

We are **FCC**

Nº 8

FCC pays **tribute**  
**to the company's**  
**employees** on  
their 40th and 25th  
anniversaries

**Fidelity**  
**Awards**  
**2018**





# SUMMARY

 Group FCC

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- Water
- Construction

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## FCC pays tribute to the **company's employees** on their **40th and 25th anniversaries**

The FCC Group presented the Loyalty Awards to people who have been with the company for 40 and 25 years in a tribute held at the Las Tablas corporate headquarters in Madrid. The ceremony was presided over by Esther Alcocer Koplowitz, chair of the FCC Group, and Pablo Colio, the Company's CEO, accompanied by senior executives from the business areas.

Pablo Colio welcomed the attendees and congratulated the award-winners for their contribution to creating the company that FCC is today. The

CEO thanked all the winners for their dedication and loyalty and expressed his desire to continue building FCC's future together. In his speech, he expressed his pride in being the leader of one of the best professional teams in the world, capable of managing and realising major projects and providing the best service to citizens. He stressed FCC's growth had been achieved thanks to everyone's effort, talent and motivation. Esther Alcocer Koplowitz, for her part, addressed some moving words to all those present, and thanked the winners for all the time they have devoted to FCC.

She thanked them for their work and effort throughout their professional careers, as well as for their high degree of loyalty, trust, commitment and passion for FCC. She also added, paraphrasing Carlos Slim, that "there is no challenge that we cannot achieve by working together and united"; and he mentioned her mother, Esther Koplowitz, referring to her as "her soul and an example to follow".

After these speeches, the prizes were handed out in recognition of the career and work of those professionals who have dedicated 40 and 25



## Fidelity Awards 2018

years to the company. In December, other branch offices also presented this award to those who have built part of FCC's history.

The event was followed by the Christmas get together where both the chair and the CEO wished everyone a Merry Christmas and the best wishes for the New Year.

[Photo Gallery](#)



## FCC participates in the **Smart City Expo World Congress** in Barcelona

**Innovation is in the DNA of FCC since its establishment over one hundred years ago, creating sustainable and efficient communities and ecosystems and improving the quality of life of its citizens on a daily basis.**

Once again, the FCC Group participated last year in the most important smart city event: the Smart City Expo World Congress 2018 (SCWC), leading world congress, held in Barcelona between 13 and 15 November. A wide range of experts, municipal representatives, institutions, academic leaders, research centres, companies and entrepreneurs attend the congress every year.

The Environmental and Construction (Industrial) business units participated in the event on behalf of FCC in a stand where relevant information on the two business areas and their positioning within the Smart City framework was provided through screens panels and interactive supports displaying several of its innovative projects.

In this context, FCC Group's Environmental Services made a global presentation of the first e-mobility platform for the vehicles used to provide these services.

FCC Medio Ambiente, through the 'FCC Equal' Special Employment Centre, the Incorpora Programme of "la Caixa", Inserta Empleo - Fundación Once and the Smart City Expo World Congress 2018 Organisation, committed to the communities in which they carry out their activities, and aware that intelligent cities must become increasingly inclusive, have joined forces in this edition of the congress to create the First Employment Fair for Collectives with Special Insertion Difficulties. This initiative was reinforced with the 'En Positivo FCC' project, which is being developed by FCC Construcción.

FCC's commitment to integration also materialised with other actions: motorised chairs for visitors with reduced mobility, monitors to accompany visually impaired people on their tour of the fair and simultaneous translation of certain speeches into the language of the hearing-impaired. These actions are in keeping with FCC's social and global commitment to the communities it serves.

FCC Industrial presented various projects for the efficient management of urban lighting in different municipalities in the country, as well as the development of intelligent electricity grids that transport energy from the source to households, thereby minimising the environmental and economic impact.

One of FCC Industrial's main attractions was the presentation of the Pintfar robot (a robot capable of automatically painting urban streetlights), which meets all the necessary requirements for a Smart City: innovation, technology, efficiency, sustainability, zero consumption and applicability. In addition, the company took advantage of this science and research environment to unveil the RET0 project



See video

(Efficient Residence Rate 0) and demonstrate its strengths and capabilities for developing efficient housing (residential and non-residential) with zero consumption rates, all supported by industry 4.0. under BIM, Big Data, IoT and blockchain procedures and techniques.

The other projects presented included: cybersecurity in critical facilities; in efficient and sustainable hospitals; urban traffic control and management models; the capacity to create sustainable and efficient urban ecosystems or digitalization in transport and ITS. The energy demands of the Smarts Cities were also analysed.

The participation of the Citizen Services Group in this type of congress is very significant, as it allows its stakeholders to learn about the latest innovations developed and the Group's capacity to address effectively and efficiently the needs of cities and their residents. Innovation has been in FCC's DNA since its inception over a hundred years ago, creating sustainable and efficient communities and ecosystems and improving the quality of life of residents on a daily basis.



The FCC Group's Environmental Services area presented the world's first e-mobility platform for service vehicles. In the phot, a 100% electric, plug-in, self-recharging and totally recyclable vehicle.

# The **City Council of Jaen** and FCC Environment unveil the **new machinery for refuse collection and street cleansing services**



To improve the service, FCC will be introducing a side-loading waste collection system to replace a large part of the current rear-loading system.

## The Company has been providing services in Jaén since 1985

The City Council of Jaen and FCC Medio Ambiente unveiled the new fleet of vehicles and machinery attached to the contract for indirect management of the public urban cleansing and municipal solid waste collection and transport services, as well as for the garden and green space maintenance services.

Last December, the city renewed its trust in FCC, which has been providing services in the city since 1985, with the signing of a contract

representing a municipal budget of almost 12 million euros per year (VAT excluded). The term of the contract is 12 years, plus another possible 8-year extension, representing a portfolio of approximately 144 million euros.

The presentation took place in the facilities that FCC maintains in the city of Jaén and was chaired by the city's mayor, Javier Márquez Sánchez, who was accompanied by Juan José Jodar Valderrama, City

Councillor for the Environment and Urban Maintenance; Manuel Santiago Bonilla Hidalgo, City Councillor for the Tax Office and Contracts, and other members of the municipal corporation.

During the presentation, the mayor said, “keeping the city clean is a challenge and a commitment of the City Council and of the residents”. Various company managers and executives attended the event on behalf of FCC Medio Ambiente, including Manuel Ramírez Ledesma, Director of Zone II and Javier Irigoyen Arcelus, Director of the Andalusia I Region.

A team of more than 200 employees for whom specific training and equality plans will be developed will provide these new services.

**Committed to sustainable services.**

This new contract underscores a real commitment too introducing electric mobility technology to enable more sustainable city services and with the objective of minimizing the environmental impact. Accordingly, 34 electric vehicles will be used, including vans and inspection cars (one of them a municipal supervision vehicle) and ancillary sweeping vehicles, in addition to a large amount of electric tools.

**Side-loading vehicles**

In addition, the new waste collection service with a side-loading system shall replace most rear-loading systems; this is a very relevant change, translating into a considerable improvement of the efficacy and efficiency of the service. As a result, the Company will be incorporating seven new side-loading waste collection units and a unit for washing the interior and exterior of containers in addition to high-pressure hydro-cleaning equipment to clean and disinfect the container islands and to remove stains and graffiti.

For the garden maintenance service, the company will provide a tree-pruning chipper, reusing the remains in green areas of the municipality with mulching techniques, which are very practical to retain humidity and create humus.

**High-performance equipment**

The street cleansing service is strengthened with the new water tankers with an 8 to 16--m3 capacity, as well as two pavement-washing machines and two electrical support trikes for places that are hard to reach. In addition, high-performance mechanical sweepers will be used on pavements and roadways.

“This new service for the city of Jaén is much more efficient and sustainable, thanks to the number of machines used during the service and the fact that this is zero-emission machinery”, stated Javier Irigoyen Arcelus, Director of the Andalusia I Region.



The new contract represents a clear commitment to introducing electric mobility technology that will enable the city to have more sustainable services and to reduce the environmental impact.



Thirty-four electric vehicles, including vans and inspection cars, will be used, in addition to ancillary sweeping vehicles.



In the photo: Javier Márques Sánchez, the mayor of Jaén, accompanied by Juan José Jodar Valderrama, the Councillor for the Environment and Urban Maintenance; Manuel Santiago Bonilla Hidalgo, City Councillor for the Tax Office and Contracts; and other members of the municipal corporation. Manuel Ramírez Ledesma, Director of Zone II and Javier Irigoyen Arcelus, Director of the Andalusia I Region represented FCC Medio Ambiente.



# Innovation in Aqualia's water cycle

Through its 20 active R+D+I projects and its 10 developed patents, Aqualia works to achieve water quality for everyone

During the last 5 years, the company has invested 15 million of its own resources for the development of technological and innovative solutions for water treatment. Aqualia participates in the main European, national and regional R+D+i programmes related to water management. Thanks to co-financing from the Spanish Administration or the European Union (FP7, LIFE, H2020, Eco-Innovation...) Aqualia is able to provide its projects with the best resources.

The R+D+i activity plays a leading role in the company, since in the management of a good as necessary as water, the continuous search for technologies that make the process more sustainable is fundamental.

Through continuous contact with the different agents in its environment and thanks to the collaboration of all Aqualia personnel, opportunities are identified for the development of new projects that fit into the lines of work on which the company's R+D+i activity is organised: quality, sustainability, intelligent management and eco-efficiency. The purpose of these four lines of action is as follows:

## Sustainability

Development of innovative technologies and responsible solutions in the end-to-end water cycle, with the aim of extending the sustainability of processes, both from an environmental and economic point of view.

Conversion of waste (wastewater) to several value-added products, while significantly reducing energy consumption. In order to meet this ambitious challenge, several water treatment projects are being developed using microalgae and bacteria.

