



# CSR

CORPORATE SOCIAL RESPONSIBILITY  
REPORT

2016







A photograph of a forest path with tall trees and dappled sunlight, serving as the background for the entire page.

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# President's Statement

Dear Sirs,

It is a great honor to share with you our third CSR report, which attempts to offer the reader an overview of Ficosa's performance to face the CSR challenges of the automobile sector and describe our actions to integrate the Global Compact and its principles into our business strategy, culture and daily operations.

In our company, we continually strive to ensure the excellence in our products and, therefore, we continue to work on providing the most innovative solutions, developing and manufacturing products with high added value.

The automotive industry is going through an amazing technological transformation in which electronics are going to boost sales in the future. We are at the beginning of a new era in which the car is no longer just a means of transport but become a Smart Car, a connected device that will be the central axis of the Internet of things. Connected car will totally transform our lives to make them safer, more comfortable and more informed with endless entertainment opportunities. The car will become the most powerful multiplatform source of communication in which the interconnection between people, objects and infrastructures have no limits.

In this regard, at Ficosa, we underwent a profound technological transformation during the last years by focusing on three areas of growth: connectivity, safety and efficiency. This year, we have achieved the following technological product sales:

- Ficosa has been the first company WW to be awarded a contract by a luxury Original Equipment Manufacturer (OEM) Brand to work on the integration of a Camera Monitoring System (CMS).
- Ficosa has been awarded a €232M contract to produce Cameras for a German OEM.
- Ficosa-Panasonic have been awarded a €800M contract by a luxury OEM brand to work on a new integrated concept of an On-Board Charger (OBC) for Electric Vehicles.
- Ficosa has won two new OEM Customers in Car Connectivity.
- Ficosa has been awarded a contract by a luxury OEM brand to produce a Laserscanner Cleaning System.

In 2016, the company has created the business Units Onbard Ventures, an open innovation ecosystem that will help Ficosa and Idneo to accelerate exploration in new technology, capture innovation and disruptive ideas that can expand business and provide new solutions for clients. Furthermore, we are committed to intensely innovating to stay on the cutting edge of the sector by investing 6.5% of revenue in R&D.

In addition, Panasonic is the best partner we could have to maximize synergies and reach the critical mass to become a leading systems supplier globally. It will consolidate Ficosa in the new technologies market, creating the first global group specializing capable of leading the automobile transformation. Both companies are working on integrating its know-how and complementary technologies to accelerate the launch of new product categories in the areas of connectivity, safety and efficiency. Products like Smart Connectivity Module are a good example of the potential offered by the integration of our technology with Panasonic.

In this profound technological transformation, the customer is the focal point of all our management. That is why we strengthen our quality standards by implementing stricter rules in the 3Q3 audits for manufacturing plant and supplier management.

We do maintain a solid commitment towards integrity, one example of this is the fact that we reaffirm our support for the Ten Principles of the United Nations Global Compact in the areas of Human Rights, Labor, Environment and Anti-Corruption. Moreover, we are elaborating a Corporate Code of Ethics that will set the rules outlining the employees' responsibilities or proper practices for the organization.

I would like to highlight our four new contracts with two American OEMs to produce 8,900,000 units of rear-view mirrors over a period of five years in North America. Three of them will be produced at the new facility in Tennessee, which will open later this summer, becoming the first projects won by this factory. These orders mark a record high for orders won by Ficosa North America in a single year. The path of internationalization of Ficosa is remarkable for its pioneering spirit, the complexity of its operations abroad and for

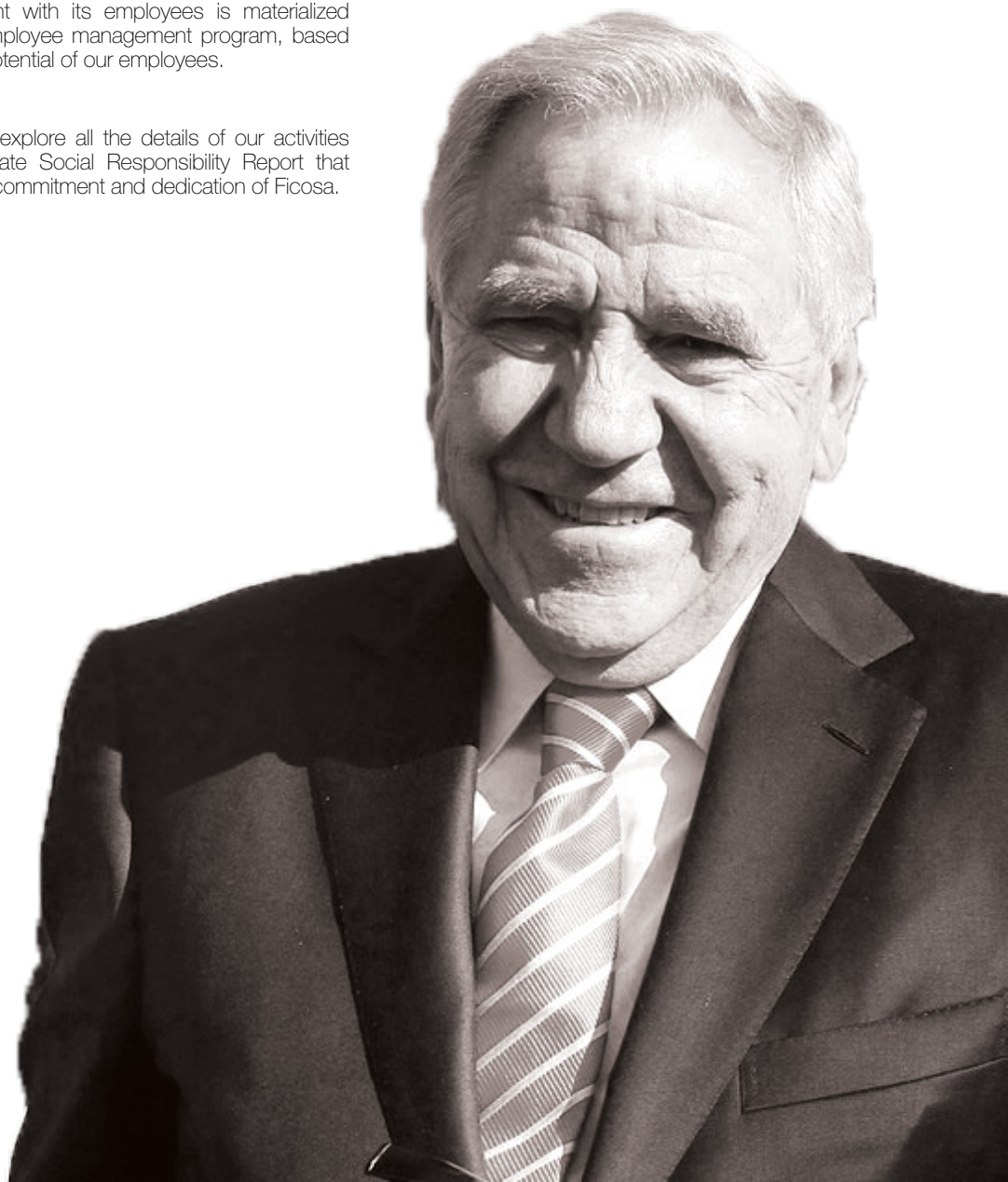


opening a market with global customers at the highest level. Nevertheless, it will bring new challenges for the company as competition for specialists is growing in the global labor markets. For that reason, we want to make sure that all the employees have the best working conditions they deserve. Ficosa's commitment with its employees is materialized through a strong employee management program, based on maximizing the potential of our employees.

I encourage you to explore all the details of our activities through this Corporate Social Responsibility Report that strongly reflects the commitment and dedication of Ficosa.

Sincerely yours,

Josep Maria Pujol  
**President**









# About our report

**The Corporate Social Responsibility Report 2016 is the third CSR report of Ficosa and attempts to offer the reader a transparent and balanced overview of Ficosa's performance in relation to the CSR challenges that the company has faced in 2016.**

## Objective of the CSR Report

In this third report, Ficosa wants to explain how Corporate Social Responsibility (CSR) challenges are approached, and the performance of Ficosa's activities in 2016, for the purpose of offering stakeholders complete and reliable information. The company focuses its reporting on explaining how the company is taking into consideration environmental, ethical and social aspects during the daily activities of the company. Likewise, it describes the annual progress made by the company in implementing the Ten Principles of the United Nations Global Compact in terms of human and labor rights, the environment and the fight against corruption.

In determining the content to be included in this report, we consider the pertinent developments and initiatives, and the related performance indicators that are material for the company.

