for ordinary maintenance and operation of the MA-01 sector, Malaga – Estepona – LP Cadiz, a 116 km long stretch of dual carriageway with high traffic intensity (84,000 vehicles per day), including service in three tunnels with a total length of 2,600 metres.
  - Guipúzcoa, for maintenance of the roads in the Donostialdea sector, which includes the main access routes to San Sebastian and its ring road.
- The renewal of the maintenance contract in the province of Girona, including 19.5 km of dual carriageway and 97.5 kilometres of conventional road along the GI-02, which includes the control centre of the Portbou, Argelager, S. Jaume, Montrós and Collabós tunnels.



- Contracts were also extended in Ávila, Soria, Badajoz and Cáceres.

### Maintenance of transport systems

Matinsa maintains the urban trams in the cities of Zaragoza and Murcia. In 2014, it started to work on the maintenance of the Malaga Metro.

### Hydraulic infrastructure maintenance

Matinsa continues its activity in the maintenance of water infrastructures, maintaining the channels of the irrigation area of the River Árrago basin, which includes 178 kilometres of channels and 9,300 hectares of irrigable land.

### Management of emergency and forest fire services

Matinsa currently provides the following services:

- The fire brigade service for forest fire prevention and extinction in the eastern area of the Autonomous Region of Madrid, with a total of 234 workers, eight heavy forest fire engines, 15 light engines, two high mobility vehicles (VAMTAC), one twin-engine helicopter and 14 forestry engineers.

- The fire-fighting and rescue service at the fire stations in Bueu, Porrino, Ribadumia and Vilagarcia de Arosa in the province of Pontevedra for an eight-year period, with a total of 74 firefighters.



An important event this year was the awarding of the forest fire prevention and extinction service with heavy machinery within the framework of the INFOMA plan for the Autonomous Region of Madrid.

### Environmental restoration

The company executes environmental restoration and recovery of damaged and/or polluted areas, including the restoration of sand dune systems and related conservation and maintenance tasks.

This year it was awarded the project to conserve, maintain and improve public domain water in the northern Galicia basins in the territorial scope of the Central Galicia area.

It also continues to manage the coastal conservation and maintenance service in the province of Pontevedra.

### Environmental services

Contracts awarded this year include:

- Framework agreement for vegetation control along the sides and on the tracks of the Iberian-gauge and metric-gauge conventional rail network in the Northeast region and vegetation control tasks on the platform of the Iberian-gauge and metric-gauge conventional network in the North region for ADIF for a two-year period.
- Forest and cultural treatments to prevent forest fires in different national heritage offices.
- Chopping and pruning around low and medium voltage aboveground lines in the province of Huesca for ENDESA.
- Pruning, clearing, preservation and maintenance of parks, gardens, roads and pavements in the municipality of Torrelodones for a three-year period.
- Conservation service for the River Manzanares where it passes through the municipal area of Madrid.

### R&D&i projects

Matinsa participates in the SIDEINFO Project to fight forest fires, which was designed for the protection of the urban-forest interface.

# 10

## CEMENT

Economic environment and the development of the construction and cement sector

Development of the Group

Energy recovery, sustainability and R&D&i



Factory "El Alto", Morata de Tajuña, Madrid (Spain).





## CEMENTOS PORTLAND VALDERRIVAS, S.A.

The control portfolio of Fomento de Construcciones y Contratas S.A. regarding shares already in circulation of Cementos Portland Valderrivas, S.A. at the end of 2014 was at 77.90%.

## ECONOMIC ENVIRONMENT AND THE DEVELOPMENT OF THE CONSTRUCTION AND CEMENT SECTOR

### Spain

According to the construction observatory (SEOPAN), official tenders in 2014 amounted to 13,111 million euros, representing an increase of 42.9% compared with 2013.

If we look at the tenders according to the type of work, we can see that building has increased by 52.1%, while civil works have increased by 40.1%. Depending on the organisation making the offer, there has been an increase in tenders of 56.3% for the central government, 12.4% for regional governments and 51.1% for local governments.

The data published by the Association of Quantity Surveyors and Technical Architects regarding surfaces approved for building in 2014 saw a reduction of 1.7% compared with 2013. This decrease is due to the fall still recorded in the surface area approved for non-residential buildings, a 9.7% reduction, and in that regard approved surface for new housing has seen growth of 2.3%. Furthermore, the figure for new housing approved in 2014 is at 34,873 units, 1.7% more than in 2013.

