Communication Network

News for the people of FCC

ISSUE 34 2017

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a project awarded to the Carso Group in which FCC participates.

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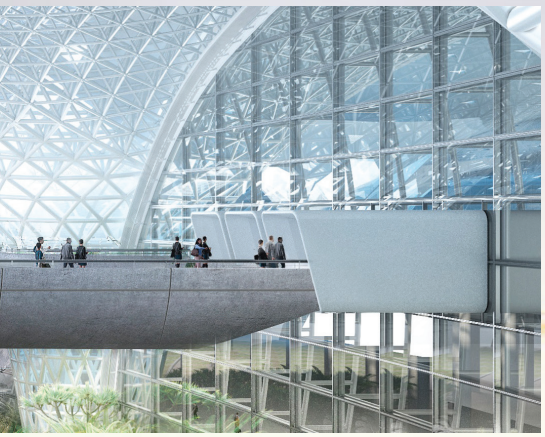
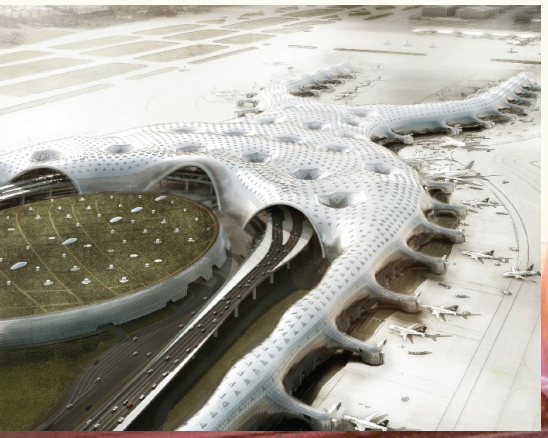
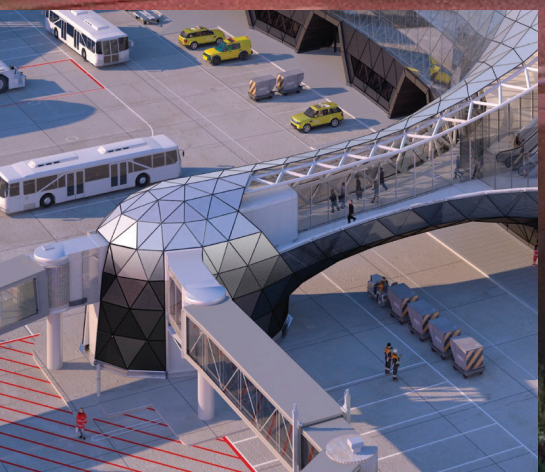
FCC to build the new terminal at Mexico City Airport

The project was awarded to the Carso Group consortium, in which the Citizen Services Group participates, for 3.9 billion euros.







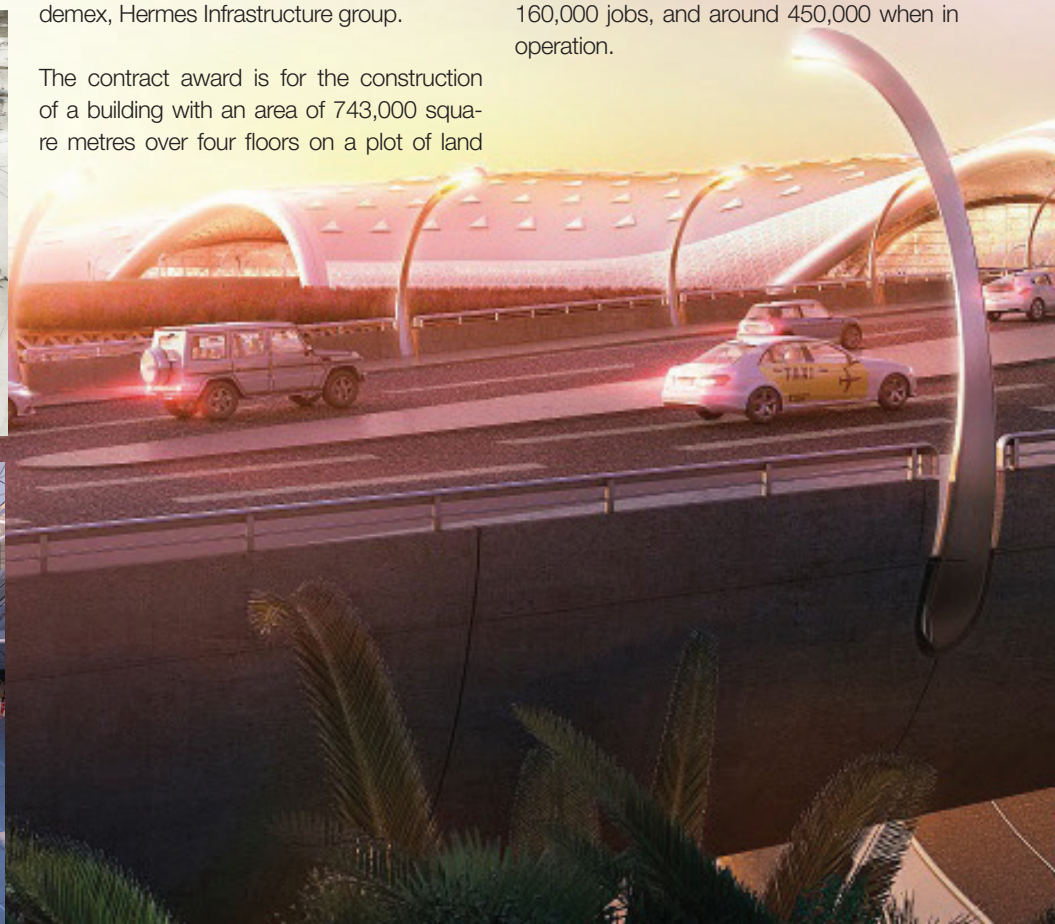
The Mexico City airport group, belonging to the Secretary of Communications and Transport of the Mexican Government, has awarded the contract for construction to the consortium led by Grupo Carso, which includes FCC. The consortium will build the terminal building of the new international airport for Mexico City (NAICM) in the Federal District of Lake Texcoco after submitting the best economic and technical bid. The contract is worth 84.8 billion Mexican pesos (4.2 billion dollars / 3.925 billion euros) and will have a 44 month completion deadline.

The new airport will be the world's second most important under construction, and the main contract to build the new airfield will be one of the largest infrastructure works currently underway in Latin America.

The consortium working on this iconic project, led by Carso, is made up of Spanish companies FCC and Acciona and local Mexican construction companies ICA, GIA, Prodemex, Hermes Infrastructure group.

The contract award is for the construction of a building with an area of 743,000 square metres over four floors on a plot of land measuring 4, 430 hectares. Arrivals, baggage reclaim and all services relating to ground handling and the baggage handling system will be located on the first floor. This level will also include access to the car park, the flight information area, the short stay car park and access to the Metro from the Ground Transportation Centre. The second floor will be used for international arrivals, immigration and the flight transfer area. Departures will be located on the third floor which will have a large central shopping area, departure passageways and an area reserved for Pre-clearance. Lastly, the fourth floor will include a car park, the check-in area and security control. The surface area of the roof will be double the size of that in Terminal 4 of Adolfo Suárez Madrid–Barajas Airport. It will be made of aluminium sheets and ceramic glass that will channel rainwater, wind and sunlight through pipes and photosensitive systems in order to be used inside.

The construction of NAICM will create around 160,000 jobs, and around 450,000 when in operation.



The building has been designed by architects Norman Foster and Fernando Romero and will take the shape of an X, alluding to Mexico. It will have the capacity to transport around 125 million passengers per year.

In addition, the new terminal will have six runways with "triple simultaneous" operation which will make the future airport of Mexico City one of the first to use this system outside of the European Union. The building will be sustainable and have LEED Platinum energy certification (Leadership in Energy & Environmental Design), with a neutral environmental footprint.

The project will involve large-scale hydraulic works. The regulation capacity of the area will be tripled to 38 million cubic metres (60 times that of the Aztec Stadium in Mexico City), thereby limiting the risk of flooding. 24 water treatment plants will also be built to increase the treatment capacity available and casing will be placed on 25 kilometres of open drainage network. These measures will reduce health risks and bad odours while also increasing the availability of clean water in the area. The water used in the terminal will also be 100% treated so as not to affect the drinking water supply of the surrounding areas.
An environmentally degraded area will be regenerated by the project. New green areas will be created, including the 'Bosque Metropolitano' [Metropolitan Forest] which, with an area of 670 hectares, will become the area's main green zone. In addition, new wetlands will be created to protect local biodiversity and reduce the impact of noise pollution on the nearby population.

FCC's experience in airport projects

FCC's participation contributes the experience of a construction company with more than 110 years of experience, proven technical capabilities, and expertise in the execution of projects of these characteristics, thereby ensuring its successful execution. FCC has been involved in the construction of major airport works, including: Terminal 4 in Madrid Barajas airport, Terminal 2 in Barcelona-El Prat airport, Riga airport in Lithuania and the international terminal of the Santiago de Chile airport. Recently, FCC also completed the control tower of Bogotá airport in Colombia.

> "The new terminal will measure 743,000 square metres divided into four floors in a 4,430 hectare lot."

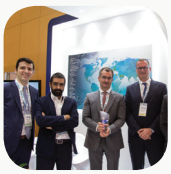
Fallo de Construcción del Edificio Terminal del NAICM del Gobierno de México

FCC Group

2016

Secured contract for road, beach and promenade cleaning as well as waste collection contract in San Bartolomé de Tirajana, Gran Canary Island.

Won two new contracts in Norfolk ad Harborough for waste management and street cleaning in the UK and delivered the Greatmoor energy-from-waste plant to the Buckinghamshire County Council in the UK.



Receives award in Saudi Arabia for our contribution to upgrading the water sector.

Completed the south section of Line 9 of the Barcelona Metro.