## Scope and boundary

The 2016 CSR report covers from the period 1 January 2016 to 31 December 2016. Unless indicated otherwise, the quantitative information reported in this document shows the performance of the company at global level and includes 100% of the facilities and sites where Ficosa holds a majority stake and, consequently, responsibility for operation and control. Thus, the report includes information from our operations in Asia, Europe, North America and South America.

To provide a better understanding of the company's performance, previous years' data – if available - have also been included.

The report focuses on the main business lines of the company: research, development, production and sales of high-technology vision, safety, efficiency and connectivity solutions for the automotive industry.





# Ficosa at a glance

The company, with headquarters in Barcelona (Spain), generated sales of €1,152.6 million in 2016 and has a team of more than 9,000 employees, with manufacturing plants, technological centers and offices located throughout 16 countries in Europe, North America, South America and Asia. Ficosa has been expanding its international presence with the strategy to be located near the decision and production centers of major OEM in order to be able to offer a more competitive and global service.

The alliance with Panasonic, signed in 2015, has boosted regional synergies and international activity of the company, mainly in Asia, thanks to the strong implementation of the Japanese multinational in this area.

In 2016, Ficosa has been distinguished for its international consolidated path with the award Cambra a la Trajectòria Internacional Consolidada that the Chamber of Commerce of Terrassa (Cambra de Comerç de Terrassa) grants annually. The business association recognizes Ficosa's "trajectory, innovation capacity and strong positioning strategy", which pioneered its internationalization process in 1972, when it was implanted in Porto (Portugal) when few companies dared to do business outside.

In addition to boosting its global presence, Ficosa is also making important investments in innovation with the will to lead the current worldwide automobile transition in the areas of connectivity, efficiency and safety systems.

Ficosa is now one of the top-tier global providers devoted to the research, development, manufacturing and marketing of high-technology vision, safety, connectivity and efficiency systems for the automotive and mobility sectors.



- Barcelona
- Soria
- Sant Guim



- Detroit (Mi)
- Crossville (TN)
- Shelbyville (KY)



- Salinas-Victoria
- Escobedo



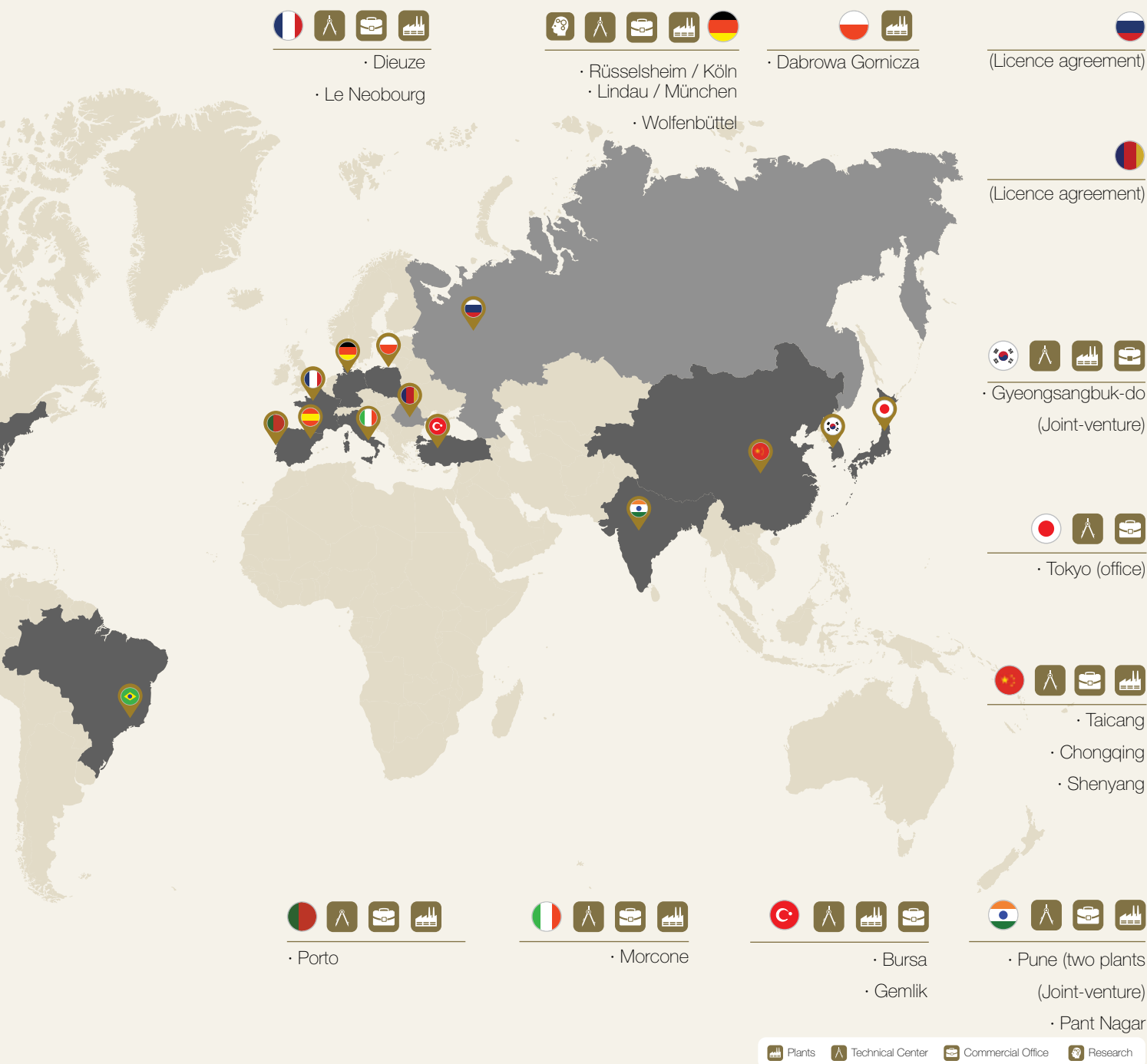
- Sao Paulo





- €1,152.6 million sales
- 16 countries
- 9,855 employees
- 19 manufacturing plants

- Established in 1949 in Barcelona (Spain), family-owned
- Pioneers in safety, connectivity and efficiency systems
- 12 R&D and technical centers



**Ficosa finished 2016 with sales above 1 billion euros for the year. The solid growth experienced by the company since 2013 is due to a clear commitment to globalization, operational efficiency, innovation and activity diversification, aiming its activities at new sectors aside from the automotive industry.**

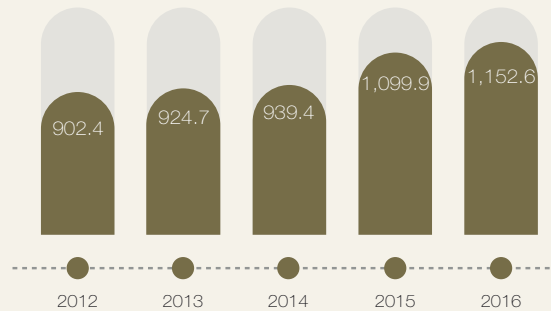
In 2016, the regions where Ficosa has registered a greater increase in sales volume have been Europe.

Nevertheless, North America has become, after Europe, the most important market for Ficosa, which began operations in this region in 1994 and where it produces mirrors, gearboxes and brake systems.

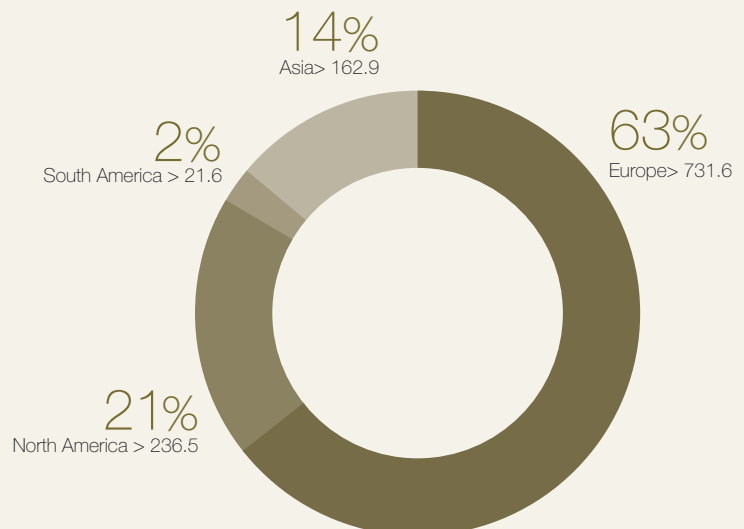
In 2016, Ficosa has been awarded four contracts with two American OEMs to produce 8,900,000 units of rear-view mirrors over a period of five years in North America. Three orders will be produced in the new facility in Cookeville (Tennessee), which will be the group's most advanced facility worldwide. The Cookeville plant, which is expected to be fully operational later in 2017, will be a leader in painting and injection processes thanks to the latest technology production equipment. Cookeville production will represent an economic value of 405 million euros, and will begin in the first quarter of 2018.

