Communication Network

News for the people of FCC

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FCC and its competencies model

Glass, a material with a nearly infinite lifecycle

ANNUAL REPORT

2014

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FCC holds its 2015 Annual General Meeting

> "The Group will continue to reduce costs, expenses and to increase its operating efficiency and will aim for greater profitability in its new contracts"

FCC held its first Annual General Meeting (AGM) following the capital increase of last year which incorporated Control Empresarial de Capitales, with a 25.64% stake, as a shareholder. At the meeting, shareholders approved the appointment of Juan Rodríguez Torres, Alejandro Aboumrad, and Gerardo Kurl as directors, representing the Mexican conglomerate of Carlos Slim. The new directors are members of FCC's maximum governance body since January of last year.

The AGM, which on this occasion was held in Madrid and from now on will be organized alternately in Barcelona and in the capital of Spain, also approved the possibility of increasing share capital and the issuance of bonds in the event that the Group deemed it necessary.

Among the agreements, shareholders also approved the possibility that the representatives of Control Empresarial de Capitales in FCC could carry out "activities that imply effective competition with those in which the company engages. The Citizen Services Group explained that "synergies will be generated with FCC as a result of future business opportunities, especially in America, all of which is expected to redound in benefits for the Group".

As to the short-term strategy presented to the shareholders, it contemplates emphasising cost savings and organizational efficiency, increasing the profitability and risk control in the Construction Division's international activities, a more rigorous selection of contracts, focusing on countries where the company currently operates. Reducing the costs of the financial structure rounds up the measures to be implemented, through the optimisation of finance costs, taking advantage of the current liquidity, and strengthening free cash flow generation.

In her speech before the shareholders, Esther Alcocer Koplowitz, chairman of FCC, described the year 2014 as "historical", thanks to the milestones achieved in

refinancing debt and the capital increase, the largest one in the company's history, which allowed the entry of Carso as a reference partner of the Citizen Services Group.

Alcocer Koplowitz described 2014 ass "the most difficult year of the harshest crisis in the more than 100 years' history of our Group". "Despite the difficulties", she added", we always had the necessary determination and were fully convinced that we took the decisions that had to be taken and that these were the correct ones".

On his part, Juan Béjar, vice-chairman and CEO of FCC, explained that 2014 marked "the end of a cycle" in which FCC consolidated its restructuring process by cleaning up its balance sheet, its financial structure, and EBITDA. In these circumstances, the Group is now back on the road to recovery and growth, although he warned that "there is still a lot to be done".

"Juan Béjar, vice-chairman and CEO of FCC, explained the Group's restructuring process that gave rise to the capital increase and said that "there is still a lot to be done"

"Esther Alcocer Koplowitz, chairman of the Citizen Services Group, described 2015 as a historical year, with the most important milestones being the debt refinancing and the capital increase that allowed the entry of Carso as a shareholder

FCC reports on the process of replacing its first Chief Executive Officer (C.E.O.)

In view of the notification sent to the President of the Board of Directors by the 2nd Vice President and CEO of the Company, Mr. Juan Béjar Ochoa Adviser, expressing his intention to exercise change of control clause included in the contract to provide services linking the company with the CEO, two meetings of the Appointments and Remuneration Committee and the Board of Directors of the Company on that have taken place in accordance with the procedures provided for in the Bylaws and Regulations of the Board of Directors has dealt with the process of replacing the 2nd Vice President and CEO of the Company, Mr. Juan Béjar Ochoa Director, as first executive of the company.

On a proposal of the Appointments and Remuneration Committee, the Board of Directors of the Company has adopted the following resolutions:

(I) Hiring a search firm for executives at international level (a "head-hunters" firm) to carry out a process of finding potential candidates who fit the profile for the position of first chief executive officer (C.E.O.) of FCC with the purpose of replacing Mr. Juan Béjar Ochoa as current chief executive of the company (CEO). The head-hunters firm should propose candidates with proven international experience in all or some of the various businesses that today FCC are being carried out by FCC. The selection process should be implemented urgently and in any case, it should have to be completed before next September 30, 2015.

(II) To allow the process of succession to the Chief Executive Officer (C.E.O.) to occur in the most orderly and planned possible way, the current Chief Executive will remain in the company until no later than 30 September. FCC having the power to anticipate the departure of the CEO.

(III) The terms of the resolution of the contract for the provision of services linked to the Company's CEO, have been approved by mutual agreement This agreement includes the payment to the CEO, by contract termination, and also the compensation for non-competition agreement, of a total compensation amounting to € 8,375,000 gross.

infraestructuras medioambiente agua

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

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

Lo estamos haciendo juntos.

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FCC
Servicios Ciudadanos

The new organizational chart of the Corporate Finance Department

As a result of the unification and standardisation in the processing of information for the analysis and evaluation of projects, including those which are part of the portfolio and those in the development process for which the various corporate divisions were bidding, and in order to trace and ensure their financing, the Models and Valuations department was created as part of the Corporate Finance Department and reporting to Victor Pastor.

In addition, the Treasury and Financial Control departments are merged into one single unit and are no longer part of the National Finance department.

PDF

See organizational chart

New organization of the Central Human Resources Department

The new organization of the Central Human Resources Department was made with the permanent objective of improving the services provided by the Corporate General Organization Division.

Hence, the functions of the Human Resources Department will be broken down as follows:

- Ana Benita Aramendia, Director of the Legal Counsel, Labour Relations and Safety and Health.
- Ana Valderrábano González, Director of Compensation, Administration and Reporting.
- Cristina Rodríguez Agudín, Director of People Development.
- Mercedes Medina Rojo, in charge of Insurance, Self-Insurance and Hiring.

PDF

See organizational

Colombia awards Esther Alcocer Koplowitz for her contribution to strengthening relations with Spain

Esther Alcocer Koplowitz, President of FCC, has received an award from the Colombian Government for her contribution to strengthening relations between Colombia and Spain. The award was presented by the Colombian Ambassador in Madrid, Fernando Carrillo at the Colombian Embassy in Madrid, on the National Day of this country.

The President of Ifema, Luis Eduardo Cortés, the Senator for Ceuta (born in Colombia), Luz Elena Sanín Naranjo, the business owner and horse-riding champion, Kike Sarasola, and the Dean of the University Camilo José Cela, Eduardo Nolla Blanco, also received awards at the event. On behalf of everyone honoured at the event, the President of FCC thanked the Colombian Government with a quote from the Colombian writer Álvaro Mutis, for acknowledging "the dedication to improving and strengthening business ties between our countries". "Something we have done, are doing and will continuing to do at FCC", she added, "because we believe improvements and progress for all can only be achieved through shared knowledge".

The event was attended by the President of Iberia, Luis Gallego, the Secretary of State for International Cooperation and for Latin America, Jesús Gracia Aldaz, and the first Vice-president of FCC, Esther Koplowitz, alongside representatives of other diplomatic legations in Madrid and of the Colombian community in Spain. The top executive of the Spanish airline, Luis Gallego, also present at the event, highlighted the progress made by Iberia in strengthening ties between Colombia and Spain, such as the recent launch of direct flights from Madrid to Cali and Medellín, joining the pre-existing direct flight to Bogotá.

Alicia Alcocer Koplowitz, new chairman of Cementos Portland Valderrivas

The Board of Directors of Cementos Portland Valderrivas, meeting on 28 May 215, unanimously approved the appointment of Alicia Alcocer Koplowitz, representative of EAC, Inversiones Corporativas, S.L, as the chairman of the Company's governing body.

Prior to this appointment, Alicia Alcocer Koplowitz, was the vice-chairman of the Board of Directors.

New competencies model implemented by FCC

An essential tool for the development of the Group's employees

The current trend in the market and in the scenario makes it a priority to define and manage the key competencies that FCC's employees must have in order to be able to compete efficiently. This explains why one of the most important projects undertaken by the Corporate Organization Department in 2015 is to define and implement a simple competencies management to enable the comprehensive management of all of the key people development processes.

These competencies will be an essential aspect that will contribute to managing the development and evolution of the Group's employees according to their potential, aspirations and the current needs of the company. It will also allow us, by working on a global basis, to be a step ahead and anticipate future needs.

Leadership, responsibility, teamwork, earnings focus, and negotiation are the five competencies of the FCC Group which comprise a series of capabilities and skills required of the professionals that are part of FCC so that we may be able to compete in an efficient manner.

These competencies will be the fundamental leverage that will boost the growth of FCC and, accordingly, of its professionals, adding confidence and diversity.

Definition of the competencies

Responsibility

At FCC, we define the competency of responsibility as a commitment to our actions, decisions and their consequences and with the fulfilment of common and individual objectives.

Leadership

Leadership is the capability of being able to have an influence on the team through their motivation and development so that these can contribute effectively and properly in achieving global success.

Teamwork

This competency is the ability to collaborate and participate actively, based on mutual trust, with all team members in order to achieve a common goal, being responsible for our own actions as the key for the success of global objectives.

Earnings-focused

This competency implies the achievement of the expected objectives, with profitable results, optimising available resources in any context and contributing to the improvement of processes.

Negotiation

Negotiation is the ability to identify the best strategy, suggest alternatives in negotiations thereby improving the solutions for the parties involved and contributing to the interests of the organisation.

Centralised Information Systems and Technologies Management Model

As part of the transformation process undertaken by FCC to improve the efficiency and services in the Information Systems and Technologies area, it was decided to work with a centralised model for all of the Group's IT structures.

The IT structures of Aqualia, and of the Construction and Environment divisions now depend hierarchically and organically on the Central Information Systems and Technologies.

Management of IT demand will maintain the same procedures and contact people as has been the case until now.

The synergies and support among the structures will bring the IT service to new levels.

Your safety, a priority for FCC

FCC employees often have to travel for work purposes. On other occasions, travel is for extended or permanent stays in places where there could be a situation of certain risk. Accordingly, the Company's Safety Department has created a video with recommendations based on the Self-protection Manual which can be found in the "Could be of interest" section in the intranet. In both cases, it includes warnings on how to increase personal safety, how to prepare the trip, and how to protect ourselves in the event of unforeseen situations. It also provides relevant information such as telephone numbers and advice on the importance of being informed and having some basic knowledge about the country of destination prior to travelling there.

I does not matter what the destination is since any place could entail risks.

Ver manual

Ver vídeo

FCC brings together international cybersecurity experts at the Las Tablas headquarters

Cybersecurity: 397 threats per minute

The Spanish Association for the Promotion of Information Security, ISMS Forum Spain, held a session at the FCC headquarters in Las Tablas, with the collaboration of the Citizen Services Group, the host of the seminar, and Intel Security.

The topics discussed included the problem posed by phishing or identity theft as well as the interoperability of the security architecture (the ability of information systems of exchanging and using information) which represents an important tool to face these threats thanks to the communication among the security control systems.

> "The objective of the meeting was to promote corporate awareness and resilience"

Manuel España, the director of FCC Systems, was in charge of welcoming the guests and, during his presentation, stressed the important role of the Group in the area of cybersecurity. The Group has been a member of the Spanish Association for the Promotion of Information Security since its inception and participates actively in initiatives such as Cyber-ex, organised by this organisation whose aim is to build awareness and improve corporate resilience. Intel Security was represented by Raj Samanl, an active member of the information security industry who participates in numerous initiatives to improve knowledge and the application of information security measures in companies and in the community. He analysed the current situation in the industry and shared his vision on the necessity of the interoperability of security architectures.

In his speech, he mentioned a very significant aspect: the number of new threats are estimated at 397 per minute. Samanl spoke of the possibility of preventing these threats as well as well as on the most frequent "attack vector" for companies.

The session ended with a message to build awareness in companies so that they can improve their ability to detect and respond to Persistent and Advanced Threats (PATs) and other attacks by means of security architectures that make it possible to respond quickly to security incidents.

FCC participates one more year in the

"Entrepreneurs Learn and Undertake Classroom"

The second edition of the "Aula de Emprendedores Aprende y Emprende" ("Entrepreneurs Learn and Undertake Classroom") program was organised where people with disabilities are able to develop their business initiatives. This initiative, sponsored by the Fundación Prevent and ESADE, was created with the aim of providing training and supporting entrepreneurs who have a disability and various professional profiles: TICS, health, tourism, culture etc. The program is totally accessible in order to provide knowledge and the training tools to those who have any type of disability – of the sense, physical, mental – in different degrees of severity.

More than 40 company executives and reference companies participates as tutors and mentors of the participants, contributing their experience and knowledge for different business ideas. One more year, FCC's Corporate Human Resources Department will train part of the mentors who will be accompanying the entrepreneurs or will participate in the contents of the courses provided in the training program (for example, on legal, labour, contractual, aspects and, on people management).

The program is totally free for participants thanks to the funding provided by Fundación Prevent and the collaboration of

Entrepreneurs' Classroom:

- Academic program on entrepreneurship
- Training (60 h. – workshops and professional business conferences).
- A tutor per student.
- Networking in the academic, business, and entrepreneur fields.
- Financial support for launching or for expediting the business.

companies such as FCC ad Cuatrecasas, Gonçalves Pereira, Esteve, Serunión, OTP and Prevencontrol. There is also an honours committee comprising several members such as the Conseller d'Empresa I Ocpaió de la Generalitat, Felip Puig; the managing director of ESADE, Eugènia Bleto; the chairman of Fundación Prevent, Antoni Llorens; the chairman of the Spanish Committee of Representatives of People with Disabilities (CERML, Spanish acronym), Luis Cayo Pérez Bueno; the regional representative of ONCE in Catalonia, Xavier Grau; the Institutional Secretary of ESADE, Enrique López-Vigurla; the journalist Manuel Campo Vidal; and the Secretary of Employment, Tourism, and Culture of the Madrid Autonomous Community, Isabel Mariño.

Young entrepreneurs with good ideas

Some of the business ideas include the creation of personalised children's books to teach values such as self-improvement and strength, tools for providing advice on accessible travel, or the development of an artistic music and theatre program for children.

Another project was one that was submitted by Alba, one of the participants in this second edition which, under the slogan, "Being accessible is a question of wanting it" aims to launch an accessible pharmacy with specific products for each type of disability, with information in braille, workshops, and personalised attention.

Reporting serious, very serious, and mortal accidents

The Instrucción de la Dirección General de Organizacion (the Corporate Organization Department's Instructions) for reporting serious, very serious, and mortal accidents aims to set out the guidelines for the formal in-house reporting of these accidents throughout the various levels of the FCC structure.

All current procedures for reporting of the various occupational hazard prevention management systems of the different departments of FCC must be adapted to the common framework that has been defined.

The regulation applies to all FCC Group work centres worldwide that involve any contract, service, concession, project, or any other form of activity management.

PDF

See instructions in PDF

FCC Aqualia set to manage the two largest wastewater treatment plants in Mecca, Saudi Arabia

The FCC water management subsidiary has been awarded the contract for the operation and maintenance of the wastewater treatment facilities in Hadda and Arana in Mecca, Saudi Arabia, for three years and representing a business portfolio of € 20 million.

FCC Aqualia has secured a contract comprising the operation and maintenance of the two largest wastewater treatment plants in Mecca, Saudi Arabia, in consortium with the local company Alkhorayef Water and Power Company. The wastewater treatment plants in Hadda and Arana treat an average water flow of 250,000 m^3 and a have a maximum capacity to treat 375,000 m^3. The contract will run for three years and has a business portfolio of € 20 million.

Mecca has a stable population of 1.5 million people, growing considerably higher during visits by pilgrims. It is estimated that around 13 million annual visits occur each year and that the maximum sporadic influx throughout the month of Ramadan (during Hajj festivities) is between 4 and 5 million people. This situation creates significant variations in the water flow from the source to the treatment plants. With this new contract, the third since the subsidiary began in Riyadh in 2011, FCC Aqualia has firmly established itself in the Middle East, in particular in the Saudi Arabian market.

The consortium comprising both companies will be jointly responsible for: the operation and maintenance of treatment facilities and units, including workshops, laboratories, electrical installations, service road status, security systems, supply, sanitation and drainage projects within the facilities, environmental maintenance of the facilities, laboratory team and conducting analyses.

This project falls within the framework of the program carried out by Saudi Arabian authorities which aims to transform and modernise the country's water cycle management. In this context, the Saudi state water company, National Water Company (NWC), is significantly improving the operation and performance of the sector via the incorporation of international companies that are specialised in Operation and Maintenance.

See Link
http://www.fcc.es/fccweb/actualidad/CSCP096936.html?iddc=CSCP096936

"This is the third contract in Saudi Arabia that has been awarded to the water division of FCC, the Citizen Services Group, since it started work on the water network optimisation contract to the east of Riyadh in 2011"

FCC Aqualia secures new contracts

FCC Aqualia has secured various contracts in Spain over the past few months. The most relevant one is 8-year contract for end-to-end water management in in Villaviciosa (Asturias). Aqualia, which has been managing the water supply of this municipality since 1987 expands its services by incorporating the 250 km long sewerage system and management of various small treatment plants. It will also be in charge of the start-up of the new facilities that will be supplying water from Consorcio de Aguas de Asturias (Cadasa).

FCC Aqualia also bolsters its position in Murcia with the extension of the Municipal Supply and Sewerage Service of Pliego until 2022.

The Company has been providing services in Pliego since 2002 to a population of nearly 4,000 and will be executing a project in the near future to prevent water leakages. The Citizen Services Group thereby bolsters its positioning in the region of Murcia where it operates in 14 cities and towns and provides serves to more than 210,000 residents.