Renewed water supply contract in Zaragoza.

Won contract for revamping the industrial facilities in Dublin Airport, Ireland.

Completed excavation work for Line 5 of the Riyadh Metro and secured the first joint Carso and FCC contract: the Samalucya and Sásabe gas pipeline.

January | February | March | April | May | June

Started the waste collection service in Orange County, Florida.

Commissioned the nanofiltration plant in Huechún, Chile.

The street cleaning and waste collection contract in Oviedo extended for another five years.

FCC Aqualia to develop the El-Alamein desalination plant in Egypt .

Secured contract for the maintenance and cleaning of ornamental fountains in Barcelona.

Awarded contract for the design, construction and operations of the El Salitre WWTP plant in Bogota.

Environment Water Construction Group

Acontecimientos 2016

Highlights

Spanish cities and towns where we conduct our activities distinguished as the cleanest with the "gold and platinum brooms".

Awarded 4-year management contract for the wastewater treatment plant in Sollano, Bilbao.

Secured contract for the collection of municipal solid waste, Lot 1-West Zone of Madrid and executed waste management contract in Edinburgh and Midlothian, Scotland.

Jointly with SEAT, created the first 100% Spanish alternative fuel from wastewater.

Completed the deck of the Almonte Viaduct, one of the world's highest-light rail high-speed rail bridges.

New contracts for waste collection and street cleaning in Polk (Florida, USA), Barrow (UK) and Prostejov (Czech Republic).

Secured contract for the operation and maintenance of the La Gavia WWTP.

The FAST Consortium wins Global Tunnelling Team of the Year award for the work conducted at the Riyadh Metro and completed boring the Bolaños tunnels for the Madrid-Galicia high-speed railway.

July

Won contract for maintenance and cleaning of the fountains of the city of Barcelona, incorporating in the workforce groups that encounter difficulties in joining the job market .

Inaugurated the expansion of the Panama Canal and completed work on the Doha Metro viaduct in Qatar .

August

September

All business areas awarded Equality seal.

Won contract for basic and scheduled cleaning and related services in Pamplona.

Participated in the Methamorphosis Project to convert waste treatment plants into bioenergy factories.

Completed the construction of the tank of the first liquefied natural gas (LNG) plant in Finland.

October

November

Created human bond to support the campaign against gender violence.

Won contract for the treatment and marketing of recyclable material from University Park, Texas, and won gold medal at the P3 Awards 2016 for the waste treatment plant in Dallas and for our commitment to the integration of vulnerable groups in the workforce.

Participated in the Smart City and iWater congresses in Barcelona.

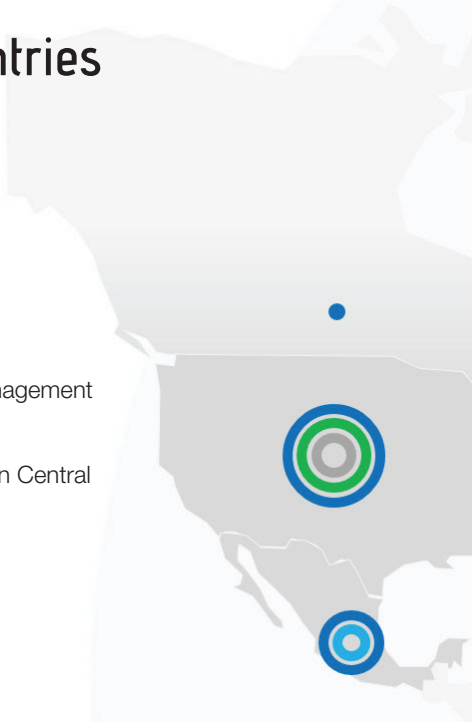
The Engineers Association of Madrid awarded us the prize for sustainability and social responsibility for the SAMCEW Project.

December

We are glocals

Global and Local

We operate in more than 25 countries



Environment:

- 1st in Spain
- Among the 5 leading players in waste management in the United Kingdom
- 1st in comprehensive waste management in Central and Eastern Europe

Water:

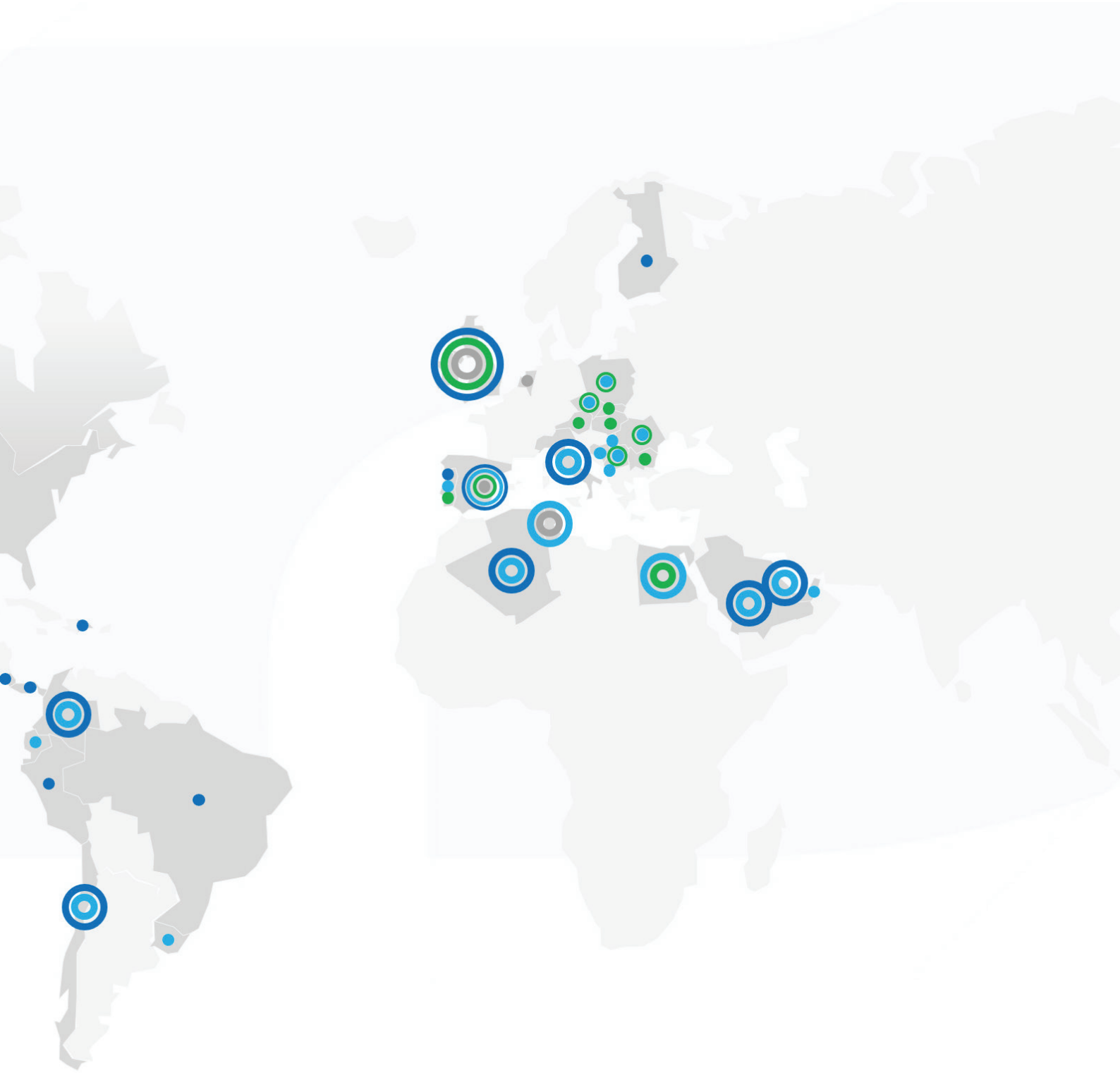
- 1st in Spain
- 3rd in Europe
- 7th in the world

Construction:

- 3rd in Spain
- Among the 20 largest construction companies in Europe

Cement:

- 1st producer in Spain
- Important presence in the eastern coast of the United States and in Tunisia



FCC in Dallas

Dallas is a great city, a blend of cultures and lifestyles and one of the most diverse destinations to discover and experiment. With a population of 1,258,000 people, it is a destination of many opportunities, from shopping, to excellent cuisine and great cultural potential with a large choice of museums in its metropolitan area, leisure areas, parks, and urban spaces to enjoy nature.

Also, according to the Resonancy Consultancy Report, Dallas is ranks as one of the best cities in the United States for business and leisure and, in the recent years, has become the number one destination in Texas thanks to the celebration of major events, the fact that it is easily accessible since it has two major airports, and the new urban projects.

Contracts in Dallas

Contract for management of recyclable waste in Dallas

On 2 January, FCC opened operations at the plant to handle all recycable waste from the Texan city. The 15-year contract, which could be extended for another 10 years, was awarded to the Citizen Services Group at the end of 2015. Backlog for the Dallas plant is estimated at around 270 million euros (300 million dollars).

The facility will be processing 120,000 tonnes of waste a year applying the most state-of-the art sorting and classification techniques, including optic sorters and gravimetric sorting machines.

All of the waste collected in the single recycling container will be sorted into different categories. It will recycle and give thousands of tonnes of paper, cardboard, glass, plastic and metals produced by the citizens of Dallas, back to the market, thereby following the circular economy principles.
Work was executed according to schedule and includes the construction of the main building housing the automatic waste sorting plant featuring the most advanced technology in the industry, as well as two adjacent facilities: the office building, dressing rooms, visitor's centre, and a workshop for mobile machinery.

Videos **Part 1** **Part 2** **Part 3**

The recycling plant measures 5,400 m², the office building a total of 840 m², and the workshop 300 m², bringing the total size of the facilities to 5.3 hectares, equal to the size of eight soccer fields.

The contract also contemplates the creation of an information centre where FCC personnel will explain to the residents of Dallas the importance and benefits of recycling.