In the United States, Ficosa currently has a commercial office and a development center, which employs 35 engineers in Detroit (Michigan); a manufacturing plant in Shelbyville (Kentucky) and a new plant in Cookeville (Tennessee), which when at full capacity will replace the Crossville factory (Tennessee). The two Ficosa plants in Mexico, located in Salinas Victoria (Nuevo León) and Escobedo (Nuevo León), where the company also has a R&D plant, reinforce Ficosa's activity in the North American region.

Sales (€ million)



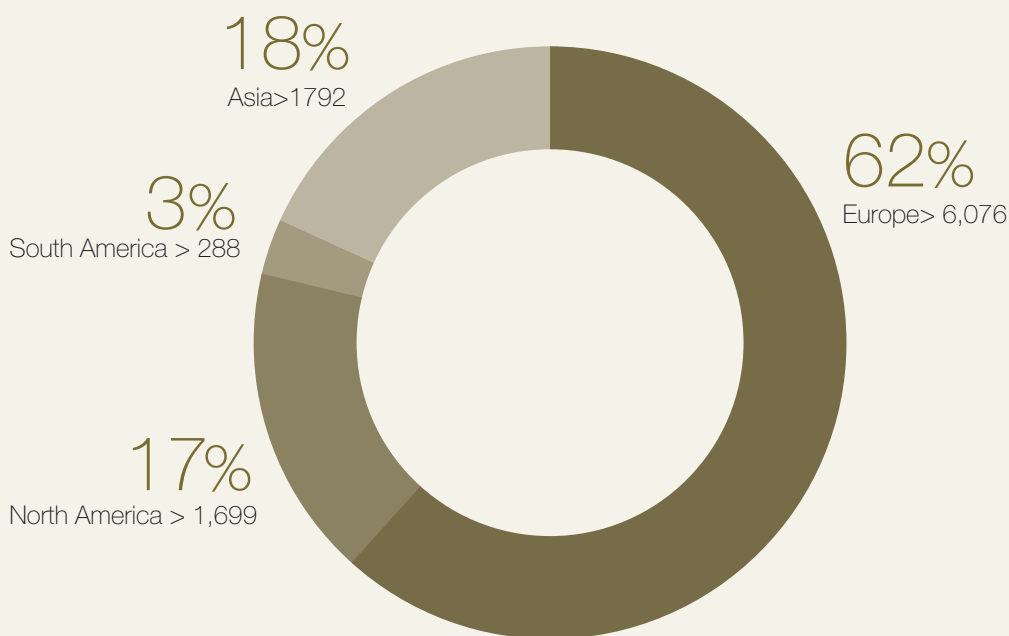
Sales per region 2016 (% sales, € million)





In December 2016, Ficosa was awarded in the 2nd edition of the Spanish-Turkish Official Chamber of Commerce and Industry Awards, in the category of Spanish company, for its contribution in strengthening the bilateral economic relationship between Spain and Turkey. Ficosa has been present in Turkey since 2000, and has two manufacturing plants situated in Bursa and Gemlik. The multinational company produces rearview mirrors, washer systems and gearshift in this country. Furthermore, Ficosa also have an R+D Center in Turkey, where the company develops its projects for the Turkish market and its influence area. Ficosa Turkey has a total of 1,100 employees.

Distribution of employees per region 2016 (% employee, No.)



## Structure of Ficosa International

At present, Ficosa is a conglomerate of companies formed by engineering centers, manufacturing plants, Ficosa's own companies, associated companies and subsidiaries, distributed all over the world. The group is organized into different Business Units:

**01 Rear-view system:**  
Develops, produces and commercializes rear-view mirrors and vision systems - forward, backward and lateral - for vehicles.

**02 Command & Control System:**  
Develops, produces and commercializes systems which interact between the driver and the vehicle, such as shifters, parking brakes, and drive cables.

**03 Under hood system:**  
Develops, produces and commercializes fluid and ventilation systems installed at the vehicles' underhood.

**04 Advanced Communication:**  
Develops, produces and commercializes antenna systems for vehicles, communication modules and antennas for navigation systems.

**05 Commercial Vehicle:**  
Develops, produces and commercializes all Ficosa's product portfolio for buses, trucks and industrial and commercial vehicles.

**06 Doors & Seat Systems:**  
Develops, produces and commercializes systems and parts for seats and vehicle doors, such as actuators, cables, and lumbar systems.

**07 Idneo:**  
Develops and produces technological products with high added value for the sectors of mobility, medical devices, consumer electronics and industrial.

**08 Ficosa Solutions:**  
Sells technical services such as auditing, designing, manufacturing and financing in the following areas: energy efficiency, communication machine to machine, smart cities and internet of things.

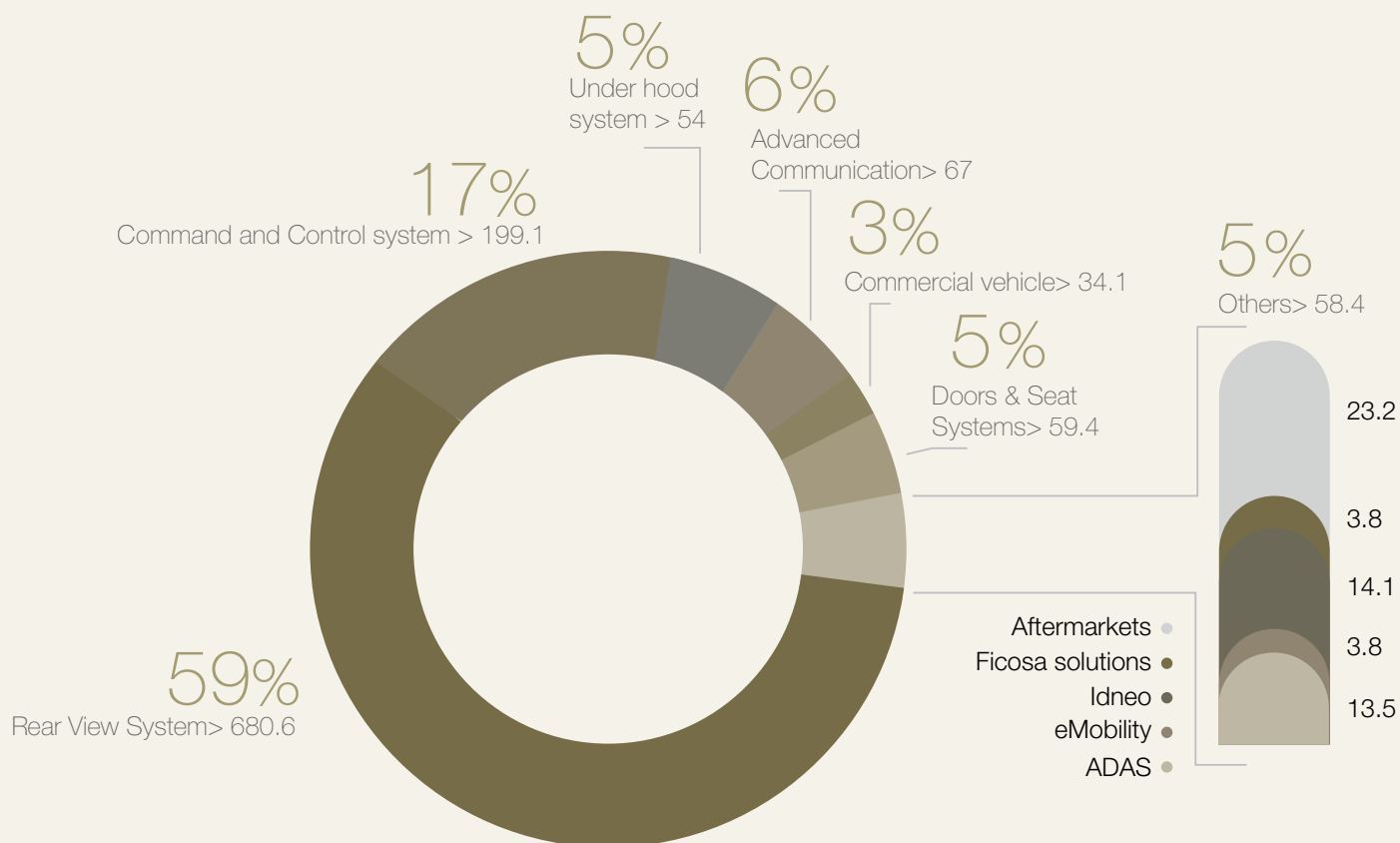
**09 Advanced Driver Assistance Systems (ADAS):**  
Develops, produces and commercializes systems that help the drivers in its driving process.