## Eco-efficiency

Development and implementation of ecologically and economically efficient technologies, processes and operating strategies, so as to guarantee the effectiveness and quality of services, reducing the consumption of material and energy resources.

To promote efficiency in the management of the water cycle, fundamentally in treatment, drinking water and desalination plants, being more respectful of the environment and increasing the value of products and services.

## Quality

Improvement of water quality, guaranteeing the efficiency and optimisation of the operation of facilities related to the integral water cycle, both in municipal and industrial facilities.

Ensuring the quality of the service with advanced and interactive control, allowing efficient use of resources and consumer participation.

## Smart management

Smart services that enable greater transparency for the user in water service, increasing his satisfaction thanks to knowledge and awareness.

Optimized management includes energy-efficient processes, continuous monitoring and the detection and prediction of events to support decision-making.



All-gas car and Idi equipment



Life Biosol equipment



Presentation of Aqualia's Incover Biosol Almería project.



Seat -Smart Green Gas.



Life Memory equipment

# Compromisoaqualia

Inicio Aqualia y los ODS #Compromisoaqualia Blog



## #Compromisoaqualia Con la innovación



Desarrollo de soluciones tecnológicas e innovadoras para el tratamiento de agua para la industria en múltiples sectores: agroalimentario, minero, farmacéutico, energético o petroquímico.



15 millones de euros de recursos propios invertidos en I+D+i durante los últimos 5 años.

FCC secures contract to design and  
construct the new  
**“North Runway”**  
at Dublin Airport



From left to right, Santiago Farré, director of Zona Europa; Dalton Philips, CEO of DAA; and Miguel A. Mayor, Country Manager UK and Ireland.



Signing ceremony: from left to right, Santiago Farré, manager of the Europe Area; Dalton Phillips, CEO DAA; and Paul O'Kane, Communications Manager DAA.

FCC Construcción (FCC) has won the contract for the design and construction of the new "North Runway" at Dublin Airport (Ireland).

Currently, Dublin Airport has two operational runways: the main runway 10R / 28L and the cross runway 16/34 that only comes into operation under certain weather conditions and on certain occasions to relieve congestion on the main runway.

The new "North Runway", is 3,110 meters long and will be located to the north of and parallel to the existing main runway 10R / 28L. The main objective of the project is to decongest aircraft traffic in the main runway and increase air traffic and frequency at the airport.

### FCC in Ireland

FCC Construcción already has a strong and stable presence in Ireland through major infrastructure projects that have been essential for the development of the island of Ireland. These projects include: the expansion of the M-50 urban highway from two to four lanes in each direction that forms a C-ring around Dublin with major junctions facilitating access to the city, and in particular, to Dublin Airport and Dublin Port; and, Enniskillen hospital that has an energy demand management centre and is one of the most modern and advanced hospitals in Europe in terms of energy efficiency.

Currently FCC is undertaking the contract for the design and construction of two buildings within the new Dublin Institute of Technology (DIT) Grangegorman campus in Dublin. Once completed, they will provide university services to 10,000 students and staff at the Grangegorman Higher Study Centre. In addition, within the Dublin Airport campus, FCC Industrial is redeveloping the aircraft fuel supply facilities and hydrant system at the airport. With this infrastructure, FCC Industrial is improving operational efficiency at Dublin Airport.

### Airport experience

FCC Construcción already has a wide portfolio in the design and construction of complex airport infrastructure, such as the T-1 Passenger Terminal at El Prat Airport in Barcelona, the third runway and the new T4 terminal at the Madrid Barajas International Airport, the terminal building and the parking facilities at the Palma de Mallorca airport, the Control Tower at the El Dorado airport in Colombia, the upgrade of the runways at Riga airport in Latvia. Currently, FCC is part of the international consortium for the design and construction of the new Mexico City International Airport, which is the second largest airport in the world under construction and will increase the size of the current airport six-fold, catering for 125 million passengers per year. Recently, FCC Construcción has been awarded the contract for the design and construction of the expansion project of the new "Jorge Chavez" international airport in Lima (Peru).



Terminal 2 at Dublin Airport (Ireland).

## Gheorghita Petre, **the first woman** hired by FCC for the Zaragoza **sewer service**

FCC's sewer system cleaning and maintenance service has a woman for the first time. She is Gheorghita Petre, 35, from Romania. FCC has chosen Gheorghita, a person with a very positive attitude and a great desire to work.



The company policy that currently governs FCC involves incorporating more female personnel into its workforce, with the ultimate goal of achieving the same number of men and women.

Last year FCC signed its 2nd Equality and Efficiency Plan, which seeks to achieve equal treatment and opportunities between women and men and eliminate any hint of discrimination on the basis of sex.

Gheorghita, let's talk about you.

I was born in Tirgoviste, Romania. I come from a very humble family.

My father was a milling lathe operator and my mother a homemaker. I have two sisters who currently live with me in Spain together with my mother. My father passed away.

In Romania, I studied and graduated as a professional seamstress but I have not followed up in recent years for lack of time.

I came to Spain when I was 21 years old and, after several years working as a domestic helper and cook, I took the chance and sent my CV to FCC, a large company where I thought I might be given an opportunity. I had seen some women working at

this company and thought to myself, why not you?

**How do you think women are treated in Spain?**

Equality in Spain is well regulated. I think it is an advanced country where women seem more aware and fight for their rights. I come from a country where this is not the case.

**How was your first day at work?**

To tell you the truth, when I saw myself the first morning surrounded by men and the boss introduced me to my future colleagues, I was quite ner-

vous and somewhat uncomfortable. It seemed odd that they acted naturally, not surprised at all, even though I was. Later, when I had been introduced, I was assigned to work with Victor, my colleague, whom I want to say hello from here. Everything was quite normal, we began to talk and I felt that I was integrated. They took good care of me. After I completed my first day of work, I got a call from Human Resources and they told me that if anything happened, the door was always open. Nothing has ever happened, however.

### Did you ever feel discriminated at work or have you experienced any uncomfortable situation?

No, everything is very normal. I have not witnessed any discrimination and everyone has tried to make me feel part of the team. I am just one more employee who performs her job. I have always been treated with respect, nothing strange has ever happened and they have always made things easier for me, not because I'm a woman, but because I have been working there for a short time and they want me to be part of the team.

### How long have you been working at the company?

Four months and I hope that I work here for a very long time because I am very happy. I work hard and I think that my bosses are happy with me. So, let's see what happens. I am particularly happy with my colleagues and want to thank them.

### What does your job at the company entail? How is your day-to-day work?

We work in rotating shifts. For example, the morning shift starts at 6:40 a.m. Before we start to work, we change clothes and put on our work clothes. We drink coffee and talk. We then collect the work instructions and the list of tasks for the day and are assigned to a team. We then go out to the streets to do our jobs.

The driver and a worker always work together. I am the worker and we go on the truck to the sites where the

boss has sent us. We load water and begin to clean. We lift the sewer grids, change them and clean with them with pressurized water hoses. We lift the lids and I check if the water flows through the entire sewer.

We take a 20-minute break for lunch, have a sandwich at the nearest cafeteria and continue working until the end of the working day.

### Can you tell us any story about anything that happened at the company?



Yes, I remember the summer months and the flooding. I remember going from Santa Isabel to Parque Grande removing the sewer grids since all the drain holes were clogged with leaves because of the great amount of rain. Even though our work clothes are waterproof, we were soaked that day but I felt happy with my work. Work on those days was quite hard.

Another anecdote has to do with the fact that I am a woman. One day, we were cleaning with a pressurized water hose and I was wearing my uniform cap, I heard an elderly person who was looking at us as we worked, say to another man: "Look at that chap; he looks like a young woman." I thought it was funny and laughed but said nothing.

### Why do you think that no women ever worked before in the sewer service?

I do not think we have to look for anything strange. I assume that society was not prepared for this, but things have evolved. Thank God that

society has evolved and now we have the possibility of working at any job.

Often, women are the ones who have a closed mind and don't take a chance. I went to the job interview with an open mind and willing to do anything. When they asked me if I was willing to work at the sewers I doubted for a minute, but I quickly said yes and I think that's the reason I'm still working here. I would like to encourage other women to go with an open mind. We are capable of doing anything.

### What does your husband think about your job?

He always tells me that he is proud of me and that I can do anything. I believe him. I say this because this is how I feel. Why not? I have gone down to sewer wells, nothing special about that.

### What are your aspirations in the company?

I am quite happy. I signed up for driving lessons since, thanks to the company, this is free and, after getting my driver's license, I want to get a license for driving a truck. Maybe someday I will be driving a large truck.

### News published in the newspaper Periódico de Aragón

el Periódico



## United Kingdom

# Wychavon residents give names to the new waste collection trucks



The names chosen by residents were placed above the cab door of the trucks.

Wychavon District Council and its waste and recycling collections partner FCC Environment launched an initiative for residents to give names to the 15 new trucks in the service fleet.

Once the names had been chosen, they were placed on the cab doors and the winners were invited to the depot for their presentation.

Steve Longdon, Regional Director for FCC Environment, said, "We are de-

lighted to welcome the residents who named the new waste collection trucks. It has been a source of pride for us that residents became involved in this initiative".

"It was wonderful inviting our winners in so they could see their trucks before they took to the roads with their personalised livery," said FCC Environment Area Manager, Mike Stass. "The 15 state of art trucks will be working hard for years to come collecting waste fractions".



Wychavon families visited the depot to see the trucks with the new names.



From now on, the service also includes the collection of batteries, small electronic items and textiles of lower grade textiles that are not good enough for re-sale.

These state-of-the-art trucks comply with the Euro 6 standard and produce less nitrogen oxide emissions and fine particles, 80% less than previous trucks. Also of great importance is the introduction of the rear-loading waste collection system. This truck renewal process seeks to improve

the efficiency and sustainability of the service, wagering on the use of more modern vehicles, quieter, more functional and less polluting.

