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# Business



# President of Panama congratulates FCC for building the first metro in Central America "in record time"

Panama's President congratulates FCC for building Central America's first subway "In record time".

The President of the Republic of Panama, Ricardo Martinelli, accompanied by the Minister



Juan Béjar blog

for Canal Affairs and Executive Secretary of Panama Metro, Roberto Roy, inaugurated the first subway system in Central America.

Panama Metro Line 1 was built in just over three years at a cost of 2.009 billion dollars (about 1.5 billion euro). The consortium that was awarded the contract in 2010, comprising FCC and Brazilian company Odebrecht, delivered the project on time and is currently building a 2.2-kilometre extension plus a new station.

During the three-hour inauguration, which was attended by thousands of people along

the route between the Albrook and the Los Andes stations, the President of Panama announced a forthcoming tender for a second line in two sections. In addition to Esther Alcocer Koplowitz and Juan Béjar, President Martinelli was accompanied on the route by the Chairman of FCC Construcción, Fernando Moreno, the company's General Manager, Miguel Jurado, and Manager for Central



#### Letter from the chairman

## Congratulations, everyone!

Line 1, the first subway system built in Central America, is already a reality. On the 5th of the month, I had the opportunity of attending the inauguration ceremony to share this milestone in Panama's history.

At FCC, we are particularly proud of having contributed to the construction and operations of a landmark project that will make transport easier for more than a million Panamanians Commencing in 2009, the project was completed in record time and as planned.

To each of the members of the FCC Construcción team involved in this project, those who were there from the beginning and those who completed it, my most sincere congratulations.

We met our target!!

Esther Alcocer Koplowitz Chairman of FCC

America, Víctor Alberola, as well as the entire team that worked on the project.

The new transit system crosses the city from north to south, from Albrook national bus station to San Isidro station. Fourteen stations were built along the 15.9 kilometre route, seven of which are underground, six aboveground and one in a cross-section.

The Secretary of Panama Metro, an agency of the National Government that commissioned the construction and will manage the new transit system, estimates that line 1 will serve one million people while reducing traffic congestion in Panama's capital city. The trip between the two terminal stations takes 23 minutes.

The consortium employed 5,000 people during the construction phase. FCC Construcción contributed its great expertise in transport infrastructure. Its reputation in complex projects of this type is accredited by the re-

cent award of a contract to build the extension of Lima Metro (Peru), the construction of a new elevated section of Doha Metro (Qatar), and three of the six lines of the new Riyadh Metro (Saudi Arabia).

# President Martinelli inaugurates the Via Brasil Section II Corridor (Panama)



The Via Brasil Section II Corridor reaches the culmination phase with the opening ceremony of the intersection at Avenida Nicanor Obarrio (Calle 50). Present at the event were the President of the Republic, Ricardo Martinelli, accompanied by Public Works Minister Jaime Ford Castro, the chairman of FCC Construcción in Central America, Víctor Alberola Ruipérez, with special guests and the mass media.

The project, which will benefit more than 200 thousand people who travel through this area, has an intersection at Calle 50 and Vía Brasil, with an underpass with three lanes, two lateral roads at ground level each with one lane. Two overpasses were built near the intersection to facilitate pedestrian traffic.

#### Highlights of the Vía Brasil Section II Corridor project

- Improves connection between the North and South corridors.
- Improves road safety.
- Reduces traffic congestion
- Three new pedestrian crossings were built.
- New pedestrian sidewalks were built.
- Implements a new and modern public lighting system.

- New underpasses for:
  - Pumping stations for rainwater.
  - Early warning systems to control access.
  - High-quality finishings, aesthetic and bright, providing users with enhanced driving comfort.
- Electricity and communication cables were placed underground.
- Water supply, sanitation, and rainwater collections systems were relocated.
- Enhances the aesthetics of the surrounding areas thanks to the new landscaping and green areas.





Ricardo Martinelli thankd the citizens for their patients during the months of construction and expressed his satisfaction with FCC for having completed the project five months ahead of schedule

"

Victor Alberola: "We want to thank each and every employee who participated in this project for their professionalism and enthusiasm and also our appreciation for the community which showed its patience while they waited for the project to be completed, aware that it would be to their benefit"

During the inauguration ceremony, President Ricardo Martinelli thanked the citizens for their patience during the months of construction and expressed his satisfaction for the work executed by FCC which culminated in the completion of this project five months ahead of schedule.

Victor Alberola, the chairman of FCC Construcción Central America division said that it was very gratifying to be part of the project that will change the lives of thousands of Panamanians. "Today we deliver this project which will benefit the many people who travel through this area every day. We said we would complete it as soon as possible and were able to fulfil this commitment", he said.

The project generated nearly 600 direct and indirect jobs, 95% of which were held by Panamanians. "We want to thank each and every employee who participated in this project for their professionalism and enthusiasm and also our appreciation for the community which showed its patience while they waited for the project to be completed, aware that it would be to their benefit", Alberola said. This project is one of the main thoroughfares in the capital city, site of the country's principal commercial establishments and banks.

Jaime Ford, the minister of Public works highlighted that fact that "we completed this important project, another component of Panama's New Road Networks which has transformed the collapsed road network in the capital city thereby resolving the problem of traffic congestion".

#### FCC starts work on the Riyadh subway system

Prince Khalid bin Bandar, governor of Riyadh province, presided over an event marking the commencement of construction of the city's metro system, which began with excavation of the "4 G1" station at King Khaled International Airport in Riyadh.

Work began two months ahead of schedule and is part of the project to build line 4, linking the city's new financial district with the airport. This initial phase includes the integration of three metro stations in the current international airport, with "4 G1" serving the new terminal 5 at the airport.

This work is part of the project to design and build Riyadh's 176-km metro line, which has a budget of 16.3 billion euro. FCC, the Citizen Services group, is leading the FAST consortium, which is building lines 4, 5 and 6 for 6 billion euro. FCC's main consortium partners are Korean company Samsung and French company Alstom. The other members are Strukton (The Netherlands), Freyssinet Saudi Arabia, Typsa (Spain), Atkins (UK), and Setec (France).

The contract awarded to the consortium includes the design and construction of lines 4 (yellow; construction began already with the "4 G1" station), 5 (green) and 6 (purple), which will have 25 stations. Construction will include 65 kilometres of track: 24 kilometres of viaducts, 28 kilometres of underground track, and 13 kilometres of aboveground track. A total of 69 automatic driverless trains will also be built to operate on these three lines.

The event marking commencement of the project by the FAST consortium on line 4 was held in a tent at the intersection of King Abdullah and Ulaya roads, behind the Sheraton Riyadh Hotel. As head of the Authority supervising the project, Prince Khaled bin Bandar presided over follow-up meetings held with the leaders of the consortium building the Riyadh subway system. Jaime Freyre de An-



drade, who heads the FCC-led consortium, highlighted that work had begun ahead of schedule.

More than 700 workers will participate in the project over the next two years. Since the contract was awarded last July, the consortium team in Riyadh now numbers some 250 people, around 50 of whom are FCC employees from Spain. Another 300 people are located in Madrid, Paris, London, New Delhi and Dubai to provide support for the project. In total, FAST will employ over 15,000 people from more than 15 countries. The term contemplated in the contract for the completion of the project is five years.

#### FCC to build a Doha Metro line in Qatar

#### for 506 million euros

FCC has been awarded a contract for the construction of a section of Doha Metro red line (Qatar) for 506 million euro. The winning consortium led by FCC, the Citizen Services Group, also comprises Archirodon (Greece), Yüksel (Turkey) and Petroserv Ltd. (Qatar). This is FCC's first major project in this Arab Emirate.

The execution period for the project, awarded by Qatar Railway Company, is 31 months and the project will create more than 1,000 jobs. In the bidding process, the FCC-led con-



sortium competed with groups from several countries, including Korea, Germany, Italy and India

#### Three aboveground stations

The red line section awarded in the contract includes building three aboveground stations (Barwa Village, Al Wakrah and Qatar Economic Zone) and a 6.97-kilometre section,

plus tunnelizing the road at the entrance to Al Wakrah. The total budget for the Doha Metro project exceeds 20 billion euro.



## FCC Chairman travels with King of Spain to the UAE

His Majesty the King of Spain visited the United Arab Emirates and Kuwait from 13 to 16 April, accompanied by cabinet ministers José Manuel García-Margallo (Foreign Affairs), Pedro Morenés (Defence), Ana Pastor (Infrastructures), and José Manuel Soria (Industry, Energy and Tourism) as well as deputy ministers Rafael Catalá (Infrastructure, Transport and Housing) and Jaime García-Legaz (Trade). The mission also included representatives from leading Spanish companies. Esther Alcocer Koplowitz, FCC Group Chairman, participated on behalf of FCC.

FCC currently operates in the United Arab Emirates through a contract to operate and maintain the sewers and water treatment system in eastern Abu Dhabi and it is also bidding for infrastructure construction contracts being put out to tender.

The FCC Aqualia contract, the first ever awarded to a Spanish company in the seven countries comprising the United Arab Emirates, includes the city of Al Ain and remote areas, serving more than 650,000 people.

FCC Construction's activities in the UAE are managed from its office in Doha (Qatar), supported by a business development manager for Abu Dhabi. The company has bid for several projects which are pending award, such as the Zayed Museum, in a consortium with local company ACC, and the Etihad Rail project.

# in Oman and Bahrain worth 2.5 billion euros

FCC is considering submitting bids for several contracts worth 2.5 billion euros being put out to tender by the authorities of Oman and Bahrain. The aim is to gain a foothold in these two Persian Gulf countries, a geographical region where it already operates in Qatar and Saudi Arabia. The bids, some already submitted, are for contracts for developing infrastructures or for managing the end-to-end water cycle through FCC Aqualia.

These projects, which would give the Group a presence in these two Gulf countries, were described during the trip of His Majesty the King in Oman and Bahrain, by the vice-chairman and CEO of FCC, Juan Béjar to the authorities and business men of these countries. Mr. Béjar participated in the corporate conference held in Bahrain where he highlighted the importance of infrastructures and citizen services such as waste collection and water management, for the economy of a country such as Bahrain. He expressed the interest of Spanish companies, particularly FCC, in taking part in the development of different types of infrastructures in this Persian Gulf country.

"We are prepared to work in your country which has been able to recognise the value of infrastructures and industry beyond the contribution of oil and gas to the national economy", Mr. Béjar said during his speech before a large audience with representatives of the Government and the business community of Bahrain. The executive stressed that FCC wants to be a loyal partner in the development of infrastructures and services and offered the Group's track record and experience in transport systems and end-to-end water management.



## FCC Construcción wins the Aqueduct of Segovia Award

The Association of Civil Engineers of Madrid granted FCC the Segovia Aqueduct Award for the its work on the construction of the bypass section of the A-4 south dual carriageway from Venta de Cárdenas- Santa Elena, a project which, according to the panel of judges, "provides a definitive solution to one of the great trouble spots in Spain's roads that stretch over difficult terrain".



Watch video



Fernando Moreno, chairman of FCC Construcción, was in charge of collecting the award for this unique project that represents a before and after in the history of the roads in Spain both in terms of capacity as well as safety, in one of the country's road with the

The prize-winning project, which stretches over more than nine kilometres through the

heaviest traffic.

historic Despeñaperros Mountain pass, provides a definitive solution to this main highway connecting the autonomous communities of Castile-La Mancha and Andalucía. The bypass, a dual carriageway with three lanes in each direction, includes eleven viaducts and five new tunnels.

This major project finally addresses one of the major trouble spots in the country's difficult terrain. More than half of the bypass with the two carriageways united corresponds to the viaduct or tunnel section to facilitate animal crossings and to increase the transit areas. Numerous measures were implemented to reduce and correct the environmental impact.

# Fernando Moreno, Chairman of FCC Construction, distinguished by the Association of Civil Engineers with the medal of professional merit



The Association of Civil Engineers has awarded the medal of professional merit to Fernando Moreno, Chairman of FCC Construction. The medal, which recognises people with an outstanding professional track-record, will be presented at a ceremony in Madrid on 5 June.