In this context the consumption of cement in Spain has improved throughout the year. The forecasts projected a further decline in cement consumption in Spain in 2014,

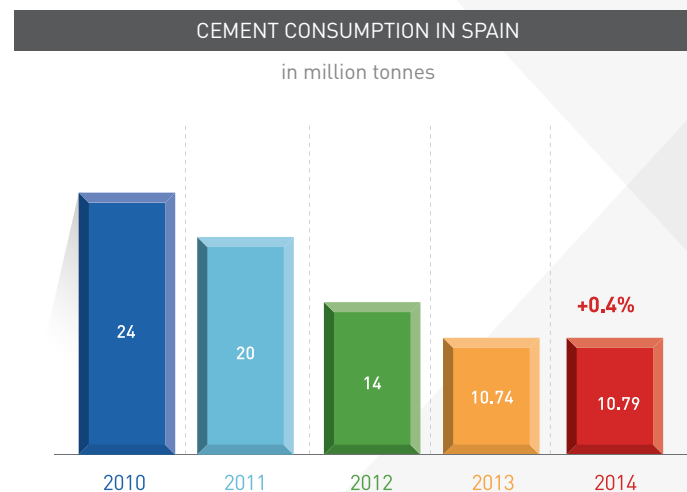
with Oficemen estimating a further contraction of 8%, following declines of 33.5% in 2012 and 19.2% in 2013.

Thus, while in the first half consumption fell by 3.2%, in the second half of the year it recovered to 4.2%, ending the year with a slight increase of 0.4% in the year to date, a very positive figure after six years of sharp declines, marking the beginning of a new growth cycle in the domestic market.

This recovery in consumption is evident in the northern and western regions of Spain, areas that have spent months recording significant growth in the year to date, and that in some areas have reached double figures.

Meanwhile, imports of cement and clinker in Spain reached 0.45 million tonnes, 10.1% more than in 2013, while exports continue to partially offset the sluggish domestic market, with a volume of 9.6 million tonnes, up 31.6% compared to the previous year.

The forecast by Oficemen for 2015 would mark the beginning of the recovery in volumes of cement consumed in Spain, with growth in its neutral scenario of 5%. Finally it should be mentioned that the volumes consumed in the domestic market in the months of January and February of 2015 grew by 6.6% over the same period last year, reaching 9.3% if comparing the average daily consumption.



### United States

Construction activity gradually recovered after the harsh winter months, which strongly affected the consumption of cement, especially in the northern states, where the company operates two of the three factories it has in this market.

So while cement consumption in the first quarter grew 3.5%, the data from the second and third quarter were at growth levels of 9.4% and 9.1% respectively, reaching the 89.1 million tonnes of cement in December, with a cumulative growth of 9.1% over the same period last year.

According to the latest estimates by the Portland Cement Association (PCA), in 2015 and 2016 the growth rate is expected to be close to or exceed 10% annually.

### Tunisia

Construction activity showed some weakness in the last quarter of 2014, but the outlook remains favourable. These are mainly concentrated around residential infrastructure, since the large infrastructure works, necessary for the development of the country, remain postponed.

In this context, cement consumption in 2014 reached 7.6 million tonnes, a slight decrease of 1.7% compared to 2013.

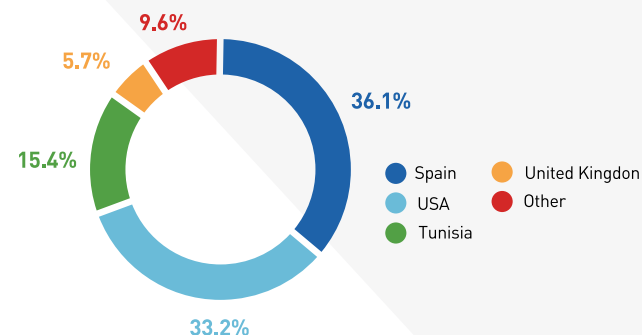
Exports of cement and clinker from the country to its neighbouring countries have grown significantly, reaching 1.3 million tonnes, well above the 2013 figure of 581,000.

Finally, the price liberation that took place in January this year is having a very positive effect on the profitability of the cement industry installed in this market

### United Kingdom

It is estimated that cement consumption in this country will reach 12 million tonnes, representing a 5% growth compared to 2013.

BREAKDOWN BY COUNTRY 2014



### DEVELOPMENT OF THE GROUP

Total sales of cement and clinker of CPV Group in 2014 amounted to 7.6 million tonnes compared to 7.2 million tonnes in the same period last year, representing a 5% increase.