### Names of the trucks

-  Reggie refuse
-  Sir Trash a Lot
-  The Incredible Bulk
-  Lambergreenie
-  Recyclosaurus Rex
-  Jus-bin Timberlake
-  The Ter-bin-ator
-  Binderella
-  The Flying Dustman
-  Greta Garbage
-  Bin Diesel
-  Trash Gordon
-  Donald Dump
-  O-bin-wan Kenobi
-  **Amazing Anna\***

\* Amazing Anna was named in honour of Cllr. Anna Mackison, a former Wychavon board member who looked after environment and street scene. Anna was part of the roll out of alternate weekly collections across the district and regularly went out with crews collecting bins so that she fully understood the service.

## United Kingdom

# Youngsters from **Boston West Academy** are the best in the county at reducing food waste



Emma Schofield, Assistant Head, Boston West Academy said, "Our visits to the EFW site are always aspirational, informative and fun for our children."

Over the past year, primary schools from Lincolnshire have been taking part in a challenge to reduce the amount of waste from their lunch box at Lincolnshire County Council's Energy from Waste facility.

"Boston West Academy won out against 18 other local schools and the 7 – 11 year olds who took part should all be very proud"

During the presentation ceremony of the certificates that recognize the work done by the students to reduce the waste from their lunch boxes, the Chairman of the Lincolnshire Waste Partnership, Councillor Eddy Poll said, "It's so important that our young people get a well-rounded education. We need to teach them about the world we live in, how it works and how we can help protect it for future generations." He added, "School visits to the EFW facility are brilliant. They allowed us to start conversations with the students about the importance of recycling and how we can all play a role in taking care of the environment

and the zero waste lunch box challenge is a key part of that."

Juergen Schaper, Lincolnshire Energy from Waste General Manager said, "This challenge is a great way for youngsters to learn about waste and recycling. "Making simple swaps, such as cutting up cheese, fruit and vegetables into sticks rather than buying individually packaged ones, putting sandwiches in a tub instead of using cling film, zip-lock bags or foil and bringing drinks in reusable bottles, can make a huge difference in the amount of waste which is put in the bin".

Sally Hood, visitor/administration manager for FCC Environment, who runs the Energy from Waste Visitor Centre, comments: "It was an absolute delight to have the children and young people from Boston West Academy visit us at the facility. I hope that it provokes thoughts of waste management and encourages them to change their lunch box habits – which evidently it has!"



## 90% reduction

In 2011, Lincolnshire County Council made a commitment to reduce the amount of waste going to landfills, and since the plant became fully operational, it has achieved this goal by reducing the amount of waste going to landfill by 90%.

# FCC employees save the life of a colleague

On 22nd November last, a colleague who works in the offices of Metro de Madrid Works, located in the Metro de Madrid de Cuatro Vientos depot, Rafael Ferre Vergara, or Rafa as his colleagues call him, suffered a heart attack with cardio-respiratory arrest and it was his own colleagues who saved his life by means of cardiac massage, combining chest compressions with mouth-to-mouth in order to maintain blood circulation and to ensure that the brain did not run out of blood flow. Once stabilized the emer-

gency services began their transfer in Mobile ICU to the hospital.

According to the colleagues of the Convensa delegation, a company specialising in railway works for the FCC Group, the moments spent in the office were extremely tense, but the important thing is that Rafa is recovering at Gregorio Marañón and thanks are due to the actions of his colleagues.

This story will surely serve to know how important it is to know the basic resuscitation manoeuvres to act correctly and reverse cardiac arrest, as well as to know that you have to call 112 to ask for help. Sometimes minutes can save lives.



[Click here to obtain information on how to perform a cardiac massage.](#)



## The mayor of Jerez closes the third edition of the **Mentoring Programme**



**The Mentoring Programme facilitates relationships between mentors and “high-potential” mentees, taking advantage of generational synergies and helping them establish a solid network of contacts within the organization.**

The mayor of Jerez, Mamen Sánchez, presided over the closing of the third edition of Aqualia’s Mentoring programme, which seeks to promote female talent and the professional development of newly recruited department managers. Accompanied by the director of People, Carmen Rodríguez, and the company’s IT director, M<sup>a</sup> Ángeles Vicente, the mayor said, “she could not fail to accompany a company that is committed to equality”.

The Sherry Hotel in Jerez was the venue for the event that brought together the nine mentoring couples from Zones I, II and III, as well as from Central Services and the International area. The Mentoring programme facilitates relationships between mentors and “high potential” mentees, exploiting generational synergies and helping them to establish a solid network of contacts within the organisation.

Aqualia launched this initiative three years ago as part of the battery of measures that the company has designed to promote equality between men and women. After each edition, it continues to consolidate itself as an excellent tool for fostering female talent and giving visibility to the company’s people with high potential.

“The aim of this initiative is to promote female talent and facilitate the active integration of recently”



## Women from the FCC Group successfully complete the **Development Programme for the Management of Women with High Potential**

FCC and Escuela de Organización (Industrial Organisation School, EOI Spanish acronym) have closed the latest training programme for high-potential women, the aim of which is to facilitate the acquisition and development of managerial skills and abilities, focusing on key aspects such as equal opportunities, diversity and business ethics.

Employees of FCC Medio Ambiente, Aqualia, FCC Construcción and Central Services have successfully completed this edition of the Development Programme for the Management of Women with High Potential that was developed at the EOI.

This programme is promoted and partially financed by the Ministry of Health, Social Services and Equali-

ty through the Secretary of State for Social Services and Equality and its main objective is to offer comprehensive training to prepare these women to assume, in the future, greater managerial responsibilities with a multidisciplinary perspective. In this way, its ultimate aim is to make companies aware of the benefit of having female talent and thus move towards a balanced participation of men and women in key decision-making positions.

The course offers multidisciplinary training that aims to enhance the managerial skills of participants and enrich personal and professional development, promoting teamwork and interrelation between participants, creating a network of contacts between teachers and students.

This new edition was carried out between the months of March 2018 and October, combining face-to-face meetings with online training periods. Throughout the course, the subjects developed included finance, managerial skills for the management of efficient and motivated teams, operational management in order to get to know the functional areas of the business organisation, management in companies to discover the keys to innovation and identify business opportunities, as well as an individual coaching process.





Pablo Colio, the Chief Executive Officer of the FCC Group, gave the opening speech at the event.

## FCC observes International **Day for the Elimination of Violence against Women**

**A round-table discussion panel was organised at the Las Tablas headquarters under the slogan "Speak up and ask for help".**

FCC celebrates the International Day for the Elimination of Violence against Women, held every year on 25 November.

Every year, the Group calls on all Company employees to remind them of its principles and to reiterate its commitment and vision: zero-tolerance when it comes to gender violence and the promotion of the social and professional integration of women who subjected to gender violence.

As part of its commitment to eliminate gender violence, FCC organized a commemorative event at its Las Tablas corporate headquarters. The event was chaired by the Company's Chief Executive Officer, Pablo Colio, who was accompanied by Esther Alcocer Koplowitz, Chairwoman of FCC Group.

The actions included a panel discussion, held under the slogan "Speak up and ask for help". The participants included Matilde Fernández, President of the Spanish Committee of ACNUR, United Nations High Commissioner for Refugees; Isabel Sanchis Vila, member and advisor of the Government Delegate's Office against Gender Violence, and M<sup>a</sup> Elena Palacios Tejero, Chief Inspector and Head

of the Intervention Service of the Family and Women's Unit (UFAM). National Police Force.

At the end of the day, the company's employees showed their support for the victims of this curse on society by standing next to a poster with the phrase "STANDING BY YOUR SIDE", as part of the activities organised to observe the International Day for the Elimination of Violence against Women. "STANDING BY YOUR SIDE" kicks off a campaign rolled out by FCC Medio Ambiente to show its support for the victims of gender violence.

With these events, FCC defends equality between men and women and rejects any act of violence by implementing numerous initiatives



in the countries where the Group operates, with the aim of contributing to building a freer and more respectful society for everyone.

In such a special day, FCC will also join the campaign against gender violence of the Ministry of Health, Social Services and Equality and reaffirms its commitment to equality by collaborating with different institutions to create a safer society that is free from gender violence.

FCC renews its commitment to the public administrations and social agents. The Group will continue to roll out in-house awareness-raising actions to raise awareness on the need to eradicate this curse on society and mitigate its impact on victims.

The key to success involves transmitting the vision of change, progress and awareness raising to all Group staff, applied to the actions

aimed at ending violence against women and fostering communication, in particular, in the countries in which this occurs.



FCC delivers award to UNHCR for the work it has carried out



The phrase "STANDING BY YOUR SIDE", the slogan of the campaign that FCC Medio Ambiente initiated on the event, was formed outside of the corporate building by all the people at the Company and guests.

# STANDING BY YOUR SIDE,

the slogan of the campaign launched by FCC Medio Ambiente to **express its solidarity with victims of gender violence**

STANDING BY YOUR SIDE marks the start of the campaign that FCC Medio Ambiente has launched to show its solidarity with victims of gender violence. His slogan will be shown at all locations and in all countries where FCC Medio Ambiente conducts its activities.

STANDING BY YOUR SIDE will form part every year of any initiative linked to the celebration of the Day Against Gender Violence and of any other awareness raising activity that the company sets in motion to put an end

to this social scourge and in solidarity with the victims of violence against women.

The objectives of FCC Medio Ambiente's Equality Plan include promoting the defence and effective application of the principle of equality between men and women, guaranteeing equal opportunities for entry and professional development at all levels in the workplace; improving the balanced distribution of genders within the scope of application of the Plan; promoting and improving women's opportunities for access to positions of responsibility, contributing to reducing inequalities and imbalances which, although of historical, cultural, social or family origin, may occur within FCC Medio Ambiente; to prevent sex discrimination in the workplace by establishing a protocol for action in these cases; to reinforce the Group's commitment to sustainability and corporate social responsibility in order to improve the quality of life of employees and their families and to promote the principle of equal opportunities; and to establish principles of exclu-

sion from any measures that might prejudice the reconciliation of working life with the family and personal lives of workers.