This contract was awarded in a strategic location since the Dallas-Fort Worth area in northern Texas, with a population of nearly seven million people, is the fourth largest metropolitan area in the United States after New York City, Chicago, and Los Angeles.

Awards

FCC Environmental Services, the US subsidiary of FCC Environmental Services, has received the P3 Bulletin Award for the single-stream Material Recovery Facility (MRF) on the McCommas Bluff Landfill site in southern Dallas, Texas in the category Best Waste/Energy/Water Project.

The design was based on helping the city to meet goals to increase waste diversion to: 40 percent by 2020, 60 percent by 2030, and 80 percent ("zero waste") by 2040.

The P3 model that FCC proposed stood out because it was the highest scored in all areas: technical, educational, operational and financial, guaranteeing a positive financial value to the City along the contract term. The panel of judges for the award were enthusiastic because the project provides a model for the US for waste reduction in the future, offering a strong and efficient solution to an increasing problem in the United States.

The waste facility in Dallas already in operations

During the last two weeks of December, over 1,000 tonnes of single stream materials coming from the city of Dallas and from University Park were received and process at the new recycling plant which started operations on 2 January.

Key figures

Processing capacity:

- Up to 120,000 tonnes/year of single stream.
- 25,000 tonnes/year of commercial waste.

Term of the contract:

- 15 years with the possibility of extending it for another 10 years.

Main recycled products:

- OCC (old corrugated cardboard)
- ONP (old newspaper pulp)
- Glass
- Plastic containers: PET and PEAD
- Metal containers

Contract in University Park, Texas

Last November, FCC secured a new contract in Dallas for the treatment and marketing of recyclable waste in University Park, Texas.

The Citizen Services Group will process 3,200 tonnes per year of recyclable waste (glass, aluminium, cardboard, paper, plastic and steel) generated in University Park which will be processed at the Dallas facility. The term of this contract is five years with scope for a five-year extension.

Contract revenues could exceed 3.2 million euros, depending on the final term of the contract and on commodity prices.

University Park, with a population of approximately 24,000, is located in Dallas County in the State of Texas.

C O N T E S T

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For the Communication Network Magazine

We need

- A name that is:
  - Short, no more than two words
  - That can be translated and applied easily to English
- One paragraph, maximum five lines, explaining the proposal.
- Your first and last names
- Name of company
- Your e-mail address

The Corporate Marketing and Brand Department is launching a contest of ideas to find a new name for our Red de Comunicación (Communication Network) Magazine. We want to revamp the publication, making some changes to promote the information and dissemination of its contents.

We invite you to participate in a contest to propose and select the name that best represents our magazine.

Use your imagination and creativity and **forward to us your best proposal**. The winner will receive a set of gifts from FCC.

Contest deadline: 6 February

Send your ideas to:
marketingcorporativo@fcc.es

FCC Aqualia, bolsters its leadership in wastewater treatment

Aqualia, the FCC Company engaging in water management, closes the year by incorporating three new contracts. Its road map is full of new initiatives and the Company is present and participates in the major global events on comprehensive water management.

In the sanitation field, Aqualia has incorporated three new plants: one in Madrid and two in Aragón. In the latter autonomous community, the Company is the leading operator in water management and treatment.

Aqualia, a company specialised in the design, construction and operation of all types of sanitation infrastructure, manages 445 wastewater treatment plants in four continents. In this regard, the company significantly helps to improve the quality of life in areas where it works.

Along with its experience in sanitation and purification projects, the company develops different R+D+i initiatives to apply new technologies to these processes.

La Gavia WWTP in Madrid

Canal de Isabel II has awarded Aqualia the operation and maintenance service for the La Gavia Wastewater Treatment Plant (WWTP). The 4-year contract is worth a total of €115 million.

The La Gavia WWTP features the most advanced technologies, making it one of the most modern and largest facilities in Spain. Designed to treat an average of 2 m^3/s (172,800 m^3 per day) for a population equivalent to 1,353,000 inhabitants, the plant consists of a highly advanced re-use system that will allow for treated water to be used for agricultural and industrial uses as well as park and garden irrigation The La Gavia water treatment plant treats wastewater from the two La Gavia (Gavia I and Gavia II) water collectors and the surplus from the La China (South Collector) water treatment plant.

The wastewater flow through the La Gavia WWTP allows 97% reduction of organic matter and suspended solids, and 85% of nitrogen and phosphorus, through an advanced biological treatment with nutrient removal. The wastewater treatment plant not only produces reclaimed water, but also obtains a sub-product, the sludge, which, according to an integral concept of sustainable development, is treated in four 7,250 m^3 anaerobic digesters, thus reducing organic matter and also obtaining methane gas, which is used to heat the sludge before entering the digesters, as well as generating electricity. The La Gavia WWTP produces 5,500 MWh per year, which is enough to supply a population of 1500 inhabitants and minimising CO_2 emissions.

The relationship between Aqualia and CYII (Canal de Isabel II) is a clear example of an organic collaboration between public administrators and/or mixed and private companies within a sector where collaboration between government and companies has been working very well for years, for the benefit of citizens.

Aqualia secures two new contracts in Aragón

The new contracts for the Bajo Cinca (Fraga, Mequinenza and Zaidín) and the Huesca-Almudevar plant bolster Aqualia's positioning as the leading management and operations operator of wastewater treatment plants (WWTP) in Aragón.

In December, the Company announced that it had been awarded two contracts by Instituto Aragonés del Agua (Water Institute of Aragón) for the operation, maintenance and upkeep of the wastewater treatment plants in Bajo Cinca, which include the Fraga, Mequinenza and Zaidín WWTPs, and the Huesca - Almudévar plant, all located in the province of Huesca.

Huesca-Almudévar WWTP

The new 3-year contract at the Huesca - Almudévar WWTPs is worth over two million Euros. The Huesca WWTP has been managed by Aqualia since it was commissioned in 1999. Furthermore, the Almudévar WWTP was included in the operations contract of the Huesca plant in 2008, the year on which management of the facility was transferred to Instituto Aragonés del Agua.

The Huesca facility has the capacity to treat a daily flow equivalent to a population of 130,000 people with an average daily flow of 24,000 cubic metres. The biological treatment is performed with activated sludge in two aerated lagoons with a total volume of 5,185 cubic metres. The sludge produced is stabilised in a single-stage 3,670 cubic metre anaerobic digester. The biogas generated is used in a CHP system with electricity generation for self-consumption and heat recovery. Once the sludge is digested, it is dewatered in centrifuges and all of it (about 4,500 tonnes/year) is sent to composting for agricultural use.

The Almúdevar WWTP has a treatment capacity to serve a population of 3,384 people, which translates into a daily average flow of 1,701 cubic metres. The biological treatment involves extended aeration in two aerated lagoons with a total volume of 720 cubic metres. Sludge produced is dewatered in centrifuges and all of it (about 150 tonnes/year) is used for composting purposes.

The Bajo Cinca WWTP (Fraga, Mequinenza y Zaidín)

The Fraga plant has the capacity to treat water for an equivalent population of 16,000 and an average daily flow of 5,500 cubic metres. It has two wastewater pumping stations on the right and left banks of the River Cinca which pump part of the wastewater treated at the WWTP.

The Mequinenza WWTP treats wastewater of a 1,500 population equivalent and has an average daily flow of 500 cubic metres. The contract awarded has a term of 3 years and is worth a backlog of 1.3 million euros (with the possibility of a one-year extension).

With these new contracts, the Company bolsters its positioning as the leading player in wastewater management and operations in Aragón where it manages 24 WWTPs and 18 pumping stations, treating an approximate flow of 16 million cubic metres/year.

In 2016, Aqualia also won the contracts put out to tender for the cities of Caspe, Tauste, and Alagón in Aragón.

> “FCC Aqualia currently manages 24 WWTPs and 18 pumping stations in Aragón, representing an annual flow of 16 million cubic metres.”

#nolotires

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Line 2 of the Panamá metro, the first Central American city with an urban metro

More than two years ago, FCC Construcción completed building Line 1 of the Panama Metro system. This line was the first metro system built in Central America and its purpose was to offer residents an alternative means of transport to avoid the traffic congestion affecting Panama City and surrounding areas.

Based on the experience acquired during the construction of Line 1, in July 2015 FCC was awarded a contract for building Line 2 of the Panama Metro System. Expected to be completed in 44 months, the budget for the project amounts to 1,857,708,728.90 dollars. The project consists of a 21 kilometre-long elevated section with 16 stations strategically placed from San Miguelito (north) to Nuevo Tocumen (east).The initial capacity is for 16,000 commuters per hour in each direction, with 21 5-wagon trains each designed to transport a maximum of 40,000 passengers during peak hours.

The strategically situated metro stations are in San Miguelito, Paraíso, the intersection of Via Cincuentenario, Villa Lucre, El Crisol, Brisas del Golf, Cerro Viento, San Antonio, El Parador de Pedregal, Don Bosco, Universidad Tecnológica de Panamá, Las Mañanitas, Hospital del Este, Altos de Tocumen, 24 de

Diciembre and Comunidad de Nuevo Tocumen urban districts.

FCC has currently executed more than 625 foundations of the necessary 1,190; 380 pillars and 221 column capitals. It has built 228 of the u-shaped beams for the viaduct of which 159 have already been placed. The Company is working of 14 of the 16 stations simultaneously and has completed the complete form structure of three stations. In addition, it has delivered the first section of the GDE viaduct to make it possible to start assembling the rail, thereby achieving the contemplated milestones.

Line 2 of the Panama Metro extends the benefits of the suburban transport system, integrated in the Master Plan for the Panama Metro and contributing to improving the commuting of half a million people. This line connects directly with the San Miguelito Station and, by means of an elevated viaduct, will stretch to the East Sector, along Domingo Díaz Avenue and the Pan-American Highway.