The Group sold 0.4 million cubic metres of ready-made concrete. Aggregate sales stood at 1.2 million tonnes and dry mortar at 0.3 million tonnes, representing 61%, 66% and 45% less respectively. This reduction in volume is due to the Group's strategy of concentrating on core business and greater added value regarding cement, which has meant downsizing unprofitable concrete, mortar and aggregate plants, resulting in their transfer or closure.



## Cement

The total aggregate sales were 7.6 million tonnes, an increase of 5% compared to the volumes sold in 2013.

Accumulated volumes of cement and clinker in the Spanish market are positive, with an increase of 9% to the 2.6 million tonnes sold. Additionally, 1.3 million tonnes of cement and clinker have been exported, 24% more than in 2013.

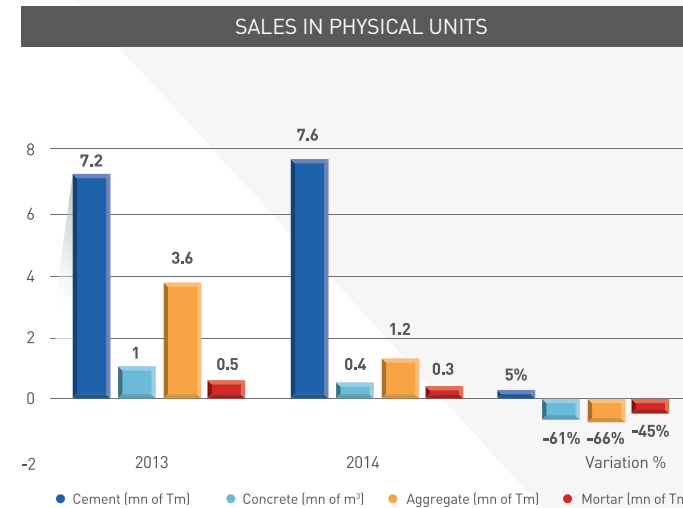
In the United States, cement and clinker volumes sold in the period are slightly lower than the previous year, a decrease of 3%, amounting to 1.7 million tonnes. Of this amount, 93,000 tonnes were exported to Canada, 17% less than in 2013.

The Group's activity in Tunisia in 2014 shows a slight decrease of 3%, with 1.8 million tonnes sold, of which 186,000 were for export.

Cement volumes sold in international markets now account for 67% of the total.

## Mortar, concrete and aggregates

The volumes sold in the concrete, mortar and aggregates sector decreased by 61%, 45% and 66% respectively after the closure or transfer of unprofitable plants in Spain and the United States.



## ENERGY RECOVERY, SUSTAINABILITY AND R&D&i

### Energy recovery

In 2014, after making the necessary investments, the Group began a process of energy recovery at the Thomastone plant (Maine, United States). This late incorporation in the year has only allowed the recovery rate to be maintained at 40% in the United States, but it will represent a significant advance for the period 2015-2016, in which it is expected that the thermal substitution will exceed 50%.



The replacement rate was 11.4% in all the Spanish plants, slightly lower than the previous year, mainly due to the manufacturing mix. Savings made from alternative fuel compared to traditional fuel was 1.8 million euros.

### Sustainability

The impetus for the sustainability of resources is also supported by material recovery, which involves replacing part of the raw materials with other materials from industrial sources.

In 2014 the replacement ratio reached 3.7% in our operations in Spain, a figure slightly lower than the previous year.

Additionally, on an annual basis, the Group develops the Corporate Social Responsibility Report, in which the information is collected in the management of economic, environmental and social performance associated with the development of our activity.