The expanding municipality of Roselló (Lérida) has again placed its trust in FCC Aqualia until 2026. The company has been operating there for several years, improving management of the system and optimising the cost of water for the town. The new contract contemplates the creation of a social tariff to provide access to potable water supply to families at the risk of social exclusion. Besides supplying water to the population of Roselló, FCC Aqualia supplies wholesale water through the Mancomunitat de Pinyana.

Inés Gómez Arnaldo, Environmental Quality Technician, and José Narciso Camino Orlyes (water meter reader).

A reference company that grows in Asturias

FCC Aqualia increases its presence in Asturias, where it already provides services in 47 of the 78 counties in the Principality. These include management of Oviedo's Municipal Water Service and those of other large cities such as Langreo through a mixed enterprise comprising the City Council and FCC Aqualia.

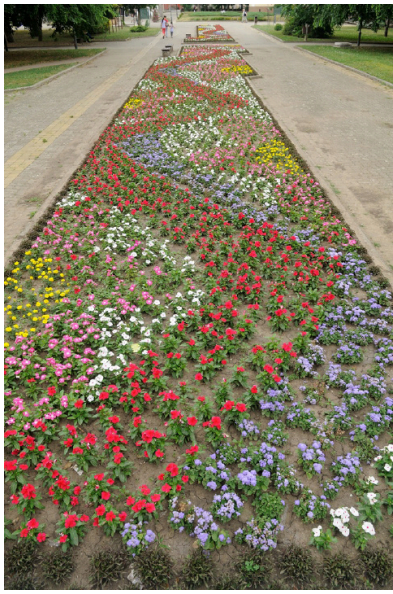
This year, FCC Aqualia was also awarded several contracts in Peñamellera Alta Amieva, and the sports centre in Villaviciosa. In Peñamellera Alta and Amieva, the city council decided to outsource the water management service to a specialised company in order to enhance efficiency, improve the installations, comply with the requisites contemplated in Spanish Royal Decree 140/2003, and apply certified policies in the prevention of occupational hazards.

Villaviciosa also placed its trust in FCC Aqualia which will managing its indoor municipal swimming pool, adjacent facilities, and several sports activities.

FCC Environment CEE will be in charge of maintenance of the green areas in Serbia

After 9 years of providing services in Serbia, FCC Environment FCC – formerly .A.S.A. – has enlarged its business portfolio in this country. The company, in charge of waste management and citizen services, will be responsible for providing services involving maintenance of the green areas for the city councils.

During one year, FCC Environment CEE will be responsible for maintaining the green areas in the municipality of Kikinda in good order. In May, the Company planted more than 12, 320 flowering plants in the city's square and worked on the landscaping of public areas. FCC Environment CEE will be in charge of maintenance of the flower beds and green areas. The service to be provided to maintain it clean and neat and visually enriching, covers an area of 877,945 square meters.



> "More than 12,000 flowering plants were planted in the city square"

FCC awarded a 15 million euro waste collection contract in South Ribble (United Kingdom)

The Citizen Services Group, through FCC Waste Services (UK) Ltd, a wholly-owned FCC Environment (UK) subsidiary, was awarded a waste collection contract in South Ribble, in Lanarkshire County (England) worth 15 million euros.

The contract contemplates the collection of municipal waste and recyclable and organic material for South Ribble City Council. The term of the contract is seven years, until 2022, and may be extended for another identical term.

FCC's proposal will enable the City Council to fulfil its recycling objectives during the term of the contract.

With this new contract, FCC's revenues per year will reach an average of 1.5 million pounds sterling (2.15 million euros). The total portfolio as per this new contract is 10.9 million pounds sterling (15.6 million euros). In the event that the contract is extended for another 7 years, total sales will amount to 21 million pounds sterling (30.2 million euros).

FCC and Bankia agree to sell Globalvia to the Malaysian fund Khazanah Nasional Berhad for 420 million euros

FCC and Bankia entered into an agreement with the strategic investment fund of the Malaysian Government, Khazanah Nasional Berhad, for the sale of 100% of their shares in Globalvia Infraestructuras for a figure that could reach 420 million euros. FCC and Bankia are joint owners of the concession management firm, each with a 50% stake.

The agreement consists of an initial payment of 166 million euros and another deferred payment that could reach 254 million euros, including the interests corresponding to this deferment. The transaction is subject to a series of conditions that could result in the suspension of the agreement, conditions that include the attainment of certain third party approvals and authorisations, as well as the approval of the current 750 million euro bondholders: USS, OPTrust and PGGM.

> "The Citizen Services Group could receive up to 210 million euros, in an operation that is part of its divestment plan"

The sale of Globalvia has counted with the financial advice of JPMorgan and Macquarie, and the legal advice of Hogan Lovells.

This operation is in keeping with the divestments set out in the Strategic Plan implemented by the Citizen Services Group, which has resulted in revenues of around 2,000 million euros.

Globalvia is one of the world's leading infrastructure concession management companies, ranked among the top companies in terms of number of concessions, according to specialised infrastructure publications. The company, established in 2007, manages 31 projects in seven different countries, including highways, railways, hospitals and ports.

Globalvia's strategic objective is to generate value for its shareholders by managing its asset portfolio to continue to be a benchmark within the infrastructure management market. Globalvia's target markets are OECD countries, with special emphasis on Spain, other European Union countries, and North America.

Esther Alcocer Koplowitz underscores the commitment to Panama that the new Metro line 2 represents for FCC

The Citizen Services Group will work, in partnership with Brazil's Odebrecht, in the construction of the new metro line, for an amount of 1.650 million Euros. The construction will have 16 stations and 21 kilometres of elevated rails and will benefit approximately benefit half a million people in the Eastern sector of Panama.

FCC was awarded last June a contract for the construction of Line 2 of the Panama Metro, in partnership with Odebrecht. For Esther Alcocer Koplowitz, chairman of FCC, this contract represents the Citizen Services Group's commitment to work and invest in Panama.

In a visit of the Spanish Minister of Development, Ana Pastor, to the premises of the Metro Secretariat and to line 1 (also built by FCC and Odebrecht), Esther Alcocer Koplowitz, said: "we are facing a new stage with which we strengthen our continued interest and commitment to work and invest in Panama".

After expressing the joy, pride and responsibility that this award implies, Esther Alcocer Koplowitz said that "after so many shared experiences, we feel as Panamanians as the 1,500 people who make possible our projects here."

The managers of FCC in the region explained to the Minister of Development, Ana

Pastor, in the presence of the president of Metro of Panama, Roberto Roy, the characteristics of the new line 2 and of all the other works being executed by the Group of Citizen Services in the Central American country.

For her part, Ana Pastor congratulated FCC for this award, making reference at the same time to the group of works that Spanish companies are developing in Panama. The project awarded to FCC and Odebrech will have 16 stations and 21 kilometres of elevated rails connecting the stations from the district of San Miguelito with the sector of the 24 December. This project will benefit approximately half a million people in the Eastern sector of Panama.

FCC has an extensive experience in Metros, having already built the first line in Panama and being a part now of the construction of lines 4, 5 and 6 of Riyadh Metro, of the Metro Red Line in Doha, and of Metro line 2 in Lima, as well as the Metros of Toronto and Bucharest, among others.

The best offer

FCC and Odebrecht won the tender with a bid of 1,650 million Euros and a total scoring of 855.98 out of a total of 1,000 in the whole of the technical and financial bid. Specifically, the financial bid was of 1,858 million dollars (1,650 million Euros) against a reference price of 1.818 million dollars (over 1,610 million Euros) set by the Metro Secretary. The exclusion range for bidders was set at 20% in both upper and lower ranges.

The contract for the construction of line 2 of Panama Metro consists of the services of engineering design, the construction of civil works, the ancillary facilities of the line, the supply and installation of integrated rail systems including rolling stock and the line launching.

Broad experience

FCC has broad experience in metros, having built the first line in Panama and currently involved in the construction of lines 4, 5, and 6 of the Riyadh metro, the red line of Doha Metro, line 2 of Lima Metro, as well as those in Toronto, Bucharest, and other locations.

FCC to boost its Concession and Construction businesses

Renowned for its great engineering, experience and technology, FCC will continue building infrastructures, focusing on medium and large projects and reducing its activity in minor works, the area of small or medium construction companies.

Accordingly, FCC Construcción will also continue to actively participate in tenders, where it has considerable experience through its specialised subsidiaries, and aims to strengthen its national and international competitiveness and become an active and important element in the development of infrastructures.

The Luis "Chicho" Fábrega hospital centre, built by FCC, opens its doors to the public

The Luis "Chicho" Fábrega hospital centre in Santiago, Veraguas province, built by FCC Construcción was inaugurated on 26 June by the president of the Republic of Panama, Juan Carlos Varela, accompanied by the minister of health, Javier Terrientes.

FCC Construcción was represented by the director for Latin America, José María Torroja, the director of FCC Construcción in Central America, Manuel Antonio Olivares, the director of Building, Juan Antonio del Saz, the project manager and FCC personnel.

FCC was in charge of the design and construction of the hospital centre, applying the highest health standards, and achieving a flexible and accessible design adapted to the needs of the community while respecting the environment and implementing energy savings measures, and contemplating the possibility of expanding the facility in the future.

For more information:
http://www.fccco.es/construccion/actualidad/CSCP097001.html?iddc=CSCP097001

See Link

An FCC-built building, the first Spanish project to be awarded the LEED platinum sustainability seal

The TIER IV Processing Centre in Murcia, completely built by FCC Industrial, was awarded the LEED (Leadership in Energy & Environmental Design) platinum sustainability seal. This certificate, issued by the US Green Building Council rewards excellence in energy and environmental efficiency.

The LEED platinum seal, the maximum distinction obtained up to now by a building in Spain, recognises that Murcia's Data Centre complies with the set of standards for implementing strategies aimed at sustainability in the construction, start up and subsequent functioning of a project.

The facilities have a modular design comprising two bodies and an ancillary module housing the IT department of El Corte Ingles and the IT technologies company KIO Networks. For this architectural complex FCC Industrial designed a project focused on energy efficiency, the use of alternative energies, the improvement of the indoor environmental quality, efficient use of water, the sustainable development of the outdoor areas of the complex, and the selection of materials. The Company also created a cooling system for the IT rooms for maximising energy savings. The centre has a 99,995% availability rate, that is, without hardly any interruptions and is one of the safest data processing buildings. With this project, which had a 3 million euro budget for construction and was built in a record time of six months, the Citizen Services Group confirms its wager on R+D+I infrastructures.

LEED is a system for certifying sustainable buildings that was developed by the US Green Building Council. Implemented in 1998, it is applied in several countries to assess the environmental performance of a building over the course of time, subject to the most demanding environmental standards worldwide. The final assessment is made by the US Green Building Council (USGBC), a non-profit organization that promotes the implementation of excellence practices in sustainable construction.

FCC Industrial wins a new contract from the NATO Communications and Information Agency

The NATO Communications and Information Agency (NCI Agency) awarded FCC Industrial a new contract for the provision of TOPFAS information development services worth nearly 10 million euros. The project is to be executed over a three-year period.

The agreement signing ceremony was held at the NATO headquarters in Brussels and counted with the participation of the managing director of FCC Industrial, Pablo Collo, the Chief of Staff of the DMission General Agency, Luis Adrey, and Spain's permanent ambassador to NATO, Miguel Ángel de Cárcer, and other personalities.

TOPFAS, the acronym for Tool for Operational Planning Functional Area Service is a group of software tools that facilitate the development of NATO's operational plans, systems analysis, evaluation of operations, and reports.

TOFAS improves the exchange of information and data and their availability ensuring the quality of the information exchanged in order to enable the decision-making process in a collaborative manner and distributed among the various levels of NATO.

FCC Industrial is responsible for the Engineering and development of the software

tools, as well as for the support, implementation, and training at the different NATO locations where the system is to be installed.

FCC activated the second tunnel boring machine in the beginning of July

Work on the Riyadh metro progressing at a good pace

Work on the Riyadh metro progressing at a good pace, in some cases, ahead of schedule of the megaproject awarded in 2013 to the FAST consortium led by the Citizen Services Group

FCC, one of the awardees as part of the FAST consortium, is in charge of the design and construction of Package 3, which covers lines 4 (orange), 5 (yellow) and 6 (purple). The part of the project to be executed by the Citizen Services Group represents 37% of the total metro project for the city of Riyadh.

On 30 April, the first tunnel boring machine, called Dhafrah, started operations and successfully completed more than 300 metres of the entire tunnel, with production peaking at more than 30 metres per day. On 9 July, FCC activated the second tunnel boring machine, named San'Ah (Beautiful) in line 5 of the Riyadh metro.

Prince Faisal bin Bandar, governor of Riyadh, was in charge of activating the two tunnel boring machines. For the second machine, he was accompanied by H.E. Engineer Ibrahim bin Mohammed Al-Sultan, the mayor of the capital of Saudi Arabia and chairman of the metro supervision committee, other authorities, and Jaime Freyre de Andrade, manager of the FAST consortium. In order to build the three lines awarded, the Consortium led by FCC will use two

Watch the Riyadh metro video

TBMs (tunnel boring machines) with a diameter of almost 19 metres and which can excavate full tunnel sections. A total of 7 TBMs will be used to complete the Riyadh Metro which will have 85 stations covering 175 kilometres.

Out of the total budget of 16.3 billion euros, around 6 billion are intended for the works on lines 4, 5 and 6. There are 25 stations planned for these three lines in Package 3, awarded to FCC, for which a total of 65 km of metro tracks, 24 km of viaducts, 28 km of underground tracks and 13 km of surface tracks are required. In addition, 69 automatic and driverless trains will be created to provide service to the three lines.

The first stage of the works began at the beginning of April 2014 with the excavation of the "4 G1" station at the Riyadh King Khaled international airport, one of the stations on line 4 which will link the financial city to the capital's airdrome.

It is estimated that the works will be complete in 2018 and FAST (along with Samsung, Alstom, Strukton, Freyssinet Saudi Arabia, Typsa, Atkins and Setec) will use around 15,000 workers of over 33 nationalities. FCC faces the challenge of designing and constructing a first-class metro for the capital of the Kingdom of Saudi Arabia, where there are currently 5.7 million inhabitants. Of the total population, 2% uses public transport and there are around 7.4 million daily commutes. It is estimated that by 2030 the population will have grown to 8.3 million, which is why the Riyadh metro will increase the quality of life of its citizens, besides boosting the local economy.

> "The largest international contract awarded to a Spanish construction company"

FCC Construcción's Control Unit

is working to standardise the cost control culture at the projects

Let's assume that the manager of a project or of any other FCC activity considers the following question on the operations that he is executing: What is the planned costs per operation? In this case, the project manager has the necessary planning in order to provide an answer. Nevertheless, if the question is: What is the actual cost of these operations? Or: Are there any cost variations? The current system in place at FCC does not provide this information and the project manager depends on his own controls in order to be able to respond to the question. If he has these, he will reply, if not, he would not be able to do so.

Knowing the actual costs per operation that we execute is necessary in order to improve the profitability of our projects or of any other activity that we engage in. Only by controlling costs and comparing these against the budgeted costs of the operations are we able to have the necessary information to make decisions on a timely basis.

Consequently, FCC plans to implement a new cost control methodology per operations supported by an IT tool the use of which is standard in the company and, therefore, part of its culture. In the words of Vicente Mohedano, managing director of FCC Construcción, "if we sell something without knowing its cost, we don't know if we are making a profit or a loss, and if we know it after the sale has been made, there is now possible way to react".

Up to now, projects used planning units different from the units for the allocation of the actual costs. The main objective of FCC Construcción's Control Unit is to implement a methodology at the projects that coincide with the units for planning and for allocating actual costs so that project managers can control the variations and can act as soon as possible to improve the results of the project. These units are known as cost operations and the group of a project's operations is called the operations catalogue.

To achieve this, since October 2014, the Control Unit is leading a process that implies the collaboration with the following departments:

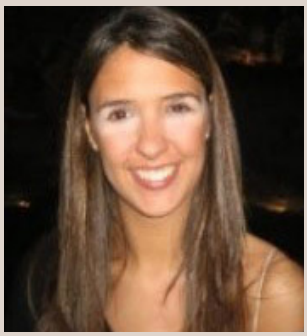
- Control Unit.
- Human Resources (Training).
- Corporate Administration and Finance Department.
- Planning.
- Systems.

Opinion of the managers of the other divisions collaborating in the implementation of this tool

Fernando Morales, head of training at FCC Construcción

"In the new cost control model, training acts as an element to communicate the new philosophy and supports the implementation of the new cost tool.

The deployment of training associated with the tool will be made in collaboration with the key users of the company. These individuals will participate in a broad training process, combining training actions of the new cost model and the tool with training of the trainers that is necessary in order to provide this training at the work sites".



José Luis Montero, CIO of FCC Construcción and Paula Fernández, Project manager

"The new tool is being developed and implemented within the current SAP Integra System (Financial management control and planning system of the FCC Group= as a vertical tool that will enable the project manager to identify the operations catalogue of direct cost with which he will control its management as well as budget the indirect concepts that he believes that he will need in order to execute his project.

The system will have a unified list of indirect concepts. The operations catalogue of direct costs, however, could be defined by the project manager according to his control requirements. The system reports, therefore, will make it possible to analyse the cost variations per operation, both direct and indirect costs, comparing these with the planned and actually allocated costs".