In order to achieve these objectives, a series of areas of action are contemplated, focusing on: access to employment, promotion, training, remuneration, and conciliation, preventive and corrective measures for the situation of discrimination, prevention of harassment based on sex, communication and protection of female workers who are victims of gender violence.

## FCC wears the colour purple in Zaragoza

The FCC workers in charge of street cleaning and garbage collection in Zaragoza have worn purple vests to demonstrate their rejection of male violence.

More than 1,100 employees have walked the streets wearing their vests, spreading the campaign slogan "Let's sweep violence against women together".



# 25N

Día Internacional  
de la Eliminación  
de la Violencia  
contra la Mujer

# ATULADO

**FCC**  
Medio Ambiente

# Aqualia says **NO** to gender violence



Family photo of the prizewinners and of the people who presented the awards. From left to right: Higinio Martínez, director of the Levante branch office; Carmen Rodríguez; Carolina Serrano; Ángel Luis Pérez; Carmen Fuentes; Elena Barroso, director of the Legal Department; Santiago Lafuente, director of Spain; and Manuel Castañedo, director of Customer Management.

On the occasion of the World Day Against Gender Violence, Aqualia launched the campaign #AqualiaContigo and with all the material received the company has edited a video with a selection of the images and messages received, which also includes a few words of presentation from Aqualia's CEO, Felix Parra, which explains the objective of the action and the company's commitment to this cause.

The hundreds of Aqualia workers who have joined the #AqualiaContigo campaign by sharing images and messages of support for the victims, and their rejection of gender violence, convey the strong commitment of all the company's professionals to the most serious problems of today's society.

At the same time, the company read a manifesto against gender violence in various work centres in Aqualia and at the gates of town halls. Examples include Santa Eulària (Ibiza), Lluçmajor (Mallorca), Abarán (Murcia) and El Vendrell (Tarragona). The water in fountains in municipalities such as Oviedo has also been dyed violet and talks and colloquiums have been organised, as is the case of Martos (Huelva), and other activities, such as dramatised performances or the canvas competition "Ávila espacio libre de violencia machista" (Ávila space free of male violence).

**Today and always, #AqualiaContigo.**

## Awards for the best photos of the contest for the #AqualiaContigo campaign.

The photograph "Tú que cuidas, déjate cuidar" (You who are a caregiver, let somebody take care of you) by Ángel Luis Pérez, director of the Castile and León branch office, was the winner of the photo competition #AqualiaContigo. Carmen Rodríguez, director of Personas, presented the prize at a ceremony held at the Las Tablas corporate headquarters in Madrid.

Carolina Serrano, head of Aqualia Contact, and Carmen Fuentes, from the Administration department of the Levante branch office, were finalists with their photographs "A flower of hope so that there is no news that produces indignation" and "There is always a way", respectively. Santiago Lafuente, director of Spain, and Elena Barroso, director of Legal, delivered the awards. The awards are endowed with a commemorative trophy and a card exchangeable for purchases at Amazon or donations to the NGOs Action against Hunger, World Vision and UNICEF.



# FCC shows its support for the International Day of Disabled Persons: **accessibility, inclusion and awareness**



## Día Internacional de las Personas con Discapacidad

FCC participates once again in the events of the International Day of Disabled Persons. In 1992, the General Assembly of the United Nations dedicated this day with the objective of promoting the rights and well-being of disabled persons. In addition, it aims to raise the awareness about their situation in all aspects of political, social, economic and cultural life.

FCC observes this day to remind everyone about its day-to-day commitment with this group and about how it has strengthened its commitment to become an increasingly diverse and socially responsible company, promoting actions and projects to foster inclusion and equal oppor-

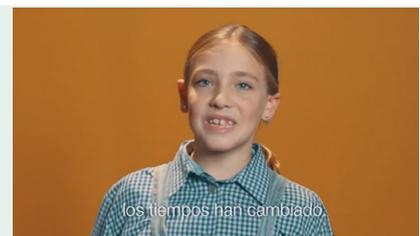
tunities through employment. More than 1,000 of the company's employees have some form of recognised disability; one of every seven people in the world also has some form of disability (more than 1 billion, about 80% in developed countries).

FCC's commitment to diversity and workplace inclusion covers various initiatives and management strategies, such as:

- Direct hiring and hiring through specialised entities, such as the Inserta foundation, with the workplace inclusion programme of the Once Foundation. FCC has worked with the Once Foundation for the past 10 years, with the aim of ensuring disabled persons can live and work in a more inclusive society that guarantees equal opportunities. The capacity, talent and commitment of companies such as FCC has allowed over 20,000 disabled persons to be hired by the companies that have joined the Programme and the Inserta Forum of the Once Foundation.
- Promoting purchasing and hiring services through Special Employment Centres, FCC Equal, its own Special Employment Centre, being a benchmark in this area, as a member centre of the Castile y León offices of FCC Medio Ambiente.
- Providing support in education and entrepreneurship programmes, collaborating with the Prevent Foundation in its Entrepreneur Classroom and participating in Scholarship programmes for disabled students and entrepreneurs, athletes and researchers working on the Prevention of Occupational Hazards.
- Giving visibility to diversity and talent, disseminating campaigns to eliminate prejudice and of the barriers that hinder the development of disabled persons. Along these lines, FCC has joined the Integra Foundation's "Very able" campaign.
- FCC also wants to disseminate the United Nations' message "Transforming into a sustainable and resilient society for all", with its commitment to ensuring disabled persons are agents of change that can accelerate the progress towards and inclusive and sustainable development model, promoting the establishment of resilient societies for everyone. A true commitment to diversity, progress and equality.

## The Once Foundation and the Inserta Forum Campaign

The campaign disseminated by the Once Foundation and the Inserta Forum in observance of the International Day of Disabled Persons: "Thinking about the future, building the present. The future starts today". This campaign is aimed at enhancing the visibility of the professional potential of disabled persons and highlighting their essential role in companies to foster workplace inclusion.



# Aqualia **#Contralasetiquetas** (Against labels) campaign in favour of the integration of people with disabilities in the workplace

Contra las etiquetas

Año 2049.

**BIENVENIDOS  
AL FUTURO**

Coinciding with the International Day of People with Disabilities, Aqualia joins the campaign #Contralasetiquetas of the Adecco Foundation to demand the social and labour inclusion of people with disabilities in the face of all the social barriers and prejudices they face on a daily basis.

Under the slogan “Now and in the future we fight against labels”, the campaign focuses on launching a spot in which more than one hundred solidarity companies have collaborated, including Aqualia. It shows us how in 2049 digitalization, robotization

and artificial intelligence have revolutionized the reality in which we live. Nevertheless, the development of technologies has progressed without taking into account one of the greatest challenges: inequality and social exclusion.

The #Contralasetiquetas campaign invites us to reflect on the future that we are designing in order to advance towards an inclusive technology that does not mark differences, promoting equal opportunities and the labour integration of people with disabilities.

As part of its social responsibility policy, Aqualia is committed to the normalisation of disability and joins the Adecco Foundation's awareness-raising campaign to contribute its grain of sand in the common project to achieve a better society.

# FCC Construcción celebrates **Disability Day**



Disability Day family photo.



Blindfolded breakfast.

On 14 December, FCC Construcción held Disability Day at the Las Tablas corporate headquarters. This conference, organised by the Adecco Foundation and FCC Construcción, is part of the framework for the development of the “enpositivofcc” initiative.

The main objective of the symposium was to bring disability closer to FCC Construcción employees through different workshops and activities, coordinated and managed by disabled people. The performance of manual creativity activities provides multiple benefits and in a very different way:

- They encourage cognitive aspects.
- They provide psychological benefits, since they improve self-esteem and mood by seeing that one is capable of carrying out work correctly and satisfactorily.
- Provides social benefits: It improves socialization, since this type of conference often represent the only opportunity for people with intellectual disability to collaborate and to relate with other people outside their disability centre and family.





Soap and biscuits workshops.



Disability Day event at the Las Tablas corporate headquarters.

The workshops developed were, soap decoration workshop, biscuit workshop and blind breakfasts, in which employees could have breakfast blindfolded and guided by the disabled.

The material prepared by the disabled and by FCC Construcción employees was placed in a solidarity market. The aim was to showcase the enormous amount of work carried out in the disability centres. People with disabilities and support staff, promoting communication and treatment of the public, basic skills and knowledge for social inclusion, attended the market.

The high degree of acceptance by FCC Construcción employees encourages the continued development and application of the principles and values of the enpositivofcc project.

## The Diversity Adds Up campaign and the enpositivofcc website

With this latest project, “La Diversidad Suma” (Diversity Adds Up) has managed to make known the company’s commitment to the social and labour inclusion of people at risk of exclusion, meaning people with disabilities, women victims of gender violence, etc.

This campaign has had some great protagonists. Employees from FCC and its Construction area, linked to disability, together with Pablo Pineda, a diversity consultant at the Adecco Foundation and the first European university student with Down’s syndrome, have put a face on this pioneering social project in the construction sector.

Five FCC employees have contributed as ambassadors for this initiative, which has penetrated the entire organisation. They all have a common bond; they all know about disability from close up but in a different way and each contributes their vision, knowledge and experience of diversity and disability in an enriching way.

# FCC hands out the 2018 Safety and Health Awards

**FCC's main and on-going priority is the health and safety of its staff at the workplace and one of its main goals is to strengthen the integration of the preventive activity at all company levels.**

FCC held the 4th Health & Safety Awards at the corporate headquarters building in Las Tablas. The event was chaired by Pablo Colio, CEO of FCC, and was attended by the executives and senior managers of the business and corporate areas of the Group.