The current chairman of FCC Construcción began his career after graduating in 1973 from the Madrid School of Civil Engineering . That same year he joined Dragados y Construcciones S.A., where he remained until 1986.

He joined FCC that year and has been working at the company for the last 28 years. His first job was as the Head of Civil Engineering

in the Madrid area for the company Construcciones y Contratas, S.A. Some years later, he was appointed Manager of the Central Spain Area.

In 1996, he was appointed General Manager of Seragua, FCC's water management subsidiary. In 2000, he became General Manager of Aqualia, the end-to-end water management company resulting from the merger between Seragua and Veolia's water management companies in Spain.

Since March 2013 Fernando Moreno has been the chairman of FCC Construcción.



# The Group

## FCC celebrates its first Safety and Health at Work Week



Coinciding with the celebration of World Day for Safety and Health at Work and in line with the initiative of the Regional Institute for Safety and Health at Work of the Madrid Autonomous Community, FCC organized its first Safety and Health at Work Week on 28, 29 and 30 April of this year.

During these days and, in collaboration with various institutions, companies, and professional associations specialised in safety and health, several conferences, seminars and other events were organized to provide information on various safety-related issues, the promotion of health and welfare, wellbeing, and personal and family care.

This initiative aims to promote the prevention of accidents at work and occupational diseases and to encourage safe and healthy habits among FCC personnel and

the dissemination of a preventive culture among the community.

Ignacio Ara Royo, deputy general manager of Sports and Health at the Sports Council was in charge of the inaugural conference which versed on the importance of physical activity and on keeping active during our senior years. The interesting conference underscored the clear correlation between practicing sports and improved productivity at work.

On the first day of the conference, FCC launched the "Step by Step for your health" campaign, an initiative in keeping with the Strategy for Promoting Health and Preventing Diseases of the Ministry of Health, Social Affairs, and Equality, the purpose of which is to encourage the use of stairs, rather than the elevators, at the workplace. FCC was the first Spanish company to promote the Ministry's campaign which is supported by the World Health Organization.

The company also unveiled its worldwide, "FCC a Healthy Company" and other projects that will be implemented shortly, such as the "Social Sports Network," which will be launched immediately and will kick-off with the "Travelling throughout Spain by foot" campaign in which FCC workers will be walking 9,000 kilometres through virtual routes that pass by several of the company's worksites.

The other topics discussed included the creation of the "Healthy Community" and other healthy initiatives for employees.

Other discussions were organized on taking care of our backs, our eyesight, road safety, sports, nutrition and health, some of which also included practical sessions.

The activities were conducted at the Las Tablas, Federico Salmón, Madrid Medical Services, Acanto and Hormgueras centres as well as in various medical departments nationwide. More than 400 people participated in the programmed activities and more than 2000 received information on







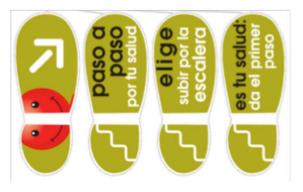
#### Step by Step for your health













the various campaigns and on the "FCC Healthy Company" project.

#### Healthy menus at the Federico Salmón offices

In collaboration with Alcesa, a company which provided advice on the benefits of a varied diet, and FCC's Medical Services, a

healthy menu was designed for these days. Guidelines for healthy eating habits, which were provided by Fundación Mapfre, were distributed as well as information on the benefits of a varied and healthy diet. The dishes offered at the cafeteria's menus will soon have a colour code (traffic light: green

for the most recommended dishes and red for those that should be eaten less frequently).

#### Good healthy habits at other worksites

The business areas participated by discussing the good safety and health practices

#### Homage for the victims of accidents at the work place

On 13 April 1999 the Ministry of Labour and Social Affairs published an Order for establishing 28 of April of each year as the World Day for Safety and Health at Work with the aim of spreading the occupational hazard prevention culture coinciding with the day chosen by the global trade union movement to pay homage to the victims of accidents at the work place. Since 2003, the World Health Organization set this as the day for celebrating the annual campaigns.









being implemented at the different worksites. For example, Otoniel Santana Sanabria, an Occupational Hazard Prevention technician at the FCC Environment Canary Islands offices spoke about warm-ups and stretching exercises which are practiced before the start of the working day.

Representing FCC Aqualia, Ignacio Romero Corral who is in charge of Safety at Work, described the "5 minutes in safety" program, a daily activity to build awareness on safety among managers and workers.

Dr. Pilar de Lara Durán, of the Medical De-



#### Other activities

#### The Medical department in Málaga

- · Promotes a healthy diet at FCC Environment's offices in:
  - · Andalucía I (workplaces in Granada and Jaén).
  - Andalucía II (workplaces in Málaga and Cadiz).
  - Murcia/Almería (workplaces in Almería).
- Theoretical-practical workshop on the back for cleaning staff at Málaga Harbour (Andalucía II branch office).
- · Lunchtime workshop at the Puerto de Santa María (Cadiz) Andalucía II branch office
- Shopping Cart Workshop (nutritional labels of food), Puerto de Santa María (Cadiz) Andalucía II branch office.

#### Medical Service at the Aragón branch of FCC Environment

Medical Service in Álava. Recommendations for the staff on safety and health in areas such as transport to work lunch hours, and physical activities.

#### Medical Service in Oviedo

- Implementation of a stretch exercise program at the start and the end of the work day to prevent muscle and tendon injuries.
- Briefing on how to perform exercises and stretches correctly, on forced postures and the correct handling of loads for department managers and middle management.
- Information on how to handle loads and the "Protect your Back" campaign.













partment at the Málaga offices, discussed the activities being carried out at different worksites to promote health, such as prevention campaigns, healthy diets, stress, physical exercise, etc.

Matinsa, the FCC subsidiary and leader in the Spanish infrastructure maintenance market presented, through its spokesperson, José Antonio Subirat, head of the Fénix Project, a GPS-enabled personnel localisation system and an alarm system.



On the last day of the event, FCC distributed more than 100 kilograms of different types of fruits (apples, pears, grapes, strawberries, bananas, loquats, oranges, and mandarins) in exchange for a healthy idea: 128 ideas were collected.

The week's closing event counted with the participation of Mar Alarcón Castellanos,



Watch video **Empresa** saludable



ganization at FCC.

# Ana Villacañas Beades, managing director of Or-

#### Collaborating entities

- Ministry of Health, Social Affairs and Equality
- Consejo Superior de Deportes (Supreme Council for Sports)
- · Regional Institute for Safety and Health at Work
- Sportsnet
- Institute of Visual Health (ISAVI)
- FESVIAL (Spanish Road Safety Association)
- Prevention Association, FREMAP
- Ivitalia
- Clínica Baviera
- Fundación Mapfre
- Alcesa



Mar Alarcón Castellanos, general director of Labour and Manager of the Regional Institute for Safety and Health at Work.

general director of Work and Manager of the Regional Institute for Safety and Health at Work, and a presentation by Ana Villacañas Beades, general manager of Organization at FCC. Marta Zimmermann Verdejo, the director of the Research and Information Department of the National Safety and Health at Work Institute was also present at this event.

This initiative was sponsored by the Department of Occupational Safety, Health, and Welfare with the collaboration of several departments involved in organizing the week event, including Human Resources, Medical Services, Prevention services from the Communications, General Services, Reprography, and Maintenance Departments.

# Come and learn about the world! First meeting in Las Tablas to promote career development



The Las Tablas (Madrid) headquarters of FCC organized on 18, 19 and 20 March the first exhibit on the FCC in the World website for all of those in who work in the Group and are interested in advancing their careers.

Under the slogan "Come and learn about the world", the three-day meeting hosted several presentations through its business areas on FCC's main projects and works throughout the world, including: the Riyadh Metro; the Mersey Bridge in Liverpool (United Kingdom); the Bucharest Metro (Romania); the Toronto Metro (Canada); the Gerald Desmond Bridge in Los Angeles (United States; the New Necaxa-Tihuatlán Highway (México); The Hospital City in Panama; Açu Port (Brazil); Callao Port (Peru); the railway lines in northern Algeria; the waste water treatment plant in Konjic (Bosnia); the desalination plants in Mostaganem and Cap Djinet (Algeria); the New Cairo waste water treatment plant (Egypt); the sanitation system in the east district of Abu Dhabi (United Arab Emirates), and the was-







#### www.fccenelmundo.es

The website offers detailed information on the main projects, locations, technical peculiarities, and useful hints on the places where the Citizen Services Group is conducting its activities.

Intuitive, accessible, and a revamped image of the company, FCC in the World offers those who make up the group much more than detailed information on projects and destinations.

The present and the future merge at this site. FCC in the World is a portal designed to grow and evolve; a space for dialogue where employees can share their professional experiences abroad and send their suggestions through the mailboxes that FCC puts at their disposal.

te water treatment and supply installations in Querétaro (México).

Employees, project managers and directors came to the exhibit with the main objective of incentivising international mobility through this in-house website.

These conferences counted with the support of the company's senior managers such as Ana Villacañas, general director of Organization; José Manuel Velasco, managing director of Communication and Corporate Social Responsibility; the managers of Human Resources of each of the business areas: María Sánchez (FCC Construcción); Carmen Rodríguez (FCC Aqualia); Luis Suárez (FCC Medio Ambiente), all of whom were essential in the planning and celebration of this event.

During the three days of the exhibits there were interviews, projections, and information on FCC's major projects around the world. The meetings were also a good venue for exchanging opinions, offering advice, ad contributing experiences on international mobility.

Everyone who came to the exhibit were also able to taste the typical products of different countries, such as dates, various types of tea, chocolate, nachos, fried plantain, tropical fruits, etc, and there were also catalogues and maps of each of the countries where the Citizen Services Group operates.

A photocall was also organised at the entrance of the conference halls and many

FCC employees could not resist the temptation of posing and having their pictures taken for FCC in the World.

#### The Riyadh Metro, a high-flying project

Perhaps the project that sparked the most interest due to its size and complexity was the Riyadh Metro, one of the highlights of the seminar which counted with the active support of several of the Riyadh team members such as Margarita Sánchez who was interviewed and talked about the lives of western women in Riyadh.

The interview was a great success and there were many interesting moments such as when Margarita dressed up in the typical and mandatory "abaya" worn by women in Saudi Arabia.

Santiago Ruiz, the deputy manager of the Middle East Zone and head of the project was photographed with some of the members of his team in Riyadh who were in Madrid on those days.

#### The start of a new culture

FCC in the World is the start of a new phase for FCC, a global reference company in environmental, water and infrastructure services, where people, projects and employees play the leading role in the affairs of the company. Promoting a culture of knowledge and collaboration among the different areas, promoting international profiles capable of being project leaders throughout the world is the key to our company's success.







#### Interview with Margarita Sánchez





Te invitamos a hacer un recorrido por el nuevo espacio de FCC, donde podrás conocer los proyectos más destacados en los que trabaja el Grupo de Servicios Ciudadanos, acceder a las ofertas de empleo interno, ver y compartir las experiencias de nuestros compañeros en el exterior, visitar nuestra galería y tener acceso a información de interés sobre los países en los que operamos.

¡Anímate a visitar <u>FCC en el mundo</u> y ayúdanos a crear una compañía global!



# FCC chairman attends the farewell ceremony for Enrique Iglesias, head of the Ibero-American General Secretariat

Their Royal Highnesses the Prince and Princess of Asturias presided over a dinner last night organized by the Spanish chapter of the Latin American Business Council (CEAL) in honour of Enrique V. Iglesias, in recognition of his work at the head of the Ibero-American General Secretariat since its foundation in 2005. Esther Alcocer Koplowitz, Chairman of FCC and Vice-Chair of CEAL, attended the event.

Throughout the event, the Prince and Princess of Asturias were accompanied

by authorities including Soraya Sáenz de Santamaría, Spain's Deputy Prime Minister, José Manuel García-Margallo, Minister of Foreign Affairs and Cooperation, Ana Pastor, Minister of Infrastructure, and José Ignacio Wert, Minister of Education, as well as numerous representatives of business and members of the diplomatic corps.

HRH the Prince of Asturias commenced his address by noting that Enrique Iglesias has been at the helm of the Ibero-American General Secretariat for the last eight years, and that he has accomplished his mission, notably his "excellent, intense work, through which he brilliantly fulfilled the tasks entrusted (...) by the Ibero-American Heads of State and Government".