**10 E-mobility:**  
Develops, produces and commercializes electric powertrain technologies and connected infrastructures to enable the electric propulsion of vehicles and fleets.

**11 Onboard-Ventures:**  
Supports start-ups in advancing their projects and turning them into businesses, relevant and scalable, giving them access to Ficosa's and Idneo's assets.



Sales by division – 2016 (% of sales, € million)



In terms of product, the major increase in sales has occurred on the new technological products focused on safety and comfort systems (ADAS) by duplicating the figure of the previous year.

In that sense, the companies are already working together on new products linked to active safety (advanced mirrors), electric cars and communication systems (connected car).

The capital and business alliance with Panasonic has helped the company to accelerate the development of new products with high added value, by allowing the integration of both companies' know how in the field of image and automotive technology.

## New manufacturing plant in Brazil

Ficosa's internationalization strategy responds to Ficosa's strong commitment to stay close to its clients to offer the better service. For this purpose, the company has recently strengthened its international presence by opening its second plant in Brazil (Jandira, São Paulo metropolitan area). This factory will strengthen the synergies of the alliance between Ficosa and Panasonic by laying the foundations for producing the technological solutions in Brazil that have been generated as a result of the agreement between these two companies. The new plant is equipped with the latest-generation technology that meets the highest standards of energy efficiency, demonstrating Ficosa's commitment to sustainability and respect for the environment. The facilities at Jandira will also be home to an R&D centre that will develop solutions for the Mercosur region.

Ficosa landed in Brazil in 1996, opening its first plant in São Paulo. Since then, the group has been firmly committed to this market, establishing here its central headquarters for operations in the Mercosur region. The company moved to Barueri (São Paulo) in 2007 in order to build larger facilities. This plant's activity will be absorbed by the new factory in Jandira.







### Manufacturing plant in Jandira (Brazil)

- Inauguration: 2016
- Employees: 273
- Surface area: 13,000 m<sup>2</sup>
- Product manufacturing: manufacture of rear-view mirrors, control and command systems (brakes, gear shifts and cables), underhood solutions and electronic systems for automobiles.
- Clients: Volkswagen, Audi, Ford, Fiat, General Motors, Peugeot, Citroën, Renault and Nissan

# How do we work?

## | Mission

To innovate, develop and produce products with added value, which contribute to mobility improvement in key factors of progress such as safety, comfort, communications and the environment, exceeding market expectations as well as those of our customers.

## | Vision

Our strength comes from our commitment. For us, success does not lie in size, but in agility, speed, creativity and the understanding that being the best means being able to respond to the needs of our employees, customers, community and shareholders in equal manner.

## | Values

The company values are posted in the different company sites and every new employee receives an explanatory leaflet informing them about our values when joining the company.







## Leadership

Humility, not taking sole credit, and understanding all persons are equally essential to Ficosa's leadership style: lead by example and with high regard for people. Delegate, decentralize, have faith in people's abilities. Integrate the company's values into the workplace.



## Commitment & Passion for one's Work

The enthusiasm for participating in the company project and integrating its values. Participating in achieving our vision through perseverance, work and enjoyment, and a job well done. Acknowledging that all jobs are equally important.



## Honesty & Integrity

Being honest and upright in our actions and behavior. General ethics and our values should guide our daily decisions.



## Teamwork / Learning together

Knowledge-sharing, open communication, learning from mistakes, cooperation, and understanding that personal success is everyone's success.



## Customer Focus

Helping our customers succeed is key to achieving our success. Being able to build trusting relationships with our customers, understanding and anticipating their needs.



## Interest in People

People are the center of our company project, whose essence consists in learning, training, respect, diversity, affection and friendly "informal" relationships.



## Innovation & Creativity

All our employees have the capacity to innovate and create, and should therefore, ensure that their ideas flourish through our leadership. Challenging the market by being bold and taking risks while using good judgment.

Our Values express the spirit of our company, the way we think and how we believe we should act

# CRS in the company

## **Ficosa's approach to CSR sits at the heart of the business and is supported at the highest level.**

Since the beginning, the company's strengths come from its commitment and its understanding that being the best means being able to respond to the needs of our employees, customers, community and shareholders in equal manner. In this regard, Ficosa continues its efforts to generate shared value among its stakeholders and add sustainability practices in its business strategy and culture.

Any new CSR initiatives and programs are reported to the Executive Committee, through the Chief Human Resources Officer, member for the Committee and highest responsible for CSR in the company. The integration of CSR into daily activities is promoted through the Human Resource department and a cross-functional organization that involves different business functions and countries.

Until 2014, the Occupational Health, Safety and Environment (OHSE) strategy and program were the responsibility of the decentralized locations. In 2014, the company decided to define a corporate structure that allows OHSE management and data collection at a corporate level. In 2016, the company has published a new Occupational Health and Safety, Quality, Environment

(OHSQE) Management Policy. The OHSE policy focuses on the identification and elimination of risks and the protection of the workers and the environment. Ficosa places the highest emphasis on Health, Safety and Environment management in conducting its daily business. We recognize that legal compliance is regarded as a minimum standard and our objective is to ensure our activities are beyond statutory regulations and aim to conserve and protect the environment while supporting our business goals.

Ficosa has diverse CSR programs and initiatives. With the aim of bringing them together in the form of a coherent strategy, the company decided to unify the diverse range of the company's CSR initiatives all under one umbrella by conducting a global CSR diagnosis and implementing a CSR action plan. To help the company determine which CSR areas should future efforts and financial resources focus on, Ficosa carried out an internal diagnosis at corporate level and country level.



## Human Rights & bussiness ethics

At Ficosa, we are committed to meeting high ethical standards and complying with all applicable local, national, and international laws wherever we do business.

Behaving ethically is fundamental to establishing and sustaining legitimate and productive relationships between organizations. The welcome manual for new employees gather the main ethical behaviors that each employee must perform in terms of conflict of interests, equal and fair treatment, confidentiality of information, etc. Furthermore, some sites are working in specific policies to make sure that their employees are aligned with the Ficosa commitments. For example, sites such as Viladecavalls (Spain), China, Italy and United States have implemented a policy or agreement to ensure the confidentiality of the information. Dabrowa Gornicza (Poland) and Wolfenbüttel (Germany) have defined a policy against corruption. Other countries such as Italy and Mexico have published a local Code of conduct that set the rules outlining the employees' responsibilities or proper practices for the organization.

In Ficosa, we are convinced that emphasizing the compliance culture makes a significant contribution to securing the sustainable success of our company. In this regard, the company decided to define a Crime Prevention Model in 2015. The goal was to adopt and effectively implement the appropriate measures to prevent and detect criminal risks. This compliance aspires to be integrated as part of a corporate culture whose hallmark has always been the promotion of ethical values at all levels. The new Crime Prevention Model and its policies is planning to be approved by the Board in June 2017.

The implementation of the Crime Prevention Model particularly takes into account the adaptation process to comply with the Sarbanes-Oxley Act (SOX) in which Ficosa is immersed. The new adaptation process relies on the implementation of new management protocols and tools that include the elaboration of a global Code of Ethics and different organic, procedural and substantive protocols such as the protocols for the prevention of money laundering, corruption, fraudulent and unfair behavior or crimes against the Treasury and Social Security. All the different procedures focus on company and sector-specific risks and priorities and will cover the facilities and sites where Ficosa holds a majority stake and, consequently, responsibility for operation and control.

## Living the values at Ficosa

The values of Ficosa underpin everything we do and must be reflected in our day-to-day behaviors. To make sure every employee understands and truly lives the corporate values of Ficosa, the company turned value into specific operating principles and communicate often about them.

In some sites, the values are displayed in the factories and offices to clearly state what we care about. Mexico has implemented a specific program to ensure that all employees understand and "live" the values of Ficosa. Every year the manufacturing plant in Mexico organizes workshops and different campaigns to make sure that its employees embrace the company values. In Dabrowa Gornicza (Poland), every employee is evaluated by his manager on the adequacy of his behavior with the values of Ficosa.