### R&D&i

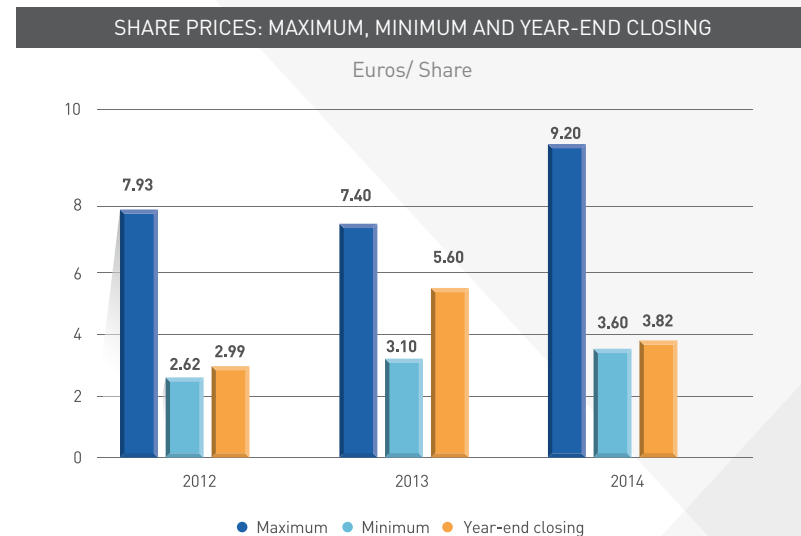
At the beginning of this year the Group's activities focused on the processing for the justification of nine of the ten R&D&i projects awarded to the Group by various official entities such as MINECO (Ministry of Economy and Competitiveness) and CDTI (Industrial Technological Development Centre).

It is important to highlight the successful completion four of the above projects: CEMESFERAS, HORMIGONES POROSOS, ESCOMBRERAS and MICROCEMENTOS.

As the product of this research, the main results obtained in these four projects are summarised below:

- Design of new cement materials with a lower carbon footprint by promoting sustainable production by saving natural resources and having lower emissions of greenhouse gases in the process.

- Development of new porous high-strength concrete to serve new applications under the framework of energy efficiency, and future draining pavements for heavy traffic.
- Research into eco-efficient cements through the recovery of ash from thermal waste tips.
- Development of a new range of micro-cements which places the Group in a global position with regard to these types of special products, aimed at applications for the restoration of microcracks in dams and soil stabilization.



At the same time we continued with the promotion and development of the remaining six projects (NANOMICRO, CEMESMER, IISIS, BALLAST, MERLIN and MAVIT), in compliance with the planning of research work within the 2014 milestone. It is important to mention the design and construction of a pilot plant within the MAVIT project, implemented towards the end of this year, for which the Group has a test bench for testing a range of products with high added value.



Throughout this process, intellectual property remains an indispensable element in the protection of the technologies developed. In this regard the company has obtained two new patents from the OEPM (Spanish Patent Trademark Office), expanding its portfolio to four patents.

All these initiatives contribute to strengthening the Group's image. The synergies established with a large number of opinion leaders and foreign companies, technological centres, universities and government agencies, position Cementos Portland Valderrivas Group as a point of reference for R&D&i in the development and application of cement materials within the sector.

#### Human resources, occupational health and safety

During 2014, the Group continued adapting their staff and organizational structure to the market situation. That is why its staff was reduced by 88 employees. As a result,

the effective total at 31 December was 1,739 workers (803 in Spain, 585 in the United States, 335 in Tunisia, and 16 in the UK and Holland).

#### Spain

During the past year, the Group reduced its workforce by 36 employees in Spain (54 leaving, 18 new staff), reaching the aforementioned 803 workers. Furthermore, the agreements regarding employment and temporary work suspension costs were applied, as agreed in 2013.

Moreover, the company undertook an analysis of collective agreements and conditions and labour costs in Spain, ahead of the drafting of the proposal for collective bargaining in 2015.

This analysis resulted with a report, in the month of December, on all existing agreements, and led to the drafting of a proposed business platform, whose ultimate goal is to reduce labour costs and provide greater flexibility, mobility and versatility to the Group's workforce, in order to efficiently meet current demand.

In 2014 the extension of the Equality Plan of the Cementos Portland Valderrivas Group, until December 31, 2015, was agreed with the MCA-UGT Trade Union Association of Industry and the Federation of Construction and Services CC.OO., and signed on September 24, 2009.

#### United States

In the United States several initiatives aimed at reviewing the benefits for company employees have been undertaken. In this line some suppliers who have helped us establish a cost containment strategy, maintaining a competitive benefits package for employees, were changed.