CEAL is a network of the leading entrepreneurs in Latin America. It was established 24 years ago with the principal mission of stimulating its members' participation in trade and cooperation, in all aspects where private enterprise can contribute to strengthening reciprocal links and to the nations' social and economic progress.

## The Mayor of Barcelona awarded

## Esther Koplowitz

# the highest honour of the capital of Catalonia

Xavier Trias, Mayor of Barcelona, has presented Esther Koplowitz with the city's Gold Medal of Scientific Merit for her outstanding charitable work at the helm of the Esther Koplowitz Foundation, which focuses primarily on social initiatives to help the most disadvantaged groups and promotes science, especially biomedical research in Barcelona. Esther Koplowitz collected the award, Barcelona's highest distinction, before an audience which included members of her family as well as Dr Vicente Arroyo, director of the Esther Koplowitz Centre for Biomedical Research (CEK).

In Barcelona, her foundation built the La Nostra Casa retirement home in Fort-Pienc



for disadvantaged elderly people, and the Esther Koplowitz Centre, one of the largest private sector institutions dedicated to biomedical research, which is forging a reputation in its field in Europe. More than 400 researchers from all over the world work at the centre, in close cooperation with prestigious scientists who study metabolism, diabetes, obesity, diseases of the digestive tract and liver, haematology and oncology, immunology, neurodegenerative and cardiovascular illnesses, Alzheimer's, and poverty-related diseases.

Esther Koplowitz's philanthropic work includes the construction and outfitting of another retirement home in Collado Villalba (Madrid) and a centre in Valencia for people with physical and mental disabilities. She also donated a Da Vinci robot to the Hospital Clínico

San Carlos in Madrid for use as part of the robotic surgery programme. Ms Koplowitz has also assisted a tactile vision project at Madrid's Complutense University, helped fund other disease research programmes, granted a large number of scholarships to students without means, and built, outfitted and donated a centre for grant recipients, benefiting approximately 240 students each academic year.



See Pdf

# Esther Koplowitz has received the "Socially-committed Executive" distinction at the 24th edition of the Ejecutivos Magazine Awards

The ceremony was held in Madrid, and attendees included the Madrid Regional Government Minister for the Presidency and Justice and Government Spokesperson, Salvador Victoria, and Chairman of the Madrid Confederation of Business (CEIM) and of Madrid's Chamber of Commerce, Arturo Fernández.

Each year the Ejecutivos Magazine Awards recognise the efforts of leading executives, companies and institutions. Esther

Koplowitz received the award for her extraordinary philanthropic work through the foundation that bears her name, which focuses primarily on social initiatives to help the most disadvantaged groups and also promotes science, biomedical research and the fight against disease.



### FCC and Barcelona's City council create the HUBarcelona scholarship programme

FCC and Barcelona City Government have signed a cooperation agreement to create the HUBarcelona scholarship programme. The grants are for university students in Barcelona who want to extend their studies to include smart city strategies.

FCC will contribute 250,000 euro in total to the programme, which will provide five scholarships of 50,000 euro each. The city government will establish a tutoring system to monitor the training funded by the scholarships and will design an internship programme so that beneficiaries can apply the knowledge they have acquired to projects of interest for the city.

At the presentation of the scholarships, FCC Vice-Chairman and CEO Juan Béjar commented: "We support Barcelona's initiative unconditionally, especially as the city is on the cutting edge of innovation and optimal management of services".

Barcelona Mayor Xavier Trias highlighted the importance of the agreement with FCC: "We are investing in talent to create services for citizens", because "new technologies must generate returns to improve people's living standards".

The HUBarcelona scholarships were created to broaden and deepen FCC's public-private partnership with Barcelona in the field of smart cities.



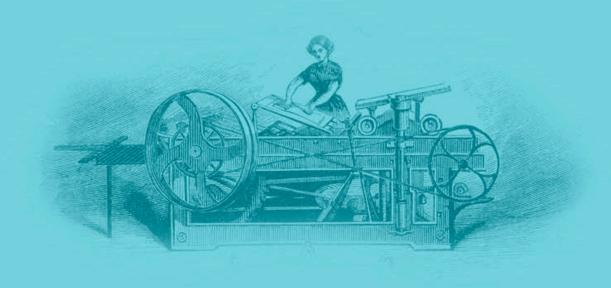
## Letter from the Chairman on International Women's Day

We have been celebrating, since the last part of the 20th -century "International Women's Day every 8th of March, a celebration that has spread across the world and which has become a space for reflecting on the progress achieved by women and the aspects that have yet to be improved, and also to pay homage to the courage and determination of women who have played an exceptional role in their countries and in their communities.

"International Women's Day" also offers us the opportunity of increasing our support for the rights and participation of women in the political and economic affairs of our society.

For many years, the FCC Group has been intensely involved in equality-related issues.





#### Día Internacional de la Mujer

8 de marzo de 2014

We have signed nine Equality Plans in several of the Group's business units and companies, organized numerous campaigns on equality and against gender violence, and have drafted a protocol to prevent workplace and sexual harassment within our companies.

To bolster these measures, in Spain we have an "Equality and Diversity Management" team that is committed to spreading these policies and the related programs and actions in their respective business units to ensure that these actions cut across the entire organisation.

In addition, as part of our Corporate Social Responsibility strategy, we are also supporting international projects in developing countries in which women are involved, such as the "Stop Obstetric Fistula" project being carried out by the "Foundation of Women for Africa" in Liberia and Monrovia where FCC has designed an architectural project and plans to build an hospital to treat women with childbirth related problems.

On a day like today, I want to reach out to women who are part of our company who represent 21.62% of our team, that is, 53% of the total employees in administrative functions and 13.2% in managerial functions. I want to thank you for your efforts and commitment, not always easy to reconcile with our personal and family lives, and encourage you to continue with your commitment to the company, of which you are all an essential part; the same efforts, dedication, commitment, and heart that I have always seen in my mother, a reference for all the women in our Group.

The motto chosen this year by the United Nations to celebrate "International

Women's Day" was: "Equality for women means progress for all", as recent studies have shown. If there is progress in equality, there is progress for society, the economy and companies. Therefore, it is the task of everybody, men and women, to promote it and to eradicate anything that can violate this right.

At FCC we will continue to facilitate access, training, and the promotion of the women who are part of our Group since we are convinced that this will redound positively to the benefit of all.

Esther Alcocer Koplowitz
Chairman of FCC



# FCC

# on the right track to recovery, cuts losses by 78% in first quarter

Gross operating income was up 72.5% driven by the increase in operating profit. Revenues climbed 2.7% to 1.435 billion euros despite the ongoing drop in public sector investment in Spain.

FCC started to reap the results of the implementation of its Strategic Plan. The Citizen Services Group slashed its losses by 78% year-on-year to 31 million euros in comparison with 140 million euros at 31 March 2014.

This positive trend is not limited to the Group's net income. Gross operating income (EBITDA) grew 72.5% year-on-year to 168 million euros tanks to the strong performance of all activities, particularly Construction as a result of the incipient effect of the adjustments in Spain and higher profit generated by selective projects in foreign markets.

Revenues were also up year-on-year. Net sales totalled 1.435 billion euros, 2.7% higher than in the same period last year. This year-on-year variation was driven by the 14.8% increase in international revenues, especially in the Construction division which grew 49.3%. In Spain, revenues were down 4.9% mainly due to the impact of the strong public sector investment in infrastructures.

Backlog also reflects this favourable performance. The incorporation of new contracts amounted to 33.446 billion, 1.8% higher than at the end of March last year thanks

to new contracts in the Water and Environmental divisions.

Net financial debt at the end of the first quarter stood at 6.205 billion euros, 241 million more than at the end of 2013 as a result of the seasonal increase in working capital during the first half of the year.

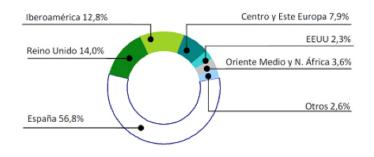
In the opinion of Juan Béjar, the Group's vice-chairman and CEO "quarterly results fulfil the commitments set out in the strategic plan and the refinancing agreement recently executed with about 30 banks and show that the Group continues on the right tract improving profitability and competitiveness".

The "red numbers"
are limited to 31 million
euros vs. 140 million in
the year-ago period

#### PRINCIPALES MAGNITUDES (millones de euros)

	2014	2013	Var.%
Importe neto de la cifra de negocio (INCN)	1.435,4	1.397,7	2,7%
Beneficio Bruto de Explotación (EBITDA)	168,0	97,4	72,5%
Beneficio atribuido a sociedad dominante	(31,0)	(140,2)	-77,9%
Total Deuda Financiera	6.205,0	5.963,8	4%
Cartera	33.446,3	32.865,1	1,8%

% Ingresos por Áreas Geográficas



#### First quarter highlights

The most relevant events in the first months of 2014 in the activities of the Citizen Services Group were as follow:

- · Refinancing of 4.512 billion euro in debt.
- The award of two major railway contracts (Doha and Lima metros) for almost 4.5 billion euro.
- Further progress with the divestment plan which raised 1.670 billion euros.
- Conclusion of the Spanish government's Second Supplier Payment Fund, through which FCC collected 71 million euro in the first quarter.

FCC refinances
4.512 billion euros
debt with the
support of 99.98% of
the banks

http://comunicacion.fcc.es/ comunicacion/actualidad/ CSCP089033.html



Backlog increases by 1.8% in this period, reaching 33.446 billion euros

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# People

# Being international Mobility as a driver of FCC's future

FCC was awarded its first international contract in 1979. At the end of the 80's. the company crossed the Atlantic Ocean to export its know-how to Central America. Since then, international expansion has been one of the Company's key growth drivers. We currently operate in 15 countries. The drop in construction activities in Spain and the need for infrastructures in other countries in the world has meant that FCC. like other construction companies, has had to look abroad. Without its professionals, however, this international drive would not have been possible. Expatriates play a key role and make it possible to build the future of FCC. Today, more than thirty professionals are working abroad.

#### Interview of María Sánchez Sanz

Human Resources manager at FCC Construcción

#### How would define the organization's current situation?

In my opinion, FCC is currently immersed in a transformation and change process towards a global company, capable of operating in international markets, with professionals ready to tackle greater challenges through their involvement in major projects, with a role of contract manager much different than the role of a project manager in Spain.

The arrival of Juan Béjar, deputy chairman and CEO of FCC, has meant a new change and transformation phase that forces us to be more demanding and global in order to



fulfil the plan to ensure the company's future.

The current situation generally represents a great challenge for all of us who are part of this organization and I believe that we are



Watch video

working hard so that FCC can be a great international infrastructures group.

#### Why is the so much talked about internationalisation so important?

This can be summarised in two main ideas: survival and new opportunities. The internalisation process is due to the sector where we operate and the economic situation in Spain. This means that we must be involved in tender processes in other countries, new growth and profitable markets that invest in major infrastructure projects where FCC is able to contribute value and can differentiate itself versus its competitors.

Our ten most important projects at the present time are being developed abroad. One such example is the recent contract for building the Riyadh metro, the greatest metro project in history. We now have to execute it o time, with quality and profitability.

The challenge is to be able to train and to prepare our professionals for working in this new scenario that requires a learning process, not just in languages, but the other rules of the game in new markets where in general, the common language is that in the contract. The key for the success of a project is the contract, which requires that our engineers become managers of the various areas of responsibilities beyond just production.

## What is the role of the contract manager? What type of professional does FCC Construcción need?

FCC requires professionals who are committed, specialised and with vision, capable of managing a project globally, of being the leader of multidisciplinary teams, open to other cultures and to new markets. We currently need people who are ready to drive the change, not just organizationally, but also operationally. Each professional can contribute to making the new FCC a reality.

The implementation of new management tools will enable us to manage projects comprehensively and globally.