Ficosa wants to be responsible not only for its own decisions and activities, but also wants to make sure that its suppliers and business partners operate in line with the company's CSR principles and respect the Universal Declaration of Human Rights and environmental protection. Following the General Purchasing Conditions, in addition to all applicable laws and regulations to be observed by the supplier, it is also the supplier's obligation to respect social responsibility duties and especially the requirements based on the Universal Declaration of Human Rights (UDHR) and the International Labor Organizations (ILO) conventions proclaimed to respect employees' rights, age and working-hours limits, etc.

The purchase orders sent by any company of Ficosa or any of its subsidiaries must include the terms and clauses of the General Purchasing Conditions.



# Commitment to quality

Our customers, mainly automobile manufacturers, are continuously raising their standards of quality. Therefore, Ficosa is committed to anticipating and fulfilling such expectations in order to maintain and even improve its market position.

Ficosa aims to be a company trusted by its customers, by addressing quality as a company wide issue. The company seeks to provide top-level quality to customers at every stage, from the planning of new automotive-related products, through development, manufacturing, distribution and sales to after-sales service.

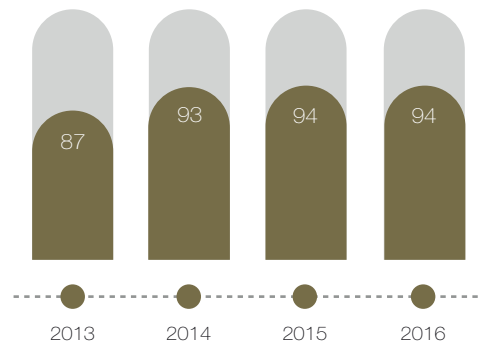
## | Quality Management

Operational facilities certified ISO/TS  
16949 and ISO 9001 (%)

100%

ISO/TS 16949:2009 defines the quality management system requirements for the design and development, production and, when relevant, installation and service of automotive-related products. It is specific to the automotive industry and based on the ISO 9001 standard.

Customer satisfaction (%)



## Corporate Quality 3Q3 program

Since 2009, Ficosa has implemented the Corporate Quality 3Q3 program, which aimed to improve quality thrice within three years' time, thus elevating the business to the top of the automotive sector.

The 3Q3 program is updated every three years and is accompanied with a specific roadmap and quality targets to make sure that all the regions are following the best practices in this regard.

Through the 3Q3 program, the company performs more than 100 audits per year to ensure that all the sites comply with the quality requirements of the company

In 2015, the company has implemented stricter rules in the 3Q3 audits for supplier management, project management and technical centers, using the same criteria as for Ficosa manufacturing plants. In 2016, the company has implemented a new internal 3Q3 Process Design Audit to certify the design

of the production process at Ficosa sites (Plastic & Metal injection, Injection Toolings, Paint shop). The new internal audit will be applicable to all the Company's technical centers and manufacturing plants.

Furthermore, the company has added three new checklists in the 3Q3 Plant Audit to make sure that 4 guidelines.

Furthermore, stricter rules have been implemented to guarantee that the design and production of safety products comply with the highest standards of the automotive industry. each site is following the Ficosa standard for proactive management of warranties. Finally, the company has implemented stricter rules in the 3Q3 audits for technical centers. The main goals of the new checklist is to certify that any software developed by Ficosa is aligned with the ISO/IEC 1550. Furthermore, stricter rules have been implemented to guarantee that the design and production of safety products comply with the highest standards of the automotive industry.

# Quality performance

Company quality is managed through the monitoring of KPIs (soft metrics or hard metrics). The company has defined a balanced scorecard system that offers the sites's monthly values versus target figures. This monthly reporting enables the company to pinpoint areas where improvement is needed.

Ficosa conducts some periodic supplier assessments to ensure that the suppliers' quality meets the standards established. Since 2015, the suppliers audits have been using the same criteria that the ones used for Ficosa's manufacturing plants.

The quality management goes beyond Ficosa activities. The company wants to make sure that its suppliers also operate in line with the company's commitment to excellence. All the suppliers must have a quality certification (ISO 9001, VDA, EAQF, and ISO/TS 16949) and must provide Ficosa with written evidence of the most recent certification renewal.

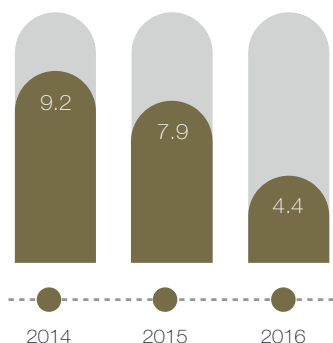
Furthermore, Ficosa will review the criteria used to select its supplier for its Purchasing Optimum Panel (POP).

# Main KPIs

Ficosa priorities	Ficosa objectives	indicators of progress	FY 2015 results	FY 2016 results	Goals 2017
Product quality	Reducing the customer claims	Customer of claims (No.)	380	356	334
	Reducing number of defective parts	Customer ppm (No.)	7.9	4.4	8
	Reducing the costs of non-quality	Over sales from Non-Quality Costs (NQC) (%)	0.69	0.76	0.5
Supplier quality	Reduce the impact of suppliers on customer	Suppliers assembly ppm (No.)	54	32	55
		Number of complaints at Ficosa's customer due to suppliers responsibility (OEM QCR)	91	65	66

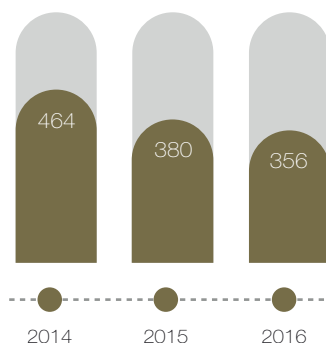


Customer ppm (No.)

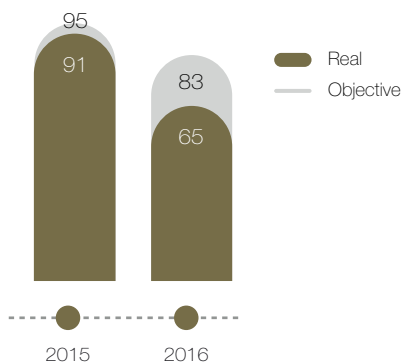


ppm: number of defective parts per million delivered.

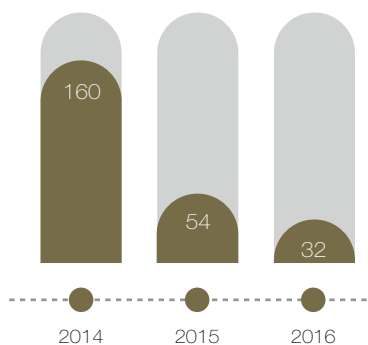
Customer claims (No.)



OEM QCR (No.)



Supplier assembly ppm (No.)



ppm: number of defective parts per million delivered.

In the last four years, Ficosa has reduced their defective parts indicators by 70% (Customer ppm) and by 81% (Supplier assembly ppm). In line with this improvement, the company has reduced its customer claims by 39% since 2013.

Since 2015, the company has been implementing the Lean Six Sigma methodology in all the manufacturing plants and technical centers and reinforce the training for quality and process engineering.

## Awards and recognition

### In 2016, the company received numerous awards from its clients.

Ficosa has been recognized by Toyota Motor Europe with the Value Analysis award. With this prize, the Japanese multinational has distinguished Ficosa's know-how and ability to offer high-quality products, optimizing the relation between function and cost and eliminating those costs that do not add value. Ficosa has received numerous awards from Toyota Motor Europe, a fact that highlights the policy of quality, excellence, service, flexibility and continuous improvement that the multinational keeps with all customers.

The manufacturing plant in Turkey has received the Best Plant Award 2016 from PSA for its commitment and quality of their response to PSA Group's expectations.

Furthermore, Adient, the world's largest global automotive seating supplier, has recognized the manufacturing plant in Maia (Portugal), for its leadership and superior performance, by awarding the center with the following category: Silver 2016 Supplier Performance Award. The Adient's suppliers were honored during the company's annual Supplier Performance Awards ceremony held in Detroit.



## EFQM Excellence Model Training

In 2016, the manufacturing plant of Turkey participated in an EFQM Excellence Model Training. The EFQM Excellence Model training provides participants with theoretical and practical in-depth experience of assessing an organization with the EFQM Excellence Model. The training contents included social responsibility topics.



## Action planned for next year onward

### Quality in our supply chain

From next year on, the company is planning to implement a strong program to reduce the impact of suppliers on customers by imposing stringent rules and consolidate the supplier audit in the countries where the company operates. In this regard, Ficosa has defined a specific 3Q3 supplier's strategic line that establishes more stringent quality rules for suppliers.