#### Tunisia

During the year 2014 a reorganisation was carried out as a result of the retirement of 34 employees. Furthermore 17 new workers were hired. These additions were

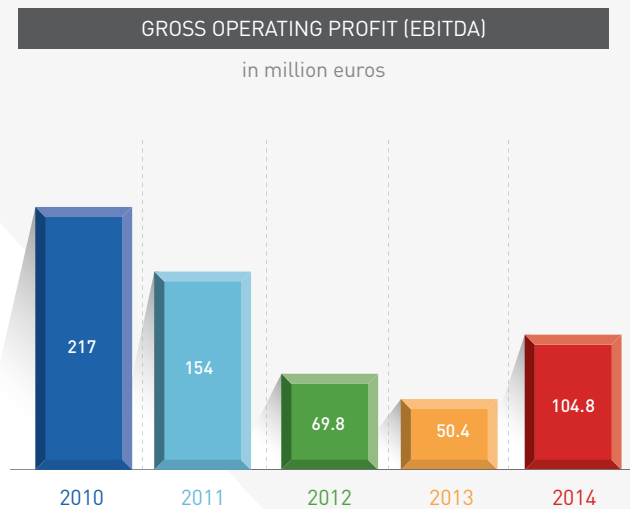
mainly in operations management (12 new employees), sales management (3 new employees) and HR management (2 new employees).

### Organisation and development

During the past year 23,487 hours of training in the Group were performed, of which 56% were actions on occupational health and safety. The percentage of employees who received staff training reached 85%, compared to 53% last year.

Moreover, the average training time per employee in the Group stood at 13 hours, compared to 10 hours the previous year.

The Performance Management System has been re-launched this year with the aim of helping executives to manage the performance of employees under their charge. It was therefore possible to deploy and evaluate common and individual goals of a group of 80 employees.



Also in 2014 the new variable remuneration policy for the years 2014 and 2015 was approved and implemented. The variable remuneration is linked to the achievement of Group and market objectives and established in the approved budgets each year, as is the case with objectives assigned to each executive and/or key post.

In the last quarter of the year a flexible remuneration programme was implemented for employees who are not part of the collective agreement at corporate offices in Spain, with a start date of January 1, 2015.

Finally, in order to have a rapid response to the possible brain drain and to meet the present and future needs of the organisation, the development of a succession or replacement plan began. Said document contains information on possible replacements in the short and medium term of 60 key positions within the Group.

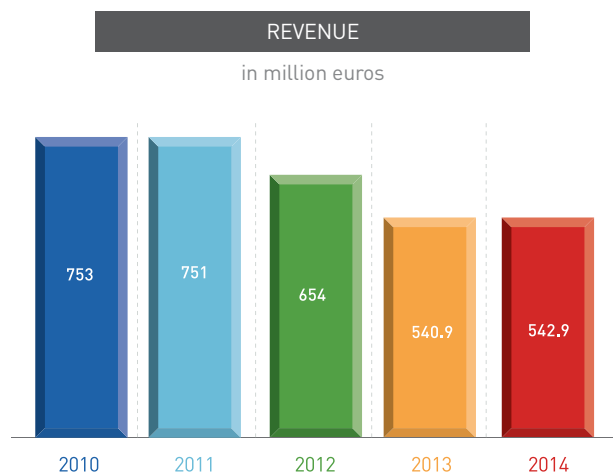
### Occupational health and safety

The Group accident ratios indicate a significant improvement in 2014 over the previous year, with a significant reduction in the number of accidents resulting

in sick leave, and the number of days lost due to accidents. The frequency index (\*) in 2014 went down to 5.02 (10.22 in 2013) and the severity index (\*) went down to 0.66 (0.73 in 2013).

These indexes were reduced quite considerably in Spain, so that the frequency rate decreased from 14.70 to 2.94 and the severity index was reduced from 0.51 to 0.14, with these being the best values in the markets in which the Group operates, significantly reducing work days lost to industrial accidents and occupational illness.

In the US market index values are often kept at 6.29, in what is called the “confidence margin”, in addition to maintaining stability, it ensures low accident rates and achieves the integration of occupational health and safety in the daily management of the company.



Finally, in Tunisia, the reduction of the accident rate has been considerable, from a value of 10.46 on the frequency index to a value of 6.61. To consolidate the improvement achieved, and to continue to make further progress, a plan containing measures to further reduce accidents and develop employee awareness has been established.

(\*) The ratios used to measure the accident rate are the frequency index (number of accidents with sick leave x 1,000,000 / total number of hours worked) and the severity index (number of working days lost due to sick leave or disability x 1,000 / total number of hours worked).

## FINANCIAL AND ECONOMIC DATA AND SHARE PRICE PERFORMANCE

The accumulated balance sheet and results of the Group as of December 31, 2014 are impacted significantly by the following relevant facts:

### 1.- Amortization of debt

On September 30 Cementos Portland Valderrivas Group addressed the amortization of 50 million euros arising from the syndicated refinancing contract signed on July 31, 2012, in which the company achieved a unanimous deferral of the financial institutions on June 30.