#### What requisites must be met in order for a professional to form part of a project abroad?

Para formar parte de un proyecto internTo be able to take part in an international project, the most important aspect is to have an open mind, to be flexible and able to integrate in and adapt to a new cultural environment, and also to be able to consider an experience abroad as an opportunity for taking on greater responsibilities and, therefore, to grow personally and professionally. Travelling abroad is not just a simple event; it is a total change in your life. You leave behind the comforts of home and go to someplace unknown which you have to start learning about bit by bit.

#### And the family?

En FCC nos preocupa la adaptación de las At FCC we are concerned about the adaptation of people in a new country and, therefore, make it easy for employees to go with their families, putting all the means necessary at our disposal to ensure that all are integrated.

#### What support is offered to those who travel abroad?

Information, moving arrangements, accommodations, medical insurance, social security coverage, and schools for children...we offer all guarantees so that the stay abroad is arranged comfortably and easily.

#### What should I do if I want to be part of an international project?

To be able to take part in an international project, the first thing that must be done is to analyse the project which, due to its technical characteristics and the local environment where it is being developed, is best adapted to my experience and which can interest me the most.

Afterwards, you should talk about it with your boss so that he is aware that you are interested in a job abroad.

During the process, the Human Resources department will assess your profile to determine that it fulfils the job requirements and, if that is the case, the international adventure starts to take off.

All information in this respect is available at the new "FCC in the World" website where you can find a description of the projects and on the countries where we operate.

Vacancies are also published in the "International Mobility" section of our intranet. Managed by the Human Resources Department, this channel enables employees to maintain confidentiality before the take a decision on the transfer.

#### For a short or a long period?

From months to the years that it takes to complete a project. Support can be specific depending on the needs of the professionals.

#### What happens when you return?

Depends on what the situation is such time. Our company builds projects; we arrive at a site, complete the project, and move on to another one. All depends on the specialisation and the contracts that we are awarded. Although it can be said that a professional with international experience contributes to developing his career and increasing his competencies. In many cases, this experience can further drive the professional's career.



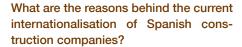






# Interview with Alicia Revenga

# Manager of Seopan export group



At the start of our internationalisation, the process was driven by the search for a business portfolio due to the serious crisis that affected the sector in the mid 70's (which has been more than exceeded at present). Nevertheless, as of the mid 80's, the move abroad was bolstered due to the clear strategy of major groups to diversify their sales geographically. This process became stronger as companies began to be awarded construction and long-term management contracts for major infrastructure projects in the five continents.

As a result of this situation, Spanish companies have been able to maintain their construction activity and, what is even more important, were able to create new business





lines to ensure recurrent revenues over the long term in all types of infrastructure service concessions, in a successful collaboration with the financial sector, thanks to which, Spanish construction groups have become global leaders in public/private collaboration projects.

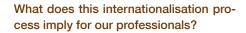
#### What does this imply for companies?

A counter-cyclical exit, a stable presence in third countries, risk diversification, stable revenues, and creating jobs and wealth in host countries. Besides executing major infrastructure projects, it enhances visibility, reputation, and the strength of Spanish construction groups.

#### Why are Spanish construction companies abroad considered strong?

Their technological levels, their management expertise in public interest projects, their demonstrated experience throughout their years of operations in Spain, the professionalism of their human capital, spe-

cialisation, and their financial solvency, as well as their firm commitment to corporate social responsibility and environmental sustainability.



In new opportunities for professional and human growth, in a learning process on working in a different way, and in the immersion in different cultures, in short, with the current lack of opportunities in Spain, this is certainly a professional option.



# ABCD Awards for FCC Environment

The ABCD Awards "Beyond the call of duty" 2013 were officially closed on 5 March in Nottingham.

The two runner-ups in each category attended the award ceremony that was presided by Paul Taylor, CEO of FCC Environment.

#### And, the winners were....

**Agustín's team:** The site with the most improvement. Wychavon Contract. Paul Farmer, Project Manager

Paul's team: Health and Prevention. Richard Hickmott, Manager.

**Vicente's team:** Cost-savings initiative. Cell 9A Greengairs Void Engineering.

**Chris' team:** Recycling of the year. Neath Port Talbot. Alwyn Spedding (Project Manager), Michael Adams and his team.







Watch video

The finalists were recorded and the film was shown at the ceremony before the announcement of each winner.



Paul's team: Good environmental practices. The environment and North West landfill team.

**Kristian's team:** Sales of the year. Helena Cheetham, Key Account Manager for the Midlands (genera accounts manager for the Midlands region).

**Richard's team:** Customer service. The team from the Medway urban waste recycling plant.



Paul Taylor, CEO of FCC Environment.

**Fernando's team:** Operators of the year team. Transfer centre and fuel-from-waste team at Costessey. Peter Howe, Garry Clarke, Keith Barnes, Nigel Parfitt, Hollie Parfitt and Carl Ager.

**Lesley's team:** "Extra effort team". Alison Lochhead - Regional Administrator.







# Mila: the story of a rescue

Last December, the people in charge of monitoring the outlets in Navalcarnero informed the supervisor, Raúl Parreño Leal, and the project manager, David Ortega, that when they were performing their normal surveillance work at the sanitation network and opened the lid of one of the wells, they discovered two greyhounds at the bottom of the well that had been dropped there from a height of three metres.

After being there for probably a few days, one of the dogs had died but the other one, although in a sad conditions, was still alive.

Our colleagues Raul and David, even though it was a holiday, did not hesitate and









went to the site and ordered the operators not to go to the bottom of the well under any circumstances and to notify the Civil Guards.

When they arrived, the Civil Guards were already there and, fearing that the dog could attack, they decided to call for help.

Raul and David waited for help, but since it was taking too long, they decided to get to work and help rescue the dog. After talking to the animal for a long time to try to calm him down, they agreed to try to rescue it. They prepared a bow and sling which they dropped to the bottom of the well so that the dog could place his front legs through and they could lift him up. The dog, however, was very weak. They then decided that somebody had to go half-way down

the well to try to help the dog hang on to the sling. They weren't sure who was more afraid, the dog, or them. The greyhound did not offer any resistance and allowed them to help him, and they brought him up to the surface. After a short while, the Civil Guard arrived with Narub, the animal aid association that took charge of the dog.

After some time, Raúl and David decided to visit the dog kennel to see how the dog was

#### FCC heroes

Raúl Parreño is a supervisor and has been working at FCC for over 20 years. David Ortega, who joined FCC in September 2005, is a project manager. Both are currently working at the services contract for operations and maintenance of the peripheral sanitation networks managed by Canal de Isabel II.

doing and see if it had survived since during the time that the dog had been at the bottom of the well, it ate rotten meat and drank faecal water. To the surprise of everyone, the dog, a female, was almost recovered and had a new name, Mila (short for Milagro, which means miracle in Spanish). She recognised them and jumped and started to lick them as a sign of gratitude.

The kennel which took care of Mila informed them that through an association and after undergoing several checkups, a family had fallen in love with her and had adopted the dog. "Our greyhound, Milagros, was adopted by a family with children. They could not tell us if they were from Belgium or Austria, but they did confirm that she was quite healthy when she was adopted".



## Transforming leadership

Commencement of the Executive Development Cycle in People Management and Leadership, core training contemplated in the People Development Plan at FCC Aqualia.

As part of the People Development Plan prepared by FCC Aqualia over the past few months, one of the core targets was the transformation of our leadership model into a more participative, development-focused, model that acted as a catalyst for talent to bolster the cohesion of the team and backed by a common language shared by all.

The Executive Development Cycle in People Management and Leadership which

will commence at FCC Aqualia will be led by Otto Walter and is one of the most advanced and complete work methods.



## Caps for Alba

FCC employees at the container sorting plant and the Waste Treatment Facility in Salamanca pick out more than three tons of caps for a solidarity initiative.

Representatives of workers, the company and associates gave Alba's family a che-

que for the sum that was raised during this campaign.

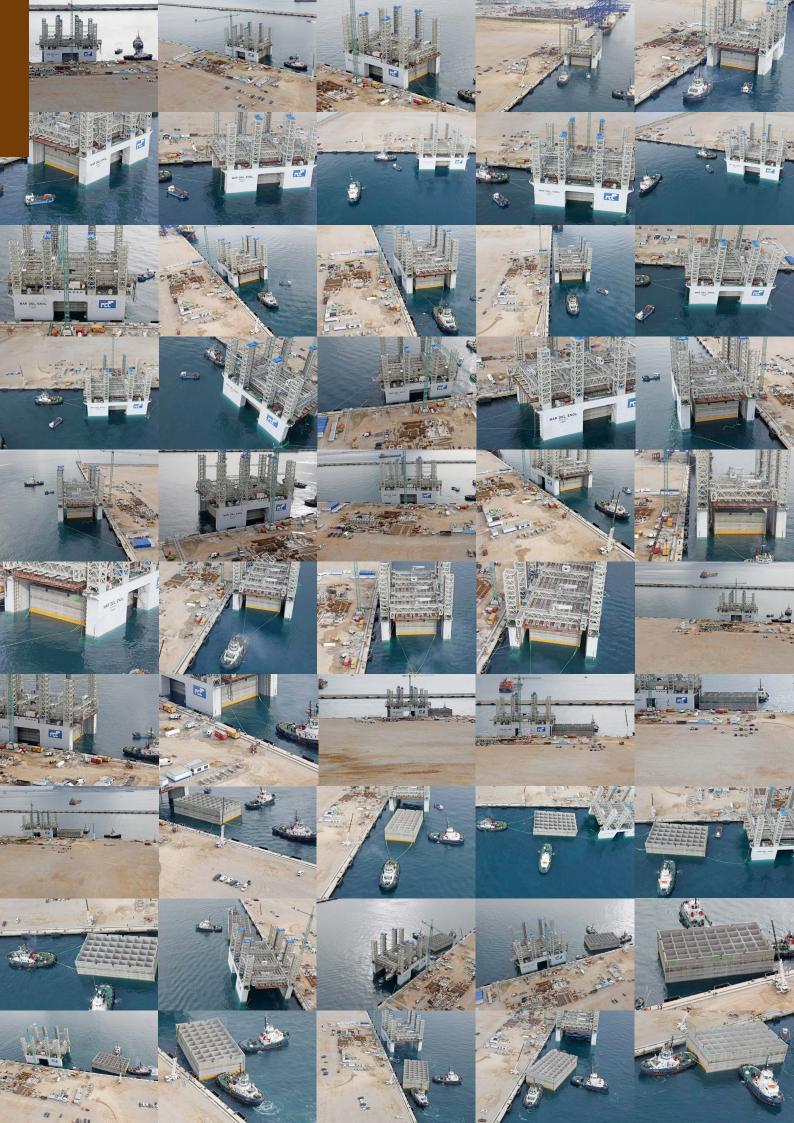
On this occasion, they joined forces and collected plastic caps for worthy cause; improving the quality of life of Alba, a girl from Salamanca who needs orthopaedic adaptations and physical therapy so that she can perform simple things such as swallowing, moving, and even breathing. She suffers from nemaline myopathy, a rare congenital disease that weakens the muscles and prevents motor development.











Pablo Roza, member of the FCC team working at the Açu Port (Brazil) project, shares this photo gallery with the Communication Network



## built for the Mar de Enol floating dyke

FCC has launched the first caisson, named Ana Cristina, which was executed for the Mar de Enol Floating Dyke at Isla Verde at the Algeciras Harbour. Pablo Roza, a member of the FCC team who works at the Açu Port project in Brazil contacted the Communications Network to share with FCC employees these aerial photos of the launching of the first caisson.

The Mar de Enol floating dyke was inaugurated at this project following a major transformation process of a floating platform which was towed from Japan, into a caisson manufacturing machine.

The assembly of the umbrella and climbing systems was performed at Puerto de Santa María (Cadiz) by the FCC Central Machinery

Park team. Once the work was completed, it was towed to Algeciras for building the caissons that were shipped to Brazil in a semi-submergible vessel in early April to help the Mar de Aneto dyke complete the main seawall at Terminal TX-1 in Açu Port.

The manufacturing of these two caissons served a double purpose; to test the machine during the manufacturing phase, and to gain useful experience for its implementation in Brazil without delays or uncertainties.