Line 1 was executed in record time

The construction phase of Line 1 was executed in record time, over a period of just slightly more than three years. The project contemplated the construction of a 15.9 km metro line of which 7.5 km were built underground, 7.1 km above ground, and 1.3 km in trenches. There are 14 metro stations (six above ground, seven underground and one which is half-buried); two trenches (from where the train goes from the above ground section into the underground part); five ventilation shafts and an industrial area of patios and workshops housing the operating centre of the rail transport system.

The route was inserted in a corridor with great demand for public transport, benefitting more than one million commuters. Operations started on 5 April 2014 carrying 16,000 passengers per hour during peak hours. Maximum demand has reached 280,000 passengers in one day.

Great experience in building metropolitan railways

FCC has demonstrated its sound experience in building metropolitan railways. In Madrid, it executed the extension of Line 10 of the Madrid Metro system to Metrosur, Line 8 of the International Madrid Barajas Airport; Line 2 of the Madrid Metro (Las Rosas) and the Puerta del Sol Suburban Train Station. In Barcelona, the Company built Line 9, 4th Section; Bon Pastor to Cam Zam and Sagrera university area; Line 5, section Horta-Vall d' Hebron and Line 2, Clot- La Pau section.

In the international front, the Company's most representative projects include the Lisbon Metropolitano (Portugal), Alameda-Expo section; the execution of the Athens Metro (Greece); the above-mentioned Line 1 of the Panama Metro. The Company is currently involved in the execution of the Toronto Metro (Canada); lines 4, 5 and 6 of the Riyadh Metro; the Doha Metro; Line 2 of the Panama Metro; and Line 2 of Lima Metro (Peru).

> "FCC's know how in this type of project and the experience of its human capital represent a guarantee for the success of the project"

Line 2 of the Panama Metro

- 21 kilometre-long
- 16 stations

Interview with the deputy manager of Line 2 of Panama Metro, Santiago Erans

What is the differential value of FCC Construcción in the execution of metro lines?

FCC has the expertise for this type of project and a human capital with great experience in these types of projects abroad. Of the FCC personnel working on the project, 99% knows the Panamanian market and is aware of the difficulties entailed in the execution of projects in Panama. The personnel is used to executing projects with very demanding timetables, projects such as Line 1 of the Metro, PAC IV, the Vía Brasil I and II corridors, Hospital Chicho Fábregas, etc. This represents a guarantee for the success of the project.

What is the repercussion on the execution of this project of the know-how acquired in building Line 1?

It has been essential. Although there are small differences, it is worth noting that Line 2 is very similar to the elevated part of L1. The difference is that instead of the 7 km-long viaduct between Line 1 and the 6 above-ground stations, now in L2 there are almost 23 kilometres of viaduct (21 km of metro line plus access to the patios and workshops) and 16 above-ground stations, plus the railway connection between L1 and L2.

What are the main problems being encountered in the execution of Line 2 of the Metro?

One of the key aspects is the execution timetable, the delivery of 21 km of metro line and 16 stations and having the entire railway system functioning in only 44 months. Even the client is considering the possibility of reducing the execution time by five months. This means that all the civil works have to be completed in practically 24 months (2016 and 2017). It is necessary to work in many fronts at the same time in the two avenues that form part of the route (Domingo Díaz Avenue and Panamericana Avenue) both of which suffer from traffic congestion throughout most of the day. According to the tender specifications, two lanes in each direction in these avenues must be open to traffic and, therefore, many activities can only be performed at night, such as most of the concrete work and the assembly of the beams that form the viaduct and the stations.

Another problem is relocating public services (drinking water, electricity and telecom lines, storm drainage, etc.). This involves a lot of work and, at the end this is in the hands of the different operators or of their authorised subcontractors and means that you are never able to have full control of the process.

What are the project milestones?

Some of the important milestones include work to be able to begin assembling the U-beams, which was executed last August, as well as the delivery of the first section of the viaduct to GDE, the subcontractor in charge of the electromechanical aspects, the installation of the comprehensive railway system and the supply of rolling stock., last October, as scheduled, making it possible to start building the railway.

Another major milestone was the start of construction of the San Miguelito Station that will serve as the interexchange connecting L2 and L2. To accomplish this, it was necessary to liberate the area next to the San Miguelito intersection, one of the most congested in Panama City, as well as the demolition of existing structures.

The next milestones will be, in January, the construction of the roofs of the stations and the metal structures to support the escalators and the metal structures for the elevators. The escalators will be installed in February as well as the partitions in the stations. Another important milestone will be the arrival of the first train, expected in the fourth quarter of next year.

What are the environmental implications and the protective measures implemented in the project?

It is necessary to define the procedures that, complying with the various environmental regulations in the country, make it possible to implement such measures to prevent and/or minimise any possible harm to the natural ecosystems and the population. These procedures are contemplated in the Environmental Plan and include handling of landfill sites, monitoring the climate, air, water, vibrations, as well as reforestation procedures to protect flora and fauna and the archaeological, historical and cultural program.

The start-up of Line 1 of the Metro System and the execution of Line w will articulate the public transport network of Panama. What are the social implications of the execution of this project?

The execution of L2 will significantly improve the quality of life of residents in this part of Panama City. It is estimated that more than 500,000 Panamanians will benefit and will save between 1 and two hours of commuting time in each trip.

During the execution of the project, the communities or neighbourhoods adjacent to these lines will also benefit since, currently, more than 50% of the workers hired by the consortium live in these communities.

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FCC Construcción prize
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10 years old.

FCC organizes a new edition of the drawing contest for employees' children: "United at FCC"

Participation in the most recent Christmas drawing contest for children of the employees of the Environment Water, and the Construction areas and Support and Corporate Services was a great success. Children between the ages of 4 and 12 reflected in their drawings the proposals based on the idea of an international company that acts as a connecting link of cultures, nations and values.

So much so, that this was the first edition where children from all of FCC Group's business units participated: Support and Corporate Services, and the Environment, Water and Construction divisions.

Esther Alcocer Koplowitz, chairperson of FCC, and Carlos Jarque, CEO of FCC used the Christmas card featuring the award-winning drawing to greet all employees during the holiday season.

A voting session was organised to select the winners with the participation of Cristina Marqués, Laura Ferrero, David García Núñez, Pilar Morillas, Ignacio León, Raquel López, Ana Belén Pérez and Raúl Rivera in the panel of judges.

FCC Aqualia prize
Itziar Carpio,
8 years old.

FCC Servicios de Apoyo y Corporativo prize
Lorena González,
7 years old.

FCC Medio Ambiente prize
Lukas Odstrcil,
9 years old.

FCC involved in the ATHOS initiative as part of the European Waste Reduction Week

During the week of 19 to 27 November, FCC Medio Ambiente launched the ATHOS (Spanish acronym meaning All Working Together for Sustainable Goals) initiative, a solidarity and sustainability project that is part of the European Week for Waste Reduction (EWWR). The goal of this project is to promote the reuse of old clothing and small electrical and electronic appliances, encouraging the participation of employees.

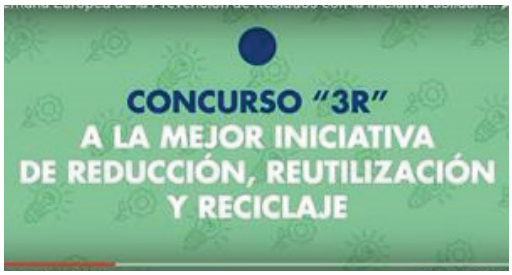
The action was carried out at 19 work sites in 16 Spanish cities where specific bins, provided by charitable organizations involved in the project, were installed. Several foundations, including Cáritas, Ecolec, Ataretaco, Traperos de Emaús, Fundabem and Porsiete, through their charitable associations, collected the materials for their subsequent reuse and/or recycling.

Bolsters its commitment to sustainable development

The ATHOS initiative reinforces FCC Medio Ambiente's commitment to the sustainable and responsible development of its activities in view of its numerous groups of stakeholders and the unavoidable changes being marked by its surroundings. Among these objectives, the company has been able to achieve the following

- Supporting an awareness-building measure of general interest, promoted by the EU, and focused on a circular economy that generates changes and opportunities for our businesses.
- Joining several local and regional Spanish public entities, clients and opinion leaders, in the great challenge of preventing waste (recognition and appreciation expressed by mayors and waste associations, exchanges and connections established via digital platforms).
- Fostering and associating the involvement of its personnel in a responsible and solidarity corporate project.
- Take new steps towards a strengthened and more long-lasting collaboration with solidarity entities that joined the pilot project, the ATHOS initiative, spontaneously, from its inception, with professional foundations and charities (Ecolec, Cáritas, Traperos de Emaús, Fundabem, Ataretaco, Porsiete).
- Fulfilling the environmental objective of the EWWR 2016 Week for the reduction of waste. Thanks to the collaboration of employees, it was possible to recover nearly 700 kg of old clothing and small electrical and electronic appliances for their reuse thereby preventing the emission of 4.5 tonnes of CO_2 and saving 72 m3 of water by reusing the old clothing.
- Taking advantage of the experience and results of the ATHOS project to undertake new initiatives to get closer to our stakeholders in order to consolidate and enrich our value chain.

This participatory awareness-building scheme directed by the company at all its stakeholders aims to enhance the SDG 13, one of the Sustainable Development Goals that form the United Nations' Development Agenda to improve education, awareness-building and human and institutional capabilities in regard to mitigating climate change, adapting to it and reducing its effects, such as in this case with an initiative that encourages the Circular Economy.



Ambassadors of exemplary behaviour

FCC wants to encourage its employees to be examples of exemplary environmental behaviour, key for the sustainable development of our services.

- Read the ATHOS Initiative Campaign brochures
- Read the ATHOS Contest form
- Watch the presentation. “Our contribution to the Agenda 2030 challenges”
- See photo album

Interview with Catherine Marie Milhau, manager of FCC Medio Ambiente division’s Coordination and Development Department

Why is the ATHOS initiative important for FCC Medio Ambiente?