Jacinto Alcalde, manager of Administrative Procedures

"The new Cost Control per Operations tool automates information thereby freeing the administrative staff from the mechanical work that had to be performed up to now. Their main functions after the tool has been implemented will be: prior recognition of where each cost will be allocated (bids, allocation of the line of orders of the established control unit), monitor personnel (identifying their location, work schedule…) and work with concepts such as 'single entry of data', 'single machine', and 'user's register'. In short, the administrative staff will be able to know the project and will be involved in the cost control that must be aligned with the financial planning".

Gonzalo Gómez Mulero, manager of the Planning Department

"Cost control per operation will mark an important qualitative leap in the financial management of our Company's projects by enabling project managers to have monthly data comparing the foreseen and the actual costs of the most relevant operations and, consequently, having better information for making decisions that make it possible to correct the possible variations in comparison with the estimates in the annual budget. At the same time, this new work method will provide the project teams with better knowledge on the projects both in the initial planning stage as well as in the monthly monitoring of the planning.

The process implies a cultural change at FCC Construcción since it standardises the cost control per unit instead of by their nature and this will materialise in the creation of an IT tool that will deployed in phases throughout the projects managed by FCC.

In this sense, training becomes an essential aspect so that people involved in cost control at the projects (managers, heads of production, administrative staff, project managers, department managers and representatives) know the mew methodology and act accordingly".

Meeting with the heads of six pilot projects

On 21 April, the Control Unit met with the heads of six selected pilot projects at FCC's Las Tablas headquarters to test the tool for when it becomes available.

- Vallirana Road (Barcelona).
- San Claudio Wastewater Treatment Plant (Asturias).
- Road maintenance, Setúbal district (Portugal).
- Arroyo de la Charca – Grimaldo (Cáceres) high-speed railway
- Madrid Networks (FCC Industrial).

These are six entirely FCC or managed joint ventures and their role in the process is, according to Vicente Mohedano, managing director of FCC Construcción, "essential for fine-tuning the tool that will contribute to having rigorous information on the projects".

Other projects will receive training further down the road. The teams of these projects must implement the control methodology for 100% of the direct cost per operations as of the month of May, inclusive.

"Thanks to this", Gómez Andrio ensured, "the pilot projects will have a monthly report on the actual cost to be able to compare the real unit cost with the foreseen cost for each operation. This information is very valuable so that we may take immediate action as well as to accumulate the knowledge of the company and have own cost references that could be used in future offers".

Currently, the definition of the cost control per operation tool is at a very advanced stage and its programming is already in progress.

Once the tool becomes available, the teams from the pilot projects will receive specific training on the use of the tool and they will be the first to use it and verify that it functions correctly. When the testing phase is completed at the pilot projects, it will be deployed in other equivalent projects (those of FCC and those of managed joint ventures).

Since November 2014, the Control Unit has been explaining the methodology for cost control per operation to nearly 400 people from practically all areas of FCC Construcción.

The Control Unit of FCC Construcción

The Control Unit is, according to Ramón Gómez Andrio, as explained by Ramón Gómez Andrio, the Control Unit "is in charge at FCC Construcción of carrying out the following functions: designing and implementing a new culture of cost control per operation; monitoring the key control information of Block 1 on a monthly basis and every four months; preview of results of Block 2; scorecards of Block 3; Forecast and follow-up on-site (countries / branch offices / projects of the two previous points".

Gómez Andrio remarked that "three keys ensure that this methodology functions successfully: (1) the correct definition of the catalogue of operations at each project with a number of operations that should be the one that is necessary to ensure the detailed cost control, although not excessive to enable to the correct allocation of all the project's resources; (2) the strict allocation on a daily basis of the actual cost; and, (3) the involvement of the project team, from the supervisors to the project manager".

On-site interviews

What did you do up to now to control actual costs per planned operations?

In our case, until now, besides controlling direct costs by their nature, at the same time and at the project's internal level, we monitored actual costs incurred every month based on the project work units of the project under contract. In this way, we had the necessary information to control the variations that could exist in respect of the direct planned cost and to know at all times the profit/loss margin on the sale of the work unit with respect to the cost incurred.

José Luis del Valle
Project Manager, Arroyo de la Charca-Grimaldo joint venture

Until December 2014, costs per unit/operations was not controlled, at least officially. Each project team made estimates of the most important units that had to be executed every month and every four months and the cost variations per SIE nature, to correct, if necessary the planned cost in the updating.

As of January 2014, with the collaboration of the Control Unit, we started to allocate direct costs to each of the operations defined in the operations catalogue which basically coincided with the units in the budget of the project.

Benito Romero
Project manager/Cataluña Civil Works

Until now, we did not planned the operations and the cost control was done according to the nature of the cost (manpower, sub-contractors, industrial, etc.) using a software tool adapted to our needs.

Juan Ignacio Cuñado Sandoval
Head of the Distribution Networks, Madrid

The control was performed outside the system especially the industrials.

José Manuel Torres Corral
Project Manager of Viviendas Montealiso

What is your opinion on the change of culture implied by the allocation of resources to the operations?

Positive. Even though at the beginning data to be processed and analysed increase, it will make it possible to make a rigorous analysis on a monthly basis and at the conclusion of the contract of the actual cost per operation. In addition, it will be possible to obtain historical data on the unit cost per operation which will make it easier to manage current and future contracts with the client and the subcontractors.

Antonio Dámaso
Project Manager,
Setúbal Conservation

We believe that it is a question of having the entire project team involved, from the project manager to the administrative staff, from the production managers to, of course, the project manager, and that we are all able to have the same name for the same item which will make allocation easier, which is the basis for the success of this system.

Benito Romero
Project Manager,
Cataluña Civil Works

It will take some time for the change to be effective but, in a few months, with proper training, it will be easily assimilated.

José Manuel Torres Corral
Project Manager of Viviendas Montealiso

Considering that the procedure is not unknown to us, the only thing we have to do is become familiarised with the functioning of the work tool to be able to put it into practice.

José Luis del Valle
Project Manager, Arroyo de la Charca-Grimaldo joint venture

How does this tool improve project management? What does it contribute?

In the medium term, it will ensure that we have comprehensive knowledge of the costs per operation and, what's most important, in the future this information will be available not just for the project, but also for the entire corporate structure.

Antonio Dámaso
Project Manager,
Setúbal Conservation

In our specific case, since we apply a system, it provides an extra control for comparing against our system even though it will be able to check every day, on real time, the evolution of costs, making it possible to know ahead of time if there is a variation in a project unit and the measures can be taken more promptly.

Oscar Fernández
Project Manager, San Claudio WWTP.

I believe that if it is well managed, it will be quite useful since it gives you an idea, immediately of where you have to take steps as a priority, trying to optimise costs if possible, and also lets you know to whom you have to address any claims.

Benito Romero
Project Manager, Cataluña Civil Works

I think that having a single tool and that the fact that the criteria for monitoring costs is the same for all of the Company's projects will help us not only to be able to control costs on a monthly basis, but also will enable us to have a large database that we can use to plan future projects.

José Luis del Valle
Project Manager, Arroyo de la Charca-Grimaldo joint venture

It significantly improves management since it facilitates the decision-making process in the short and medium term for developing the different activities that we carry out in our projects on a daily basis and in the future, it will allow us to know the actual cost of a series of activities which will enable us to present more realistic offers to our clients.

Juan Ignacio Cuñado Sandoval
Head of the Distribution Networks, Madrid

It offers the advantage of being able to know the price of things within the system.

José Manuel Torres Corral
Project Manager of Viviendas Montealiso

International Manager Training program

María Sánchez
Director of FCC Construcción's Human Resources Department

FCC Construcción, through its training department, has been developing since March 2015 a new training program, known as the "International Program for Manager Development" focused on enhancing capabilities and providing updated tools to profiles whose role implies management of international construction projects.

"The change from the technical role to that of a project manager has been a determinant factor when designing and structuring the training program. For the Training Department, the experience acquired on a day to day basis should be supplemented with high-impact training by professionals with a reputable track record. The careful selection of participants and the collaboration of the speakers was essential for the launching and progress achieved by the project", Fernando Morales, from FCC Construcción's training department explained.

The objective of this training program is to achieve a twofold impact: one, at the training level by increasing knowledge and skills; and, two, in the work environment as a way to boost motivation and confidence in the work teams.

"The International Program for Manager Development" is in keeping with the Company's strategy of preparing our employees so that they are able to face the new challenges in international projects. The program is divided into four major areas of knowledge: Legal, People, Economic-Financial, and Languages. This covers the critical areas of knowledge required to train the Project Manager of the future", María Sánchez, Manager of the Human Resources Department of FCC Construcción, said.

The training sessions, offered on a monthly basis, count with the participation of important schools and professionals in the sector, including human resources consultants such as MRC Training and People Excellence, or financial and legal academic institutions such as the Centro de Estudios Financieros (CEF) and the International Financial Training Centre (CIFF).

The range of profiles included in the program include project managers, department heads, heads of production and technicians responsible for the execution of projects with broad experience and with a global vision of the business.

Fernando Morales
FCC Construcción's Training Department

Vicente Mohedano
Managing Director of FCC Construcción

Play clever days

at kindergarten Himberg

Education is essential to ensure that children adopt the habit of recycling at an early age. To this purpose, FCC Environment Austria, for the second consecutive year, launched a campaign aimed at pre-schoolers. Thirteen pre-schoolers from the Schulallee kindergarten in Himberg (Austria) listened to a speech on the company's activities and visited the local waste collection site. Most of the preschool kids were already informed that waste collection is important and that resources can be gained out of various materials. Together, the boys and girls could show their knowledge by separating various materials and placing them in the right containers and bins.

For FCC Environment Austria, it is essential for children to learn the relevance of the resources that can be obtained from waste. "The understanding for waste collection and the relevance of resources can be communicated at an early stage and represents an important contribution to our society. Therefore we appreciate the big interest of the preschool kids very much", Mag. Tanja Calof, responsible for group wide material management, said.

Foto: Kindergarden Schulallee, Himberg.
Copyright: FCC Environment Austria.

Javier Vázquez de Prada, Plant Coordinator, collects the prize from Miguel Angel Clavero, secretary of TERSA.

The packaging recycling plant in Salamanca wins prize for an innovative occupational safety idea

The Salamanca Packaging Recycling Plant in Salamanca, managed by FCC, received the first prize in the Contest of Ideas organized by the Asociación de Empresas de Recuperación y Selección de Envases y Residuos Municipales (ASPLARSEM). The objective of the contest, aimed at the employees of the facilities, is to promote innovative ideas for improving the processes and safety at plants in charge of recycling packaging materials.

The innovative idea was designed by Felipe Segovia Melgar, head of the waste treatment plant in Segovia; Javier Vázquez de Prada, coordinator of the waste treatment plants in Valladolid and Salamanca; and by Teodoro Pérez, a Prevention technician at the facilities. The project was submitted with the title "Device for halting the machine in the belt transporting the packaging to the presses".

The project involves the installation of an electronic device on the transporter belt and a sensor for the press operator so that when there is any sign of danger, it emits a radio-frequency signal which stops the transporter belt, minimising the risk of being trapped in the event that an operator falls in the belt and is transported to the press.

Francisco Esteban, IT manager at FCC Construcción, is the new chairman of the Technical Association of Ports and Coasts

Francisco Esteban Lefler, manager of Innovation and Technology at FCC Construcción, was named chairman of the Technical Association of Ports and Coasts, also assuming the chairmanship, for a four-year term, of the Spanish section of the World Association for Waterborne Transport Infrastructure (PIANC).

The executive from the Citizen Services Group who also has broad experience in maritime works, was recently awarded by the Ports Association of Japan for disseminating a report, published by MarCom, the Maritime Commission of PIANC, on the effects of the tsunami on the country's harbours.

The Asociación Técnica de Puertos y Costas (ATPYC, Spanish acronym) was created in 1999 and integrated the functions of the Spanish section of PIANC, which had been formerly functioning as the governmental delegation of the current Ministry of Development. FCC Construcción has been a corporate partner of the association since its founding.

Esteban Lefler has a civil engineering degree from Universidad Politécnica de Madrid and his career has been linked to the Ministry of the Defence in the Department of Military Naval Constructions, Central Park of Transmissions, and the General Department of Infrastructure where he was the manager of the NATO Infrastructure Units and Environmental Protection.

In 1993, he provided his services in the Technical Department of the Public Entity of the State's Harbours as head of the Projects Department. A year later, he joined the Technical Department of FCC Construcción as head of the Maritime Works Department.

Gonzalo Cacho Cacho

A colleague from the waste collection services in Zaragoza rescues an old woman

Gonzalo Cacho Cacho, an FCC Environment employee in Zaragoza, has become an example of citizen services after rescuing an old lady and, for a few days, was the focus of attention in the media.

In the dawn of 29 to 30 July, Cacho was driving his truck through an unpopulated area of Zaragoza after collecting waste at the Clinical Hospital of Zaragoza. A woman, about 80 years old, entered the road and Cacho had to swerve to avoid her. Surprised that the old woman, Crisanta, was alone in such a place, he decided to turn around and talk to her.

He confirmed that she was somewhat disoriented and did not carry her ID card with her. Crisanta told him that she had been waiting for a train for a few hours since the one in which she was travelling had broken down. In this area of Zaragoza there is no train or bus station and the nearest ones are about five kilometres away. Cacho then decided to call the police who then took care of Crisanta.

This is not the first time that the 60-year old Cacho rescues somebody. In his 23 years as a professional at FCC in the night shift, he has faced similar situations. On one occasion he found a man who was injured, applied a tourniquet and drove him to a hospital emergency unit. Thanks to his help, he saved the man's life, according to the hospital. He said that "99.9% of his colleagues stop to help in similar cases".

Cacho is very happy that he was able to rescue the old woman and has received praise and was congratulated for his actions.

Listen to the audio
La Brújula
Onda Cero

Aragón

UNA LECCIÓN DE SUPERVIVENCIA

Un gesto de humanidad

Una mujer octogenaria pasó toda el día atrapada en una rotonda entre el tercer y el cuarto cinturón y salvó la vida gracias a un empleado de FCC que pasó de madrugada.

The AEC medal awarded to Ignacio Sánchez Salinero

The Asociación Española de la Carretera (Spanish Road Association) awarded Ignacio Sánchez Salinero, deputy managing director of MATINSA, the Medal of Honour in recognition for his professional work at an event held last 10 July at the auditorium of the Civil Engineers' Association in Madrid.

Sánchez Salinero has a doctorate degree in Civil Engineering from the Universidad Politécnica de Madrid, a Master of Science and PhD from the University of Texas in Austin. He is one of the first promoters of comprehensive road conservation in Spain and is considered as one of the country's experts in monitoring and managing paved roads. He has broad national and international experience in this field.

He joined MATINSA in 1995 as the manager of the department for the Comprehensive Conservation of Roads for the Ministry of Development, the regional government of Castile and León, the Autonomous Community of Madrid, and the Empresa Nacional de Autopistas y Peaje and, in 2001, was named deputy managing director of MATINSA. He was formerly the managing director and member of the Steering Committee of Euroconsult.

Aurelio Blasco, managing director of FCC Ámbito, new chairman of ASEGRE

The Asociación de Empresas Gestoras de Residuos y Recursos Especiales (ASEGRE, Spanish acronym), has named Aurelio Blasco, managing director of FCC's (FCC Ámbito) Industrial Waste Division since 2003, the new chairman of this association. The new chairman takes the place of Santiago Ortiz who was the chairman during 2014.

Holder of an Industrial Engineering degree from Universidad Politéctnica of Barcelona, the new ASEGRE chairman has developed his professional career in the waste and water treatment sector for more than 30 years, of which, 26 years have been at FCC. Blasco also obtained a post-graduate degree in general management from the IESE business school.

Aurelio Blasco has detailed the ASEGRE's plans for this year, all of which are focused on improving the treatment of special waste and the remediation of contaminated soils. In the last five years, the drop in industrial activity coupled with the incorrect handling of waste due to lack of control by the public powers, has led to a decrease in the activity of about 50% and the loss of half the jobs.

The main task of the new chairmanship is to seek the maximum collaboration with the administrations to define environmental inspection criteria nationwide with the key objective of controlling the traceability of waste. One of the other main challenges of ASEGRE is to modify the responsibility of the waste producer to include its complete treatment.

Blasco also considers it necessary to standardise the treatment throughout the national territory with the focus on clarity and rigour. To this end, he proposes standardising the environmental monitoring to encourage recycling.

In addition, in view of the recent approval of the royal decrees on the Transfer of Waste and Electric and Electronic Apparatus Waste (RAEE, Spanish acronym), ASEGRE will be intensifying its training activities. The association has collaborated intensely in drafting the Methodological Guide for activities involving the management of hazardous and non-hazardous waste published by the Ministry of Agriculture, Food and the Environment.

infraestructuras medioambiente agua

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

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

Lo estamos haciendo juntos.

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FCC
Servicios Ciudadanos

Social responsibility

FCC Industrial e Infraestructuras Energéticas

awarded the Seal of Equality

In the centre, María Sánchez, manager of Human Resources at FCC Construcción.

The Ministry of Health, Social Affairs and Equality awarded FCC Industrial e Infraestructuras Energéticas, S.A.U. the seal of Equality in the Company.

This seal of excellence serves as a stimulus and recognition of companies that are committed to equality and which have implemented policies aimed at promoting it throughout all corporate areas.