With this new strategy, a supplier that shows three months of lower performance than expected will enter the "Business Hold" process. In this process, Ficosa will collaborate with the supplier, with the aim of improving its performance and ensure it operates in line with the principles and standards of the company. Nevertheless, a supplier that has entered a "Business Hold" process and still records three consecutive months of low performance will enter the "fix or leave" process. Furthermore, the company will increase the number of controls to ensure the production process is in line with Ficosa's quality standards.

### Proactive management of warranties

One of our main goals next year includes the proactive management of warranties. We will monitor the customer portals to reduce response time, as we do not have to wait for the official notification of defective parts to be received to take action. We will continuously monitor any possible warranty incidents thanks to a better monitoring of our customer portals. Furthermore, we will use statistical tools to predict any future trends and contrast the effectiveness of our actions.

### Toward a "Zero-Defects" standard

It is also worth emphasizing the commitment of the company to improving both our processes and our employees' skills, using problem-solving and analysis tools and techniques with the aim of reaching zero defects.



# Commitment to our people

## Ficosa's commitment to people is the foundation of the company's culture.

Ficosa develops its activity in a very competitive and demanding industry. In this regard, we are aware that our success depends mainly on our employees' innovation, performance and behavior.

Because of this, we need to implement all the necessary mechanisms to get the best potential of our teams and recruit the best professionals to maintain our competitive advantage in the future.

Ficosa looks for people who share its corporate values and have a high level of commitment, who are customer-focused, team players and are not afraid to take risks and are prepared to develop their career in a continuously changing international environment.

Since 2008, the company has tapped into new business areas and international markets and integrated these into the corporation. In this regard, Ficosa has banked firmly on creating highly valuable jobs, as shows the fact that the number of engineers working in the headquarters in Viladecavalls (Spain) has risen by more than 60% from 2013 to 2016.

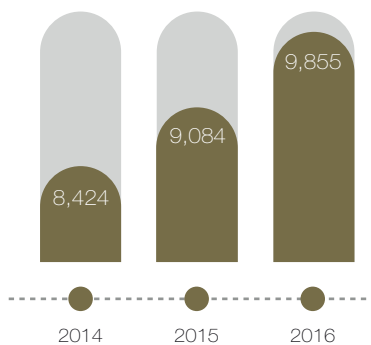
Moreover, the company is hiring hundreds of employees from a variety of skill levels and educational backgrounds for its new automotive manufacturing facilities, such as the one in Cookeville (Tennessee), which is about 80 miles east of Nashville.

This new hiring process is bringing new challenges for the company as competition for specialist and managerial staff is growing in some areas of the global labor markets. For that reason, Ficosa wants to make sure that all the employees have the best working conditions they deserve.

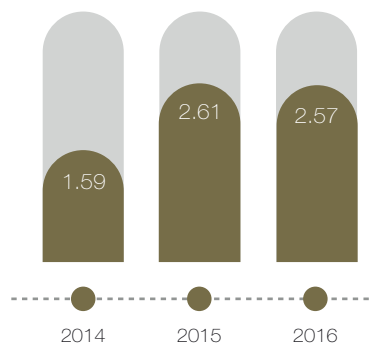
For Ficosa, being a responsible employer involves a number of challenges: train employees, advance their careers, provide them with fair salaries that motivate them, look after their well-being at work, combine operational excellence and personal development and encourage a full social dialogue.

Ficosa has numerous internal policies to ensure that all the sites are following the best practices in this regard.

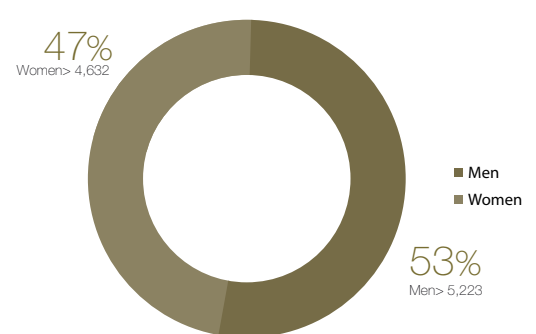
Workforce (No.)



Turnover (%)



Diversity men/women 2016 (% , No.)







## | Diversity and Integration

In Ficosa, the criteria and procedures for the recruitment and selection of human resources take into account the principle of equality and non-discrimination based on sex, race, national or social origin, social class, birth, religion, disability, sexual orientation, union association, political opinion, age or any other condition. Furthermore, all worker agencies that work with us must guarantee the equality of the sexes, origin, ethnicity, political affiliation or religious option in the candidates who are pre-selected for our company.





## Case Studies: promoting the diversity in our different manufacturing plants

In 2015, Dabrowa Gornicza (Poland) received a special prize “Icebreaker” for its commitment to promoting inclusion of persons with disabilities by the Foundation for Vocational Activation of People with Disabilities and the Polish Organization of Employers of Disabled Persons. Since 2010, the site has defined a specific program to promote the employment of disabled people. Every disabled employee in Ficomirrors received a special treatment with external doctors. Furthermore, the company regularly studies workstations to make sure that the working conditions are adapted to the needs of disabled people.

Soria (Spain) collaborates with correctional institutions for fostering the rehabilitation of prisoners. In 2015, the company received a special prize “Empresa Socialmente Responsable” by FADESS (Fundación de Ayuda al Discapacitado y Enfermo Psíquico de Soria)

that recognizes its commitment to contributing in hiring, training and reinserting prisoners of Soria penitentiary establishments. The company collaborates with FADESS and ASOVICA (Asociación Virgen del Camino de Familiares de Personas con Enfermedad Mental) to promote the social insertion of physically and intellectually disabled people. Furthermore, the site, in collaboration with the Red Cross, has implemented a program to promote the integration of disadvantaged groups.

Turkey has defined a specific target to employ disabled people that exceeds the legal requirement. The manufacturing plant in Dieuze (France) has entered into partnership with a public organization to adapt the workplace to disabled people. In China, the company is analyzing the possibility of adjusting its work station for people with disabilities.



## | Growing @Ficosa

In 2014, Ficosa launched a Competency Development Program with the aim of identifying and maximizing the potential of our key employees. This program implies, as a starting point, an external Development Center that enables each one of the participants to better understand their behaviors and to map their strengths and development areas. This diagnosis is the foundation of Growing@Ficosa, a program that provides the resources and support for accelerated development adapted to each one of the participants. Growing@Ficosa means to make sure that our employees are prepared for the current and future challenges of the company.

because it goes on for eighteen months up to two years, aiming at 110 participants in 2015-2016, but also because each year there is a new group of people on-board. In 2017 we will work with 25 new participants coming from different functional areas, levels of responsibility and countries.

Growing@Ficosa is helping to create a homogeneous people development culture across the organization. It involves a large number of participants with different backgrounds working together with the Human Resources team and the managers and top lines of the Company worldwide.

Ficosa is committed to increasing the number of participants with the goal of becoming an ongoing process to develop key people. This is a global long-term program, not only

The program is based on a 3 band commitment and is structured around:

### 01 An Individual Development Plan (IDP):

An ad-hoc plan resulting from one-to-one interviews with the participants and their managers to better understand and define their main expectations and development. This is a blended program based on the 70-20-10 model with a strong focus on learning on-the job and social learning.

### 02 A Corporate Program:

With training on areas such as Leadership, Teamwork, People Development, Impact and Influence, and supported by coaching, mentoring and specific metrics, as 360° or other behavioral KPIs.

70

Experiential  
learning

Work-related collaboration  
On-the-job  
performance support

20

Social  
learning

Peer learning  
and coaching  
Mentoring

10

Formal  
learning

Learning program  
support High  
potential development





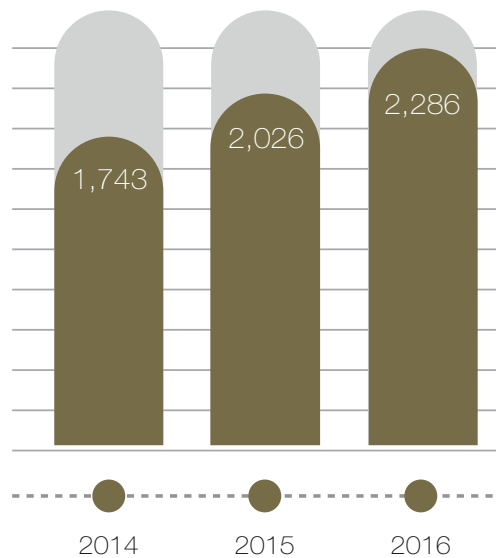


## | Employee development

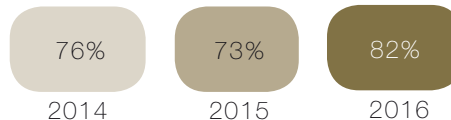
Employee development is a priority for Ficosa. Since 2011, Ficosa has adopted a system-wide performance which focuses on setting performance goals for employees according to their duties and area objectives. A mid-year review has been implemented to update the existing objectives with new information that may have happened during the first half of the year. Every site decides the performance goals at the beginning of the year, taking into account process implementation and local conditions and sharing this decision with corporate development.