Firstly, the ATHOS project has enabled FCC Medio Ambiente to demonstrate its interest in backing a European awareness initiative focused on the future of waste management. This involves all players in the community with the corresponding incidences on the evolution of our businesses towards a circular economy. It is important that the changes that were announced, which are part of the national programs and regulations and in the transposition phase, are perceived from within our organization. To this end, the implementation of a participative initiative enabling the voluntary and direct involvement of all and of each of our collaborators, from our branch managers to operators, seemed a good step towards creating awareness on the changes that are about to take place.

The ATHOS Initiative has also served to highlight the collaboration opportunities that could arise through the integration of these objectives and social and environmental objectives among a major company, its employees, and the charitable entities associated with the project.

Why is this initiative important for society?

ATHOS is an enriching initiative thanks to its contributions to the European Week for Waste Reduction (EWWR), informing our stakeholders on how a major company in the sector can have its personnel involved in a different way to tackle routine tasks such as daily waste collection and recycling. Our employees can become ambassadors of good practices and show the community how a change in our behaviour can give waste a second opportunity, with all the social and environmental repercussions that this can have. Such as, an example, playing the role of committed companies by facilitating the re-integration in the workforce of people at risk of social exclusion; or through more intensive sorting of waste at its origin to facilitate its recovery, reuse, or recycling, thereby minimising the depletion of natural resources and the contaminant effects of its transformation for its consumption. .

Assessment of the results of the campaign

The results are both tangible and intangible. On one hand, the effective involvement of our employees through the voluntary contribution of nearly 700 kg of clothing and small electrical and electronic appliances for their reuse and recycling in the 50 containers provided for this purpose at the work sites, benefitted the environment by preventing the emissions of 4.5 tonnes of CO2 emissions and saving of 72.4 m3 of water by reusing 506 kg of clothing. On the other hand, there was a space for dialogue and coming together, giving rise to talks by charitable companies, paving the way for new forms of collaboration based on solidarity.

What has FCC contributed to this European week?

EWWR offers the opportunity of bringing together, for a defined period, numerous public and private organizations and associations working towards the same goal. This results in the promotion and sharing, on an EU scale, the experiences and initiatives that open new roads. For this reason, the mere fact that we participated is in itself a very positive contribution. Moreover, the benefits achieved through this initiative can be replicated and re-channelled.

FCC wins award for its commitment to the integration of vulnerable groups in the workforce

FCC Medio Ambiente won an award from Fundación Integra for its commitment to the integration of people at risk of social exclusion in the workforce, receiving a Special Mention for the work carried out by the Human Resources Team.

The award ceremony took place during the annual celebration of Fundación Integra. Luis Suárez, the director of Human Resources from the Environmental Services Division represented FCC and collected the award.

FCC currently has a collaboration agreement with the Fundación Integra to train and integrate people who are at risk of social exclusion into the workforce. It also has agreements with other organisations, such as Fundación Down Madrid, with which it has signed a framework agreement to promote measures to improve the life of people with Down Syndrome or other mental disabilities, as well as with Fundación Adecco and ONCE (Spanish association for visually impaired people).

FCC's Equality and Diversity Management team constantly works towards the integration of this group into the workforce and is involved in causes that are of concern to the communities where the Citizen Services Group operates. Some of the groups that have benefited from these initiatives are women who are victims of gender violence, the disabled, and women at risk of social exclusion and/or trafficking.

Furthermore, in line with its Equality and Diversity policy, FCC fosters and implements initiates aimed at favouring equality and implements working practices to ensure that no member of staff is treated unfavourably for having different abilities or for any other unjustified reason that is not based on professional skills, knowledge and performance.

infraestructuras medioambiente agua

En 100 años prestando servicios a los ciudadanos hemos visto cambiar muchas cosas, la primera de ellas al propio ciudadano.

En FCC diseñamos y construimos infraestructuras, recogemos, reciclamos y valorizamos residuos urbanos e industriales, limpiamos calles, cuidamos parques y jardines, mantenemos el mobiliario urbano y gestionamos el agua en 5.000 municipios de todo el mundo desde hace más de 100 años. Al principio éramos unos pocos preocupados porque millones de personas disfrutasen de un lugar mejor donde vivir. Hoy son esos millones de personas los primeros que se preocupan por crear un lugar mejor donde vivir.

Lo estamos haciendo juntos.

www.fcc.es

FCC Servicios Ciudadanos

FCC presents the 2016 Safety and Health Awards

Last December, FCC handed out the prizes for the 3rd edition of its Safety and Health Awards at an event celebrated at its Las Tablas corporate headquarters and where the senior executives of the Group's business and corporate areas were present.

The safety and health of people at their workplaces is a constant priority at FCC and one of its key objectives is to strengthen the integration of preventive activities at all company levels.

This third edition counted with the participation of 26 high-quality projects. The aim was to reward those initiatives or measures implemented at by FCC departments, teams, business areas and personnel that contribute to bolstering and disseminating the prevention policy and preventive culture at the workplace.

The awards given in the different categories were as follows:

- **The Prize for the category Prevention of Occupational Hazards (technical measures):** significant milestones and processes implemented to improve the control of hazards at work went to FCC Environment for its "Mobile Plant Pedestrian System (PWS)".

- **The Prize in the Prevention of Occupational Hazards (strategic measures) category:** enterprising initiatives and strategic approach projects that contribute to improving safety and health conditions went to the project submitted by FCC Aqualia – Project for improving the preventive culture.

- **The Prize in the Promoting Health category:** recognition of the innovative alternatives for a healthier workplace was shared by two nominations submitted by FCC Medio Ambiente's Andalucía II Branch office for Andalucía II Healthy Branch Office and by the Aragón-La Rioja branch office for Promoting cardiovascular health and road safety (shared prize).

- As to **the prizes for individuals for their work in promoting healthy values, habits and practices,** the award-winners were: Manuel Gonzalo Mateos Pavón, from FCC Construcción, manager of Section A of Line 2 of the Panama Metro; Javier Rubio Durán, head of FCC Aqualia's department in Almería; Marta Costa, head of Industrial Ecodeal (FCC Ámbito), and for Pablo Fuentes Marciel – Manager of FCC Medio Ambiente's branch in Ávila.

Employees from Vigo's cleaning service implement a preventive measure: warm-up exercises before starting work

Like a good soccer team before going out into the field, workers from Vigo's cleaning service perform warm-up exercises before going out to the street in order to prevent injuries, improve their health, and reduce absenteeism.

At the FCC Medio Ambiente branch in Vigo, employees from the cleaning service have implemented a preventive measure consisting of warm-up and stretching exercises for all their muscles and joints before the start of the working day.

The exercises are adapted to each type of work and, therefore, each worker performs the warm-up and stretching exercises focusing more on the part of their bodies that are more involved in their work activity. Thanks to this measure, FCC was able to reduce in Vigo absenteeism caused by these types of injuries and has organised conferences on warm-up and stretching exercises throughout the work day.

Street sweepers' work is not easy. They put pressure on their cervical vertebrae because they are always looking down and their arms are also affected by moving the shovel and broom.

Like a good soccer team before going out into the field, these workers at Vigo's cleaning service perform warm-up exercises before going out on the street. The response among workers has been very positive and of the 500 employees at the Vigo branch, about one hundred have joined this program.

Road safety at FCC: a constant concern

How to drive in harsh weather conditions

Road safety has been an ongoing concert at FCC over the past few years, taking into account the close relationship of many of our activities to driving on the road. Several million hours of work at FCC involve driving, excluding all our personal time affected by traffic as drivers, passengers, or as pedestrians.

Most traffic accidents are caused by distraction, by being absent-minded, or due to bad practices because of factors such as tiredness, stress, alcohol or drug consumption, among other reasons. Because of these factors, our performance behind the wheel may not be precise or adequate in terms of traffic, road, or weather conditions. We highlight some of tips that could contribute to our road safety when driving in harsh weather conditions.

Rain

- Special precautions should be taken when the first drops of rain fall. Mixed with dust and grease, the road may become slippery.
- Increase the safety distance under normal circumstances twofold.
- Reduce speed and use the windshield wipers.
- Always turn on the dipped headlights. In the event of strong rain, also use the fog lamps.
- Avoid driving through flooded areas or deep puddles of water.
- Turn on the heat, combined with air conditioner, towards the front windscreen to prevent the glass from getting foggy.
- Check frequently, especially after driving through puddles, that the brakes are functioning properly.
- By reducing your speed and keeping the tyres in good conditions, you can avoid the risk of aquaplaning. In the event of aquaplaning, steer firmly, correct any possible variations from the planned route, and avoid putting on the brakes or accelerating while maintaining the same speed.

Fog

- The lack of visibility is the main obstacle. Turn on the back anti-fog lights (mandatory as well as the front ones.
- We should never use the strong headlights.
- Reduce speed and adapt it to your field of vision.
- Avoid overtaking other vehicles.
- Use the longitudinal and lateral lines of the road to guide you.
- Stop in a safe place, off the road, when the fog is very thick.

Wind

- Reduce speed but maintain the same power (shift to a lower gear). This way, we can combat the wind's resistance.
- Increase the safety distance with respect to other vehicles, including those on our side.
- Hold the driving wheel firmly and make soft movements.
- Prevent overtaking other vehicles, especially if they are large, such as trucks or buses.
- Take special precautions at tunnel exits, spaces between buildings, and bridges.
- Know the direction the wind is blowing and its intensity.
- Pay attention to danger signs due to lateral winds, especially when driving through viaducts and bridges over dells.
- In extreme cases, it may be necessary to hold the driving wheel firmly and softly oppose the pressure of wind over the vehicle.

Snow

- The first flakes of snow on the road make it very slippery and, as it accumulates, it becomes more difficult to drive.
- It may be necessary to use chains or semi-automatic tyres as well as textile sleeves or winter tyres.
- Use the dipped headlights.
- Reduce speed and increase the safety distance.
- Try driving over where other cars before you have driven.
- Drive calmly and firmly.
- Use the long gears so as not to skid.
- Avoid putting on the brakes sharply and use the engine brake.