The seal was awarded after assessing the criteria for the implementation and results of the measures contemplated in Equality plans, the definition of procedures and criteria for periodical assessment of these plans, the application of positive measures to actively promote equal opportunities of men and women, the policy in place at the FCC Group against harassment at the work place, the dissemination of campaigns against gender violence, and the incorporation of women who have been victims of gender violence, as well as the training actions for joining the workforce and those focused on promoting the incorporation of women in managerial positions.

FCC Industrial e Infraestructuras Energéticas signed its first Equality Plan, in force until 31 December 2016, with the trade unions CCOO and UGT at the end of 2012. The award of this seal reinforces the change undertaken at FCC Industrial e Infraestructuras Energéticas in line with the FCC policies that promote the development and professional performance of its workers ensuring equal opportunities.

FCC wins prize for its "Daisy. He does not love me" campaign against gender violence

FCC won a prize for its "Daisy. He does not love me" campaign against gender violence in the Corporate Social Responsibility category in the 23rd edition of the "The best 100 ideas of the year" prizes awarded by the magazine Actualidad Económica.

The "Daisy. He does not love me" campaign was carried out at the end of 2014. It consisted of messages written in the petals of the flower by employees of the Citizen Services Group which were then used to form a giant daisy. Nearly 300 messages where employees left their words, phrases and expressions against gender violence were collected all of which was recorded in a video. The campaign was translated into 14 languages and was distributed in the countries where the Group operates.

The most noteworthy aspect of the FCC campaign was the participation of employees in this initiative which shows and reinforces the entire Company's commitment to the community and people. FCC bolstered its fight against this social disgrace, stressing the idea of zero tolerance in respect of these practices and the promoting social and professional integration of the victims of violence in society.

The "Best Ideas of the Year" award are granted every year by the magazine Actualidad Económica. The objective is to reward the 100 most innovative ideas, in different categories, which stand out because of their originality and quality during the year 2014.

> "Nearly 300 messages where employees left their words, phrases and expressions against gender violence were collected"

The recently-formed negotiation table. From left to right: María Teresa Solá (CCOO); Fernando Antón (CCOO); Carmen Rodríguez, Human Resources Manager at Aqualia; Belén Sánchez (FCC); Isidoro Valverde (FCC); Diana Junquera (UGT) Gustavo Vargas (UGT); and María Ángeles Polo (FCC Aqualia).

Committed to Equality

The Ministry of Health, Social Affairs, and Equality has been supporting for years the application of equality policies for men and women. FCC Aqualia was awarded the Equality Seal in 2011 for its active Equal Opportunities policy in all of its corporate activities.

A negotiation table was recently formed at the Las Tablas headquarters in Madrid for the new FCC Aqualia Equality Plan. The table included members of the trade unions FITAG-UGT and CCOO (CCOO-FSC-CIA) and representatives of the company. The new bases for the working plan were defined in the first meeting which will stress the measures that promote equality in hiring, employment, and promotion. Carmen Rodríguez, the Human Resources manager said that "at FCC Aqualia, we have been working on equality for more than three years, with the commitment of the entire organization and the support of senior management. All of this makes it possible for the message to reach and see throughout all of the Company's departments.

What to do in the event of a virtual kidnapping

Dynamics of a virtual kidnapping in PDF

An increase in the number of virtual kidnappings has been detected in recent months. This is a new form of blackmailing consisting of threatening somebody by phone making them believe that they are victims of a kidnapping. At the same time, the family of the threatened individual receive telephone calls from the alleged kidnappers demanding a ransom in order to free the subject.

This type of kidnapping occurs more frequently in Central and South America as well as in Spain. That is why we ask you to check the Self-Protection Manual prepared by the Organization Department which contains advice on how to detect if you are being threatened and the measures that you should take.

The Aqualia Educational Notebook:

Trained children, responsible adults

Education is an essential factor to ensure that children gain awareness on water consumption. With this objective, Caltaqua, FCC Aqualia's subsidiary in Sicily, distributed the "Aqualia Educational Notebook" to the children who came to the open door seminar at the Caltanissetta (Italy) facility.

Schoolchildren during their visit to Caltaqua's facilities where they were given a copy of the Aqualia Educational notebook.

For more than 34 years, Aqualia has been disseminating knowledge and building awareness among young people so that they acquire responsible use of water both in terms of consumption as well as on returning it to its natural state by means of treatment processes. Education on water management activity is essential so that youngsters adopt a careful attitude in respect of the consumption of this resource. At Caltaqua, the FCC Aqualia subsidiary in the Island of Sicily, a new communication tool was designed, the "Aqualia Educational Notebook" which will make it possible to continue this work at all the cities and towns where the company operates. It is a practical notebook that children can take home and, this way, parents can also assume the sense of responsibility on the use of water. In a simple and fun way, youngsters learn about the process, from the capturing of water to its return to the natural medium.

The notebook has been distributed in other countries, including Spain, since it is the ideal support for interacting with children, the preferred target public for FCC Aqualia.

Environmental issues

FCC Aqualia's workshop with journalists in Seville

Journalistic information on environmental issues require specialisation so that its dissemination is as rigorous and clear as possible. Sometimes, however, journalists without specialised training have to cover these issues. To help them in their task, the Asociación de Periodistas de Información Ambiental (Association of Environmental Information Journalists, acronym in Spanish, APIA) organised an ad hoc workshop with the collaboration of FCC Aqualia specialists which also included a visit to one of the company's waste treatment plant.

A journalist often has to cover topics which are not in his area of expertise. To improve the quality of environmental information, APIA organised an environmental information workshop with the collaboration of FCC Aqualia jointly with the Biodiversity Foundation of the Ministry of Agriculture, Food, and the Environment, the Federation of Mass Media Associations (FAPE, Spanish acronym) and the Press Association of Seville.

The workshop was held at the end of April at the headquarters of the Press Association of Seville. Journalists were given practical resources and tools on environment-related issues to increase their knowledge in specific issues such as water, or broader topics, such as climate change.

Lucas Díaz, Director of FCC Aqualia's Zone III, participated in the inauguration event jointly with Rafael Rodríguez, the chairman of the Press Association of Seville, and Clara Navío, chairman of APIA. In his presentation, Lucas highlighted "the important role played by Aqualia in Andalusia as a specialised company, contributing added value by developing its own R+D+I projects such as All Gas, or providing technology as a technological partner".

Carlota Córdoba, for the Corporate Communication and Marketing Department of FCC Aqualia in Zone III gave a speech entitled "The exciting challenge of providing information on water". She described some of the difficulties that local media could encounter when writing about the water service as well as to good practices that could be of use to them when they prepare thorough information.

The first day of the workshop concluded with a visit to the La Ranilla Wastewater Treatment Plant (WWTP) in Seville, built by FCC and Aqualia in 2009 using the most innovative technology. During the tour of the facilities, Antonio López, manager of the plant, described the most relevant aspects: the 90,000 m3/day treatment capacity and the low environmental impact since odours and noise are reduced to a minimum because the facilities are completely covered and deodorised. It also features a tertiary treatment to eliminate nutrients and the water s used for irrigating a nearby golf course. Jesús Maza, managing director of Emasesa, closed the workshop with a presentation in which he stressed the importance of the media's collaboration with management companies to disseminate the message for creating environmental awareness to prevent the improper use of the sewerage system for disposing of throw-way towels.

The workshop is in keeping with FCC Aqualia's collaboration with APIA to disseminate and create awareness among the community and, particularly journalists on the activity conducted by the company: end-to-end water management for its consumption in households, industry, and farms.

From left to right: Lucas Díaz, manager of Zone III; Rafael Rodríguez, Chairman of the Press Association of Seville; and Clara Navío, chairman of APIA.

The group of journalists during their tour of the WWTP in Seville with Antonio López, manager of the facilities.

Jesús Maza, managing director of Emasesa (left) who was responsible for the closing speech.

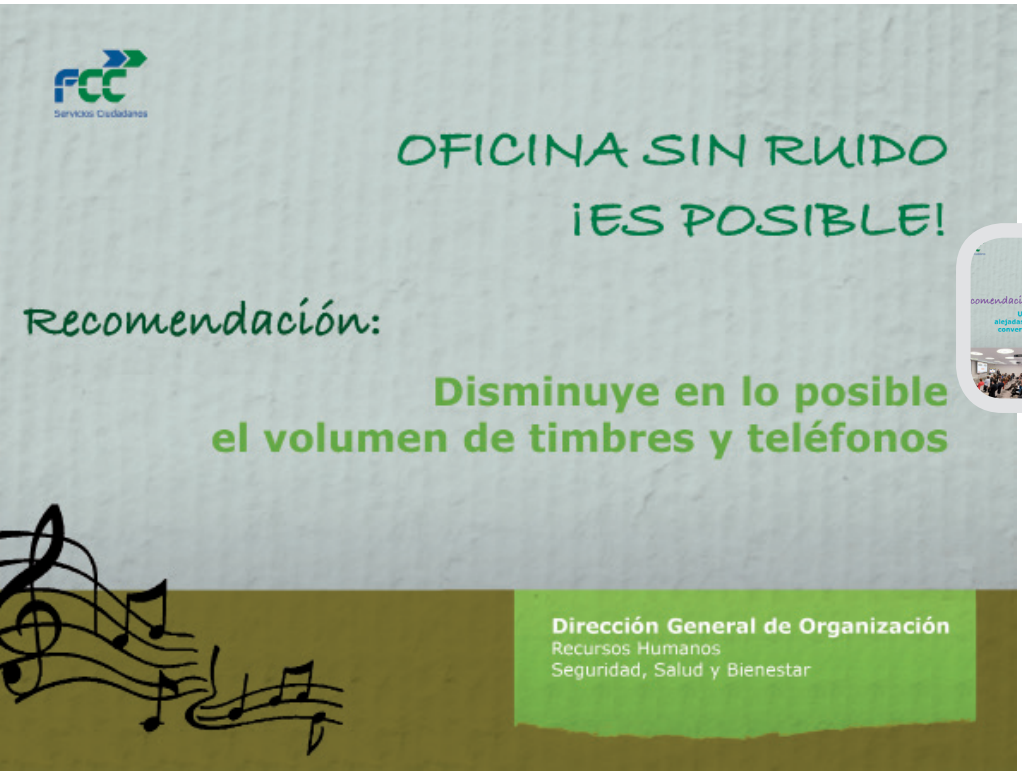
An office without noise is possible

Noise can cause effects such as: physiological alterations, distractions, interferences in communication or psychological alterations. This can also affect the work environment, diminishing the worker's well-being and performance.

With this in mind, the Corporate Organization Department, through the Human Resources and the Safety, Health, and Welfare Departments, launched the "An office without noise is possible" campaign.

This camping is based on recommendations on reducing noise in our work spaces and improve the acoustics. The goal is to have a work environment where we can perform our daily work as best as possible.

Some of the advice of the "An office without noise" campaign include reducing the volume of buzzers and telephones, take advantage of areas not close to the workplace to maintain conversations an meetings, etc. With everyone's collaboration, the comfort of shared spaces will improve.



infraestructuras > medioambiente > agua

La ciudad
es el lugar en
el que vives.
Nosotros trabajamos
para que también
sea el lugar en
el que quieres vivir.

En FCC trabajamos día a día gestionando el agua, encargándonos de la limpieza viaria y del mantenimiento de las zonas verdes; así como de los residuos, algunos de los cuales los convertimos en fuente energética. Cada día más ciudadanos cuidan el lugar donde viven y así mejoran la calidad de vida de todos. Y nosotros colaboramos a que se sientan orgullosos de su gran hogar.

Lo estamos haciendo juntos.

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FCC
Servicios Ciudadanos

Two desalination plants in the Balearic Islands managed by FCC win award for good Safety and Health management

The mutual insurance company Asepeyo and the General Directorate of Labour and Occupational Health have recognised the zero accident rate of Codeisa, integrated by FCC Aqualia and Acciona, the concession company in charge of the desalination plant in Ibiza. Its excellent track record is rewarded after two years without any accident at work resulting in sick leave.

The success of this zero rate for which it received an award is due to the good management and common efforts of workers and the company in implementing preventive policies and practices as well as the training and research efforts in relation to accidents.

The managers of the plants in the capital city of Ibiza and in San Antoni, Lorenzo Romero and Cristina Ramón, respectively, collected the diploma at an event held in the Centre de Formació Blacapma (SOIB) with the presence of the councillor for Business and Employment Promotion, Vicent Roig, and the manager of Asepeyo in the Balearic Islands, Guillermo Remón.

Codeisa is one of the companies attached to FCC Aqualia's Joint Prevention Service which covers three technical disciplines: Safety at Work, Industrial Health an applied Ergonomics- Psycho-sociology and coordinates the Prevention Service of Occupational Medicine. In order to conduct its activity, it has technicians throughout Spain who implement all the measures contemplated in the Risk Prevention Law, such as: risk assessment, planning of preventive activities, emergency plans, training, investigation of incidents, etc. Codeisa also has implemented the Occupational Hazard Prevention Management System designed by the Prevention Department and certified with the OSHAS 18001, (Occupational Health and Safety Assessment Series), considered the demanding certificate internationally in the Prevention of Occupational Hazards.

In the photograph, from left to right: councillor Vicent Roig, the manager of the Sant Antoni desalination plant, Cristina Ramón, the manager of the plant in Ibiza, Lorenzo Romero; and Guillermo Remón Oliver, the manager of Asepeyo in the Balearic Islands.

> "No occupational accident resulting in sick leave has occurred in Ibiza and Sant Antoni in the last two years"

FCC Construcción Chile receives the 'honour roll' ' in the prevention of occupational hazards

FCC Construcción Chile was awarded the Honour Roll for the Prevention of Occupational Hazards by Mutual de Seguridad and the Cámara Chilena de la Construcción (CChC) thanks to its management of occupational hazards. The company was distinguished in the 5-star category for having achieved excellence in the occupational hazards prevention in the period from January to December 2014 in accordance with the bases established by the entity.

Occupational safety is one of the pillars in the operations of companies that are members of CChC. For this reason, the Chilean Mutual entity commemorates the Construction Week by awarding the Honour Roll in Hazard Prevention to companies that stand out in their performance in this respect.

The award, granted jointly by Mutual de Seguridad and the CChC aims to be a reference for companies in the construction industry.

FCC involved in drafting the guide on corporate good practices in accessibility

Asociación Española de Servicios de Prevención Laboral (the Spanish Association of Occupational Hazard Prevention, AESPLA) unveiled the "Guide on good corporate practices in accessibility", a document that aims to contribute to improving the work conditions of people with disabilities by eliminating architectural an communication barriers in the work place and to encourage businessmen to take these into account.

The guide, in which FCC participated as a member of AESPLA, was supervised by Centro de Referencia Estatal de Autonomía Personal y Ayudas Técnicas (CEAPAT), an organization attached to the Ministry of Health and supported by the Seres Foundation (Responsible Society and Companies). The guide was approved by the National Institute of Safety and Health at Work and by the Safety and Health regional institutes of the Madrid, Cataluña, and Valencia. One of the chapters of this document is dedicated to mobility within the work place, offering universal criteria and good practices, such as the necessary interaction between accessible pedestrian walkways and the work place and another one on the accessibility in communication and information systems.

The document also includes good practices that have already been implemented so that these can serve as an example for other companies when they decide to undertake accessibility-related projects.

The director of Aenor in Aragón, Marisa Claver, gives the certificate to Joaquín Jiménez, manager of FCC Medio Ambiente Aragón-La Rioja.

Presentation by Carmelo Jiménez Bozal, manager of the Human Resources Department of FCC Medio Ambiente Aragón-La Rioja.

The Aragón-La Rioja branch office of FCC Medio Ambiente is certified as a Healthy Company

The presidential table. From left to right: Marisa Claver (AENOR);Román García Oliver, Regional Manager of the Work Inspection and Social Security of Aragón; and Joaquín Jiménez López de Oñate, manager of FCC Medio Ambiente's branch office in Aragón-La Rioja.

A moment during the event.

Aenor certifies the branch office for Aragón-La Rioja of FCC Medio Ambiente as a Healthy Company within its industry in an event which counted with the representation of members of Zaragoza's City Council, the General Council of Aragón, the University of Zaragoza, the Confederation of Businessmen of Aragón, and representatives of the branch office.

This global project at FCC, implemented in the various branch offices of the Environment Division, including the certification, reinforces the Citizen Services Group's identity for promoting and protecting the safety, health, and well-being of the employees who contribute every day to building an taking care of the city and to improve the quality of life of the community.

The most relevant actions undertaken by the Human Resources Department of the branch office, under the direction of FCC's Medical Service in Aragón and in collaboration with the Legal Representation of the Workers, include:

- Activities to create awareness among employees and their families of the dangers posed by high blood pressure and the corresponding measures to diagnose, assess, and provide guidelines to employees who have high blood pressure.
- Various initiatives to prevent smoking.
- Promoting sports through measures to encourage indoor biking, spinning and Pilates.
- Corporate volunteer actions. Social awareness a priority to make the workplace a more human and healthy place. These include the "A smile for Christmas" campaign, conducted with the joint effort of the company, its committee, and the NGO International Cooperation the objective of which was to ensure that more than 4000 children in Spain in a vulnerable situation had a Christmas present and to distribute food among 2200 people at risk of social exclusion.

This project is defended by the Aragón-La Rioja branch office of FCC Medio Ambiente as a an idea that has taken root an whose benefits have a direct impact on workers, the organization, and corporate production and which, indirectly, on the activity conducted in the cities where it provides its services.