More than 31 top-notch candidates participated in the fourth edition of the awards, which was aimed at recognizing the initiatives or actions carried out by the departments, teams, business areas or staff of FCC that contribute to consolidating the culture of prevention and health and well-being advocacy at the workplace.

As in previous years, the event was quite a success, with the participation of many different national and international members of the structure, business units and production areas of FCC Group, with candidates from the United Kingdom, Czech Republic, Panama, Costa Rica, Colombia and Spain.

The awards were given in three categories: "Occupational Risk Prevention", "Health Advocacy" and "Personal Development":

## Prevention of Occupational Hazards

The first Occupational Hazard Prevention award (technical measures sub-category): Safety in waste water pumping work in urban areas was given to the Aqualia team, made up of Manuel Ruiz Espejo, Representative of the Campo de Gibraltar offices; Alberto Romero Gómez, Head of Production of the service in Algeciras, and Francisco Rueda Amado, ORP Technician in Cádiz and Campo de Gibraltar.



The second Occupational Hazard Prevention award (technical measures sub-category): Smart Waste Transfer Plant, was given to the team of FCC Medio Ambiente in the Central Offices, made up of Leo Guldentops López, Head of the South Community of Municipalities Area; Miguel Hernandez Calderón, ORP technician of the Central Offices; and Raúl Díaz Romero, professional of the Transfer Plant in Colmenar de Oreja.

The Occupational Hazard Prevention award (strategy and management sub-category): Safety in construction of the viaduct over the Almonte River was given to the team of FCC Construcción, made up of Agustín Alonso Velasco, Project and Site Manager

and M<sup>a</sup> Luisa Pérez Riveiro, professional of Convensa.

### Health Advocacy

The Health Advocacy award was given to the programme “Health comes first” of the RBU-LV in Paterna (Valencia).

### Personal Development

The Personal Development awards were given to the following professionals, in recognition of the promotion of healthy values, habits and practices: Laura Ferrero Nielfa, Head of Selection and Training of the HR Coordination and Development Department of FCC Group; Fabio Rodríguez Velázquez, First level skilled worker, Driver and Prevention officer of the Offices in the Canary Islands of FCC Medio Ambiente; Javier González and Jesús Rodríguez, Site and Project Manager and Foreman, respectively, of the Offices of FCC Construcción; Rufino Blázquez Fernández, Head of the Metropolitan Sewer Network of Zone I of the Central Offices of Aqualia; Antonio Alejandro Martínez Díaz, Treasury, Financial Control and Budgets, of the Finance Department of the Corporate Services of FCC Group; FCC Environment Health & Safety Team of the United Kingdom; and Pablo Alcalde Martín, Head of Cleaning in Repsol Puertollano, FCC Medio Ambiente (Ciudad Real).





## 4th Open Door event in Zaragoza

The Aragón-La Rioja branch office held its 4th Open Day at FCC's Zaragoza facilities.

The event that took place on 1 December was aimed at all the children, grandchildren and nephews of workers between the ages of five and 12. Carmelo Jiménez Bozal, the branch office manager, welcomed around 30 children, accompanied by family members, who attended the event. Many activities were programmed for the children. With the collaboration of CREA (Confederación de Empresarios de Aragón), workshops were organized on preventing hazards at home where the youngsters learned things ranging from how to extinguish a frying pan on fire to basic first aid.

José Ramón Ruiz, a prevention technician, talked about FCC and road safety.

In addition, together with the Once Foundation, awareness workshops were held, where children could walk with guide dogs and play goal ball, the only sport created specifically for people who are blind or have low vision. The game is based mainly on the auditory sense to detect the trajectory of the ball, which has bells inside that make noise as the ball moves. This sport, therefore, requires a great capacity for spatial orientation to be able to intercept the ball, strategically located in the field and make the throw. One thing to note is that all players wear opaque masks to match the lack of visibility of the participants. In the recycling workshops, the children learned how to differentiate the different containers and how to sort the containers at home.

In addition to these activities, there was an exhibition of the machinery

fleet, where the children had the opportunity to understand and see how they operate, and to get into the cabins to see them inside. All attendees were given a bag with different gifts from Fundación Once and healthy company t-shirts.

It was a day of learning and awareness accompanied by games and good times, where both children and adults enjoyed a day with the family.



# Beaqualia

for a very **healthy Company**



Aqualia's management is committed to a company where work, personal and family development reach the highest levels.

**A concept that brings together the pillars of the company's global Human Resources strategy, linked to the vision of the company to be recognized for the health, well-being, happiness, commitment and productivity of its employees.**

The Human Resources Department recently presented the Be Aqualia initiative at a conference held at the Federico Salmón offices in Madrid. The project was born with the aim of unifying and strengthening the keys to a healthy organisation through the promotion of actions based on the development of programmes that focus on attracting talent and equal opportunities.

The certification of the company with the Familiarly Responsible Company (EFR) seal, the Development Programme for the Management of Women with High Potential, the Mentoring programme, the Otto Walter course, the training sessions on Prevention of Occupational Hazards, among others, are some of the initiatives included in the Be Aqualia concept. All of them have a common denominator: a com-

mitment to leadership, job quality, work-life balance, professional development, Equality and Diversity, Health and Safety, and the creation of a Community among employees.

The Be Aqualia concept aims to involve all workers - the company's main assets - in order to achieve a quality working environment, guided by leaders who generate trust and transmit a commitment to ethical values and principles for optimum professional and personal performance. In short, a healthy and safe environment in which communication and participation are promoted.

# Purifying wastewater only with the help of the sun

## How to recover nutrients and energy in household wastewater by using bacteria?

**Researchers from the Chemical and Environmental Engineering Group (GIQA) of the Rey Juan Carlos University (URJC) and the Innovation and Technology Department of Aqualia have developed a new wastewater treatment system based on the circular economy.**

Wastewater treatment is an ideal platform for basing technological development focused on changing the production model of the circular economy. In this modern system, all surplus elements are transformed into raw material, which is incorporated back into the system, potentially implying a zero-emission concept.

Recently, several wastewater treatment alternatives have emerged based on the circular economy concept. One of the treatments proposes the use of PPB (Purple Phototrophic Bacteria). These microorganisms assimilate the nutrients contained in the wastewater rather than dissipating them. In addition, they use infrared light as an energy source and, therefore, their recycling efficiency is very high.

This novel approach to photobiorefining has been the starting point of the URJC's GIQA group, led by Dr. Daniel Puyol and Professors Juan Antonio Melero and Fernando Martínez. The researchers have developed a wastewater and liquid effluent treatment technology based on these PPB bacteria, in collaboration with the Innovation and Technology Department of Aqualia, represented by Frank Rogalla and Doctor Víctor Monsalvo.

The technology developed by GIQA and Aqualia, called ADVANSIST, represents a new concept of the traditional carousel-type aerobic reactors for water treatment, based on the heterogeneous mixture of prokaryotes (unicellular and without a nucleus) and other microorganisms.

These reactors have a high operating cost due to the need for aeration, and generate significant emissions of both carbon dioxide and nitrogen oxides. In the ADVANSIST system, on the other hand, "the growth of anaerobic PPB bacteria is encouraged through the selective use of filtered infrared light, thereby overcoming the difficulties inherent in conventional aerobic carousel technology," says Dr. Daniel Puyol of GIQA.

Among the achievements reached with this new model, the notable increase of biomass inside the reactor and the consequent improvement in the production of biogas stand out, due both to the increase of biomass and to the fact that PPB bacteria are more easily digestible than other conventional biomass sources.

ADVANSIST System (Carousel-type anaerobic photobioreactor): The wastewater is fed laterally. The water circulating in the reactor and the treated effluent is evacuated at the opposite end. The system has a cover that selects the incident wavelength, giving way only to infrared light, in addition to ensuring an anaerobic environment.

**From the experimental phase of technological development to the construction of a demonstration plant**

The viability of the technology has been demonstrated by piloting for a period of one year in the wastewa-



Carousel-type photobioreactors installed at the URJC wastewater treatment plant (Technology Support Centre, Móstoles Campus) before starting operation.



Demonstration treatment plant at the Estiviel treatment plant (Toledo).



Víctor Monsalvo, in charge of the Eco-efficiency Area at Aqualia, explains to the councillor for Environmental Public Services, Noelia de la Cruz, the operation of the project before the head of the Toledo Management Unit, Jesús Martínez.

“Wastewater treatment is the ideal platform for technological development focused on switching to the circular economy production model”

ter treatment plant of the Campus de Móstoles of the URJC.

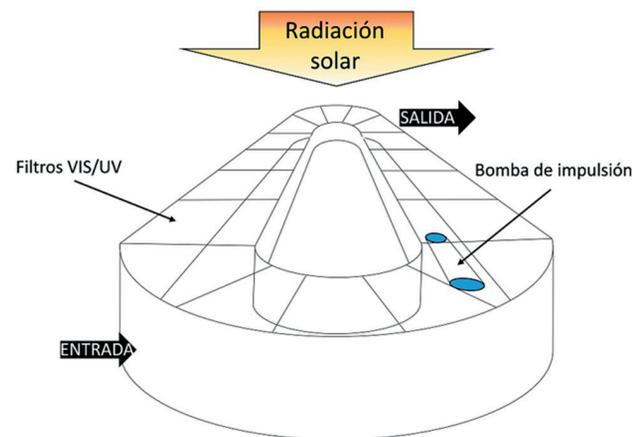
The results obtained were promising, so Aqualia continued to invest in the development of this technology, in collaboration with the GIQA, to maximise the use of wastewater as a resource and promote a more sustainable use of water resources. Aqualia commissioned in Toledo the world's first pilot wastewater treatment plant based on 100% anaerobic technology that uses sunlight as the only source of energy.