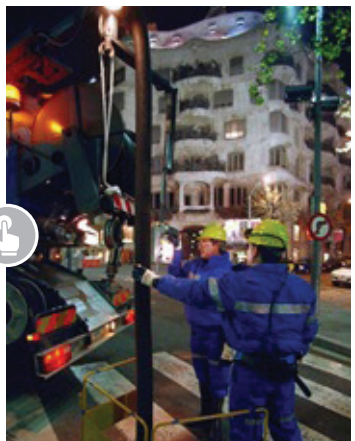
Ice

- The fact that the car does not adhere to the road is the main factor to take into account. Driving in ice conditions is worse than in snow.
- Ice appears more frequently in shady spots, bridges over rivers and during the night.
- Reduce speed and drive calmly and firmly.
- If we drive over a sheet of ice, we should slowly take our feet off the accelerator and move the driving wheel slowly. If we have to brake, do it softly so as not to block the wheels.

FCC participates in the International PRAISE seminar "Identify, Evaluate, and Prevent Occupational Road Risks"

On 15 November, FCC participated as a speaker in the "International PRAISE Seminar: Identify, Evaluate, and Prevent Occupational Road Risks" coordinated by the European Transport Safety Council (ETSC) and co-funded by the European Commission, and currently supported by the MAPFRE Foundation, the Dräger Foundation, the German Road Safety Council (DvR9 and the Belgian Road Safety Institute UBRSI).

The seminar was held in Madrid and counted on the presence of several experts in the sector. The objective of the seminar was precisely to share good practices in relation to road safety to help all types of entities, both private and public, to increase their requirements in terms of road safety, thereby contributing to prevent injuries among their employees. Pedro Ledesma, from the Corporate Labour Safety and Health Department at FCC gave the speech at the seminar.



FCC joins "eHealth Challenge" the first inter-company on-line Olympics

FCC joined the "the first inter-company on-line Olympics" program known as "eHealth Challenge" which promotes healthy competition among companies in all sectors and aims to eliminate a sedentary lifestyle in organizations and to increase energy, productivity, enthusiasm and satisfaction among all workers.

The program, which counts with the collaboration of Fundación Más Familia, Efr, and the Red Cross, will be ongoing from 16 January to 15 February 2017.

How does it work?

The program is aimed at all FCC employees regardless of where they work.

1. Employees must sign up at this page: **https://ehealthchallenge.sportsnet.es/inscripcion/1481535638/.**
2. They can participate on their own or in a team (5 people maximum).
3. Three permanent inter-company rankings will be (walking, running and cycling), (based on the number of employees).
4. Employees have to choose the option where they want to compete (walking, running and cycling).
5. There will be simple challenges: personal, team, corporate, and global.
6. Participants will only need a Smartphone to be able to participate in the challenge and share their progress with our platform through several sports apps (runtastic, endomondo, strava) and wearables such as fitbit.

How?

By leading to changes in habits, the main objective of which is moving, something that is also fun and motivating. To achieve this end, eHealth promotes team participation to ensure success and to count on the support and commitment of its members.

What does this imply for the employee?

Besides motivating people to move and perform physical activity, the program also promotes enjoying the company of colleagues in and outside the office through challenges in order to become better and better day-by-day. It also increases self-confidence and commitment to the Company, helps one to lead a healthy life and contributes the social benefit of health and wellness.

What does it imply for FCC?

Besides encouraging healthy habits and make employees more active, it will improve the work environment, boost the worker's health and wellbeing and, consequently, that of FCC and will also facilitate networking.

A global and solidarity objective

- A corporate and common objective for the project will be defined based on the total number of participants (from your company and globally).
- The objective will be marked in kilometres: How many times will we go around the world? Will we reach the Moon?
- If we are capable of "moving" the world together: why not convert the energy generated in being supportive?
-

The money raised will go to the Red Cross.

Grandes beneficios

According to the World Economic Forum, companies that implement workplace wellness and health programs reap great benefits:

- Reducing a simple health increases productivity by 9%
- Reducing a simple health risk reduces absenteeism by up to 2%

"41.3% of the population says it is sedentary, slightly less than half for women (46.6%) and more than one third for men (35.9%)."

eHealth CHALLENGE

fundación más familia | efr | Cruz Roja Española

FCC Citizen Services

eHealth Challenge is an online intercompany competition open to all FCC employees regardless of where they are based.

Cycling, walking, running...anything goes for moving forward and collecting kilometres. You don't have to be a super athlete, we can all take part.

From January 16 to February 15

The more of us involved, the further we will get.

Sign up NOW by visiting the following website or by scanning the QR code

https://goo.gl/rLE1YM

Aqualia and SEAT

join forces to find a more sustainable biofuel

The mayor, councillor and FCC Aqualia managers with the Smart Green Gas cars.

Speech by Mamen Sánchez, mayor of Jerez, at the presentation of the project on 29 November.

Aqualia is developing the R+D+i SMART Green Gas project at the Guadalete (Jerez de la Frontera) wastewater treatment plant (WWTP). The aim of this research is to obtain 100% Spanish origin, renewable biofuel from wastewater from the households of residents in Jerez de la Frontera to be used in compressed natural gas (CNG) powered vehicles.

A consortium formed by Gas Natural Fenosa, EDP-Naturgas Energía, and Biogas fuel cell, Diagnostiqa, Dimasa Grupo and Ecobioga is collaborating in the development of the SMART Green Gas project with the support of the CIEN program of the Centre for Industrial Technological Development (CDTI), and the Ministry of the Economy, Industry and Competitiveness. Developed and patented by Aqualia, the technology makes it possible to develop a circular economy and the construction of resilient cities by transforming traditional WWTPs into an energy producing factories.

It is estimated that a medium-size WWTP such as the one in Jerez de a Frontera, could produce a million litres of biogas per day, sufficient to feed a fleet of more than 300 vehicles. This would enable cities to supply a fleet of urban buses, waste collection rucks, police cars and ambiances as well as other public services managed by the City Council.

One of the advantages of this project is environmental since a biomethane-powered car avoids the entire biofuel production cycle and enables an 80% reduction of CO_2 emissions compared with petrol-drive vehicles.

Furthermore, profitability is evident since the development of the project will result in energy optimisation and significant cost savings in the wastewater treatment process. This implies that cities that implement this technology will increase their autonomy and sustainability.

Press briefing at the WWTP .

Unveiling of one of the two project cars.

FCC Aqualia and SEAT wager on biogas. The Smart Green Gas Project.

The implementation of this project at the Guadalete WWTP is a clear example of Aqualia's commitment to the communities where it provides its services. Hence, and beyond the technical services provided by its workers, the Company generates great added value in the communities where it operates, undertaking social, educational, environmental and innovative commitments for the benefit of the entire communities. In this respect, the implementation of this project in Jerez de la Frontera implies a "real privilege" as stated by Mamén Sánchez, the city's mayor in her speech during the presentation of the project on 29 November (watch the video).

Testing the biofuel

The Smart Green Gas project, which has a duration of five years, represents a strong boost to research and the creation of alternative fuels for the Spanish automobile industry thanks to the use of Aqualia's proprietary and patented technology that enables the production of 100% autochthonous biofuel.

Aqualia recently began the pilot test for this project, working in conjunction with SEAT (the leading auto company in Spain). The aim is to test and confirm the entire production chain until the fuel is obtained and used as fuel in two SEAT León TGI vehicles.

The City Council's Municipal Technical Department will be using one of these cars while Aqualia's research team in charge of the SMART Green Gas project will be using the other vehicle. Each car has to be driven 30,000 kilometres in one year and its deposit must always be filled at the wastewater treatment plant's biofuel station.

The Aqualia – SEAT collaboration is a firm wager on the development of ecological and real alternatives to petrol-derived fuels with the aim of promoting a future environmental improvement.

Supported by the Centre for Industrial Technological Development (CDTI), SMART Green gas is being developed in collaboration with public research entities such as Instituto Catalán de Investigación del Agua (ICRA) and the universities of Girona, Valladolid and Santiago de Compostela. SEAT participates jointly with Aqualia.

Another step forward in the field of R+D+i

Pilar Icaran Pilar Icaran, a member of Aqualia's Innovation and Technology Department is the head of the SMART Green Gas project.

What is the objective of this research project?

The project studies the development of new technologies and processes to produce more biogas from the sludge produced in a WWTP and transform it into biomethane to make it possible to use this biofuel in the automotive sector or injected into the natural gas distribution network. That is, research focuses on generating energy from waste and sludge by obtaining biomethane.

What are its advantages?

Besides being an inexhaustible and autochthonous source, the biomethane obtained is economical, renewable and ecological. On one hand, we are able to covert wastewater into an efficient product such as biogas and with this, we are wagering on a circular economy while contributing to the autonomy and self-consumption of cities where we manage waste water treatment plants and implement this system. In addition, what is most important: we prevent CO_2 emissions thereby drastically reducing the harmful impact from vehicles in the environment. Through SMART Green Gas, we transform the wastewater treatment process and the services that we provide to residents, making it more sustainable and efficient.

How is this achieved technically?

The aim of the research project is to maximise the production of biogas, improve its quality and concentrate it by eliminating impurities until its quality is similar to that of natural gas. We are currently immersed in the validation phase. SEAT, which is monitoring the vehicles, will be confirming that the gas that we are producing and cleaning can function perfectly in their cars. After this has been confirmed, we will be able to offer our clients this new product.

Bratislava,

little big city in the middle of Europe

Slovakia, a country of many faces, long fertile plains, moderate hills and high mountains. High Tatras in northern Slovakia are the pride of every citizen, a great skiing opportunity and hiking destination. And beautiful Slovakia has its own beautiful capital city, Bratislava.