The Catalunya II branch office of the Environment Division receives an award for Good Practices in Promoting Health at Work

The National Institute of Safety and Health at Work (Instituto Nacional de Seguridad e Higiene en el Trabajo, INSHT, Spanish acronym), as a member of the European Network for Workplace Health Promotion, also occupying the chairmanship, in which national safety and health institutes participate as well as players in the field of public health of all EU member states, launched the "Spanish Network of Healthy Companies" in order to recognise the work of companies who promote the improvement of health and well-being at the workplace an a culture of health and the exchange of corporate experiences.

Along these lines, a work group was created by representatives of the Ministry of Health, Social Affairs and Equality, the High Council of Sports, and the Autonomous Communities, in order to assess the activities of companies and organizations in order to recognise their work by awarding them a certificate, on an annual basis, for good practices in health promotion.

A seminar was organized on 16 April at the INSHT headquarters as the meeting point for public administrations, corporate organizations and safety and health at work technicians where the results of the 2014 project were unveiled and the awards giving to the companies whose work in this field was recognised.

The Cataluña II Branch Office of the Environment Division was rewarded for its work to date as a model of Good Practices in the Promotion of Safety and Health at the Workplace. Montse Gómez, a physician at FCC, also participate in the event and described the management at the branch office which has also received the AENOR Healthy Company certificate.

See Link

Details of the presentation by the speakers and posters of the Technical Seminar "Spanish Network of Healthy Companies: the road to workers comprehensive health" are available at the INSHT website.

See PDF

Jesús Padullés, the manager of the branch office was present at the event and collected the award, showing his support for the initiatives implemented by the Cataluña II office and which are being promoted and developed by the Medical Service in Tarragona.

En la web del INSHT, están disponibles las reseñas, presentación de los ponentes y posters de la Jornada Técnica: "Red española de empresas saludables: un camino hacia la salud integral de los trabajadores".

International seminar to analyse the risks of asbestos

Sponsored by the European Economic and Social Committee (EESC) and the Committee of the Regions (CoR), a seminar entitled "Freeing Europe safely from asbestos" was held last 24 June in Brussels.

Asbestos consists of a group of natural minerals found in the environment as fibres that can be separated into thin and long-lasting threads which are resistant to heat, fire, and chemical substances and are not able to conduct electricity.

Inhalation of these fibres is the cause of a disease known as asbestosis.

The European Federation of Building and Woodworkers (EFBWW) and the organization of the European Construction Industry Federation (FIEC), of which Cristina Herguedas, the manager of FCC Construcción's Joint Prevention Service, is the chairman of the Safety and Health Committee, participated in the seminar jointly with the Belgian Asbestos Victims' Group (ABEVA) and the international Ban Asbestos Secretariat.

Cristina García Herguedas participated in the panel discussion: "Energy efficiency, safe management and removal of asbestos from old buildings and workers' training", and explained that in the European Union there are clear and strict laws affecting companies involved in the elimination of asbestos which describes the obligations of businessmen in training, prevention and protection measures, and health monitoring.

She shared experiences and good practices in the work involving the removal of asbestos.

Cristina García, manager of FCC Construccion's Prevention service

participates in the Congress on the Prevention of Occupational Hazards held in Zaragoza

The Spanish Quality Association, through its AEC Prevention of Occupational Hazards Committee, organized the second edition of the Congress on the Prevention of Occupational Hazards in Zaragoza under the slogan: Prevention of Occupational Hazards in the 21st Century: Challenges, Commitments, and Opportunities.

Cristina García, manager of FCC Construcción's Prevention Department and vice-chairman of the Committee on the Prevention of Occupational Hazards of the Spanish Quality Association, participated in the working group: Organization and Management of Prevention of Occupational Hazards.

The challenges faced by companies, institutions, and workers in the prevention of occupational hazards were discussed in the congress. Also, the 20 years of the enactment of the Act on the Prevention of Occupational Hazards in Spain were commemorated.

Issues of the maximum interest were the topic of the round table discussions, including the coordination of corporate activities, the present and future of prevention associations, corporate culture and commitment, road safety, and occupational and public health.

Watch vídeo:
http://www.aec.es/web/guest/congresos/2015/prl/inicio

FCC, a reference in promoting the Healthy Company

Healthy companies are those that are able to face the costs incurred due to diseases such as chronic ones and those related to the ageing of the population and non-healthy habits, converting these into opportunities to improve efficiency and competitiveness.

Juan Carlos Sáez de Rus, manager of the Safety, Health, and Welfare department during one of his presentations.

Promoting and sharing our experience and management of the company as a health-promoting agent are among the activities in the company's healthy company strategy.

Juan Carlos Sáez de Rus, manager of the Safety, Health, and Welfare department, representing the company, participated in several of the seminars on the various practices and approaches which companies are implementing for managing safety, health, and well-being and its positive impact on aspects such as the productivity, commitment, and satisfaction of employees.

FCC was invited by the Valencia Safety and Health at the Workplace Institute (INVASSAT) to collaborate in the technical seminar on "Healthy Organizations" to promote health at the workplace as a modern corporate strategy aimed at preventing occupational hazards, increasing the individual capacity of the working population to maintain their health and quality of life by providing the necessary means and resources for achieving this objective.

During the seminar, the idea that the combined efforts of businessmen, workers, and the community to improve the health and welfare of people was defended since it offers great results, not only be reducing the rate of diseases and related costs, but also by increasing productivity, the quality of life, and the number of healthy and motivated individuals.

Along the same lines, FCC participated in the 2nd Seminar on the Healthy Company focused on results which was organised by Medycsa. The company participated in this event jointly with Universidad Rey Juan Carlos and Universidad Internacional de Catalunya, as well as with the companies Corporate Excellence, Vodafone and Grupo Mutua Madrileña.

Healthy companies are those that are able to face the costs incurred in treating chronic diseases associated with the ageing of the population, non-healthy lifestyles, converting these into an opportunity to improve efficiency and competitiveness.

Health at the workplace:

Some of the aspects of promoting health at the workplace which have a positive impact on a company's earnings performance are:

- Incrementar la participación de la plantilla en el proceso de mejora de la organización del trabajo y del entorno laboral.
- Implementing organizational measures to enhance the well-being at the workplace based on work-life balance policies and flexible work schedules.
- Encouraging healthy food habits at work, providing information on nutrition and offering healthy meals in the cafeterias or providing the appropriate installations and services.
- Creating awareness on addictive substances that are harmful for our health, such as, for example, tobacco, offering stop-smoking programs and prohibiting smoking at all of the company's facilities and buildings.
- Promoting mental health, offering activities and training to avoid stress and tension as well as psychological support services.
- Stressing and promoting physical activity and an active and healthy work attitude.
- Creating awareness on controlling our health, offering medical check-ups to control risk factors of cardiovascular diseases, high blood pressure, or high cholesterol levels.

> At FCC we understand and put into practice safety and healthy habits to achieve a state of well-being

Healthy initiatives

Several programs have been launched at FCC to encourage physical exercise, healthy nutrition, rest, health-care, and the promotion of this culture.

- The Social Sports Network with more than 600 FCC employees registered in the program. Paddle and soccer leagues have been created; races and running groups that share information on sports events or activities such as skiing or handball.

- The promotion of physical activity: "For a million steps" (an initiative in Malaga thanks to which a group of female workers walked 2 million steps); "step-by-step for your health" (encourages the use of stairs and includes messages in elevators and stairwells).

- "Riding the bike to work" (the Environment division in Andalucía) which, besides providing areas for parking the bikes, includes talks and activities such as rewarding the number of kilometres).

- Encouraging healthier diets, promoting healthier products in the vending machines as well as the criteria for Nutrition, Physical Activity, and the Prevention of Obesity) in the catering and restaurant service contracts.

At FCC, we understand and put into practice safety and health habits to achieve a state of well-being.

- "Five a day" or "Take care of your diet" campaigns at the rest areas.

- The prevention and treatment of obesity (Medical Services) and the promotion of a healthy diet with activities such as the "healthy tapas" contests in Malaga, or the "Healthy Christmas" campaign.

- The fight against harmful substances such as tobacco (treating more than 40 cases), alcohol and drug abuse (prevention and treatment programs at several of the Environment Division's branch offices).

- Awareness-building campaign and information on taking care of our back, visual health, fatigue and taking care of our health, and the prevention of diseases (cancer, diabetes, cardiovascular problems, high blood pressure, etc.).

Balearic Islands: 0.0 drugs and alcohol at work

The participants during the event.

The desalination plant in Ibiza was the venue chosen for presenting to department and plant managers and supervisors in the Balearic Islands the awareness campaign against the consumption of alcohol and drugs which was launched by the Safety and Health Department.

The objective is achieving a safer, healthier, and more productive workplace, reducing the accident rate, absenteeism, and sick leave while improving and promoting interlabour relations, the environment at work, and the sense of belonging to the company.

The event also served to remind those attending of the role of the supervisor in ensuring compliance with the Law on the Prevention of Occupational Hazards; the Preventive Resource (operator with specific training who helps in the supervision of tasks implying certain risk), the reporting and investigation of accidents, or the control of absenteeism, among other responsibilities. A practical training session on asbestos and work at heights were also conducted during the seminar.

Road safety, person-to-person, month-by-month

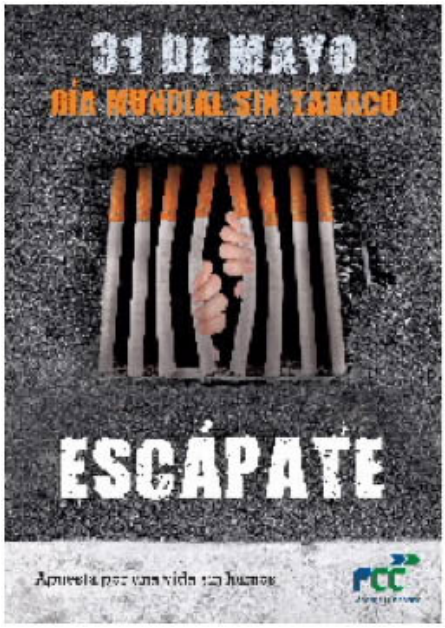
The Aragón and Levant II branch offices of the Environment Division continue every month with the Road Safety Campaign known as “Twelve months, twelve slogans, one objective” and the topics that have been already discussed such as adverse weather conditions, the use of the cell phone, 0.0 alcohol and drugs, vans and trucks, plus the subjects added in recent months: motorcycles and bikes, and speed.

These campaigns, besides providing graphic and audio-visual information, include talks before the work day begins. The objective is to create awareness and inform the staff on the risks and consequences of some of the factors involved in traffic accidents, current law and compliance thereof and the contemplated sanctions; published information and campaigns conducted by official organizations with which FCC collaborates in its dissemination, etc. This has encouraged the participation of employees at many work centres and their involvement in order to drive more safely and to have a greater perception of the risks behind the driving wheel. For further information, visit FCC’s Road Safety Portal.

World No Tobacco Day

For one more year, FCC joined the World No Tobacco Day celebrated worldwide on the 31st of May of each year in order to highlight the health risks associated with smoking and to encourage the implementation of public policies to reduce smoking.

Quitting smoking substantially improves the quality of life from the health and financial perspective. Recovering lung capacity, the sense of taste and smell, the positive effects on the skin and dental health, and the radical reduction of the possibilities of developing cardio-respiratory problems are just a few of the important benefits from quitting smoking stressed by the World Health Organization. The company joins this celebration to highlight that quitting smoking is possible. For you, for those around you. Of course you can.



Above, images of the practical training sessions at the "La Pipa" deposit in Almería under the supervision of Wolfgang Hagen and Ignacio Romero.

FCC Aqualia organizes a practical session on working in confined spaces for technicians of the Junta de Andalucía

Above, images of various moments during the rescue simulation exercise at the Motril-Salobreña wastewater treatment plant and its participants: firemen from Motril with Cristina Gómez Merlo, head of the Motril-Salobreña WWTP, Wolfgang Hagen, and several workers from the plant and other departments.

FCC Aqualia organized last July a training session on working in confined spaces at the La Pipa Municipal Water Deposit in Almeria. Several occupational hazard prevention technicians from the Junta de Andalucía (Andalusian regional government) participated in the training session.

FCC Aqualia's prevention technicians, Ignacio Romero Corral and Wolfgang Hagen Guirado were in charge of providing and supervising the training sessions.

The training involved a theoretical part in which the work procedures were explained and then a practical session with several activities including going down to a confined space with a face mask and entering a confined space with autonomous breathing equipment.

The participants were divided into different groups, rotating the activities and using different types of equipment. The trainees used all the equipment required for entering confined spaces such as a gas detector, tripod, harness, and an arrest system.

The participants and members of Almería's Department of Training from the Occupational Hazard Prevention Centre, attached to the Department of Economy, Innovation, Science, and Employment of the Junta de Andalucía thanked and congratulated Ignacio Romero Corral and Wolfgang Hagen Guirado for their work.

FCC promotes road safety in Costa Rica

The project aims to create awareness among pedestrians, especially children at nearby schools, to use the pedestrian bridges.

FCC has launched a road safety campaign in Costa Rica with the slogan "1, 2, 3 Bridge, three simple steps to arrive safely at home" in order to create awareness among the population on the importance of using the pedestrian bridges in Cañas-Liberia, a project being executed in the country by FCC Construcción.

Developed in coordination with the Ministry of Public Works and Transport (MOPT), the Inter-American Development Bank (IADB), and the Council for Road Safety (COSEVI), the project aims to create awareness among pedestrians, especially children attending schools near the road, to use the pedestrian bridges to avoid traffic accident deaths.
To train pedestrian, several fun-information actions were designed: information material, talks, meetings with teachers and parents, giant posters, drawing contests, and the design of murals.

> "Slogan of the campaign: 1, 2, 3 Bridge, three simple steps to arrive safely at home"

Well-being for all citizens

With these activities and the support of Pipo, one of the characters of the campaign, the objective is to teach preschool and primary school children how to cross the pedestrian bridges in three simple steps. Mauricio González, the manager of FCC Construcción in Costa Rica, explained that the objective of this social responsibility project is the welfare of all the residents in Cañas, Bagaces and Leria and is in keeping with the company's corporate social responsibility policy.

"Using the pedestrian bridge means protecting something very valuable: life. The campaign has a high information component with clear messages that make it possible to encourage a responsible road culture, where children learn how to cross the pedestrian bridge in a safe way", González explained.

Six schools with about 1000 children are in the zone of influence of the project. These children walk, ride horses or a bicycle to school and many of them do this without an adult accompanying them.

11 pedestrian bridges

The Cañas-Liberia section will have 11 pedestrian bridges situated in the main population centres to increase the safety of the pedestrians who travel in this area to go to healthcare centres, homes, or schools.

FCC encourages communities to be agents of change, safeguarding their lives by using the pedestrian bridges.

Recommendations for the summer months

The consequences of prolonged sunbathing, jelly-fish stings, and spine injuries due to diving, are some of the main health risks associates with summer vacations. At the beginning of the summer period in Spain, the Ministry of Health, Social Affairs and Equality reminds the population of several recommendations to prevent, as much as possible, these types of injuries.

Not diving in unfamiliar areas, avoiding drinking alcohol before bathing, keeping a close eyes on children when they bathe,, not sunbathing in the middle of the days, protecting the head and eyes, in particular, using protective creams and washing jelly-fish stings with salt water area among the main recommendations for the summer months.

1. General recommendations for prevention and protection against high temperatures.
2. Protection against strong sunlight.
3. Prevention against accidents in the water.
4. Precaution against jelly-fish stings.

General preventive and protective measures when the temperature is high

The Ministry of Health, Social Affairs and Equality stresses the need to prevent the effects of high temperatures on our health. Since 2004, it has in place a protocol detailing the measures to be taken by medical services in the event of a heat wave.

See PDF

The Spanish Drug and Medical Products Agency (AEMPS) has also drafted a document on the proper use of drugs in the event of a heat wave.

The National Health System has a key document detailing the problems caused by exposure to extreme temperatures. Since the best defence is prevention, it stresses a 10-point list of general recommendations "Enjoy a healthy summer":

1. Drink water and liquids frequently, even though you may not be thirsty and regardless of your physical activity.
2. Do not drink too many beverages with caffeine, alcohol, or large amounts of sugar since these can deplenish body liquids.
3. Even though anybody can suffer from heat-related problems, pay special attention to babies and small children, the elderly, or those who have a disease that can get worse with heat and dehydration, such as cardiac pathologies.
4. Remain as much as possible in fresh places, in the shade or in air-conditioned places and freshen up whenever you need it.
5. Try to reduce physical activity and avoid outdoor sports during the hottest hours (from noon to 5:00 p.m.)
6. Wear light and loose clothing that lets you perspire.
7. Never leave anyone in a parked and locked car (especially children, old people, or those with a chronic ailment).
8. Go to your doctor if you notice symptoms that last more than one hour hat could be caused by high temperatures.
9. Keep your medication in a cool place; heat could alter its composition and effects.
10. Prepare light meals that help replenish the salt lost in perspiration (salads, fruits, vegetables, juices, etc.).

Protection against sunrays

Summertime is when we engage in more outdoor activities. It is, however, the season when sunrays are more harmful since they reach the earth at a more perpendicular angle. Our skin in this season is very vulnerable to the exposure of sunlight and, therefore, proper protection is essential to prevent harmful effects on our health particularly because the negative effects of prolonged exposure are cumulative.