The Estiviel wastewater treatment plant in Toledo already has a new wastewater treatment system, pioneer in the world, which uses sunlight as the only source of energy. A revolution made possible by the technology of purple bacteria.

This pilot plant, which can now treat up to 80 cubic metres per day (equivalent to some 350 inhabitants), produces only half the waste from conventional purification and will also make it possible to take advantage of all the by-products generated in purification: biogas to produce energy and solids for the formulation of biofertilizers.

The purple bacteria system encourages the growth of anaerobic bacteria capable of purifying wastewater without external electricity supply. Among the achievements reached, the notable production of electricity from biogas stands out, mainly because the biomass obtained is easily digestible - and instead of a consumption of 0.5 kwh/m<sup>3</sup> for aeration in conventional treatment plants, a net production of 0.2 kwh/m<sup>3</sup> is obtained. In this way, it also avoids the emission of 0.5 kg CO<sub>2</sub>/m<sup>3</sup> of greenhouse gases.

Aqualia has decided to advance in the development of this innovative process after two years of intense work, during which the viability of the technology on a pilot scale was tested at the WWTP of the URJC campus in Móstoles. Now, the collaboration between the Department of Innovation and Technology and Zone I, and the decisive support of the local administration, will allow the benefits of the ADVANSIST purple bacteria technology to be contrasted in the first demonstration treatment plant based on 100% solar anaerobic technology.



## About the Incover project

The new technology, using purple bacteria, involves an innovative concept of water purification that will reduce a high percentage of the costs of conventional systems. In addition, it takes advantage of all the by-products derived from purification: biogas to generate energy and solids for producing biofertilizers.

# FCC Environment and Irizar present the **first e-mobility platform** for Urban Services

FCC Medioambiente and Irizar e-mobility presented the first e-mobility platform for Urban Services at the Smart City Expo World Congress, the leading smart environmental solution event. The vehicle is the result of an ambitious technological innovation project, VEMTESU ('Highly Efficient, Electric-Powered Vehicular, Modular and Self-Supporting platforms for Urban Services'). The project has been developed over the past four years in a consortium led by FCC, with the participation of another four benchmark companies of the Spanish market and two external collabora-

tors, all of which are very relevant in the automotive sector and in scientific-technical and electrical-electronic technology areas.

The project was jointly funded by the European Regional Development Fund (FEDER), within the framework of the 2014-2020 Operational Programme for Smart Growth, sponsored by the Ministry of the Economy and Competitiveness through the Centre for Industrial Technological Development (CDTI).

### 100% electric, plug-in, self-recharging and recyclable

The technical details of this innovative technology have been unveiled by the Director of Technical Services of FCC Medio Ambiente, Alfonso García, and by the Managing Director of Irizar e-mobility, Héctor Olabegogea, who stated:

“It reduces the energy consumed by over 50% when compared to conventional vehicles and drastically reduces emissions and CO<sub>2</sub>”

Alfonso García highlighted that “The main purpose of FCC in this project is to focus on the development of a fully urban and electric vehicle, with the versatility required in relation to types of bodywork and power needs, designed with a new modular chassis structure and permanent electric drive, as well as a very-low operator cab, moved forward and with a panoramic view, to improve ergonomics and facilitate the execution of services, with built-in bodywork and chassis controls. The driving framework is made up of an electric traction motor, high-power batteries and a unified electronic system”.

According to Hector Olabegogea, “the global vision of Irizar Group on the electrification of cities has allowed us to present this innovative lorry today, which features

state-of-the-art solutions, in terms of its design, safety and electrical technology, which will operate on cities and urban environments with zero atmospheric and acoustic contamination levels. It features the group's technologies, such as electric traction, energy storage and control electronics, as well as all other systems supplied. Without a doubt, this project has a promising future”.

The unified electronics system controls the energy and power of the chassis and body. It has a unified ECU control centre, which, with its corresponding specific programming, provides a vehicle with maximum energy optimisation.

The vehicle is equipped with side loading bodywork to collect waste. The 100% electric Plug-in technology means that the lorry drives out of the depot with the batteries fully charged and completes the service in a fully electric mode, therefore, operating as a ZEV vehicle (Zero-Emission Vehicle). If the operating time needs to be extended, it uses a thermal/compressed natural gas (CNG) motor, which is solely used to charge the batteries. This auxiliary motor operates at a constant rate in its maximum efficiency point, achieving the minimum energy consumption and lowest possible emission level. Therefore, the vehicle's batteries are charged during the trip to and from the waste treatment plant, after which the vehicle can start a new shift, if required. As an alternative, the vehicle could operate in the full-electric mode or be driven by an H-cell (hydrogen).

The batteries incorporated are of the latest generation of Lithium Ion. Its design is unique to this application



Vehicle unveiled at Smart City.

because of their rapid recharging, high power and long duration.

The traction system is permanent electric, that is, the vehicle is propelled by an electric motor that is fed by the energy accumulated in the batteries. The main premise of this technology is to obtain the minimum possible energy consumption for urban services. In the case of waste collection, the collection vehicle represents the service configuration with the greatest energy needs. The stops and starts are continuous, every 60 to 100 meters, for the loading of the containers and subsequent compaction of the waste, so that the inertia and braking are always used as regenerative energy, which is stored in the batteries. The obtained result allows to do the same services that today the conventional collector does with equal performances but reducing the consumed energy in more than 50% and also and drastically the emissions and the CO<sub>2</sub>.

### A UNIQUE vehicle for Smart and sustainable cities

Both for its modularity and for the new design of the cab (ultra-low, advanced and with access to the interior of low and flat floors, without intermediate steps), the technology presented today means having the model of urban vehicle of the future and for any application in this field. In addition to the aforementioned reasons for energy savings and lower emissions, the new vehicle also achieves much lower operating costs and its useful life is extended considerably. On the other hand, chassis, bodywork and all its components can be easily reused, which ultimately represents a far-reaching and consolidated contribution to the circular economy in intelligent cities.

Indeed, it is an investment in the future, since the electric vehicle has a much longer useful life than the vehicle with a combustion engine and has subsidies and deductions that



100% electric, rechargeable, and completely recyclable.

lower its real cost. The development of this common platform makes it possible to start producing it at an industrial scale, thereby providing the possibility of reducing its cost.

### Alfonso García, director of technical services at FCC Medio Ambiente, wins an award

Alfonso García, director of technical services at FCC Medio Ambiente, has been awarded by the Spanish National Association of Public Environmental Companies (ANEPMA) in its annual awards in the Private Companies category for his work at FCC, with special mention for his contribution to technological development and his R+D work in the sector.

jects developed by FCC Medio Ambiente. Throughout his career, Alfonso has led and coordinated innovation projects developed by FCC Medio Ambiente, especially those related to alternative and ecological engines for Municipal Services vehicles, Compressed Natural Gas (CNG) and others related to e-mobility technologies.

#### At FCC Medio Ambiente

Alfonso García has been honoured for his human and professional career, carried out in his more than 40 years in the company, in a ceremony held at the corporate headquarters of Las Tablas, in Madrid.

Alfonso García has always been a key person in the innovation pro-



At the ANEPMA Awards.

# FCC Industrial develops a mechatronic prototype for painting urban street lamps

FCC Industrial is currently developing multiple energy efficiency contracts that accredit it as a manager of municipal energy facilities. It is currently developing the public lighting and energy efficiency maintenance in: Vigo, Totana (Murcia), Isla Mayor (Seville), Los Palacios and Villafranca (Seville), Madrid-Lote 3, Cádiz, San Roque (Cádiz), municipal districts of the city of Málaga. It also develops the supply and installation of energy-efficient lighting systems for airports such as Santiago de Compostela, Barcelona, Tenerife Norte, Tenerife Sur and Lanzarote.

In particular, FCC Industrial has developed a mechatronic prototype in the context of the Madrid-Lote 3 urban lighting contract that paints urban street lamps. When the FCC Group's industrial company painted the different urban elements, such as streetlights, it detected that the task generates problems such as closing

the street for traffic, the need for lifting platforms and other resources that make the activity more difficult and expensive. The possibility was raised that the painting task could be carried out by robotic means that would eliminate the need for such a platform, reducing costs and increasing productivity and quality.

An analysis was made of the different types of urban street lamps in Madrid that are covered by the contract and the painting of which can be robotised by mechatronic means. The BME or AM10 single stick model was established as the basis for the application of a first study and design of the robotized system.

During the conceptualisation process of the robot, FCC Industrial solved a number of difficulties, such as:

- Designing a robotic structure that would allow it to be ascended by a vertical truncated cone element.
- Designing a robotic system that included all the necessary mechanisms for the correct painting of the street lamp.
- Characteristics of the robot: it had to be lightweight so that it could be lif-

ted, with a simple anchoring system that did not detract from its operability, and the inclusion of a painting system that controlled the dosage of the paint.

FCC Industrial completed the design of the robot and presented a Pintfar prototype at SCWC 18, which was held in Barcelona in November. At this international congress, the different projects for efficient management of urban lighting in different municipalities in the country were presented, as well as the development of intelligent electrical networks that transport energy from the source to the different homes, thus minimising the environmental and economic impact. The robot meets all the necessary requirements that a Smart City must have: innovation, technology, efficiency, sustainability, zero consumption and applicability.

FCC Industrial is currently working on the improvement of the Pintfar prototype, continuing with tests on the motorised ascent structure in the different sections of the street lamp; building a painting system; carrying out painting pressure tests; completing the automation of the ascent process until the end of the street lamp and descending painting. In addition, it is expected to open new avenues of work such as:

- Optimisation of the robot system: optimisation of the structure and mechanical components of the robot, as well as its control system.
- Creating a visualization chamber for the painting process.
- Providing new functionalities and tasks.