Bratislava is located in the western part of Slovakia, near to other capital cities - Budapest (Hungary) and Vienna (Austria). Many tourists like to come back to Bratislava, it is a smaller city, less busy than the other metropolitan capitals around, however, it offers unmistakeable atmosphere - a beautiful historical centre, castle, many small cafés, parks, forests to rest as well as particularly tasty food. Bratislava is home several universities, colleges, theatres, museums and other cultural institutions such as the world famous Slovak Philharmonic orchestra, Slovak National Gallery, Slovak National Museum and Slovak National Theatre. Bratislava has half a million inhabitants and is located on the banks of Danube, the second largest river in Europe.

Slovakia, a country of many faces, long fertile plains, moderate hills and high mountains. High Tatras in northern Slovakia are the pride of every citizen, a great skiing opportunity and hiking destination. And beautiful Slovakia has its own beautiful capital city - Bratislava.

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The dense transportation network, main transport hub and changeable weather with snow in winter and high temperatures in summer require a quality partner to provide for cleanliness in the city and passable roads and streets. FCC is such a partner. FCC is the main partner of the capital city of Bratislava in providing the summer and winter city maintenance.

FCC keeps this nice city clean throughout the year!

At FCC, we take care of snow removal, gritting and ploughing roads of a surface area of 4 374 518 m^2 as well as the winter maintenance of squares, public spaces, sidewalks, bus stops and stairs on an area of 306 937 m^2 and 1481 pedestrian crossings. At FCC, we have extensive experience with this service, we have experienced staff, a variety of equipment and vehicles as well as a sophisticated system of online monitoring of winter maintenance vehicles. This online monitoring is accessible for every inhabitant of Bratislava. With just one click, they can open the map of Bratislava and see the current position and movement of vehicles.

FCC in Bratislava also takes care of mowing the grass, emptying bins at squares and bus stops, trimming shrubs, in summer we sweep clean and water the streets and, last but not least, we also beautify the city by planting flowers and shrubs. In 2016, FCC was particularly taking care of the cleanliness in the city and planting flowers due to the Slovak presidency in the European Union. There was higher frequency in both street cleaning and emptying the bins. We are glad we got the chance to be part of the important preparations for our EU presidency!

FCC is a reliable partner of the capital city of Slovakia - Bratislava.

> Bratislava, Slovakia's largest city is situated on the banks of the Danube, between Austria and Hungary. This unique location makes it the only capital city in the world bordered by two countries.

A castle with a long history

The Castle of Bratislava stands as a symbol of domination and supremacy on top of a hill overlooking the city's historic district. Hungary, Austria and the Danube Valley can be seen from atop the castle's walls.

At the end of the Stone Age, the hill was colonised by the Celts who built a settlement known as Oppidum. Afterwards, and during many centuries, the castle was a fortress, the seat of the General Seminary for the Priesthood during the government of Joseph II and later served as a military headquarters.

It was rebuilt several times and was transformed from the Gothic to the Renaissance and finally to the Baroque style. In 1811 the castle was destroyed by fire and was not rebuilt until the years 1953-1968.

FCC renews all its digital channels with LifeRay technology

The FCC Group is fully immersed in a digital transformation process. It is currently focusing on renewing its entire digital channel in a project that is in keeping with the Company's strategy focused on five criteria:

1. Cost savings
2. Time saving
3. Improving resources
4. Synergies
5. Improving the image and digital reputation

FCC's digital transformation process is being driven by Corporate Marketing and Brand and by Information Technologies in collaboration with the business areas (Environment, Water and Construction), Investors' Relations, Procurement, Human Resources, and the Support and Corporate Departments. The key objective is to join efforts to unify the Company's image, improve users' navigation experience, offer a wide range of functionalities, and to optimise performance.

The result is already visible externally with the publication of the websites of FCC Group, FCC Ámbito, FCC Aqualia and City Councils, FCC Construcción and Countries, Ciudad FCC, FCC Industrial and subsidiaries and Fundación Esther Koplowitz. The renewal of the digital channels makes it possible to align the digital ecosystem and create a unified image of all the portals, that is, a platform that improves synergies with solutions adapted to the specifics of each business area.

All the websites are available in several languages. The design focuses on the user, with icons, graphics, and illustrations that encourage usability and facilitate navigation, offering information for all of the Company's stakeholders on who we are, what we do, how we work together, information for shareholders and investors, on our corporate social responsibility and current news. The new portals are, in short, more up-to-date, visual, and multi-device: PC, table, mobiles.

FCC has placed its trust on LifeRay, the leading Open Source platform for creating digital experiences that make it possible to update contents easily and enables users' autonomous contribution.

From the performance perspective, access time has been reduced by 10% and the SEO of all the displayed pages has improved. This improvement in the digital ecosystem has been possible thanks to FCC's firm commitment to improve the positioning in search engines to strengthen the online channel as the main communication channel and to increase its market opportunities.

Accesibility

All of the pages of each of the websites published using LifeRay technology have been developed in compliance with Level AA according to the UNE 139803:2004 standard which, in turn, is based open Accessibility Guidelines for Web Content 1.0 of W3C.

Moreover, in order to ensure accessibility to contents to facilitate users' access regardless of their capabilities or their environment, enable access with different user agents, include clear and well-structured contents and improve navigation and the user's experience, FCC has implemented the following measures:

- Separation of content and presentation: use of style sheets (CSS) for the presentation of information and HTML code for its correct structure.
- Alternative to non-textual elements: the necessary alternatives have been included so that no user finds content access barriers.
- Appropriate navigation mechanisms: The links offer details on the function or destination of the hyperlink, thereby making it easier for users to find information and find their way around the website.
- The correct use of standards: documents in the website were built on specifications by W3C, the organization that sets the international standards to be used on websites.
- Programmed objects are not used: this makes it possible to surf the site regardless of the technologies available in the user's agent.

FCC already manages the contents with LifeRay of more than 40 websites:

FIRST PHASE 2016

- FCC Group website
- FCC Construcción + countries websites
- FCC Ciudad website
- Aqualia + city councils + international websites
- FCC Ámbito website
- Fundación Esther Koplowitz website

SECOND PHASE 2017

- FCC Medio Ambiente website
- FCC Environment UK website
- FCC Environment CEE website
- FCC Environmental Services website

FCC

FCC Construcción

FCC CO Portugal (RRC)
FCC CO United Kingdom and Ireland
FCC CO Rumania
FCC CO Brazil
FCC CO Canada
FCC CO Chile
FCC CO Costa Rica
FCC CO United States
FCC CO Mexico
FCC CO Panama
FCC CO Peru

Ciudad FCC

FCC Aqualia

Adeje
Linares
Lleida
Alcalá de Henares
Almería
Ávila
Calahorra
Écija
El Vendrell
Entemanser
Granadilla de Abona
Guía de Isora
Ingenio
Jaén
San Miguel de Abona
Jerez de la Frontera
Lloret de Mar
Medina del Campo
Mérida
Muro
Narón
Nerja
Oviedo
Puerto de la Cruz
Salamanca
San Lorenzo de El Escorial
Santander
Talavera de la Reina
Vélez Málaga
Vigo
Santa Marta de Tormes
Santiago del Teide
Sanlúcar de Barrameda
Ostrava (Czech Republic)
Caltanissetta
Campomaior (Portugal)
Elvas (Portugal)
Fundao (Portugal)

FCC Industrial

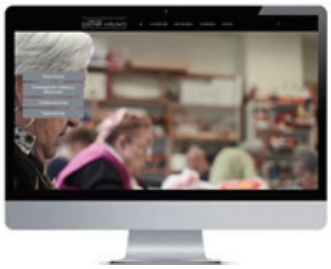
Matinsa
Megaplas
Prefabricados Delta

> "From the performance perspective, access time has been reduced by 10% and the SEO of all the pages displayed has improved."

FCC ámbito

> "This was carried out in record time. FCC has been referred to as a success story in the International LifeRay Forum."

FCC is already working on the next step: improve the positioning in search engines and boost the content and dissemination of each of the business lines to enhance market opportunities and to unify the image in its social networks.



Fundación Esther Koplowitz

FCC Medio Ambiente granted energy-management certification for its 17 offices in Spain

Via the newly certified Energy Management System, efficiency measures are being implemented that affect a fleet of more than 7,000 vehicles and over 300 workplaces, covering practically all FCC Medio Ambiente's activities in Spain.

FCC Medio Ambiente has been granted by the certification agency AENOR certification for its Energy Management System under UNE-EN ISO 50001:2011, as part of the management system that develops its commitments related to quality assurance, sustainable development, efficient management of resources, occupational health and safety, and innovation. As a support tool for this implementation, the VISIÓN application has been used, having been developed exclusively by FCC Medio Ambiente personnel.

Via the Energy Management System, efficiency measures are being implemented that affect a fleet of more than 7,000 vehicles and over 300 workplaces, related to aspects including: efficient driving; management and optimisation of routes; raining and awareness-building of staff in the efficient use of energy; upgrading equipment and facilities with more efficient alternatives or ones that use renewable energy sources.

Energy-management certification involves improving energy efficiency and as a result not only reducing greenhouse-gas emissions but also cutting energy costs. It also enhances the organisation's public image, because of the environmental commitment being made, as well as increasing competitiveness in tender processes.

> "AENOR certification helps companies to manage and reduce their energy consumption, with the associated positive effects on cutting financial costs and greenhouse-gas emissions."

FCC Environment's consolidation in Europe continues with two new contracts worth €42 million

FCC Group's environmental services business has strengthened its growth in Europe with the award of new contracts in the United Kingdom and the Czech Republic.

The contract awarded in the UK, where FCC Group has been providing environmental services since 1989, covers municipal waste collection, selective collection and street cleansing for Barrow in Furness District Council, in Cumbria. The contract is worth £12 million (approximately €14.3 million).

The 7-year contract kicks off on 1 April 2017 and could be extended for another 7 years. The Company will also be making an investment of nearly 1.5 million pounds (1.8 million Euros).