## Social Responsibility

# Agreement with the ONCE Foundation to incorporate 125 people with disabilities in the workforce

Renew Inserta Agreement under the framework of the Por Talento Programme, an initiative that is co-funded by the European Social Fund and is being developed by ONCE Foundation via FSC Inserta, which trains and employs people with disabilities

ONCE Foundation and FCC signed an Inserta Agreement in Madrid to integrate 125 people with disabilities into FCC's workforce over the next three years. This initiative aims to increase to 350 the total number of employees with disabilities.

The agreement, signed by Juan Béjar Ochoa, FCC Vice-Chairman and CEO, and Alberto Durán, Executive Vice-Chairman of ONCE Foundation, is among the measures implemented the latter as part of the Por Talento Programme to train and employ people with disabilities, is co-funded by the European Social Fund.

"This agreement is aligned with the measures implemented by FCC, the Citizen Ser-

vices Group, to promote the employment of people with disabilities. Working together with ONCE Foundation is an essential part of our Corporate Social Responsibility policies", explained Juan Béjar.

According to Alberto Durán, "The renewal of this agreement confirms that ours is a relationship based on trust. FCC is staunchly committed to employment for people with disabilities, and ONCE Foundation shares its expertise in favour of a more inclusive society".

To cover new job posts that arise, FCC will work with FSC Inserta, an ONCE Foundation organisation focused on training and employment, which will shortlist candidates with the most suitable profiles.

FCC will also encourage indirect hiring of people with disabilities by acquiring goods and services from sheltered workshops.

#### **Talent programme**

FCC participates in several unique projects implemented by ONCE Foundation, such



#### Commitment

One of the main focuses of FCC's Corporate Responsibility Master Plan is a commitment to sustainability by promoting actions which are socially responsible and respond to stakeholder expectations. Through the Exemplary Behaviour component of its master plan to promote social inclusion of special needs groups, FCC is committed to supporting and integrating people with disabilities into the Group.





as the "Never Give Up" (No te Rindas Nunca) plan, which aims to promote employment among young people with disabilities; internships for Spanish university students; and in the Foundation's new jobs website (www.portalento.es).

#### **Background**

In 2009, FCC Medioambiente in Barcelona signed an agreement with FSC Inserta un-

der which 73 people with disabilities were hired. Following the good results of this initiative, in November 2010 the two groups signed an Inserta Agreement which covered all of the company's business areas. As a result of this collaboration, 220 people had been hired by 31 December 2013.

#### **FSC Inserta**

FSC Inserta, ONCE Foundation's training and employment arm, is responsible for the Por Talento Programme, which is co-financed by the European Social Fund. This ambitious project is part of the Operational Programme for Fighting Against Discrimination 2007-2013 and provides further support for the integration of people with disabilities into society and the workforce and for equal opportunities.



### Celebrating World Water Day

March 22, as an international day for celebrating fresh water was an initiative proposed by the United Nations Environment Programme (UNEP) Conference which met in 1992. The United Nations General Assembly responded and designated March 22. 1993 as the first World Water Dav.

Each year, a specific aspect of fresh water is highlighted in World Water Day. This year, the slogan was "Water and Energy", two closely linked elements since often since the generation and transmission of energy requires the use of water resources, especially for hydroelectric, nuclear, and thermal energy, and for the treatment and transport of water to consumers.

FCC Aqualia professionals participated in several seminars where experts discussed the future water and energy challenges and those faced by the human race.

It also spoke about its vision on end-to-end water management, the future of R+D+i in



the sector, and the work that the company is carrying out in various municipalities to ensure water quality and to offer a personalised service.

#### The expert's vision

#### Madrid. Event organized by the magazine Water

#### Speaker: Pedro Ruiz, technical director

At the round table "Energy in the urban end-to-end water cycle", Pedro Ruiz stressed that electricity consumption currently accounts for about 8% of FCC Aqualia's management expenses and discussed the R+D+i projects in which FCC Aqualia is currently carrying out in the company's major projects, including the All-gas and ELAN® projects focused on reducing energy dependency in the end-to-end water cycle.

#### Santander, Palacio de la Magdalena. Technical Seminar on World Water Day

Speaker: Santiago Lafuente, director of Zone I

Santiago Lafuente focused his presentation on the main challenges that FCC Agualia will be facing in the future: Corporate Social Responsibility (CSR), dialogue with the community, and R+D+i. He spoke on the need of having a public-private collaboration model such as ones currently being carried out by the public administrations in the water sector and stressed that this was the model for success. He also highlighted the international and nationwide prestige of Spanish public and private water management companies



Event in Santander



Manuel Rosado.

#### Benidorm (Alicante). The Department of Health of the Generalitat Valenciana. Commemorative World Water Day Seminar

#### Speaker: Manuel Rosado, Aqualia's representative in Alicante

In his presentation, entitled "Managing the quality of water supply in La Nucía (Alicante), Manuel Rosado explained the procedures for ensuring the quality of water for human consumption, existing regulations, the treatment processes, the types of analyses performed, and the protocol for self-control and how citizens can obtain information on the quality of water of their municipalities.

#### With citizens and children

Coinciding with this celebration, FCC Aqualia staff organised and participated in several community and children's events.





Roda de Ter (Lleida).

Oviedo.

In Lleida and in Oviedo, many people came to learn about the work carried out by FCC Aqualia professionals at their installations. In Ibiza, a group of schoolchildren visited the Santa Eulàlia water desalination plant and in Roda de Ter (Barcelona) children came to an event where they learned about the end-to-end water management cycle.

In Santander, the classroom of the children who won prizes at the 11th edition of the FCC Aqualia's Drawing Contest was invited to visit the La Molina facilities where they learned about the water cycle. A seminar open to all visitors was also organized at the Water Museum as well as a guided tour of the drinking water installation. The drawing contest prizes were given out on that day in Rota and in Vigo.



A championship was organized coinciding with World Water Day at the Denia Sports Centre (Alicante).

In Badajoz, more than 150 children attended the presentation on the city's water cycle and a photo contest was organized in this city through the Twitter social network (@FotoaqualiaBadajoz).



Vigo.

Badaioz.



Francisco Blanco, manager of the Extremadura regional office, during his presentation in Badajoz on World Water day of FCC Aqualia's activities.



Image of the cover of the brochure which explains the bases for the photo contest and, on the right, an image promoting the championship in Denia (Alicante).



Coinciding with World Water Day, FCC Agualia launched the International Children's Drawing Contest, this year with the slogan "Water needs heroes like you". One of the novelties of this contest, a reference in all the cities and towns where FCC Aqualia provides services, was the dissemination of the competition guidelines at the www. heroesdelagua.es website for schools and students.



#### Awards for the **Small-Artists**

For the fourth consecutive year, the children and grandchildren of FCC Aqualia employees participated in the Small-Artists contest which was held this year with the slogan "The future of water looks good because you paint it". The two winners in this edition received a digital note tab and the ten runner-ups a game for experimenting with the natural water cycle. Children also received a fun caricature as a memento.



The participants during the debate.

## The importance of Corporate Social Responsibility at **FCC Aqualia**

The Las Tablas corporate headquarters hosted FCC Aqualia's Corporate Social Responsibility Forum. Enrique Hernández, FCC Aqualia's Director of Social Responsibility and Management Systems, was the moderator of this event where professionals from different fields contributed their vision and experience on Social Responsibility in companies and debated the key issues relating to this sector.

As a starting point for the debate and focusing on the citizens to whom we provide our services, Enrique Hernández discussed the complicated social situation in the sector as a result of the anti-privatisation movements and the social tariffs and also talked about technology as a means for listening and communicating with citizens and not merely the venue. He also discussed the need to measure social, economic and environmental impacts in the communities where FCC Aqualia operates.

Clients, suppliers, university, consumer and city council representatives attended this second edition of the CSR forum and discussed various aspects relating to the company and the sector and people's perception on the work carried out every day by FCC Aqualia employees.



Family photo of the Forum participants, from left to right: Yolanda Barahona, head of FCC Aqualia's Internal Communications; Juan Pablo Merino; Ramón Pueyo; Félix Parra, managing director of FCC Aqualia; César Martín; Eduardo Gonzalez, chairman of FCC Aqualia; Ángel Menéndez; Victor Viñuales and Enrique Hernández.

Regino Criado, professor at the Rev Juan Carlos University; José Luis García, engineer at the Alcala de Henares City Council; Luis Guijarro, a journalist who covers news on the environment; Javier Pino, regional manager of SOFREL; Belén Ramos, who works on consumer affairs at the Organización de Consumidores y Usuarios (OCU); and Carlos San Félix, former manager of Sustainability at Cementos Portland Valderrivas were among the guests who participated at this event. FCC Aqualia was represented by Enrique Hernández, director of Corporate Responsibility and Management Systems, and Alberto Garcia, head of R+D+i Communications and CSR.

One of the debates that sparked the most interest among the audience was the one dealing with the social actions that water companies are launching in the current crisis scenario and also the debate in relation with contracting and finance on the concession fee. In this respect, those who were present at the forum demanded more transparency and information, not just in respect of crisis-related cases, but most importantly, as a prior step.

## Cantabria will be able to know its water footprint

FCC Aqualia and Fundación Botín sign an agreement for the first collaborative study to calculate the water footprint.

FCC Aqualia and Fundación Botín will be collaborating in preparing a study on Cantabria's water footprint. The managing directors of both entities, Félix Parra and Íñigo Sáenz de Miera executed an agreement at a ceremony held at the Madrid headquarters of Fundación Botín. The objective of this project is to study the water footprint of Cantabria to determine the im-

pact of the consumption of water resources in close collaboration with the regional administrative bodies.

The study will be conducted during one year and carried out by Fundación Botín's Water Observatory which is made up of researchers from the Complutense University and Polytechnic University of Madrid in collaboration with the University of Cantabria.

This work will make it possible to know the impact of the consumption of water included in the goods and services produced and exchanged by Cantabria, a region where FCC Aqualia has a major presence as part of its activity as the manager of the end-to-end water cycle.

According to Enrique Hernández, director of CSR and Service Management at FCC Aqualia, "the new examples of comprehensive planning and management of resou-



Félix Parra and Íñigo Sáenz de Miera after signing the agreement.

rces and the possible different uses and qualities, make it necessary to perform a conceptual analysis and breakdown, something quite different than the conventional studies. The considerations of virtual water and the water footprint facilitate this analysis enormously to determine the most efficient and sustainable options for the community's water supply".

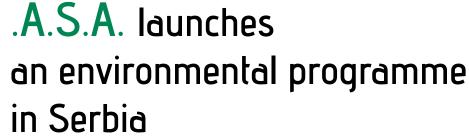


The signatories of the agreement with, from left to right: Santiago Lafuente, Manager of Zone I; Enrique Hernández and Alberto Garrido, deputy manager of the Water Observatory.









"The Land of Dreams" is the symbolic name of this initiative.





A.S.A. Serbia launched an environmental education program in Serbia as part of a young people the principles of ecological behaviour.

The company is aware of the importance of raising environmental awareness which has a great impact on the younger generations who adopt these good habits and, at the same time, transmit this acquired knowledge to their family members.

"The Land of Dreams" is the symbolic name of this programme which was chosen for a specific reason. .A.S.A. wants to implement several measures as part of a long-term programme to show, in a practical way, how it is possible, with just a small effort, to make our environment more comfortable.

A package of measures was chosen as part of the programme to develop the competitive and creative aspects of individuals and groups with the aim of achieving an environmentally and socially acceptable behaviour.

### series of activities to teach children and

The first action implemented in the Kikinda region was a competition to collect waste paper from schools and kindergartens.

#### Lapovo region

Kikinda region

A creative contest was organized in the region of Lapovo at primary schools with .A.S.A. as the underlying theme. The response of the children from this region has been very positive and creative so far. .A.S.A. is perceived for its efforts and the company is very proud of the work that has been carried out.

The program is designed as a series of activities with the objective of teaching children and young people the principles of ecological behaviour

## Well-being

Program

## "5 minutes today for your safety"

Under this title, a tool is made available to company managers the objective of which is to make a significant contribution towards creating a solid preventive culture at FCC Aqualia.

"5 minutes today for your safety", is a program consisting of a series of periodical informative talks by the contract manager consisting of five minutes of alerts and indications prior to the start of a working day.