Some of the consequences are sunburns, heat strokes, eye injuries, alterations in the immune system, or premature aging of the skin. The increase in skin cancer (carcinoma and malignant melanoma) in recent years is a clear sign of the dangers of these radiations when we do not take the proper precautionary measures.

Nevertheless, most of the negative effects of sun exposure can be prevented by following the simple recommendations of the Ministry of Health, Social Affairs and Equality and of specialised organizations:

1. Avoid sun exposure in the central hours of the day (from noon to 5:00 p.m.) as well as prolonged exposure or siestas under the sun).

2. Reduce the body areas with direct exposure to the sun. Light garments, thick-woven shirts, long pants, will block most of the sunrays. The most comfortable garments for hot climates are cotton shirts in light colours. Clothing should be comfortable and not too tight.

3. The head should be covered with hats or caps. The sun can also damage your eyes and, accordingly, it is recommended that you wear sunglasses that filter at least 90% of ultraviolet rays (UV).

4. Apply solar protective creams with a high factor and appropriate for your age, type of skin, and the part of the body to be protected. These solar protectors should be applied generously, 30 minutes before sunbathing and re-applied every two hours and after swimming. Remember that not even the most effective solar protection creams that protect against UVB and UVA rays, can ensure total protection against the risks posed by ultraviolet rays. The only way to prevent the harmful effects of the sun is to avoid exposure and, when you do, the proper measures, as described above, should be taken to try to reduce the risks.

5. Be careful of exposures on top of or in the water since radiation can penetrate in clear water up to one metre deep.

6. Protect children since they are very sensitive to sun exposure during this time of the year. Try to avoid sun exposure for children less than 3 years old. Creams with a high sun factor should be used (the factors for sun protection recommended are those of more than 40).

7. If you take medication, check that it does not increase the skin's sensitivity to ultraviolet rays.

8. Bear in mind that the risk of sunburn increases with height (for each 300 metres, the power of ultraviolet rays increases by 4%). This means that the same recommendations should be followed to protect against the sun.

Advice from the Spanish Drug and Health Product Agency

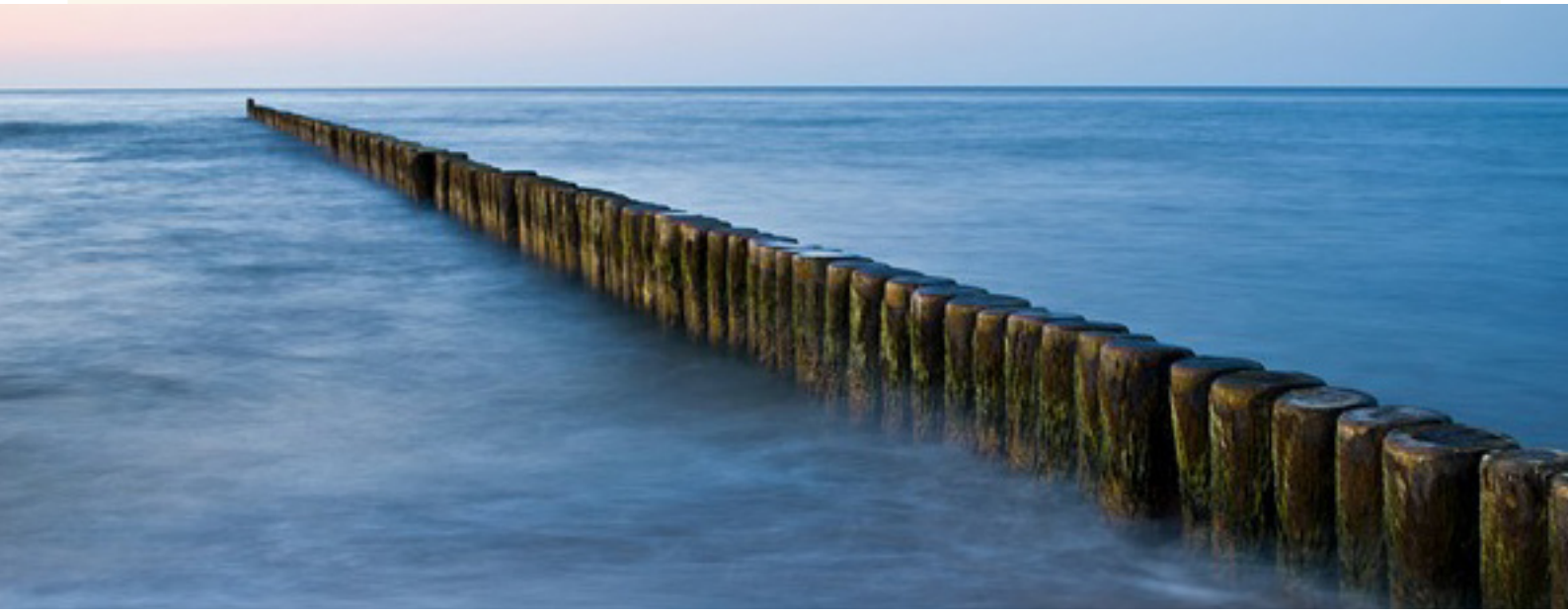
See PDF

Preventing accidents in the water

The start of the summer also means the start of the season for going to the beach, pools, lakes and rivers where many decide to enjoy their leisure time. Recreational water activities such as swimming, fishing and other water sports are very beneficial for the health of people of all ages.

Nevertheless, we know that these places of leisure and enjoyment can also be the cause of injuries which can be quite serious or even fatal. These serious injuries, drowning, cranial traumatism, and spine injuries, are mostly caused by imprudent behaviour or in a moment of carelessness when taking care of minors. Most of these injuries, however, can be avoided or their effects can be minimised by adopting a safe attitude and by following the recommendations of experts such as:

1. Adults should constantly watch and be close to minors, when in the water or when playing near it.
2. Use a lifesaving jacket if you don't know how to swim or, even if you know, when you practice any water sport.
3. Respect the meaning of the flags and the indications of the lifesavers.
4. Do not drink alcohol when engaging in any activity in the water.
5. Do not swim at night.
6. Always swim accompanied by somebody else.
7. Know the depth of the water before diving.
8. Avoid diving or jumping in murky water.
9. Avoid bathing in areas where there are water currents.



These and other tips are available at:

See PDF

MSSS1 Brochure: Enjoy water and avoid risks. Family Guide

See PDF

10-tips for swimmers

See PDF

European Alliance Guide: Protecting children and youngsters in recreational water activities.

Taking precautions against jelly-fish stings

In recent years and during certain seasons, some of the Spanish coasts are becoming full of jelly-fish that are swept on shore by marine currents. This could alter or, even prevent, walks or swimming in the affected beaches.

Jelly-fish have stinging cells that contain poison which is released when they try to defend themselves in case of danger or to capture their prey. Most incidents generally occur due to accidental contact with the jelly-fish when bathing or when stepped upon or handled mostly by children.

Although there are always some exceptions, stings do not pose a serious threat and generally depend on the species.

Contact with live or dead jelly-fish or parts of it produces immediately pain or an intense itching in the affected area and the reactions include reddening, inflammation, and small vesicles. On rare occasions, the symptoms include nausea, vomiting, and muscle spasms. In the most serious cases, there could be loss of consciousness and the resulting danger of drowning.

People who have had previous contact with jelly-fish could be more sensitive and a second sting could produce a more adverse reaction. People with a history of allergies and those with heart problems should be particularly careful. Children should be watched very carefully.

Besides those bathing in the beach, scuba-divers or those who work in the sea can also be affected. Precaution should be taken since the greatest risk is not being aware of the danger of being in contact with jelly-fish.

If you have been stung or have touched a jelly-fish, you should follow these recommendations:

1. Clean the affected area.

2. Do not rub the affected area with sand or with a towel or with anything else that might cause more injury.

3. Always use salt water, never clean the area with freshwater.

4. Apply a cold compress during 15 minutes on the affected area, using a plastic bag full of ice. Never apply ice directly unless it is icy sea water.

5. If there are any remaining parts of the tentacles attached to the skin, do not make any brusque movements; these should be removed using tweezers and the affected area should never be touched with the hands.

6. If the pain is very intense or if the individual's condition worsens, go immediately to a hospital or clinic.

If there are a large number of jelly-fish in the beach, follow these useful recommendations:

1. Take precautions even if the jelly-fish are far from the bathing area since waves can break their tentacles and these floating pieces remain active.

2. Do not stroll on the beach where the waves break since the area could be full of jelly-fish fragments.

3. Avoid playing games on the shore when there are jelly-fish in the area.

4. With precaution and without touching them with your fingers, take them out of the water and collect those that remain on the edge of the water.

5. Warn other bathers that they should not touch them, even if they seem dead or are broken into pieces.

6. When jelly-fish appear on the beaches, the best precaution is to stay out of the water.

Drinking moderate amounts of coffee reduces swerving off the road, sleepiness, and driver's reaction time

Drinking coffee reduces reaction time, the number of times the car touches the lines on the pavement, and driver's sense of drowsiness according to the study "Coffee when driving vehicles: analysis of its effects on tired and sleepy drivers" prepared by the Spanish Road Safety Foundation (FESVIAL), the Traffic and Road Safety Institute (INTRAS), and sponsored by the Spanish Coffee Federation (FEC).

In this research, the first of its kind in Spain, a group of drivers underwent driving tests in a simulator to analyse the effects of coffee with caffeine, decaffeinated coffee, or placebo, the effects of taking a siesta before driving, and the sense of drivers' drowsiness and fatigue.

The conclusions of the study indicated that drinking coffee improves the performance of tired or drowsy drivers since it reduces by 36.3% the number of times the car goes over the lane markings, reduces reaction time by 7.7%, and diminishes drowsiness by 25.9%.

Reducing the number of times that the driver goes over the lane markings is extremely important since it is usually an indicator of a pattern that indicates a drowsy or tired driver who zigzags on the road. This is the cause of 30% of accidents. Accordingly, the study concludes that drinking a cup of coffee improves driving performance, and is a simple and effective measures that drivers can take for a temporary improvement in their driving performance.

The study also showed that drinking coffee improves the sense of drowsiness which contributes to improving road safety.

In short, "resting during long drives or when one feels that the level of attention decreases, and driving correctly are always the best options which, in combination with drinking coffee, could be a good practice to improve road safety behind the wheel", according to Luis Montoro, a professor of Road Safety at the University of Valencia, the director of FACTHUM.lab del INTRAS research group, and chairman of FESVIAL. "It is important to conduct studies that contribute to improving road safety".

Coffee consumption in Spain

Coffee is one of the most consumed beverages worldwide. In fact, in Spain, consumption is equivalent to nearly 600 cups of coffee per inhabitant per year of which 58% are drunk at home and the remaining 42% in restaurants and cafeterias.

At home, coffee is mostly drunk during breakfast and mealtimes while at cafeterias, it is drunk mid-morning. The preferred way to prepare coffee is with milk, and nearly 56% of the population drink it this way, especially at home.

> "Drinking coffee improves the performance of tired or drowsy drivers and reduces by 36.3% the number of times the car goes over the lane markings"

In the presentation of study, María Seguí, the general manager of DGT, said that "We always talk about research involving the factors that increase the risk of accidents among drivers, but it is also important to investigate the factors that could reduce these risks".

The importance of tiredness and drowsiness when driving

Drowsiness and tiredness are two major risk factors when driving, provoking accidents such as hitting the back of the car in front, swerving off the road or into the adjacent lane. In fact, tiredness is considered the fourth cause of mortality in Spanish roads and, according to the DDGT; it is related with 20-30% of traffic accidents. It is also calculated that drowsiness is responsible (directly or indirectly) with traffic accidents due to human failure. In fact, according to the Spanish Sleep Society (SES), nearly 70% of drivers affirm that they have felt sleepy occasionally when driving.

Therefore, taking measures such as drinking coffee to reduce the driver's drowsiness and fatigue could improve road safety and reduce the rate of traffic accidents.

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FCC Aqualia's Project for reducing hydrogen sulphide achieves success and recognition

Efficiency assessment

Technical report on H2S experiences

Technical report on hyrogen sulphide reduction

In view of the serious problems caused by the atmosphere contaminated with hydrogen sulphide at the waste water treatment plants, FCC Aqualia conducted an important research and execution project to reduce the levels of this compound and eliminate the risks and damage caused by the concentration of this component:

- Its high toxicity generates zones where the atmosphere is highly dangerous for workers.
- Gas emissions affect the areas surrounding the installations, spreading bad odour that cause discomfort for the population.
- The presence of certain compounds result in the corrosion of the pipes and equipment at wastewater treatment plants.

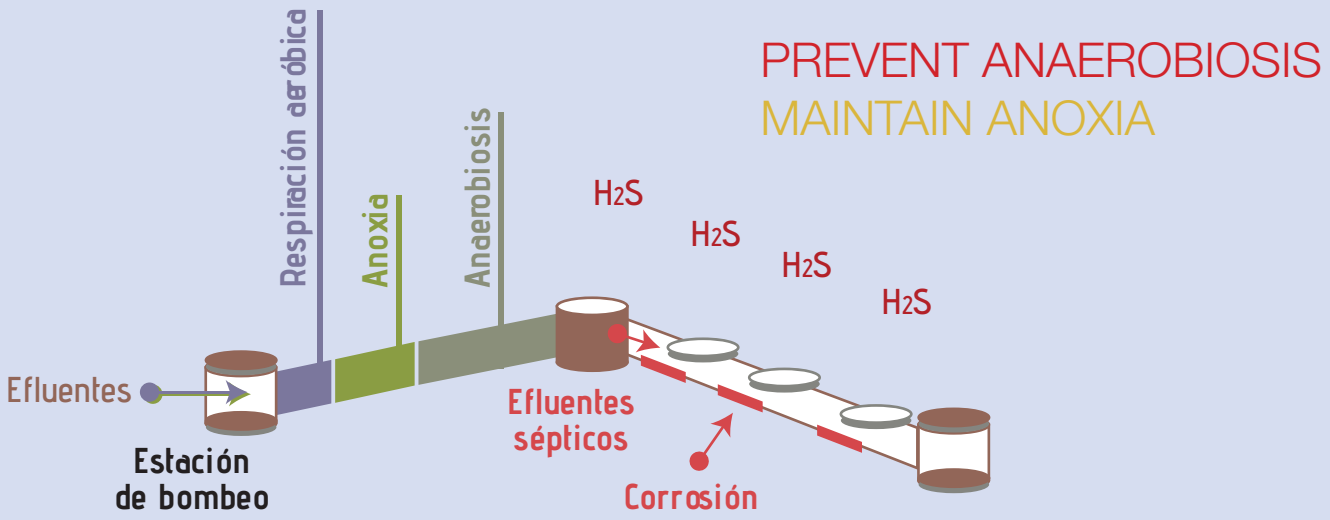
After several years of work and implementation which began at the wastewater treatment plants of FCC Aqualia, East Zone, in a project headed by Pilar Icarán López, a current member of FCC Aqualia's Innovation and Technology Department in Barcelona, it was possible to substantially reduce the concentration of hydrogen sulphide at the waste water treatment plants by tackling the problem at the source and obtaining optimal results in just a few minutes.

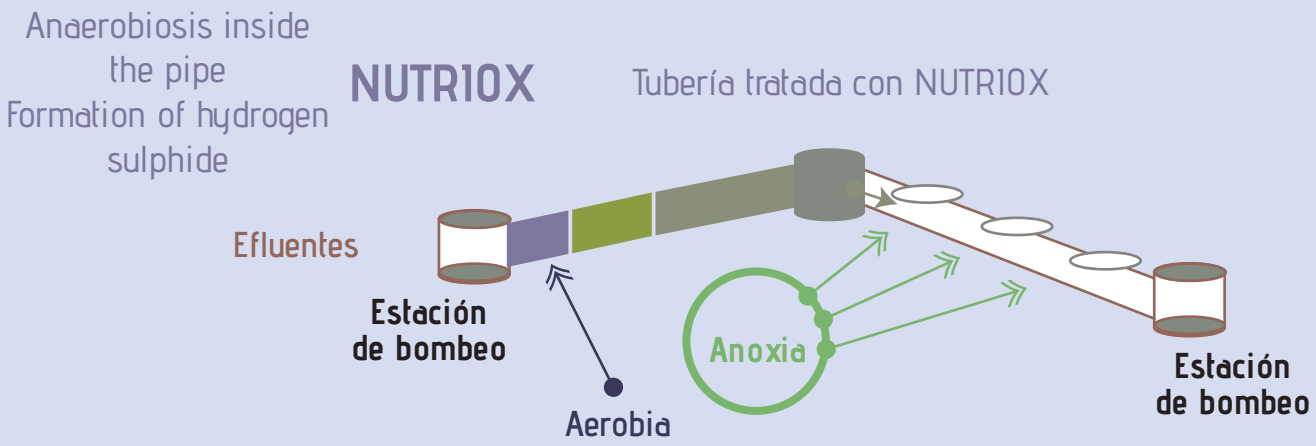
The study was carried out by the department in charge of controlling the quality of treatment processes which determined that by using doses of oxidant agents in wastewater before its entry in the treatment plant, it was possible to significantly reduce the content of hydrogen sulphide which, in the interior of the plants, caused great toxicity, corrosion, and bad odours.