Barrow in Furness is one of six districts in the county of Cumbria. It has a population of more than 71,000 with 33,500 households.

This new contract boosts FCC's market share in the county where it has been providing municipal services more than 20 years.

Semmering SKI World Cup 2016:
We're on again!

For 2 days, 60 of the world's very best lady skiing competitors and around 25,000 spectators are set to converge on Semmering, Zauberberg in Austria. Local accommodation is already booked out, and you can hope to avoid a traffic jam or two on your way to the beautiful Alpine resort. This prestigious World Cup skiing event is held every second year at the end of December.

The main fan area is like a winter fair and has a festival feel with a number of small music stages where spectators can enliven their mood with some typical 'Apre ski' music. Pennants, gloves, scarves and many other souvenirs are sold, as well as drinks and food in large quantities. And in the midst of all this; our company - .A.S.A. - and at this year's event we will be presenting the new FCC Environment brand for the first time. We have been on board partners of the event since 2002, as main waste disposer for the Semmering lift operating company (Bergbahnen Semmering Hirschenkogel GmbH), as well as for the hotels (Panhans Hotelmanagement GmbH).

Without our 20 pcs 1,100 litre waste containers, our 20 pcs 240 litre plastic bins, our 20 mobile toilets and 2 sanitary containers the event would be messy and unhygienic – a complete disaster! Our 4 specialist on-site colleagues are supported by a press-waste truck and a suction-tank truck and will be taking care of the smooth running of the event's waste disposal requirements. We provide a broad range of services, including: The provision of containers and bins for waste disposal, the continuous exchange and transportation of collected waste and it's subsequent management, the cleaning of the carpets in the VIP tents, support during the assembly and the dismantling of the stands and grandstand of the World Cup arena and the cleaning of and maintenance of roads and walkways throughout the area.

"We always need around 2 days of preparation work beforehand and we then provide a 24 hour a day service during the event, whatever the weather conditions", says Florian Pratscher, the representative of - .A.S.A. Abfall Service Neunkirchen GmbH - who is responsible for the team of onsite staff. "During the event we usually collect about 15-20 tons of mixed waste and have to use our trucks many times a day to empty the bins, as well as regularly sucking out the mobile toilets and keeping the whole area clean, orderly and hygienic. "

The European Cleanwater project at the Racons desalination plant in Dénia takes off

In the photograph, from left to right: Juan Arévalo (researcher at Aqualia); Christian Westarp (from Ceram Hyd); Cosme Barrocal (operator at the Racons facility); Ricardo Sandín (project manager from Aqualia); and, Mélanie Tran (from Ceram Hyd).

Aqualia, in collaboration with the French company Ceram Hyd is developing the Cleanwater project at the Racons Brackish Water Desalination plant to validate and market a new disinfection technology based on the on-site generation of disinfectant agents by means of an elecro-chemical system.

This new system has two key objectives: to confirm the technical and economic feasibility of the process that will make it possible to replace traditional disinfectant systems and prevent the transport, storage and handling of hazardous chemical compounds; and, assess the reduction of chlorination by-products thereby obtaining high-quality potable water with less environmental impact.

With a budget of 1.66 million Euros, the Cleanwater Project is part of the European ECO-INNOVATION (2014-2017) aid program and represents an ambitious effort to improve water disinfection using accessible, safe, and compounds that are less harmful for the environment, fulfilling the Company's commitment to quality service and environmental awareness.

FCC Aqualia gives and receives awards

The work "El canon de saneamiento subirá un 50% y encarecerá el recibo", published by the journalist Tomás Díaz in the Water and Environment supplement of the newspaper El Economista, was the winner in the 1st Edition of the Aqualia Journalism Award "End-to-End Water Management in municipalities" organised in collaboration with Asociación de Periodistas de Información Ambiental (APIA). An article by Luis Guijarro another work by Patricia Álvarez and Marcos Luna, from the Asturian Public Television was the second runner-up.

Aqualia's awards

iAgua!, the reference publication of the water sector in Spain and Latin America held its annual award gala event to recognise Aqualia's good practices in the communications area. The Company won two awards: one for the Best Contract referring to the contract awarded for the El Salitre wastewater treatment plant in Bogotá, Colombia; and the other for the Best Company thanks to its awareness-building initiative #nolotires (Don't throw it away on the good use of the toilet).

In addition, Aqualia's work in Mérida (Extremadura, Spain) won the "Golden Drop" distinction given by the Spanish Association of Portable Ecological Toilet Rental Companies (AESPE, Spanish acronym). The award recognises the Company's commitment to the environment and for undertaking initiatives, in keeping with FCC's Environmental Policy, aimed at achieving more efficient management of natural resources, more rational energy consumption and the identification of the risks associated with its business activities.

FCC Aqualia will continue to provide services to El Vendrell (Tarragona) for another twenty-five years

After almost ten years managing the serviAqualia once again was awarded the contract by the El Vendrell (Tarragona) City Council as the private partner in the public-private venture for managing the city's water service for another twenty-five years.

The Company, which has been part of Aigües de Tomoví since 2007, was awarded a 25-year extension of the contract representing revenues of 140.4 million Euros. The selection of Aqualia is by the local authorities is an endorsement of the good services that the Company provides to the city's residents.

At El Vendrell, Aigües de Tomoví provides services to a population of more than 36,480 people and over 100,000 in the summer season, providing four million m3 of water through a 275 km supply network and 197 km of sewage pipelines.

Winners of the Peque – artistas contest

There are already seven award-winners in the Peque – artistas contest: Tomás Bicho, from Campo Maior (Portugal), and Sara Corral, from Madrid, were the winners in the children's ad youth category, respective, in the seventh edition of the drawing contest for the youngest members of the Aqualia family.

Last December, all winners were given a Samsung Galaxy tablet in addition to ten digital cameras to the five runner-ups in each of the categories. The names of all the award-winners are listed in the Intranet of FCC One Aqualia and on the contest website.

this year: as a novelty, the father, mother grandfather, grandmother, aunt or uncle of the winners received a 10" Samsung Galaxy tablet.

Once again, an edition of the Peque–artistas contest broke a record with a total of 178 girls and boys, aged 5 to 14 and children, nieces and nephews, or grandchildren of Aqualia workers in Spain, Portugal and Uruguay participating. The growing success of this initiative over the past few years reflects the involvement of the Company's employees who educate and encourage youngsters to consume natural resources in a responsible and sustainable way. It also makes them appreciate the work involved in bringing water to homes and returning it to the environment after its use in optimal conditions.

The aim of the contest is to encourage youngster to learn about the end-to-end water cycle in a fun way, recreating a great adventure story in a digital environment. This initiative has also become an essential tool, creating a sense of in-house cohesion and pride in being a member of the Company among all the workers who form part of the Aqualia team. Congratulations to all Aqualia family members!

FCC Construcción completes boring of the Bolaños tunnel on the Madrid-Galicia high-speed line

FCC Construcción has completed the boring of the Bolaños tunnels (Verín-Ourense). The works entail the execution of two parallel single-track tunnels, each 6.7 kilometres long, on the Madrid-Galicia High-Speed Line.

With an average excavation performance of 19.40 linear metres per day in the first tunnel, the work took 11.5 months to complete. The boring of the second tunnel saw an average excavation performance of 24.32 linear metres per day, resulting in a completion term of 9.5 months. Therefore, there was a two month reduction with regards to the time invested in the first tunnel.

The FAST Consortium, led by FCC, recognised as the Global Tunnelling Team of the Year for its work on the Riyadh Metro

The FAST Consortium, led by FCC, has been recognised as the Best Global Tunnelling Team of the Year at the 2016 New Civil Engineer Tunnelling Awards. Following the successful completion of the excavation work on the Yellow, Green and Purple lines of the Riyadh Metro, the Consortium also came in as runners-up in the Community Engagement and Global Best Project of the Year (above $500m) categories.

The winners were announced at an event held at the Grosvenor House Hotel on Park Lane in London on Thursday, 8 December. The panel of judges highlighted the size and diversity of the FAST excavation team, made up of 9,500 people from 42 countries who speak 22 different languages.

FCC Construcción completes its last Instagram contest of the year: "The best 12 photos of FCC CO projects"

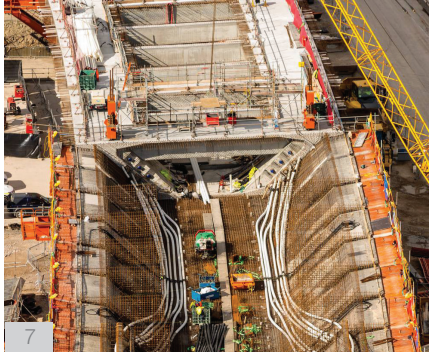
The most recent edition of FCC Construcción's Instagram contest concluded with participation that, for yet another year, was a great success. Workers who represent the Company's activities in all corners of the world where the Group operates sent their photos of the major projects that FCC Construcción is currently developing.

The most-voted photos this year, and therefore, the winners of this edition, were as follows:

1. Humberto Moreno, Construcción of Line 2 of Panama Metro
2. Gleison Arlindo da Silva, Açu Harbour, Rio de Janeiro
3. Álvaro Marzo, new soccer stadium for the Atletico de Madrid team
4. Enrique Díaz Valdés, the Coatzacoalcos tunnel
5. Panama Metro team, Line 2 of the Panama Metro
6. Francisco Borja Morales, Río Bogotá Project
7. David Carnero, Almonte Viaduct
8. Pedro Carlos Vega, Roof structure of the bus station, Toronto Metro
9. Luis Mayo, Castrovido Dam
10. Jennifer Douglas, Mersey Bridge
11. José Manuel Ballinote, Dublin Airport
12. Alejandro Lago, Mersey Bridge

Their photos will accompany us throughout 2017 in the calendar provided by FCC Construcción at the following link:

Link



New Terminal Project at
Mexico City Airport