One of the important benefits of periodical training on preventing occupational hazards is that it serves as a reminder of risks and that nobody is immune to accidents. It is essential, therefore, for workers to understand the purpose of these talks on safety since these will be useful and they will be aware of the possible consequences of not complying with safety rules and procedures.

It is also important that the worker is able share this newly-acquired training with those around him. The topics include issues such as safety when checking the automobile, fire extinguishers at home, etc. Implemented as a routine activity at FCC Aqualia during the first year, the goal if for these talks to become intense debates with all workers participating actively and where the topics will include the risks thaw can be expected in the daily scheduled tasks.



More information Read PDF



#### Ignacio Romero Corral

Technical Assistance – Safety and Health Seville

#### How did this idea come up?

More than an idea, it is a tool. We are certain that things are done well because we are convinced that it's as it should be, and these informative talks cover general and specific safety related issues on a workermanager level "The idea is not to teach in the strict sense of the word but rather to motivate, build awareness, and be always conscious of safety".

Although informative talks have a long international tradition in all sectors, it is not such a common practice in Spain. In France, for



example, it is known as "le quart d'heure sécurité" (a quarter of an hour on safety) and in other places "safety pills". At FCC Aqualia we opted for the title "5 minutes today for your safety" referring to what is known colloquially as "just a minute".

#### What has been the workers' response?

The aim of these talks is to incorporate prevention at the work place, that is, in situ, learning about the problems in relation to each aspect and tackling them simple and clearly, using the same language as the one employed by the workers.

The response has been generally positive. The aim is to achieve interrelation from the first minute on the day's topic.

We usually like to be told what we need to know and this includes preventive aspects that we can apply to our day-to-day lives.

A good example of the response to this initiative is that in many cases, the need for further knowledge has been detected; the need for new informative talks to try to delve more deeply into one of the topics discussed and this is the type of reaction sought by this initiative.







#### Sebastián Liébana

An operator in the supply network in Almería

#### What do you think about this initiative?

I think that it's interesting, different, and helps us to remember something that is very important in our lives: safety.

It is really just 5 minutes to remind us about safety measures at work and also useful ones for our personal lives.

## Preventive campaigns



# on the consumption of alcohol and drugs at the workplace

#### The FCC Environment Levante II regional office

Alcohol and drug consumption in general, especially when it is addictive, is a serious problem for people and their surroundings, at home and at work. From the family perspective, it can be a real drama for close relatives. From the work perspective, it poses a greater risk of serious accidents, greater worker absenteeism, and diminished productivity.

In order to tackle this problem, the FCC Environment Levante II regional office is carrying out a preventive campaign on drug and alcohol at the workplace, with the collaboration of Fundación Noray Proyecto Hombre de Alicante. FCC is part of the "EmpresAmiga" program for collaboration and involvement in order to implement measures in the field of occupational



hazard prevention and for a healthier and more socially-committed society. Fundación Noray Proyecto Hombre de Alicante contributes its experience and knowledge for detecting and treating addictive habits, especially alcohol and drug consumption.

The objective of this campaign is to build awareness among the staff on the need for keeping an eye on alcohol and drug consumption, reducing or eliminating the use of these substances particularly at the workplace.

To date, 148 workers have participated in awareness-building informative talks ad 35 middle-management personnel were involved in campaigns to create awareness and to encourage a critical attitude in respect of alcohol and drug consumption at work.

Various types of informative material have been distributed so far, such as leaflets, to all workers and posters have been placed at the regional work sites providing information on the risks associated with consumption of these substances.

These measures underscore the company's interest in encouraging, in a comprehensive manner, healthy habits among its employees so that this has an impact not only in their working lives, but also in their social and family lives, and the working place as a place which generates good healthy habits.

#### Lleida, FCC Aqualia

The key objectives of the prevention pilot program, which will be carried out in Lleida (Lérida) are to create awareness on the effects of alcohol and drug consumption at work and to set up the mechanisms for early detection. Managers from Catalonia and the Balearic Islands attended the training seminar in Barcelona which was led by the deputy general manager of Drug Addiction of the Generalitat de Cataluña (the regional government), Joan Colom.

Mr. Colom explained the impact of drug and alcohol consumption at the workplace, the legal framework and the lines of action. Afterwards, he described the prevention program being carried out in Lleida with the collaboration of the Catalan regional government. This program is going to be developed in three phases: awareness-building; detection; and, control, plus intervention and help for the worker who consumes these substances.

The program was already successfully carried out at several departments at FCC. The result was, in some cases, reducing the rate of drug and alcohol consumption from 32% to 2% and workers' absenteeism by 10%.



## Prevención del consumo de Alcohol y otras Drogas en el Ámbito Laboral







Pda. Aguamarga s/n 965 112 125

www.proyectohombrealicante.org info@proyectohombrealicante.org



## Interview with Pilar de Lara Durán

#### Name:

Pilar de Lara Durán

#### Profession:

Company physician

#### Location:

Medical Department in Malaga

#### Years in the company:

Since July 2003

#### Academic training:

- Medical and Surgery Degree from Malaga University.
- Senior Technician in Occupational Hazard Prevention, specialist in Safetv.
- Doctorate course in Internal Medicine, University of Malaga.

The Medical Department in Malaga, which has great experience in Safety and Health at Work campaigns, is characterised by its professionalism and commitment and for having tackled and launched several related actions and programs, for example, on heatstroke, stress, and preventive campaigns, such as the one in Rincón de la Victoria (Malaga) following the invasion of Portuguese jellyfish, a very harmful medusa found last year in several coastal areas. The department is committed to an activity plan to promote health and welfare among workers, a program which has been a great source of satisfaction for the department.

#### How did the idea come up and why did you decide to focus your efforts in this field?

Even though we have been conducting group health campaigns since I joined FCC, these were always based on demands by workers as well as by the Prevention Department. For example: a case of meningitis is detected in a school. What should the cleaning staff who work at the school do in that case? We started to collaborate in 2012 with the Department of Health of the Junta de Andalucía. It all started when one of the technicians visited us and presented this health program which thought was of interest and decided to adopt the program. Since then, we have participated in several initiatives.

Of the different health promotion campaigns that your department has launched, could you tell us which were the most and best accepted by the company's personnel?

The degree of acceptance varies significantly depending on the contract staff. I cannot explain the reason, but it is clear that the involvement and collaboration of department managers is essential. Once the campaigns are underway, we have not seen a significant level of dropouts; quite the contrary, others have joined the campaigns afterwards. The most difficult part is the beginning.

#### What campaign would you highlight?

One of the most fun initiatives and with the highest level of participation was the "Healthy Tapas" contest. We proposed to the workers who had participated in the theoretical-practical workshops on healthy diets to prepare what they thought were healthy recipes. I was very pleasantly surprised by the variety, the presentation, and the quality of the dishes that they prepared.

#### Tell us about the "One million steps" initiative?

We posed a challenge: would you all be able to walk a combined number of one million steps in total during a one-month period? The Department of Health provided the pedometers for counting the steps and we just got going. We were able to achieve nearly two million steps in 20 days.

What was it that finally attracted the participation of so many women and that contributed to meeting this target?

We had a lot of fun the first day that we went walking. Later, it was a question of spreading the word and the female workers encouraged each other to participate, taking their families along. The initiative went beyond the family circle and many new friendships were formed among the colleagues who had not met before because they worked at different workplaces.

The Mindfulness concept is a new idea which is spreading worldwide and was even on the cover page of TIME Magazine with the title The Mindful Revolution. Have you carried out any activity in this respect? Could you tell us how it worked and what activities were carried out?

This practice is based on Oriental medicine and on Buddhism and that is why I was a bit sceptical at first. I learned about it at the Andalusian School of Public Health and we were fortunate to be able to attend a theoretical-practical session headed by one of their collaborators, a psychologist specialising in Mindfulness. The word means "full attention" and it consists of concentrating our five senses in each of our daily activities, regardless how insignificant it might seem. In the session that we attended, we were given a raisin. We had to touch it with our fingers for almost an entire minute. Then we smelled it and put it in our mouths, noticing its wrinkled surface, without thinking what we had to do next or if we were uncomfortable, or if we felt the heat. It was impressive!! We all came out very relaxed and this was just after one session. Some of the workers who participated later joined a Mindfulness centre where they lived.

Based on your experience as a physician why is it important that we make progress in promoting the health and wellbeing of workers?









A worker who does not feel well goes to work unhappy, the performance is not optimal; he does not get involved in his work. If the same worker knows that the company is concerned about having optimal work conditions, that an effort is made to address health problems or that the company helps to solve the health problems that he suffers and prevent new ones, he will go to work happy and things will be easier for everyone.

### What difficulties did you encounter when you tried to launch this plan and how did you solve them?

The main difficulty is raising the awareness of workers on the importance of healthy lifestyle habits and trying to convince department managers to allow certain activities during working hours (an essential condition in order to secure the collaboration of the Health Department).

My colleague at the Prevention Department, Laura Garrochena and I have both participated in all the activities that we have organized. I think that if the workers see that we practice what we preach with our example, they would be more motivated to participate in these types of initiatives.

#### Do you think that these practices could be exported to the other regional offices and business units?

I am convinced that these practices can be exported to other regional offices and departments. We plan to launch this initiative shortly in Cadiz and the staff there is already aware of its benefits. Even though we had originally considered that one of the workers went there to describe the experience and convince them, at the end, this was not even necessary.



## Healthy tapas contest







We associate going out to eat as an informal meal. Nevertheless, this does not mean that it cannot be healthy food and all we have to do is to choose the type of tapa and try to avoid fried or breaded dishes or heavy sauces, for example. A good choice of tapas is one which includes vegetables and less caloric foods such as broiled turkey, chicken, lean meat and which make tapas a healthier option.

The Medical Department of FCC Environment in Malaga organized several workshops on Healthy Diet at the workplace with the participation of workers from the cleaning sector. The most successful initiative was the healthy tapas contest where the proposal was to prepare healthy recipes which would be awarded a prize for the healthiest and best prepared tapa with the most attractive presentation. This was a good opportunity for Josefa, Dolores, Ana Ma, Ma Carmen, Araceli, Amparo, Paulina, María, Francisco, Victoria, Rosa Mª, Carlota, Dolores, Vanessa, Atanasia, Esther, Fermina, Mª Pilar, Delia and Rosario who submitted some of their kitchen specialties, in this case, their best tapas.



The variety, presentation, and quality of the dishes was a great surprise for the panel of judges which included Francisco Medina Acosta, the department manager; Laura Garrochena Rivas, the Prevention Technician in Andalucía I, Mª Pilar de Lara Durán, the physician in charge of the Malaga Medical Department.

The winning entry was called "Pisquilabis", an endive stuffed with capers, onion, avocado, fish and eggs. Other tapas included: gulas with avocado and mango, pisto (Spanish ratatouille) with beef loin; mussels Mediterranean style; salmorejo (a thick gazpacho) with ibérico jam; lima beans omelette, scrambled eggs with green asparagus, stuffed piquillo peppers, quail's eggs croquettes; stuffed avocado, and potato and tuna omelette.











A moment during the signing ceremony of the agreement. From left to right: Fernando J. Antón, Pascual Capmany and Gustavo Vargas. On the right, with Carmen Rodríguez.

#### Health at Work Charter

FCC Aqualia and the major trade unions in the industry, UGT and CC.OO, have sponsored the implementation of Health at Work Charter at the company. To this purpose, they signed an agreement at the corporate headquarters in Las Tablas pursuant to which they have set out the key objectives for the ongoing improvement of work conditions to increase the level of safety and

health of workers beyond what is strictly contemplated in Law. This underscores the Company's commitment to its workers.

The document was signed by Gustavo Vargas (UGT) and Fernando J. Antón (CC.OO) on behalf of the trade unions. Pascual Capmany, manager of Safety and Health and Carmen Rodríguez, the head of Human Resources, acted as the representatives of FCC Aqualia.

A working group, created as an advisory body, beyond the legally established workers' representation, will be in charge of designing the actions pursuant to this charter. The aim is to create added value in respect of the representation of workers in the joint design of the company's safety and health policies.