“The robot features all the requirements for a Smart City: innovation, technology, efficiency, sustainability, zero consumption, and applicability.”



# Más de 100 años mejorando la calidad de vida de los ciudadanos.

El Grupo FCC, durante sus más de 100 años de historia, ha evolucionado adaptándose a las necesidades de las personas, desarrollando un modelo basado en la colaboración con las administraciones públicas que genera beneficios y bienestar para la sociedad.

FCC es una compañía de referencia internacional, especializada en los sectores de servicios medioambientales, gestión integral del agua e infraestructuras. Opera en más de 35 países y enfoca su gestión hacia el diseño y la prestación de servicios inteligentes para mejorar el entorno vital del ciudadano a través de soluciones innovadoras.

FCC cuenta con un equipo profesional de más de 50.000 personas y es una compañía creadora de valor para la sociedad, con un modelo de negocio sostenible, social, medioambiental y financieramente aceptable.





## INTERVIEW



# Francisco Esteban Lefler

Technical Director of Technical Services of FCC Construcción

In this interview, Francisco Esteban talks to us about maritime infrastructure works, where FCC has stood out in important projects.

### What experience does FCC Construcción have in the design and construction of national and international maritime works?

FCC Construcción's experience in national maritime works extends to almost all types of port and coastal works. Particularly relevant is the experience in caisson works.

In the international field, experience is concentrated in a series of

large-scale projects, including the vertical breakwater of the Açú superport (Brazil), the APM container terminal at the Port of El Callao (Peru) and the ferry port of Igoumenitsa (Greece).

### What maritime infrastructure projects will be developed internationally in the coming months?

Port infrastructures are linked to the growth of trade and, therefore, to economic development. Large port expansions, such as that of the Port of San Antonio in Chile, are to be expected in areas of rapid development and of complex and costly



re) is the only association dedicated to the infrastructure of ports and coasts worldwide, bringing together almost all the world's experts. Within the framework of the Strategic Plan 2019-2023, we will press ahead in the process of disseminating and sharing the state of the art of infrastructure engineering. In addition, we stress sharing this knowledge with developing countries, integrating them in PIANC through the Cooperation Commission.

We will pay special attention to the environmental framework, by promoting the Working with Nature principle in the conception and design of infrastructures and we will tackle fundamental social challenges, such as the decarbonisation of logistics chains, through infrastructures, both in their procurement process and in terms of their contribution to low-carbon maritime transport. We will not only focus on the prevention of climate change but also on dealing with its consequences by obtaining more resilient structures in view of their impact. Leadership in the Navigating a Changing Climate coalition and active participation in the World Port Sustainability Program will play an important role in all of this.

**What maritime works projects carried out by FCC Construcción in recent years would you highlight due to their technical complexity?**

There is a before and an after of what has probably been the most complex port work carried out in Spain: the enlargement of the Port of El Musel in Gijón. The need to build a dock with a section of caissons in a maritime environment as hostile as the Cantabrian Sea led to the development of specific techniques for towing and anchoring large floating caissons made of reinforced concrete under very unfavourable agitation conditions. The experience gained has subsequently enabled the floating and anchoring of the caissons in the shelter dock at the Port of Açu (Brazil).

Finally, from the point of view of the quality of the concrete and the execution process, I would highlight the recent execution of caissons in the Port of Algeciras (Cádiz) for their transfer to the vicinity of Saint Petersburg, where they will be subject to the action of icy waters in an LNG terminal.

**FCC Construcción is strong in terms of its own capacity and resources. Have the construction techniques for the caissons evolved?**

Construction techniques are constantly evolving. FCC Construcción's objective is to remain at the forefront of all these processes.

FCC Construcción has three floating docks for manufacturing caissons. The design of each of these incorporates all the improvements and innovations developed in the previously built dock. The most modern, the Mar del Enol, already eliminates the climbing bars. This facilitates the process of sliding the formwork and integrates considerable improvements with respect to similar docks. It can be described as the most modern and best of its kind.

Last but not least, FCC Construcción has carried out specific transport and anchorage studies for the works and based on this, R+D+i projects have been undertaken with great success, providing us with a set of knowledge in the maritime manoeuvring of the caissons that undoubtedly places us at the forefront of the sector.

land transport infrastructures, as is the case in much of South America. Other foreseeable projects would be in Europe (Port of Tilbury, in the United Kingdom and others) as well as in North America. Many of these major developments around the world are associated with the rapid evolution of container transport, with the rapid evolution of the fleet and the improvement in efficiency brought about by the introduction of technologies such as blockchain.

**The Council of PIANC recently proposed to its General Assembly your appointment, as the only candidate, for the international presidency, to be ratified next June. What lines of action are you considering for the coming years?**

PIANC (The World Association for Waterborne Transport Infrastructu-



# FCC wins **three new contracts** in Texas (EE.UU.)

FCC Environmental Services (the US subsidiary of the environmental services division of the FCC group) has been awarded three new contracts in the state of Texas, which increase the company's order book by seven million dollars (6.12 million euros).

## **Management of all the bio solids for the City of the Garland**

The first contract includes the management of all the bio solids for the City of the Garland's water treatment system, including transportation to the city landfill.

The second award signed by FCC, also with the City of Garland, contemplates the processing and marketing of all the recyclable material for the Garland Independent School District, which encompasses a total of 68 schools and more than 56,000 students.

With 235,000 inhabitants, Garland is one of the ten most populated cities in the Dallas-Fort Worth metropolitan area. . Since 2016, FCC also manages all the recyclable material generated by the residents of Garland, approximately 10,000 tons per year, which are processed and recovered in the recycling facility that the company has developed in the city of Dallas.



Dallas recycling plant



### Lewisville

Lastly, FCC was also awarded the contract to process all recyclable waste from the Texan city of Lewisville during a term of nine years including extensions. With a population of 106,000, Lewisville is one of the fastest growing cities in North Texas, with great development potential. Through this agreement, FCC will recycle and market all recyclable waste in the city, approximately 5,500 tons per year. This process will be carried out in the aforementioned facilities of FCC in Dallas, awarded in 2017 as the best recycling plant in North America. It is an automatic selection plant of the latest technology, where the most modern separation and classifi-

cation techniques are applied, including artificial vision and optical and gravimetric sorters. The installation classifies by category all the recoverable material that is collected mixed in the single recycling container.

With this facility built by FCC, thousands of tons of paper, cardboard, glass, plastic and metal generated by residents can be returned to the market for a new productive cycle.

To date, there are 10 contracts signed by FCC in the state of Texas, and a total of 12 in the US.

These new awards bring to ten the number of contracts signed in the state of Texas, where FCC will become the state's main recycling company when its new recycling facility, with a capacity of 145,000 Tons per year, starts operations by March 2019, thanks to the contract recently awarded by the city of Houston for a period of 15 years. In the last four years, there are 12 contracts signed by FCC in the United States, including two large contracts awarded in Florida. FCC has accumulated a total order book value of more than 900 million dollars in the US, delivering services to more than eight million Americans.

All of these contracts mean for FCC the consolidation as a service providing company in North America, helping to capitalize on this market its more than 100 years of experience in the environmental service industry throughout the world.



Some of the vehicles used in Texas





# Metro de Doha (Qatar)

Last October FCC Construcción obtained the Taking Over certificates for the three elevated stations. In order to obtain this certificate, it was necessary to obtain prior approval from the local Civil Protection authorities, the external railway safety auditor and the GSAS 4\* Sustainability certificate.

The complementary works of the Highway Underpass were received in September, leaving all the works completely received by Qatar Railways Co.

The project, called Red Line South Elevated & At Grade, consisted of the construction of a 6.9 km viaduct (mostly built using the system of prefabricated segments and single girder) and three elevated stations of approximately 12,000 square metres each. The work has also included the movement of earth in an area of

500,000 square meters to house the facilities of the Depot (garages). Complementary to the works of the subway, the project included the construction of an underpass for the Doha-Al Wakra highway of one kilometre in length.

The contract started in March 2014, resulting in a final budget that has reached 695 million euros. The satisfactory completion of the works is a very positive factor for the next award of Phase 2 of the Doha Metro, which consists of the expansion of the Green Line. FCC has submitted an offer to the client for these works, which have yet to be awarded by Qatar Railways. The successful completion of this project joins the long list of transport projects completed by FCC around the world.

Last January the Prime Minister of Qatar, Sheik Abdullah bin Nasser Al Thani, visited the Doha Metro works corresponding to the section that FCC Construcción, as leader of the FYAP Consortium, is carrying out in the Qatari capital.

During the visit, the "Economic Zone" station, the Prime Minister and the rest of the authorities invited to the event toured the facilities and had the opportunity to get on the trains and follow the complete route of the project. Also in attendance was the Managing Director of Qatar Railways, Abdulla Abdulaziz T. Al Subaie, who congratulated the FCC representatives on the quality of the work carried out and the professionalism and commitment shown during the execution of the project.



The project, called Red Line South Elevated & At Grade, consisted of the construction of a 6.9 km viaduct.



The stations are in the final phase of architectural finishes and testing of electromechanical equipment.

The section built by FCC, within the North Elevated Line Network, is the most advanced in terms of all the sections that various international construction companies are building. The viaduct is completely finished, and the stations are in the final phase of architectural finishes and testing of electromechanical equipment.

FCC's success in this project has meant that it has been pre-qualified for the next phase of expansion of the Doha Metro, the extension of the green line. This project is currently under technical evaluation by the client.



SEE VIDEO



## Czech Republic

**SmVaK**, Aqualia's Czech subsidiary, **celebrates** water supply in the Ostrava region.



The Podhradí Drinking Water Treatment Plant (DWTP) in the Czech Republic

The construction of the drinking water supply network in the Czech region of Ostrava began in 1954 and lasted for four years. At the end of 1958, the first drop of water treated by the Podhradí DWTP reached the end user, inaugurating a treatment and distribution system that already has 3 water treatment plants, 113 tanks and more than 500 kilometres of pipelines.