Furthermore, in collaboration with the Production and the Occupational Hazard Prevention departments, this work has confirmed that the risk of suffocating or similar dangers, are controlled, thereby reducing the preventive measures and costs generated to minimise the risk resulting from the concentration of gas at the installations and work areas.

Pilar Icarán López, member of FCC Aqualia's Innovation and Technology Department in Barcelona

Operating principles of Nutriox





The method

Dosing of oxidant agents in the collectors to minimise the hydrogen sulphide generation problems:

- Installation of a gauge to measure hydrogen sulphide in order to determine the levels and the profile of the hours at the point where the problems were detected.
- Retrieval of data and dosing proposal.
- Testing begins, controlled dosing by means of a regulated pump.
- Removal of the hydrogen sulphide measuring gauge and verification of its efficacy or extension of the test after the necessary corrections to control the concentrations.

Dosing devices were installed and in some plants, the water exits and the aspirations of the air extraction system were modified in a localised manner and in the drying area. For safety purposes, ancillary equipment was installed for the comfortable and safe handling of chemical solutions, such as girders and hoists that make it possible to transfer the hoppers of the product to their location over the dosing machine. Dilution water valves, eye-wash solutions, and a safety shower were also installed.

FCC Aqualia wins occupational hazard prevention prize for its reduction of hydrogen sulphide research project

Asepeyo, the private insurance fund affiliated with the social security system, and Generalitat Valenciana (the Valencia regional government) distinguished FCC Aqualia in relation to occupational hazards for its research project to reduce the formation of hydrogen sulphide at the source in its wastewater treatment plants.

Awarded by Asepeyo

The panel of judges rewarded the project presented by FCC's water management company "Reduction at the source of the formation of hydrogen sulphide in wastewater treatment plants" in the category of Best Practices for controlling risks.

The award ceremony, held in Seville, was presided by Francisco Javier Zambrana, managing director of Occupational Safety and Health of the Junta de Andalucía. Aqualia was represented by Pascual Capmany, manager of Safety and Health; Manuel Alcoucer, head of Human Resources of Zone III, and César Fernández, the Safety and Health coordinator for Zone IV.

Rewarded by the Generalitat Valenciana

The manager of FCC Aqualia's branch office in Levante, Manuel Calatayud, collected the distinction for the prevention of occu-

The event was presided by Francisco Javier Zambrana, managing director of Occupational Safety and Health of the Junta de Andalucía. Aqualia was represented by Pascual Capmany, manager of Safety and Health; Manuel Alcoucer, head of Human Resources of Zone III, and César Fernández, the Safety and Health coordinator for Zone IV.

pational hazards granted by the Generalitat Valenciana for the research project on the reduction of the formation of hydrogen sulphide at the source in wastewater treatment facilities.

Calatayud was accompanied by Juan Carlos Sáez, corporate director of Prevention of Occupational Hazards (POH) at FCC; the branch office manager in Valencia; Ana Gómez, POH technician; and the managers of the Albal, Alboraya, Villena, Alcoy, Llíria, Los Serranos, Marines and Olacau services: Vicente Crespo, Rafael García Monllor, Matías Serna, Santiago Catalá and José Miguel Ibáñez, respectively.

Granted by Instituto Valenciano de Seguridad y Salud en el Trabajo (INVASSAT), this distinction is for promoting excellence in the prevention of occupational hazards of companies, organizations, institutions and individuals who have stood out for their involvement in promoting safety and health at work in the Valencia Autonomous Community so that they serve as an example of a job well done in prevention for other companies or organizations with whom they deal which, in turn, contributes to dissemination the culture of prevention throughout the Valencia community.

Family photo of FCC Aqualia. From left to right, Manuel Sánchez, representative in Valencia; Manuel Calatayud, manager of the Levante Branch Office; Salvador Puigdengolas, deputy technical manager of INVASSAT; Juan Carlos Sáez, corporate director of Prevention of Occupational Hazards (POH) at FCC; Santiago Catalá, head of the Alcoy service; Vicente Crespo, head of the Albal service; José Miguel Ibáñez, head of the Lliria service; Ana Gómez, POH technician, Rafael Monllor, head of the Alboraya service.

The work performed by FCC Aqualia complies with the essential characteristics of any research project: it is innovative, simple, and can be easily extrapolated to any other facility.

Manuel Calatayud (centre) receives the distinction from the regional secretary of Economy and Employment and the vice-chairman of the Instituto Valenciano de Seguridad y Salud en el Trabajo (INVASSAT), Fernando Díaz Requena on the right) and the director of INVASSAT, Felipe Codina (on the left).

Del PET se obtienen los copos lavados.

The ubiquitous PET, a type of plastic used widely in beverage bottles and textiles

There are some materials that can be found everywhere. One of them is plastic, which has very diverse properties an applications. Unlike natural materials such as wood, plastic is manufactured synthetically by means of the chemical conversion of natural resources, such as oil.

Of the 16 types of plastics handled by FCC Environment CEE (formerly .A.S.A:), polyethylene (LDPE, LLDPE and HDPE) and polyethylene terephthalate (PET) are the most frequent ones. Various foils such as plastic bags, packaging foils and PET bottles are produced from these types of plastic.

When we buy a bottle of water, we hardly ever think of what happens to it when we drink it and then throw the bottle in the trash bin. Even though it may seem strange, we could encounter the same bottle again in the form of PET or converted into something different. This is because some materials come and go, especially plastic.

Once in the trash bin, FCC Environment CEE or another waste management company, collects and transports the waste (classified and not classified) to the sorting line. There the plastics are sorted into the following main categories: PET bottles (transparent, white, green, blue and other); foils; household products (detergents, shampoos, etc.); and other types of plastics.

The individual commodities are then compacted into neat bales and prepared for transport to a company that processes plastics. One of these is General Plastic a.s. based in Kolárovo, Slovakia. It is one of the top processors of PET bottles and producers of PET preforms in central Europe. This is the destination of PET bottles not only from Slovakia, but also from Hungary, Czech Republic, Slovenia, Poland, Romania or Serbia. About 900 tons of washed flakes are produced monthly here, making it the main commodity produced at this plant, which also produces PET regranulate and LDPE shrink film of which around 100 tons are produced from 102 tons of granulate. An input of 1.150 tons of compacted PET bottles is needed to produce this amount of flakes.

The compacted bales of PET bottles are taken apart here and undergo further separation in the sorting line to eliminate residues that do not belong to the given commodity and would affect the quality of the resulting product, and which could have been mixed in during the initial sorting. The PET bottles then pass through a complicated process of multiple crushing, washing and drying, until they are transformed into the mentioned flakes. These are the basis for the production of PET regranulate.

The multiple uses of PET

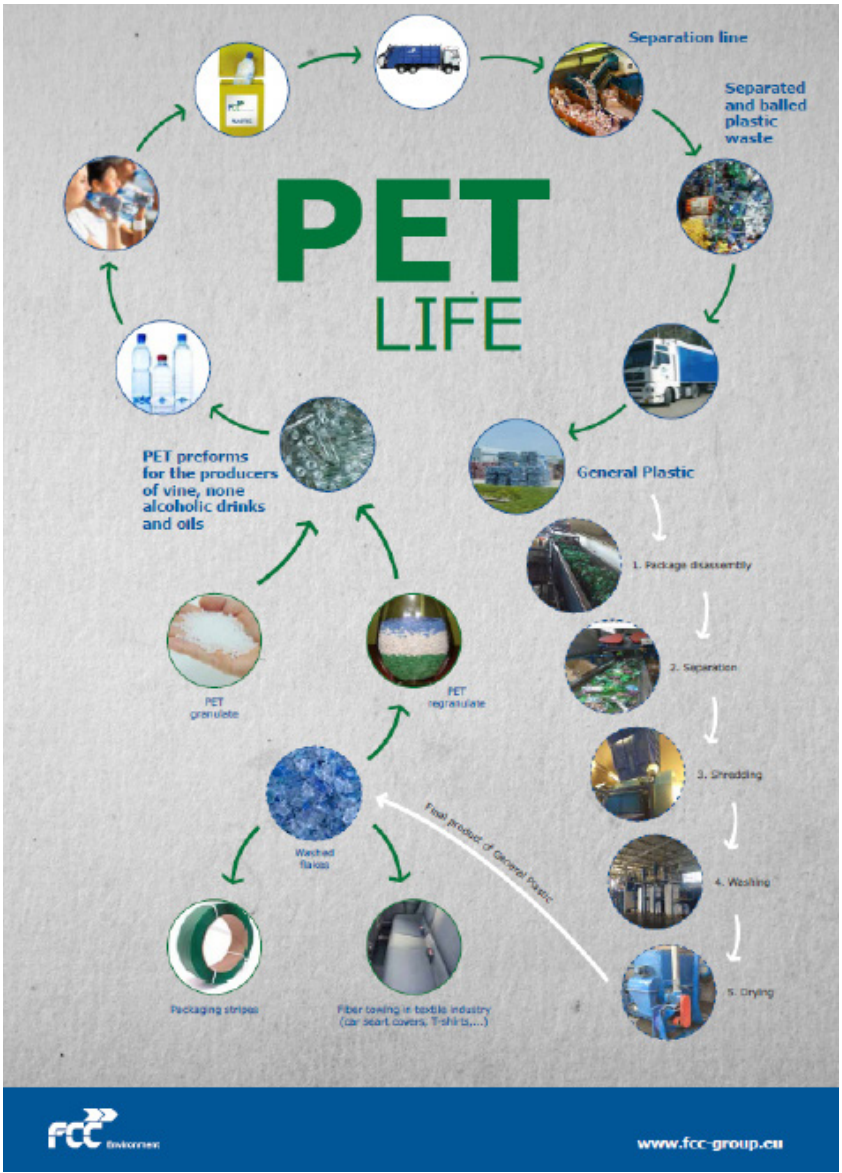
PET is useful for producers of wine, non-alcoholic beverages, and oils, packing strips and fibres used in the textile industry. The bottle that we consume and then throw away becomes useful again.

In fact, the bottle could now be part of your bed since there is a high probability that the mattress on which you sleep contains fibres made from PET flakes. When you fry eggs for your breakfast, you will meet the PET bottle again: the plastic packaging for eggs is also made from flakes. In the winter on your way to work, you have the PET bottle right on your body if you are wearing a fleece jacket. Even here the flakes served as a basis for textile fibre, from which the jacket was subsequently produced. What's more, a winter jacket could be made with ten PET bottles.

If you drive your car to work and put your sports bag in the trunk, you again have your original PET bottle in your hand, because it is contained in the luggage compartment cover. In the office, a PET bottle of water stands on your desk (up to 50% of the inputs for its production are secondary raw materials) and the highlighter you are using also has a "relationship" with your PET bottle.

You cannot get rid of the presence of the PET bottle even at the supermarket. If you buy, for example, cheese or ham, their plastic packaging is also has its base in our PET bottle. In addition, all the goods that are transported on pallets in bulk, whether to super or hobby markets, are for safety reasons tied on with strips made from flakes. "Safety strips are the market of the future", explains Thomas Hinterwallner, Advisor of the Executive Board of Directors from General Plastic. "Their importance is growing on the EU market, where about 100 thousand tons of them are produced and used annually."

> "Recycling prevents the extraction of non-renewable virgin raw materials, such as oil and gas, and reduces energy consumption by 80 to 90%"



FCC Environment in Gyál (Hungary) wins the Energy Efficient Company award

Biogas

to produce energy

The use of biogas (gases from the breakdown of organic waste) as a source of energy is nothing new for us. Thanks to our experience in this field, FCC Environment in Gyál (Hungary) was the winner this year of the Energy Efficient Company" prize.

Although the use of biogas (gas generated by the natural bio-breakdown of organic material in waste) is not FCC Environment's core business, it is one of the company's most attractive line of business and also an essential service for numerous reasons.

Methane (CH4), a main component of biogas (an average content of 50%), is a very dangerous gas for the atmosphere. In fact, CH$ is the third most abundant of the greenhouse gases (after $H_2$0 and CO_2 vapours) and its potential global damage is 25 times higher than CO_2.

Biogas production cannot be prevented and, therefore, it must be collected and treated. The system for capturing it depends on the type of landfill site, the operations system, and the characteristics of waste. In large landfill sites which produce large amounts of biogas, active capturing systems are used in which degasification is obtained by forced extraction. When gas production is less, either because of the size of the landfill or due to the composition of waste, passive systems can be used.

Small landfills generally do not produce sufficient gas to make its conversion into energy viable. In these cases, the gas must be destroyed. One of the systems used is

Control panel in Gyál.

Drilling of degas wells, Arad, 2014.

CHP unit Úholičky, CZ, 520 kW Waukesha, prod.capacity 3.500 MWh/year.

to filter it through sealed layers where the oxidation of methane takes place and, therefore, its elimination.

When the production of gas allows it, biogas is converted into energy by capturing the thermal energy for its subsequent use, for example, to generate electricity. This is exactly what we have been doing at the CHP units (combined heat and energy units) in several of our landfill sites.

An award-winning example: an energy efficient company

FCC Environment CEE (formerly .A.S.A.) in Gyál was awarded last year the Energy Efficient Company prize thanks to its production of clean energy. A combined 2000 kW heat and energy unit not only produces heat, but also electricity jointly with another smaller plat. With both units operating at the same time, it is possible to produce all the energy necessary in the offices, social buildings and in the first three phases of the landfill. Heat is used for heating and for producing hot water. In this way, all thermal energy and electricity for the offices is obtained by recycling the gases from the landfill site. Any left-over electricity is sold to the grid.

Personal memories of Karel Procházka, project manager

Waste to energy (W2E) is not something new for FCC Environment (formerly .A.S.A.). I remember well my first visit to Halbenrain (Austria) in 1999, to the grand room where the new green Jenbacher had been installed, with an approximate output of 520kW. Energy was used for the process of cleaning wastewater and in the adjacent room a new wastewater treatment plant had been installed. Surplus energy generated by the CHP (combined heat and energy) unit was offered to the public grid.

After our landfill in Ďáblice, Prague, started operations, I did not waste any time in preparing the ".A.S.A. Energy" project which included the transformer station and the connection to the grid. All was positive when it came to the production and se of gas. The only obstacle was how to actually sell the energy. At that time, programs supporting alternative energy production were not active.

The energy project itself was quite costly since, in this case, it was necessary to invest 2 million euros. Nevertheless and, as we did later in other .A.S.A. landfills, we made an initial investment in the degasification station and in the capacity to maintain as safely and under control. Then we collected data on the amount and the quality of gas in relation with the gas field operation. We burned the gas. It was interesting to see the sparkles at night, like a rocket, but the other way around.

The quality and quantity of gas production started to increase and, therefore, we decided to sell the energy potential of the gas to a partner. This contractual partner installed 2 large CHP units (2 of 1,026 kWe) and then another smaller one with nearly 240 kWe to generate energy (electricity and heat) for our area, particularly for the administration building. Another interesting phenomenon occurred in Ďáblice: all of our windows (in AB) were open (even when the temperature was -20° C outside); we had an enormous amount of surplus heat energy, and it was free!

After some time, we prepared some variants on how to fully se the heat potential more effectively. Shortly after, our partners already had the degasification station connected to the former landfill in Prague (in Chabry, 2 km away) with the new .A.S.A. landfill in Ďáblice.

We also wanted to use the heat potential, not just produce electricity. The expected power of the additional heat was between 3 and 4 MW. Then, we installed a 7 km-long underground pipeline to Letňany to supply gas and transferred the machinery. There, it was possible to use electricity as well as heat energy for the industry, homes, and apartments. It is also interesting to note that the machinery (pumps) that carry the gas from the landfill to Letňany also functions with energy from the gas engines at the landfill site.

Guest column

Antonio Alfonso Avelló
Managing director. FCC Medio Ambiente
Internacional Division

The present and future of waste to energy

> "It is essential for local communities to become involved in waste to energy"

FCC Medio Ambiente played an important role in the World Waste to Energy City Summit, organised in London last May. During two days, more than 200 attendees, including authorities, executives, developers, financial agents, technology providers, and industrial users met in order to analyse new markets and the challenges and global trends in waste to energy (WTE).

For our Citizen Service Group, it is essential to have local communities involved in the waste to energy processes to create awareness among the population and, at the same time, improve the perception of the public of these infrastructures. This is a challenge that can be addressed by means of communication campaigns and, most importantly acting with complete transparency at the installation and in controlling the emissions.

This played a key role in the congress. These measures include reducing the financial barriers to simplify protocols and finance structures thereby encouraging companies to develop these infrastructures. The need for innovation is also crucial not just technological but also political, finance mechanisms and associative models in order to speed up the growth of this industry worldwide.

Waste to energy still has a long way to go. In fact, it is an essential part of our Environment business and will remain so thanks to the development strategy that we are implementing. It is a very good alternative for the treatment of waste in geographical areas with a high population density, where the amount of disposable land is too limited to create landfills, or if the idea is to reduce as much as possible the size of these sites as the final destination of waste. The system rounds up perfectly when this technology is aligned with the production of renewable energy (we should bear in mind that the energy produced with these technologies are included in the group of renewables); the economic-financial equation is more assumable when production incentives and its injection in the grid is possible, either as electricity or heat.

From left to right: Felipe Urbano de Saleta, manager of Development at FCC's Environment Division. Panel of CEOs with Paul Taylor, CEO of FCC Environment UK, the centre.