The soft competencies of each person are also assessed, generating development opportunities for each person. Finally, it is important to highlight the informal mutual feedback that is generated between employee and manager throughout the year, which is at the base of the main dynamics of people development generated in Ficosa.

**No. of employees with access to performance and career development review**



**% employees that fulfilled the performance and career development reviews**



### Successfactors

**successfactors**  
An SAP Company

Until 2015, the company had different Human Resource (HR) systems and tools that supported personnel administration processes and that needed a global and integrated solution. To improve the efficiency, Ficosa has implemented a new Human Resources Information System named SuccessFactors. This new tool is an employee-centric system and enables each employee to complete HR tasks more quickly and perform strategic HR activities more frequently such as its annual goals, performance program, training program, etc. In 2017, Ficosa expects the different modules to be fully integrated within the different countries where the company operates.

## | Employee training

Contributing actively to the professional development of the employee is the best way to increase the company's leadership position by improving its competitiveness. At Ficosa we understand that the best way to learn is to build on previous knowledge and experience, and to put into practice what our employees learn in their job positions. Thus, working along with some of our best professionals is the most valuable and direct way to improve our employees' knowledge.

This hands-on experience is complemented in each case with specific training programs given by professionals in our company, as well as business and training institutes.

Each year, each site defines a quantified and budgeted annual training plan and submits it to the formal approval by the corresponding Plant Manager, Country General Manager or Region/Business Unit Director.

The company collects the annual training data of each site to detect improvement areas in the training activity achieved worldwide.

**No. of training hours provided to employees 2016 (h)**

165,871

**Average training hours per employee 2016 (h/employee)**

\*16.8h

**Training investment 2016 (€)**

1,413,932

**Average cost of training per employee 2016 (€/employee)**

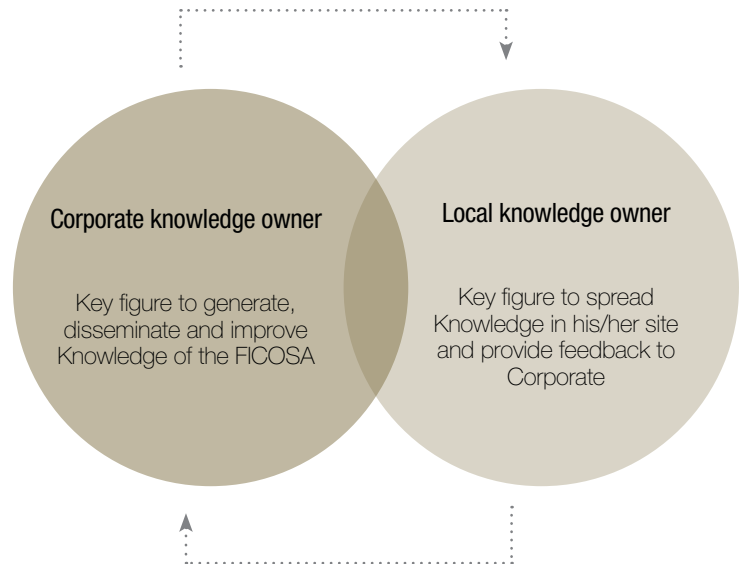
143€

More than 60% of the training sessions are related with manufacturing, quality, health & safety or engineering contents. Between 2015 and 2016, the manufacturing plants in Maia (Portugal), and Mexico incorporated an external Social Responsibility training as part of its employee training programs.

\*The company is using the average workforce at the end of the year to calculate the ratio.

## | Knowledge management

In Ficosa, knowledge management is a vital element to ensure sustainability over time and communication in a global environment. In this regard, we define Corporate Knowledge Owners and Local Knowledge Owners to generate, disseminate and improve Knowledge in the plants, technical & development centers. Furthermore, we implemented a Knowledge Management Process with the aim of transferring our knowledge to Ficosa standards documents. Furthermore, the company will produce training materials on the basis of Ficosa standards that will focus on error prevention, practical cases & activities that ensure learning through close-to-reality situations and evaluation tools. The Local Knowledge Owner will be the responsible of adapting any training material to train employees in his/her site.



## | Operations standard training plan

In order to ensure that all the employees have the technical knowledge required to perform their duties successfully and are familiar with Ficosa's tools and methodologies in the operations area, Ficosa has implemented a personalized operations training program for plant positions that includes diverse training modules related to assembly, injection process, OHSE, quality, supply chain, painting process, lean manufacturing, etc.

To develop this new program, different areas of the plants have designed specific training materials & contents adapted to Ficosa standards and processes (e.g. case studies, practical exercises & evaluation). For example, the Corporate OHSE department has developed and taught 6 specific courses: OHSE Introduction, Emergency Response, Waste management, Personal Protective Equipment (PPE), "5S" method, LockOut/TagOut (LOTO)

and Handling of Chemicals. These training courses serve as a basis for each site's OHSE Specialists, who will have to adapt them to their manufacturing plant.

A Pilot program has been implemented in Cookeville in 2016 to make sure that all the employees have technical knowledge to properly perform in their job positions. Starting from 2017 and based on the pilot program in Cookeville, each site will have to implement the Corporate Operational training program for plant positions. All materials developed for the specific training plant in Cookeville will be used to define an on-line corporate operational training program that will be available on Ficosa intranet through SuccessFactors. In the future, a corporate operational training program will be developed for project management and purchasing positions.





## | International assignments

One of our aims as a company consists of promoting the development of our people through the creation of a dynamic and attractive environment where opportunities for lateral, vertical, functional and geographical movements always exist. In this sense, international assignments are a key part of people development at Ficosa. Employees benefit by gaining international experience, growing personally and professionally; Ficosa also benefits by expanding the distribution of knowledge and skills, expanding technical expertise and promoting a consistent global culture.

Ficosa defines a specific International Assignments Management procedure to guarantee the application of homogeneous practices within all the sites of the company. The company guarantees in any case that employees coming back to their home country have a job position with the same level of classification than they had before the international assignment and a salary level in the home country equivalent to the level of the last position developed in the destination of expatriation.

## Employee communication & satisfaction

Ficosa wants to foster a strong and effective communication with its employee to make sure that they understand where the organization is headed and are kept up to date with key information about the company. In this regard, the company has developed different channels to communicate with its employees, such as intranet, suggestion box, employee newsletter, round table meeting with plant manager, one-on-one interviews, town hall meeting, etc.

At local level, some countries, such as France, China, Mexico, Portugal and Turkey have developed an employee survey in the last 3 years. The results were presented to the top management and were followed by an action plan. In 2017, the manufacturing plant in Dabrowa Gornicza (Poland) will carry out a specific employee survey.

## Workplace health promotion & work-life balance

Ficosa is working to make sure that the entire workforce receives an annual medical examination in all the countries where it operates. The Workplace health promotion and work-life balance initiatives depend on each site and are led by the Human Resources department. In some locations, the company has already implemented some initiatives:

The company is defining a specific program to make sure that all the sites implement measures related to workplace health promotion and work-life balance, including formal objectives for the prevention of stress. In Soria (Spain), the company has conducted a specific survey to measure the potential impact of psychosocial risks and work-related stress experienced by its workers. In Dieuze (France), the members of the Health & Safety Committee and the HR department have received specific training on psychosocial risks. In Morcone (Italy), the company has conducted a specific study to identify any improvement in its company workplace ergonomics process.