On this 60th anniversary, SmVaK has decided to open the Podhradí water treatment plant to the public for several days. Since its construction, this key infrastructure for the network has produced 2.4 billion cubic meters of

quality drinking water collected from the Slezská Harta - Kružberk reservoir cascade. It has undergone a series of renovations and upgradings, the most significant of which has been carried out in recent years for an amount of almost 130 million crowns (more than five million euros).

The sixty-year old Ostrava network currently has a capacity of more than five cubic meters per second, enough flow to fill the Santiago Bernabéu stadium in two and a half days, and has an interconnected layout that maximizes the reliability of the network by being able to combine the different

# operates 60 years of efficient and safe



supply sources. The distribution system also boasts the technical peculiarity of operating eminently by gravity, minimizing the energy consumption of the pumps and representing a great engineering challenge in its design, execution and operation.

“ Since its construction, the Podhradí water treatment plant has produced 2.4 billion cubic metres of drinking water ”



## First Spanish entity in obtaining the ICTE Tourist Q certification



The Spanish Institute for Tourism Quality (ICTE) has awarded the Q FCC Environment Brand specifically for services related to the conservation of parks, gardens and green areas, as well as the cleaning of beaches, coasts and coastal waters. The certificate was awarded at a ceremony held at FCC's corporate headquarters.

## Edinburgh plant begins incinerating non-recyclable waste and exporting energy

FCC Medio Ambiente begins incinerating non-recyclable waste and exporting energy at the Edinburgh and Midlothian energy recovery and recycling centre that serves the communities of Edinburgh and Midlothian. This December the turbine was synchronised and for the first time a punctual export of energy to the grid was carried out, which is expected to be regularised at the beginning of the year.



## FCC Ámbito's refrigerator treatment plant: a key player against climate change and in favour of the circular economy



Following the incorporation of the latest technology available on the market and a 60% increase in production capacity, the refrigerator treatment plant managed by FCC Ámbito at Pont de Vilomara (Barcelona) is at full capacity. The new facility, which has already treated more than 200,000 units, meets and exceeds the strictest European environmental standards in terms of emissions, gas recovery and material recovery, which reinforces

its important role in the fight against climate change and in favour of the circular economy.



## The e-mobility platform present at the International Summit on Climate Change (COP24)

FCC Medio Ambiente was present at the UN conference on climate change that was held from 2 to 14 December 2018 in the city of Katowice, Poland. Felipe Urbano, Director of Development, Communication and Institutional Relations at FCC Medio Ambiente presented the new e-mobility platform for Urban Services vehicles, within the framework of the Circular Economy, energy efficiency and sustainability of intelligent cities.

## FCC to respond to environmental emergencies in the Autonomous Community of the Basque Country

The Basque Government has awarded FCC Ámbito one of the two lots of the "Management of environmental incidents/emergencies and the waste generated therefrom" contract, which consists in dealing with incidents that could have an environmental impact in the Basque Autonomous Community, as well as the removal of waste generated in emergencies. Under this contract, FCC Ámbito will act as technical assistant to the Basque Government's Department of the Environment and Territorial Policy.

## The LIFE4FILM on plastic film recycling of urban waste presented in Brussels

FCC Medio Ambiente presented the LIFE 4FILM project for recycling plastic film from urban waste during the launch event of the 2017 edition of the LIFE (Environment projects-Resource Efficiency /Waste) programme organised by the European Commission in Brussels. This is the first LIFE project in which FCC Medio Ambiente acts as coordinator. The main objective is to prevent the plastic film (LDPE) present in solid urban waste from being sent to landfill or to energy recovery.



## Line 2 Connection Branch to Tocumen International Airport



Contract for the design and construction of a two-kilometre section of Line 2 of the metro. The contract will have an execution period of 28 months and a budget of more than 90 million euros.



## 2017-2018 Sustainability Report

This document analyses the results of our responsible management and our perseverance in the development of people, the care of the planet, integrity and the creation of wealth. In order to

advance in increasingly responsible and efficient performance practices, it is necessary to rely on research and development.

## FCC Construcción Centroamerica publishes the bulletin "Crecemos Contigo"

The bulletin includes the main corporate responsibility actions developed by La Valdeza (Panama)

## The Metropolitan Wanda chosen as the best stadium of the year



The Wanda Metropolitan Stadium, built by FCC Construcción, was chosen in the "Industry Awards" of the World Football Summit as the best venue of the year, ahead of the Mercedes-Benz Stadium de Atlanta and the Century Link Field de Seattle.

## RRC and FCC Construcción win the contract for the execution of the Gouvães dam in Portugal

Ramalho Rosa Cobetar and FCC Construcción have been awarded the construction contract for the Gouvães dam in Portugal. The project has an execution time of 35 months and a budget of 18 million euros. The dam will have a maximum height of 30 meters above the foundation and 232.7 meters in length at the top. The total volume of the dam is approximately 43,000 cubic meters. The Gouvães reservoir will have a capacity of 13.7 cubic hectometres.



## Signature of the concession contract for the Haren prison (Brussels)

The FCC Group's construction area has signed the contract for the design, construction, financing, operation and maintenance and 25-year concession for a new penitentiary complex in the municipality of Haren, in the Brussels region.

## The Almonte viaduct, built by FCC Construcción, winner of several international awards

The American Concrete Institute, in Las Vegas (USA), presented the "Excellence in Concrete Construction Awards", where the Almonte Viaduct was awarded first place in two categories, the best infrastructure and the best global project. On the other hand, the International federation for structural concrete (FIB) (Melbourne-Australia) has awarded the reference project a runner-up prize for the most outstanding concrete structure. In addition, during the congress on the infrastructures of the future that the IABSE (International Association for Bridge and Structural Engineering) held in Nantes, the project was awarded the prize in the category of structures.

## The Mersey Gateway Bridge wins the Concrete Society 2018 Awards

Built by the Construction division of the FCC Group, the bridge was named the Outright inner of the Concrete Society Awards. The ceremony was held in London las 22 November. Open to traffic in October 2017, the bridge has received numerous awards.



## The Ministry of Science, Innovation and Universities finances the National R+ D + i project "SAFE", led by FCC Construcción

The project seeks to develop an autonomous system for anchoring maritime structures where our Company will contribute its experience accumulated over the years.





## “En clave Mujeres” an event by Aqualia for equality and against gender violence led by the Vice President of the Government, Carmen Calvo.



The Vice President of the Government of Spain and Minister of the Presidency, Relations with the Courts and Equality, Carmen Calvo, starred in the forum “En clave Mujeres” organized in Toledo by El Digital CLM with the collaboration of Aqualia. The event, moderated by the well-known journalist and co-editor of El Digital CLM Esther Esteban, was also

attended by the Mayor of Toledo, Milagros Tolón, and Emiliano García Page, president of the Junta de Comunidades de Castilla-La Mancha, and other personalities.

## Guía de Isora renews its confidence in Entemanser for another 20 years



Guía de Isora City Council continues to trust Entemanser to manage the public drinking water supply service for the municipality, located in the southwest of the island of Tenerife, as it is the most advantageous offer for the residents of the municipality. The term of the contract is ten years, with two extensions of five years that could extend until 2038, under the form of administrative concession. The contract adds 57 million euros to the company's portfolio.

## Aquaervas and Aquamaior deserve quality recognition from the Portuguese regulator



Aquaervas and Aquamaior, companies owned by Aqualia that manage the end-to-end water cycle in the Portuguese towns of Elvas and Campo Maior, have received the quality seal from the Portuguese Water and Waste Services Regulatory Entity (ERSAR). This distinction includes these companies as part of the group of water resource managers that offer “excellent water for human consumption”.

## The Empalme – Guaymas desalination plant will solve the shortage of drinking water in the state of Sonora (Mexico)

Claudia Pavlovich Arellano, governor of the Mexican state of Sonora, presided over the ceremony marking the start of construction of the new Empalme-Guaymas desalination plant, which will involve an investment of 738 million pesos (almost 32 million euros) and will supply up to 18,000 m<sup>3</sup> of drinking water a day. The contract includes the operation and maintenance of the facility for a period of 20 years and the plant has been awarded the IAgua 2018 Prize for Best Contract.



## The European Union takes Aqualia's LIFE projects as its management model

A delegation of five EU representatives from Greece and Cyprus has travelled to Spain to find out first-hand how the projects financed by the LIFE (Environment and Climate Action) programme are developing in our country. During their visit to Aqualia, the Innovation and Technology team, headed by its director, Frank Rogalla, presented the progress of the five ongoing LIFE projects being developed by the company, which have their own budget of more than 3 million euros and a 60% subsidy from the European Union.



## The Jaén water service participates in the workshop of the 12th edition of the European Benchmarking Cooperation (EBC)

The Municipal Water Service of Jaén, managed by Aqualia, has participated in the workshop of the XII edition of the European Benchmarking Cooperation (EBC) held recently in Athens. The data from Jaén stand out in aspects such as the good quality of the wastewater, the low rate of complaints per client and the efficiency in the costs of water production. In sanitation, the service stands out for the optimisation of energy consumption in water treatment. On the other hand, areas of improvement have been detected in variables related to investments for the replacement of sanitation infrastructures and, to a lesser extent, of the supply networks.





La gestión del servicio del agua, un bien público y un derecho humano reconocido por la ONU, necesita recursos, especialización, experiencia y colaboración.

Los profesionales de Aqualia, comprometidos con las personas y con su entorno, trabajamos cada día para generar desarrollo y riqueza en los territorios donde confían en nosotros como su compañía del agua.

**Personas que trabajan para personas**



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*Tu compañía del agua*