Part of this amount, 20 million euros, comes from the FCC parent company, through a subordinated loan, and the remaining 30 million come from the Company's own liquid assets.

The next amortization provided for in the refinancing contract should take place in July 2015, amounting to 75 million euros, which the Group has addressed in advance as set out below.

On February 5, 2015 the company proceeded to amortize 100 million euros of outstanding debt in the syndicated loan agreement signed on July 31, 2012. This amount has been applied to the prepayment of 75 million corresponding to the amortization scheduled for June 30, 2015 and the payment of 25 million of the next instalment, scheduled for July 31, 2016. These funds come from the contribution of its parent company, FCC, through a subordinated loan and the payment commitments due to FCC reduced by the same amount, for its support obligations to Cementos Portland Valderrivas that originally amounted to 200 million euros.

### 2.- Capital increase

Last April 29 the General Meeting of Shareholders approved the capital increase amounting to 110.8 million euros for the capitalization of the FCC subordinated loan.

The increase was made at a price of 8 €/share, issuing 13,855,875 common shares, 36% of pre-existing shares before the capital increase, with trading starting on the markets on May 23.

This expansion has led to the increased participation of FCC in the shareholding of the CPV Group, currently 77.9% of the total, reducing debt by more than 8%, and strengthening the Group's balance sheet and increasing equity.

### 3.- Sale of emissions allowances

The delay in the launch of the third phase of the market for emissions allowances has meant that the excess allowances from 2013 were sold together with the 2014 allowances.

In 2014 the Group sold a total of 4,000,000 allowances, which amounted to 20.8 million euros compared to the 2.6 million in 2013, leaving a surplus of 319,000 emissions allowances to sell.

### 4.- Positive impact on the EBITDA of the adjustment measures implemented in 2013

In 2013 the Group approved the review of its 2012-2021 business plan in order to reduce costs and gain profitability.

Within this framework, measures aimed at adapting the activity of the cement plants in Spain to the market situation were implemented, downsizing the concrete, mortar and aggregates' business, adjusting the corporate structure, with respect to both staff and offices, reducing the wage bill and simplifying the corporate shareholder structure.

In order to carry out the simplification of the corporate shareholder structure, on April 29, 2014, the General Meeting of Shareholders approved the execution of mergers of companies that were wholly owned, directly or indirectly, by Cementos Portland Valderrivas, S.A., in order to concentrate them into a single company.

All the absorbed companies have been defunct, with the consequent transfer of all of their assets to Cementos Portland Valderrivas, S.A., which has acquired all the rights and obligations inherent to said assets.

The aforementioned mergers, which were done in two phases, were completed last December 18.

### Turnover

Turnover increased slightly compared to 2013, despite the scheduled exit of unprofitable businesses in Spain, which has led to the closure or transfer of numerous concrete, aggregate and mortar plants.

Thus, while the turnover of Spain's core business, cement, increased 11.7%, revenues from other activities decreased by 55.4%, with the combined effect being a decrease of 8.8%.

On the other hand, revenues from international operations grew by 6.5%, mainly due to a significant improvement in prices in Tunisia and the United States.

The amount, 542.9 million euros, is broken down into 196 million euros in Spain and 347 million euros in the international arena, which currently represents 64% of the total.

### Gross operating profit

The gross operating profit stood at 104.8 million euros, more than double the figure for the previous year.

This strong increase in profit was due to the good performance of cement sales in Spain, the impact on the accounts of the savings plans carried out in the company, positive business developments in Tunisia, and higher sales of emissions allowances.

Excluding all atypical data of the comparison, the EBITDA shows an increase of 81.8%.

The net operating income generated a profit of 35.9 million euros compared to the negative result of 24.2 million euros the previous year.

**Pre-tax profit**

The profit before tax stands at -64.6 million euros, an improvement of 50.2% over the previous year's results.

It should be remembered that the 2013 results were strongly influenced by capital gains from the exchange and sale of assets with CRH (104.8 million euros), offset by the provisions related to asset write-downs (59.2 million euros), the provisions for future actions (20.1 million), and costs related to the restructuring of the workforce (32.4 million as of September).

If we exclude all atypical data for the two years being compared, the profit before tax would have increased by 38.4%.

**Profit after tax attributable to the parent company**

In connection with the foregoing, the Group has achieved a net result attributable to losses of 52.2 million euros compared to the negative result of 71.9 million euros in 2013.