#### Jose Luis Barral Campillo, prevention technician at FCC Construcción receives an Honourable Mention from the PREVER Awards

The PREVER 2013 National and International Prevention of Occupational Hazards Committee, made up of representatives from the General Council, the Directorate General of Labour, the National Institute of Safety and Health at Work in Murcia, the National Safety and Health Committee, the Foundation for the Prevention of Occupational Hazards, and the General Council of Safety and Health at Work Professionals, agreed to grant the Honourable Mention, one of the categories of the PREVER awards, to José Luis Barral Campillo, a prevention technician at FCC Construcción, Infrastructures Division – Asturias-Cantabria Management, as recognition for his merits and work in favour of the dissemination and implementation of occupational hazards prevention.

The organization gave the award during the 15th Technical Seminar on the Prevention of



Occupational Hazards and Corporate Social Responsibility (National and International "PREVER 2013" Prevention Awards) which was held in the ceremony hall of the General Archive of the Region of Murcia, in collaboration with the Directorate General of Labour, Education, Universities, and Employment of the Murcia Regional Government.

This was the second year in which a colleague from FCC receives an Honourable Mention of the PREVER awards. In 2010, this prize was given to Juan Carlos Velázquez Palacios, a prevention technician at FCC Construcción in Valencia.

Known as the PREVER Awards, this initiative has become over the years a reference in the field of occupational hazards in Spain, the European Union and, more recently, also in Latin America.

## FCC participates in the International Safety Fair

Once again, the pavilions at Madrid's IFEMA fair grounds hosted the International SICUR Safety Salon, with 38,840 professional visitors from eighty different countries.

This fair in a reference in Europe in the private, public, labour, anti-terrorist, and fire-fighting industries and where important technical seminars are carried out at the SI-CUR FORUM.

FCC participated in the seminar organized by the Mapfre Foundation, The Worker's Health: key for Social-Labour Development. The topic of this seminar was the importance of the health of those who spend a major part of their lives in work surroundings which requires taking action to enhance the quality of lives of citizens and society.

The first round table discussion at the seminar discussed factors that affect health in a more critical manner, such as our diets, physical activity, and rest in our personal lives and at work. In the second round table, entities such as FCC, F. Mapfre, Grupo Mahou-San Miguel and Acciona talked about the vision of managers on health as a core element for a company and for society in general, and expressed their thoughts on some of the issues that were raised:

- Workers' health as a competitive factor for organizations: a worker's health is unique and its impact goes beyond the workplace. It has been proven that an organization is as healthy, dynamic, and capable as its workers.
- Workers' perception of health-promoting activities: the response to these activities is positive and workers participate actively and identify it as a key factor which also contributes to implementing mandatory occupational hazard prevention measures.



- The key aspects when initiating a health-promotion policy: besides senior management's commitment, it is essential to design the right communication strategies bearing in mind the message, its target audience, and the manner of transmitting this message.
- On the question of whether or not managers have sufficient information to be able to incorporate the healthy company concepts in their business strategy: corporate management should have knowledge on the indicators that help them manage the health and welfare of the organization. They should be able to decide the design of policies and to know their impact on the business.
- The current framework for the prevention of occupational hazards: we should have proactive regulatory frameworks that promote knowledge, research, and dissemination and it should be at the service of all hierarchical levels.
- The possible contribution of a healthy company to the ageing society: the concept of a healthy company can

contribute to eliminate barriers when considering age as a factor at the workplace and in society.

FCC was also invited to the First Latin American Seminar on municipal road safety organized by FESVIAL jointly with Unijepol, the General Directorate of Traffic, the Spanish Federation of Municipalities and Provinces (FEMP), and the Madrid City Council. Representatives of various Latin American countries discussed at the seminar the importance of road traffic in cities and the different measures and good practices that are being developed for its improvement.

## Knowledge

Tui (Pontevedra)

## R+D+i results: a real-scale facility

FCC Aqualia has conducted significant research activity at the Guillarei waste water treatment plant in Tui (Pontevedra). At this facility, the company is carrying out a project to eliminate nitrogen in the water line and to recover phosphorus in a more efficient manner.



FCC Aqualia was selected as the awardee of a project for executing the Anammox (anaerobic ammonia oxidation) system to be installed at the Guillarei waste water treatment facility in Tui, province of Pontevedra. This will be the first installation of its kind nationwide.

Anammox technology makes it possible to remove nitrogen more efficiently than in the conventional process, consuming 60% less oxygen and producing only 10% of sludge.

It is best applied in hot and concentrated effluents such as those drained from the centrifuges after anaerobic digestion – which represents a load of up to 20% of the biological waste water treatment. The elimination of this load reduces operating costs and improves the quality of effluents.

As detected in the first industrial plants in Holland, the problem with this technology is that the specific Anammox bacteria were very sensitive and presented a very low growth rate. Over the past few years, FCC Aqualia's researchers have been working precisely to address this problem, jointly with the University of Santiago de Com-



postela and the staff at the Guillarei facility. Since 2009, the joint working group has focused on implementing this technology at the pilot project scale thanks to the support of the Xunta de Galicia (the regional government) and the Centre for Industrial Technological Development (CDTI, Spanish acronym for Centro para el Desarrollo Tecnológico Industrial), which co-funded the research activities.

As a result of the work carried out at the Vigo and Guillarei facilities, the company

was able to patent a proprietary system known as ELAN® (Autotrophic Nitrogen Elimination) which makes it possible to start operations rapidly and stably. The positive results enabled the implementation of this system at a real scale.

Thanks to the award of the Augas de Galicia contract valued at 242,000 euros in its initial phase, the company will build the first system of its kind to be implemented at a Spanish utility. FCC Aqualia's work will focus on contributing its expertise, work teams, and part of the facilities of this waste water treatment plant.

The project, sponsored by Augas de Galicia, contemplates the construction of the first real-scale plant in Spain

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#### Louro Consortium Management

The consortium for managing the urban water cycle of the Louro River, comprising the city councils of Mos, Porriño, Salceda de Caselas, Tui and the Xunta de Galicia, awarded a management contract for the public service to the Louro Consortium, a joint venture in which FCC Aqualia holds a controlling 70% stake.

The contract contemplates management of the supply and sanitation services in these municipalities in the province of Pontevedra; maintenance of the Guillarei waste water treatment plant, two waste water treatment plants at the Consello de Mos, and three drinking water pumping stations situated in Tui, Porriño and Salceda de Caselas.

The provision of this comprehensive service by FCC Aqualia implies full environmental protection for the Louro River, not just in terms of sanitation, but also one with a stricter inspection system for industrial discharges.

### Interview with José Ramón Vázquez

## Head of the ELAN® (Autotrophic Nitrogen Elimination) project

Although he does not consider himself as such, José Ramón Vázquez could be the prototype of what at one time was known as a JASP (Spanish acronym for "Young, although highly prepared). Holder of a doctorate degree in chemical engineering, specialising in Environmental Engineering and Bioprocesses from the University of Santiago de Compostela, Jose's day-to-day activities are currently conducted between Vigo, where he lives, Frinova, the company where he is launching the new R+D+i project, and the Guillerei waste water treatment plant in Pontevedra, a small town near the border with Portugal where FCC Aqualia is building the ELAN® system.

Thanks to this development by the Innovation and Technology tea at FCC Aqualia, the waste water treatment plant in Galicia will remove nitrogen from waste water more efficiently than by using the conventional process, consuming 60% less oxygen and producing only 10% of sludge.

#### What has the real-scale installation of this "laboratory" technology meant for you personally?

A great satisfaction certainly. The fact that a 100% Spanish project which started in a small scale and gradually passed various phases until being implemented in an industrial scale is the maximum aspiration of any researcher. As we often discuss among our project colleagues, this is a small step in research worldwide, but a great step for FCC Aqualia's R+D+i.

How do you think that R+D+i will help to enhance the efficiency of processes at waste water treatment plants? Do you think this is essential? Is this what the future holds in store?

Without any doubt. The future of waste water treatment involves the development of R+D+i. Traditional waste water treatment technology is 100 years old. Moreover, due to the serious current crisis, enhancing efficiency is now a priority. Perhaps because of this, waste water treatment is underpinned by: quality, efficiency, and sustainability.

In this context, the research that we are conducting with ELAN® addresses these demands, since it does not only improve



From left to right, José Ramón Vázquez, head of the project, with another researcher during the AD13 Congress held last year in Santiago de Compostela where the company played an important role. The Anammox pilot project which FCC Aqualia took to the stand and which was a great success is shown in the photograph.

the efficiency of the treatment process, it is also efficient. What all of us were able to accomplish together was to achieve great improvements with a simple modification at the treatment plants.

#### Do you believe that FCC Aqualia is at the forefront in R+D+i?

If we look at the growth in research activity at the company over the past few years, the resources employed, personnel and the number of projects that have been developed, the answer is certainly "yes".

There are also other external criteria which make us think that everything is going well. One example of this is the increasingly active participation of FCC Aqualia researchers at international conferences. Another clear indicator is the fact that administrations entrust us with their public resources so that we can study new technologies. They also commission us, as is the case with Guillarei with the ELAN® technology, to implement this development in a real scale. All of this leads me to believe that FCC Aqualia is increasingly associated with innovation in research circles.

#### In your opinion, what do administrations value the most in having FCC Aqualia as a technological partner?

When you talk to administrations, they tell you that they lack the direct resources to be able to carry out real research activity. This is why they are increasingly depending on specialised companies, very involved in

FCC Aqualia, at the forefront of R+D+i

projects (the small "i" in the equation).

day-to-day operations, such as our company that can offer them not just good ideas but also the know-how and the possibility of applying and implementing these

This is a small step in research worldwide, but a great step for FCC Aqualia's R+D+i."

I recently participated in a forum at the University of Vigo on Cooperation among Companies, Institutions, and Universities in Water Management and one of the ideas put forth was the future evolution of this cooperation between administrations and operators so that both can share the cost of innovation as well as the possible profit that could result from its application. In Spain, this model has not consolidated in the majority of tender processes but it could be very beneficial for stimulating the innovative spirit of companies.



Photograph of the group participating in the project

#### At the Lancashire landfill site

### FCC Environment

#### takes first step towards micro-power

Leading recycling and waste management company FCC Environment has begun operating a micro-turbine at its Deerplay landfill site on the outskirts of Burnley Lancashire.

FCC Environment is the largest landfill operator in the UK counting some 120 operational and former landfill sites in its property portfolio.

"The move to using a micro-turbine provides viable power production long after conventional power generation has ceased, delivering considerable energy efficiencies

and reduced emissions compared to a gas engine, and its modular design makes it suitable for most applications," says FCC Environment's Senior Environment Manager Shaun Trigg.

"There are only one or two other examples of micro-turbines operating on landfill sites in the UK and ours is the most modern and efficient. We are constantly looking at ways of reducing our impact on the environment and maximising the value of the resources we have available.

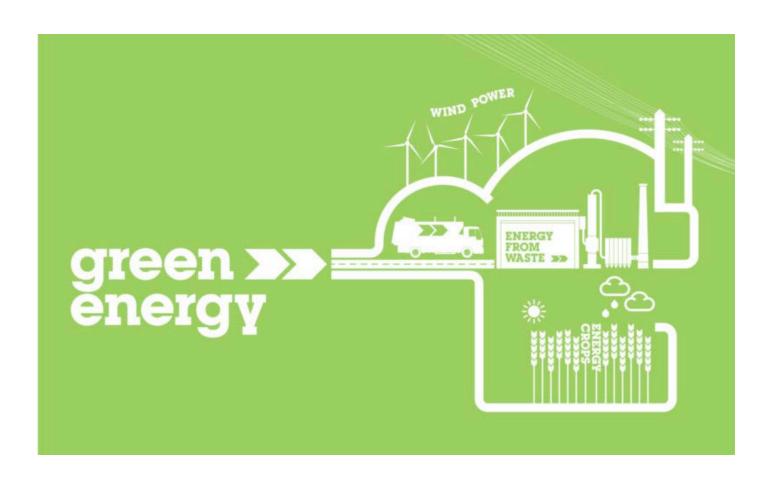
"Micro-turbines are likely to become more numerous in the future simply because of the efficiencies they provide," concluded Trigg.