Europe and North America will continue to have good development potential. Other regions such as the member states of the Gulf Cooperation Council (GCC), the Southeast Asia Association (ASEAN), or China could be very important markets. We believe that robust and tested technologies based on mass combustion grids will continue to play a relevant role in these systems, although the development of the so-called Advanced Conversion Technologies (ACTs) – which, through innovative processes such as gasification, pyrolysis, or plasma produce fuel, heat or electricity with a high degree of energy production.

WTE is contributing to enhancing the sustainability of waste treatment, particularly by generating renewable energy that reduces the dependency on fossil fuels. This will have a very positive impact on our surroundings and in the future of our ecosystems. For us, waste to energy is not an exclusive or single-use technology. The trend nowadays is to maximise recovery and recycling of waste reducing as much as possible the negative impact on the environment, one of the defined objectives of the European Union for 2020. Because of this, the major projects currently under study contemplate Comprehensive Waste Treatment and Recycling Complexes where diverse flows of materials can be processed and which combine several systems for their treatment, one of which is waste to energy.

The Citizen Services Group has two treatment plants in Cadrete and Muel (both in Zaragoza) and another one in Sagunto Harbour (Valencia)

Glass

a material with an almost infinite lifecycle

Recycling glass is part of everyday life for citizens, so much so, that it is the most recycled material, perhaps because it was the first one that we started to separate in the eighties. In 2014, 700,000 tons of glass from selective glass collection plus another 200,000 tons of glass from supplementary collections, were recycled in Spain. The sum of these tons means that the recycling rate in Spain in 2014 was 68.9%, making Spain one of the leading countries in Europe in recycling glass bottles. This recycling rate, per inhabitants, implies 14.8 kilograms of recycled bottles per person, that is, about 56 glass bottles.

The European Union has set several recycling targets that are currently in the study and approval phase. Specifically, the rate of recycling should increase progres-

sively over the coming years from 70% in 2020 to 80% by 2025, and up to 90% by 2030. These values indicated that we must continue to join our efforts in order to increase the selective collection by members of the community using the igloo-type containers placed in the streets thereby minimising the amount of glass from other types of collections.

Why should we recycle glass? This material is recycled because it can be re-used completely thereby preventing the extraction of the raw materials required for its production and, consequently, the impact on the environment.

The extraction of 833,000 tonnes of raw materials and the emission of 465,000 tons of Co2 were prevented in 2014. This means a savings of 1,875,000 megawatts/hour of energy. Recycling 3,000 bottles of glass saves more than one tonne of raw materials. The energy saved by recycling a bottle could keep 100 watt lightbulb lit during 4 hours and with the recycling of 4 bottles, a refrigerator could be turned on for an entire day.

All these figures would not be realistic without the 195,000 containers distributed throughout Spain. This means that there is one container for every 240 inhabitants, thereby facilitating their collaboration in the task of recycling. According to data provided by Ecovidrio, a non-profit organization in charge of managing the recycling of glass containers deposited throughout Spain, 75% of Spanish homes say that they always separate glass and 56% state that they have a glass container for recycling at a distance of less than 50 metres. For 78% of the population, recycling contributes to the economic and social development of Spain.

From an obligation, to a habit

This awareness is the result of years of social education. The message to the population on the importance of a simple task, such as separating waste, has expanded from generation to generation. School campaigns reinforce the example set at homes. Having youngsters become involved in recycling is essential for adopting this habit as an attitude rather than an obligation.

Companies in the beverage sector have also done their homework and have made an essential contribution by being involved in the glass recycling cycle. Producers of beer, wine, and spirits have reduced the amount of glass used in the bottles to improve the recycling process. Ecodesign means that they are committed to: reducing the weight of the bottles and packaging used; improving the environmental quality of the bottles and the possibility of their recycling; and implementing good practices in the in-house management of waste bottles. Thanks to the 6,000 prevention measures and Ecodesign implemented since 1998, the average weigh of glass bottles has been reduced by 10%.

> **“In 2014, the recycling rate in Spain was 68.9%, making it the leading European country in glass recycling”**

Conscientious recycling

For FCC, glass recycling is a key activity and the company has broad experience in the industry through FCC Ámbito, the subsidiary engaging in managing industrial waste. The Citizen Services Group has two treatment plants in Cadrete and Muel (both in Zaragoza) and another one in Sagunto Harbour (Valencia). The three facilities process more than 135,000 tons of glass each year, at the urban source (hollow glass) as well as in the industry (hollow and flat).

Besides complying with environmental provisions to optimise glass recycling processes, these plants provide services to numerous companies that generate industrial glass waste (glass factories, bottling plants, hollow and flat glass production furnaces, car scrappers and recyclers, etc.) nationwide, contributing in each case the most appropriate containers with capacity ranging from 1 to 40 cubic metres. The excellence in the operations of these plants has been recognised by AENOR which has granted the Certificates for Integrated Quality, Environmental Management, and Prevention of Occupational Hazards Systems.

These management systems implemented at FCC Ámbito's plants make it possible for glass recycled at these plants are not considered waste but rather recovered glass, thereby complying with the guidelines of EU Regulation No. 1179/2012 of the Commission enacted on 10 December 2012which defines the criteria to determine when recovered glass is no longer waste. FCC Ámbito is the first Spanish company to obtain this certificate.

FCC Ámbito's plants feature the most advanced technology to provide services to a population of more than 4.7 million through 20,000 containers distributed in all the cities and towns in Aragón and La Rioja and in the provinces of Valencia and Castellón.

> "FCC Ámbito processes more than 135,000 tons of glass each year"

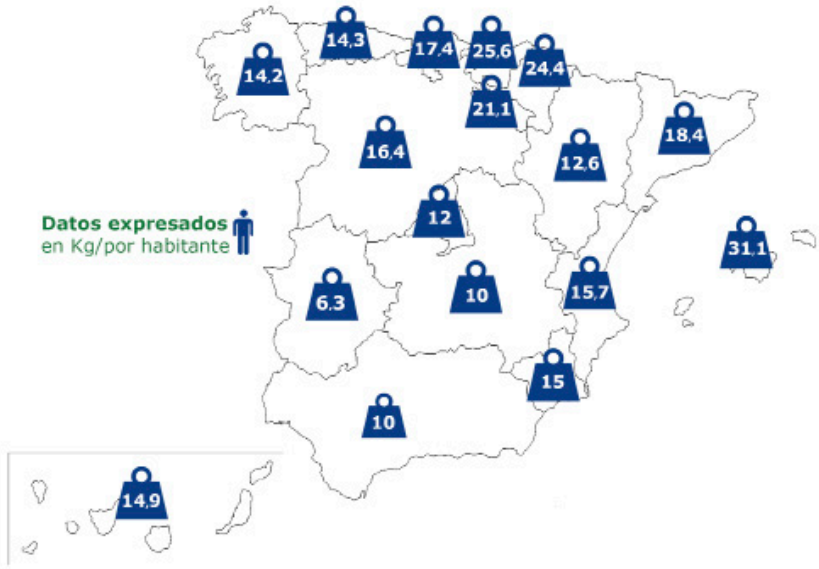
All three types of glass for other than traditional uses are processed, recycled, and sold at the three FCC Ámbito plants.

Fine glass of optimal quality

One of the main secondary materials obtained from the glass recycling process is fine glass. This product has great ecological and environmental advantages since it is free of contamination and is of great quality, in terms of size, colour, texture, etc.

Thanks to its non-porousness, hardness and its scratch-resistant qualities, fine glass has multiple applications. It is used in the construction business for kitchen countertops, façades, and flooring, to decorate greenhouses and landscaped areas, it is also used in glass fibre for thermal and

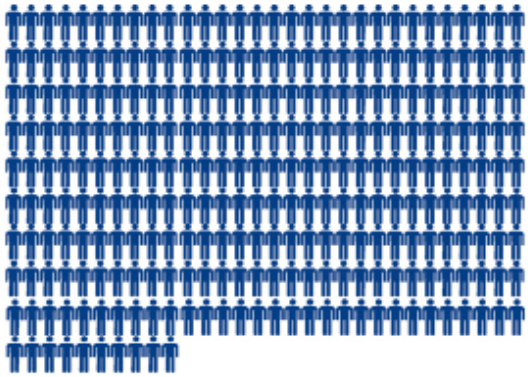
El reciclaje de vidrio por comunidades



En España hay en torno a

195.000
contenedores

1
contenedor
Por cada
240
Habitantes



Las comunidades que más han crecido

Islas Baleares
17,2%

La Rioja
14,7%

Andalucía
7,0%

Canarias
4,7%

Casi **700.000** t
toneladas de envases de vidrio recicladas

Cada español recicló

14,8 **Kg** → **56**
Envases
por habitantes

Tasa de reciclado
Datos MAGRAMA 2012

68,9%

acoustic insulation, in reflective spheres for paintings, etc.

This fine glass is also used for abrasive blasting of metallic materials, especially stainless steel and other alloyed metals to obtain metal surfaces with optimal polishing and cleaning. It also has multiple applications in industrial, manual and traditional crafts offering a translucent and coloured material that can be applied in several artistic expressions.

There are many other uses in artistic paintings, in the smelting of different metals to achieve special characteristics, in filters and in decoration in general.

Furthermore, as a result of the more than 35 years in the glass recycling activity and the commitment for continuous innovation, the human team at FCC Ámbito has succeeded in developing new products with many applications, including filtering glass for cleaning swimming pool water as a result of the CRISFILT R+D+I project, and the development of a new construction material with high added value based on recycled glass, developed in the REVICONS R+D+I project, the resulting product of which is very fine recycled glass that is used in the manufacturing of a special type of premium-class kitchen countertops.

The Cadrete, Muel and Sagunto plants, besides fine glass, also produce mixed and industrial scrap glass. The first one is the raw material used for manufacturing new containers (bottles, flasks, jars, etc.). The second one, industrial scrap glass, is used to manufacture new glass products (flat glass, pool tiles, etc.). The use of scrap glass makes it possible to save energy, 1% for each 4% of scrap glass introduced in the furnace instead of sand. This also contribute to reducing the emissions of CO_2 and other gases during the manufacturing process.

Glass does not have just one life and people are becoming increasingly aware of this. The recycling habit should continue and expand to take the most advantage of this material and to contribute to reducing contamination. In the future recycling other materials, particularly plastic and paper, should also become a habit.

About glass

Glass is obtained through the fusion at a temperature of 1500ºC, of silica sand, sodium carbonate and limestone, which cools down and solidifies without experience crystallisation.

- Glass can be 100% recycled for an unlimited number of times.
- FCC Ámbito's plants feature the most advanced technology to eliminate impurities such as: metals, organic waste, paper, plastic, stones, ceramic, and porcelain.
- Crushed glass, known as scrap glass, must comply with all the quality requisites demanded by glass factories.

COMUNICA LOS INCUMPLIMIENTOS DEL **CÓDIGO ÉTICO**

ENTRA AL CANAL ÉTICO DEL GRUPO FCC

Water in El Rocío, almost a mirà

cle

El Rocío is a small village in the south of Spain, in Andalucía, which is especially famous for welcoming thousands of faithful who come as pilgrims to celebrate the feast of the Virgin of El Rocío. Maintaining the tradition, pilgrims walk, ride a horse, or come in carts drawn by horses or donkeys. The pilgrimage is difficult and one can imagine what it was like one hundred years ago when the basic needs, such as water supply, were not covered.

With the passage of time, certain basic amenities have been incorporated to improve the quality of life of the pilgrims and visitors. During three days, the village's population increases from 1,000 to 800,000 thanks to the people who come to honour the Virgin. Since 1992, FCC Aqualia has met the challenge of providing services to this large number of people.

Providing services to a population that increases 400 times

Each year, the municipal water service of El Rocio changes radically during a few days. The infrastructures of this village are designed for a stable population of 1,850 people and, therefore, the work of the FCC Aqualia team focuses on optimising the installations to be able to serve 52 million litres of

water during the days of the pilgrimage to 800,000 visitors. This amount of water, distributed in tanks, includes 5 million litres of water for the animals and for irrigating some parts of the village. To meet this challenge, FCC Aqualia starts working before the pilgrims arrive, carefully organizing and adapting the facilities. In order to ensure that the water supply is effective, more pumps are turned on at the deposits and the tan trunk starts to function distributing water to the areas in the outskirts of the village where people gather.

Exhaustive analytical control

The company also works to ensure that the quality of the water is optimal. FCC Aqualia performs an exhaustive analytical control, testing the quality of the water at the Los Ánsares tank outlet as well as the water distributed by the tank trucks which comes from the El Rincón Well and three different points in the village's water supply network, normally public water fountains. These tests, more than 50 of them, are performed at the company's laboratories which are certified for this purpose, and checked by the department of health which certifies that the water is potable and apt for consumption.

The company also checks and cleans the water collectors, the pumped wastewater which is diverted to a provisional storage pool with a capacity of nearly 40 million litres, the approximate volume of wastewater generated during the pilgrimage.

The sewerage network is checked and the entire network of the village is cleaned before the arrival of the pilgrimage brotherhoods to prevent clogging, paying special attention to the most conflictive zones such as

Torre Carbonero, Camino Puente El Rey, Sanlúcar and Sacrificio streets, as well as the camping areas of the brotherhoods in Santaolalla and Boca el Lobo streets.

The company also checks and fixes the pumps which push the detritus to the wastewater treatment which during the pilgrimage accumulates it in a storage pool with a capacity for 40 million litres since the plant does not have sufficient capacity to treat the huge amount of waste generated during these days. After the pilgrimage is over, the input flow is reduced and this wastewater is treated gradually to prevent any discharges thereby protecting the natural environment.

The human team is fundamental to achieve all of this. During the days of the pilgrimage, FCC Aqualia has a special work team of 26 employees who work twenty-two 24-hour shifts each team made up of 11 workers.

Work continues when the pilgrimage is over

Work is not over when the pilgrimage to El Rocío ends. More efforts are made during the following days to ensure that everything is in good working order. Wastewater is

> During these days, 52 million litres of water are supplied to the 800,000 visitors

analysed at the input and output of the treatment plant (pH, conductivity, phosphorus, nitrogen, etc.) to check the facility is in working order and ensure that the output water will be properly assimilated by the natural medium where it is discharged, the Caño Marín Brook.

This wastewater treatment plan is implemented a few weeks before the pilgrimage begins when Aqualia personnel starts to inspect and clean the sewerage system, wastewater pumping stations (WWPS), and the wastewater treatment plant (WWTP). During this phase, all the electromechanical elements that could give rise to problems in the days with the largest crowds are checked and replaced.

After water is used, the wastewater is sent through the sewerage network to the repumping station at the Los Tarajales wastewater treatment plant (WWTP) where it is processed and then reused. The water is processed and recycled at the WWTP and recycled to eliminate the physical-chemical and biological contaminants before it is returned to its natural medium. All of these processes are essential to ensure the conservation of natural resources.

In operations since 2005, the El Rocío WWTP is able to process 4 million litres per day. The most salient aspect of the plant is its pool where surplus water is stored thereby ensuring that the wastewater that could not be processed, which exceeds the WWTP's treatment capacity – more than 40 million litres during the pilgrimage – is collected and properly processed.

Since the treatment process is carried out in the privileged surroundings of the National Doñana Park, any incidence could affect the park's ecosystem. To prevent this, FCC Aqualia has personnel working during 24 hours a day. Even though the infrastructures feature telecontrol equipment, the company's technicians are constantly at the WWTO and check the WWPS about every two hours until the pilgrimage is over. To prevent any incidence or electrical failure, Aqualia installs

> FCC Aqualia is in charge of the service and the special operations during the pilgrimage, being the company entrusted with managing this municipal service

a power generator at the EL Lobo WWPS since all the waste from the village arrives at this facility from where it is pumped to the WWTP.

During the pilgrimage in 2015, 225 tests were performed and more than 40 samples were taken, including those for controlling the internal processes. The following parameters were controlled for the input and the treated output water: pH, electric conductivity, DBO5, DQO, solids in suspension, total nitrogen and total phosphorus.

The water, after processing, is discharged in optimal conditions in the Caño Marín brook, which contains only water from the treatment plant that is finally discharged in the Doñana marshes. This brook passes through the village and the landmark Puente del Rey which is used by the pilgrims to enter this village in Almonte.

Aqualia, as part of its commitment to the environment through its end-to-end water management, carries out its work within the context of the Romero 2015 Plan (as it has done in the past 23 years) jointly with all the other public administration and service companies that work during the El Rocío operations.

Joy and devotion

The pilgrimage begins on the thousand-year old paths near the River Guadalquivir. The pilgrims and brotherhoods all meet during the walk which is decorated with flowers and flags, while singing and praising the Virgin.

The Virgin of El Rocío is taken out on the procession on the dawn of Pentecost Monday and that is when the traditional "jumping over the gate" takes place. The residents of Almonte take the Virgin on the procession and carry her on their shoulders throughout the village.

At night, people drink, sing and dance at the camp and the sandy wind carries the sound of flamenco guitars and tambourines which liven up the night.

Día Mundial del Agua 2013
Año Internacional de la Cooperación en la Esfera del Agua

El agua es sinónimo de vida. Y para nosotros también de innovación, responsabilidad y compromiso.

En FCC, a través de Aqualia, llevamos mucho tiempo trabajando en el ciclo integral del agua en más de 1000 poblaciones de todo el mundo. Pensando en sus millones de habitantes, incorporamos las últimas tecnologías que facilitan una gestión eficiente y sostenible. Y así, entre todos, haremos de cada ciudad un lugar mejor donde vivir.

Lo estamos haciendo juntos.

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