Shaun Trigg, FCC's Environment senior environment manager.

The micro-turbine, a Turbec T100 which can be CHP enabled, has been supplied and installed by Cheshire-based Newenco.

With just one single moving part – the turbine fan – micro-turbines can operate at 80 per cent efficiency and require significantly less maintenance compared to a standard gas engine.





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Servicios Ciudadanos

## The Place

## In the Czech A.S.A.'s Slovakia, compost Hungary and Poland plants

Compost, a valuable alternative resource that replaces industrial fertilizers.

Compost has its origins in the breakdown of biological material (vegetables) and is used in agriculture thanks to its ability to improve the quality of soil significantly.

#### The process

Composting is basically a natural process based on the gradual breakdown of biological material with the help of aerobic bacteria (who live in the presence of air). Industrial composting simply intensifies this process by improving the conditions for bacteria. This means grinding and aerating greenery waste. In the case of some technologies, the

entire process is performed in special composting tunnels or in outdoor surfaces which have been prepared specially for this purpose. Biological stimulators can also be used such as other bacteria or lignocellulose. The temperature and humidity of the waste are constantly monitored during the composting process.

#### What is it made of?

Compost is made up of biodegradable fractions, especially vegetable biological waste from households and gardens; cut grass, branches, fruit and vegetable waste, pruning waste from public green areas such as parks and, in the case of some technologies, sludge from waste treatment plants which can be useful, although not always profitable. Composting can be considered a type of recycling.

Compost consists of biodegradable fractions and is at least as efficient in agriculture as synthetic fertilizers



Planta	País	Inicio de las operaciones	Capacidad prevista (t tratadas/año)	Material producido (t media/año)
Planta de compostaje OBSED	República Checa	2007	30.000	1.500
Planta de compostaje <u>Tisová</u>	República Checa	2006	10.000	7.000
Planta de compostaje <u>Únanov</u>	República Checa	2011	5.000	1.000
Planta de compostaje <u>Borek</u>	República Checa	2004	1.000	1.000
Planta de compostaje <u>Žabčice</u>	República Checa	2009	10.000	6.000
Planta de compostaje <u>Trnava</u>	Eslovaquia	1999	4.000	3.000
Planta de compostaje <u>Gyál</u>	Hungría	2012	3.400	1.500
Planta de compostaje <u>Hódmezővásárhely</u>	Hungría	2008	5.000	3.000
Planta de compostaje Zabrze	Polonia	2012	32.000	2.200

sing the yield and quality of fruits and vegetables. Produced compost can also be used for the recovery of landfill sites.

#### The greatest challenge

.A.S.A.'s experience underscores that the greatest challenge for the compost business in to be able to sell the product. Nevertheless, people are becoming increasingly aware that compost is the same or even more efficient that synthetic compost: it contains the same nutrients but at a lower cost. Compost, therefore, is a valuable alternative resource for replacing industrial fertilizers.

.A.S.A. anticipates that there will be a significant increase in biological waste over the coming years as municipal waste collection systems gradually increase.

#### The reasons for composting

The main reason for composting is to reduce the volume of waste delivered to landfill

sites: an obligation of EU countries with strict deadlines for meeting this target.

It is important to limit the proportion of biodegradable waste at landfill sites since biowaste is a source of leachate and biogas, mainly methane, which represents most of the biogas produced that has a significant greenhouse gas effect. Compost provides nutrients to the soil and also has anti-erosion properties (the ability to retain more water in the soil). Therefore, the use of compost in agriculture offers several advantages such as improving the structure of the soil and, consequently, the health of plants, increa-

### Guest Column

Teresa Molina Martín and María Valencia Sandonís DOO, Master's degree in optometry and visual therapy Technical managers at the Visual Health Institute

## New Technologies & Vision Health: is coexistence possible?

Did you know that 72% of the Spanish population (25 million people) have used a computer in the last 3 months and that 53.8% of them use it on a daily basis? And that 80% of employees who use computer suffer discomforts throughout their professional lives? Do you know anything about the Computer Vision Syndrome?

The new technologies are rapidly entering our lives, not just for work, but also as part of our leisure and, therefore, the hours that we spend in front of a computer, cell phones, tablets, etc. has increased very significantly.

We have been witnessing over the past few years its consequences, such as vision, muscle, and mental disorders. Nevertheless, the new technologies are developed to make our lives easier and it becomes very difficult not to use them. Accordingly, we should learn how to prevent, with the tools at our disposal, so that the consequences of excessive use of such technologies are not detrimental.

In terms of vision, these difficulties are due to the failure of our vision system to function







Our vision can coexist with the new technologies, although we must learn how to adapt it

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for a long time looking at a short distance. Our vision has not evolved at the same rate as our daily habits. It was not that long ago that we spent our time gathering and hunting and at that time we needed good vision for long distances as well as good peripheral vision so that we could be aware of what was happening in our surroundings, thus ensuring our survival. Currently, we spend most of our time in closed environments, increasingly smaller, working at a close distance and this leads to several symptoms,

such as irritation, watery and red eyes, the sense of having sand in our eyes, cloudy vision at close distances, difficulties for looking afar after spending too much time looking at things up close, double vision, ocular pressure, etc.

Since 80% of the information that we receive, process and interpret is provided by our eyesight, we should be aware of the role that it plays and the impact that this could have on our working lives. Its importance is such that, in processes such as reading, 100% of the information is perceived through our eyes.

We should be aware that vision problems in relation to our job performance when we work with computers are problems that can be avoided and that there are several solutions for addressing these problems.

- The use of special prescription eyeglasses with corrective lenses to reduce fatigue when we work at a close distance.
- Vision therapy to improve the performance of our vision system, making it less difficult, for example, to focus our eyesight.
- The use of eye-drops to moisten the ocular surface sine working in front of a computer screen reduces the number of times that we blink and this can produce ocular dryness.
- The use of selective absorption filters that reduce fatigue, since it





enhances contrasts and prevent the entry of blue light, which causes the most discomfort.

- Personalised adaptation of contact lenses in case that it is necessary to correct a refracting defect such as nearsightedness, farsightedness, astigmatism, or eyestrain.
- And lastly, follow simple visual ergonomic rules that enable us to improve our eyesight and, accordingly, our job performance:

- ☐ Keep a correct distance from the computer, between 50 and 60 cm.
  - Place the computer screen in such a way that our eyes are aligned with the top border so that our eyesight looks downwards, a more ergonomic position which also allows our eyelids to keep our eyes more lubricated.
- Avoid reflections on the screen and this way, our brain will not have to eliminate the reflected image and we will save time.
- Avoid drafts on our eyes and blink frequently to improve the lubrication of the ocular surface.
- When we work at a close distance, it is recommended that we cover our eyes every 90 minutes with our hands, trying to visualise with our eyes closed that we are, for example, in a theatre and that the curtain goes down slowly, this way our brain will perceive darkness and our eye focus will relax.
- Washing our eyes with cold water or with any relaxing solution when we start to notice symptoms fatigue.

It is necessary to go for an eye check-up once a year and, of course, as soon as we notice any of the above-mentioned symptoms. The optometrist is the one responsible for checking the health of our eyes and the professional who will determine if it is necessary to use eyeglasses, contact lenses, if vision therapy is necessary and will also explain the vision hygiene rules that we should take into account to improve the performance of our eyesight.











A World Heritage Site,

## a colonial and modern city





Peru has become a reference country for FCC.
Bathed by the waters of the Pacific Ocean and guarded by the Andes, the country's economy is currently booming thanks to the efficient management of its resources.

Lima is situated in Peru's central-eastern coast, bathed by the Pacific Ocean and at the bank of the Rímac River which is where the city of Callao, home of the country's most important port and one of South America's largest in the Pacific Ocean is located. FCC is currently revamping this port to adapt it to current load transport demands, the size and depth of vessels and to outfit it with enhanced performance equipment according to the different types of cargo handled at this harbour.

Founded in 1535 as the City of Kings, Lima was the capital of the Viceroyalty of Peru and the largest and most important city in South America during the Spanish colonial period and the main political and administrative centre of South America. After Peru achieved its independence, Lima became the capital of the newly-founded republic.

#### A modern metropolis

Peru's capital is the home of the State's political bodies and is currently the country's largest city and its economic, industrial,

cultural, and social hub. It is a modern metropolis which has become one of the most important cities in South America, recording the strongest growth, and home of 25% of the country's population, about eight and a half million inhabitants.

#### **Principal monuments**

Its colonial architecture is unique in the region, a heritage of the Vice-royalty, and in 1991 was declared a World Heritage Site by UNESCO.

Lima's historic district is where the city's most important architectural monuments are situated, including sites such as the pre-Columbine Pachacamac archaeological sanctuary, one of the largest and most important in Peru, and several homes, temples and churches dating back to the colonial pe-



declared Lima a World Heritage Site because of its colonial architecture

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riod. These monuments include: the Cathedral, an architectural jewel; the Torre Table palace one of the best examples of Lima's residential style from the 17th- century; and, Casa Pilatos, the current headquarters of the Constitutional Court.

The city's landmarks also include: the Plaza de Acho bullring, the oldest in America;

the Alameda de los Descalzos, a pedestrian walk in the Rímac district full of statues; the Parque de las Leyendas, where zoology, archaeology, and botany go hand-in-hand; the Inquisition Museum; the Army Museum Forteleza del Real Felipe, a great tourist attraction; and the Government Palace in the city's historic district located in Plaza Mayor, one of the country's most important buildings as the home of the executive power as well as for its architecture with a neo-baroque main façade inspired by French architecture, and the lateral neo-colonial lateral façade.

#### Gastronomy, a fusion of different cultures

Lima also offers a rich cuisine, the result of the fusion of several cultures with those of Peru. Its dishes are inspired by Spanish, oriental, Italian, Afro-American, and Latin-American cultural and racial mix.

Lima's cuisine offers many exceptional dishes such as ceviche, stuffed potatoes,

soups, sautéed loin of pork, anticuchos, causa limeña, ají de gallina, and many other delicious dishes.

The recommended drinks and beverages include chicha morada, pisco and the local beer and, for dessert, one must try its delicious rice pudding, picarones, mazamorra morada and the doña Pepa nougat.

Also located in the Lima region is Ciudad de Caral, a vestige of an ancient civilization, dating back to more than 5000 years, and a tourist attraction for those interested in pre-Columbine history and archaeology.



# FCC in Peru



Fernando Moreno, chairman of FCC Construcción at the centre of the photo speaks with Carlos Paredes Rodríguez, the minister of Transport and Communications on his right after signing the contract on 28 April.

#### Lima's metro system



Watch

A few months ago, a consortium headed by ACS and FCC was awarded a contract worth 3.9 billion euro to design, build, finance, operate and maintain line 2 of Lima Metro and a spur from Line 4 to the airport.

Construction is expected to take five years, after which the consortium will operate the lines for 30 years.





#### Callao Port

FCC is building the new Callao Port, the largest in the country and one of South America's largest Pacific ports, for around 165 million euros.

The work in the port corresponds to contract number 3, as part of a very ambitious investment plan, broken down in phases, amounting to 1 billion dollars through 2020. The project will also affect piers 5 and 11, which will measure 560 metres and 280 metres, respectively.



Pier 5 is used for handling containers and bulk ore, while pier 11 provides port services for the import of agricultural products and has cement silos with a storage capacity of 25,000 tonnes.

FCC will be completing the work on this phase of the port, which handles more

than 1.9 million containers each year, in 23 months, for the client APM Terminals, a Maersk Group company, is the world's fourth-largest port operator.

## Trujillo sports complex

In Peru, FCC is also building the Trujillo sports complex, in the country's north-eastern region, known as the Chicago Sports Complex. The athletics stadium, seating 5,505 spectators and with a total area of 23.587 m2, includes a 400-metre track with a central enclosed area with natural grass, 2 long and triple jump runways measuring 61 metres with a sand box on each side, 2 pole vaulting runways, 2 high jump areas, 2 javelin throw runways, 2 discus throwing platforms, and 2 hammer throwing platforms. The complex also has a closed coliseum for different types of sports events and a multi-sports area for basketball and volleyball.