### Soria

- Flexible hours / labor flexibility
- Full acceptance for half time working requests for parents
- Sport promotion (free rent, discount)
- Physiotherapy service for employees
- Partnership with the Chamber of Commerce for priority nursery services

### Viladecavalls

- Time flexibility for employees and subcontractors
- Medical services



- Welfare campaigns (Healthy week, Workshop: Way to success)
- Total Wellness program



- Welfare campaigns (responsible consumption, how to prevent AIDS, healthy lifestyle)



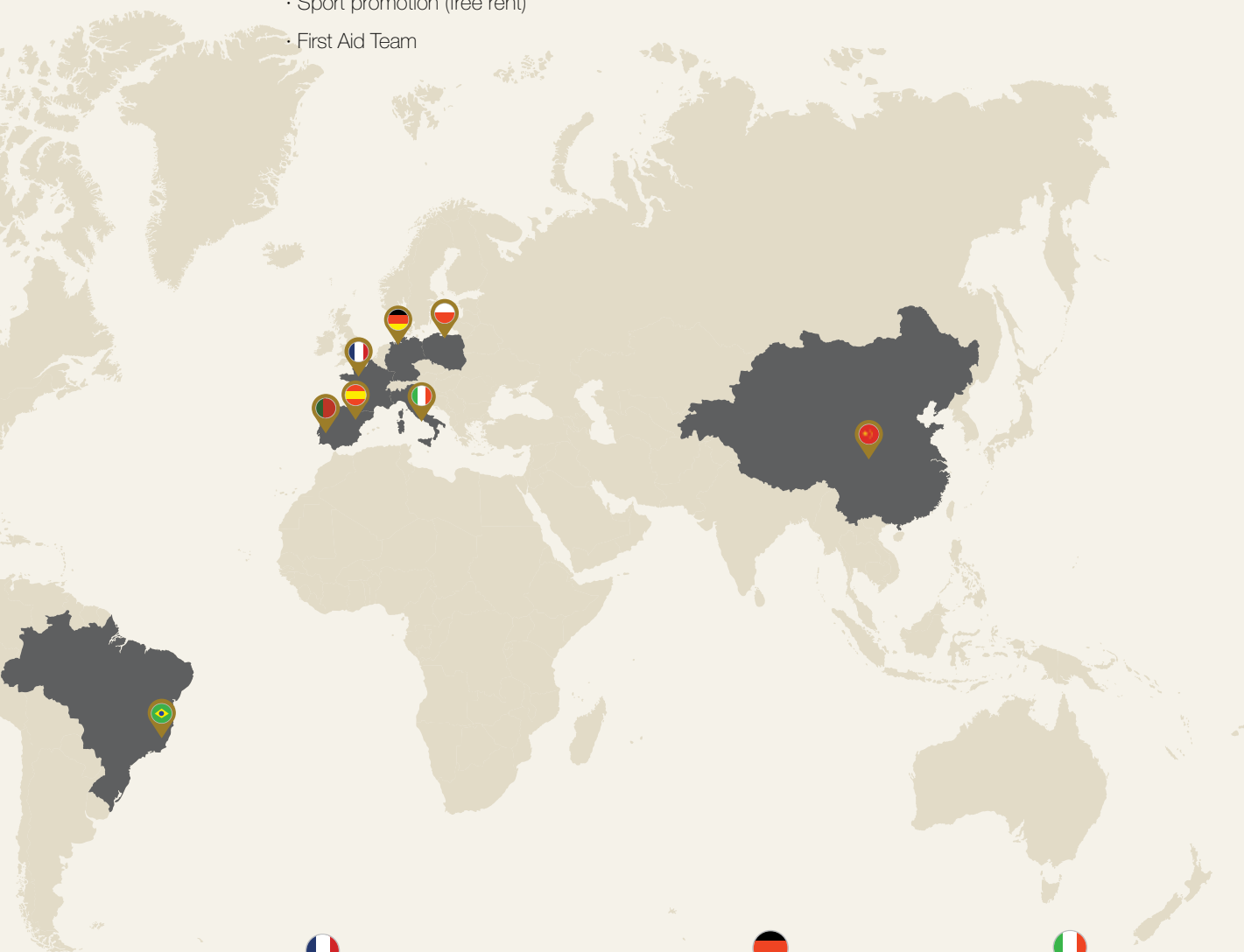
- Psychology service for all employees
- Welfare campaigns and monthly marketing concerning health and safety (Healthy food, stress prevention, etc.)
- Sport promotion (discount)
- Health Insurance offer to all employees



- Medical insurance
- Welfare campaigns (Campaign day "without a cigarette", Campaign day "fight against the diabetes")
- Sport promotion (free rent)
- First Aid Team



- Welfare campaigns



- Full acceptance for part-time working requests for parents
- Partnership with a pension fund to enable employees over 50 years to be part-time



- Welfare campaigns (vaccination)



- Partnership with an association for nursery services



# Commitment to health and safety

## | Occupational Health and Safety Management

At Ficosa, we consider the management of health & safety as an integral and fundamental part of our business. We believe that all injuries, occupational illnesses and incidents can be prevented, and we will strive for zero harm by:


- Complying with the laws, regulations and Ficosa operational policies and standards
- Establishing measurable OHS objectives and targets, recognizing and celebrating their achievement
- Identifying, assessing and controlling hazards and impacts, and adopting an approach that will strive to eliminate or reduce the risk to an acceptable level
- Informing employees, contractors, visitors and the public of these hazards and impacts
- Identifying, implementing, monitoring and reinforcing the safe behaviors we expect in our business to eliminate unsafe acts and practices
- Providing appropriate OHS training to employees and contractors
- Investigating incidents and sharing the experiences learnings to prevent them

We adopted a common approach across the company to manage health & safety. In addition to strict compliance with legal regulations, we carry out our own OHSEQ policy and implement stringent OHS standards and procedures for employees as well as contractors to ensure the safety and wellbeing of all people in our sites.

The corporate team is responsible for formulating any new OHS standards and procedures. Furthermore, the department is responsible for establishing a global system for collecting the main OHS data from all the countries and ensuring that each subsidiary complies with the internal standards and procedures. Each plant has specialists in charge of implementing the company's health & safety instructions and systems.

Plant managers are held accountable for the OHS performance of each plant, and all employees are expected to take personal responsibility for their actions, and to be involved in improvement initiatives and developing and setting standards. Creating the right safety culture at our sites is important. It takes strong leadership and an active commitment to safe operating from our workforce.





Operational facilities certified OHSAS 18001 (%)

88%

In 2016, 16 plants were certified in accordance with OHSAS 18001 – the international standard for Occupational Health and Safety (OHS) - which represents 88% of operational facilities. In 2016, the manufacturing plants of Chongqing (China), Shenyang (China) and Cookeville (USA) were not OHSAS 18001 certified. Nevertheless, all the manufacturing plants are carrying out internal OHS audits on a regular basis.

In 2016, one of the new initiatives implemented this year has been the introduction of new OHS questions into the Corporate Quality Audit “3Q3” led by the quality department.

# | Occupational Health and Safety training

The company is investing in training to make every employee aware of the OHS risk associated with their duties. In recent years, corporate development has designed different learning modules that will be implemented in each site next year. The main goal is to ensure a skilled OHS team and prepare them for any changes within the company.

introduction, emergency response, personal protective equipment (PPE), "5S" method, LockOut/TagOut (LOTO) and handling of chemicals. These training materials provide the guidelines for the OHS Specialists to create their own training courses adapted to the plant.

The different training modules include specific cases and best practices aligned with our operating management with the aim of guiding our workers on staying safe. The training materials that have been developed and taught by the Corporate OHS included 6 different courses: OHSE

Furthermore, some sites have implemented practical training to make sure that its employees respond correctly to any safety risks. For example, Ficosa's manufacturing plant in Brazil has offered a course that included practical and theoretical training to ensure participants have the skills and confidence to know what to do in case of fire.

No. of OHS training hours provided to employees (h)

25,186h

Average OHS training hours per employee (h/employee)

2.6\* h

% hours of training dedicated to OHS

15.2%

Improvement actions (No.)

2,288

In 2016, the company launched various awareness campaigns on OHS aimed at promoting safety in the workplace. Through internal and external audits, certification, and special safety programs and training, the safety standards at Ficosa manufacturing plants are continually improving.

\*The company is using the average workforce at the end of the year to calculate the ratio.

## | 2016 main performance

Because OHSAS Recordable Incident Rate (ORIR) is one of the primary safety measure, we have defined a specific annual performance goal in our ORIR at corporate level and for each manufacturing plant. Each plant manager is responsible for successfully achieving our annual goals.

Ficosa priorities	Ficosa objectives	indicators of progress	FY 2015 results	FY 2016 results	Goals 2017
<b>Local protection of Human Health</b>	Achieve an (OSHA) Recordable Incident Rate Below 1.60	Occupational Safety and Health Administration (OSHA) Recordable Incident Rate (ORIR)	1.61	1.22	1.60





ORIR is a measure widely used in the U.S. industry to track on-the-job injuries. The ORIR in the tables represents the number of Ficosa employee and contractor injuries (apart from minor first aid cases) per 200,000 hours worked. The lower the number, the closer we are to achieving our no injuries vision. Our ORIR improved in 2015 and 2016. Although this is encouraging, we continue to focus our efforts on safety to reduce incidents, mostly due to ergonomic issues, possible bum-cuts and burns in the injection or assembly process.

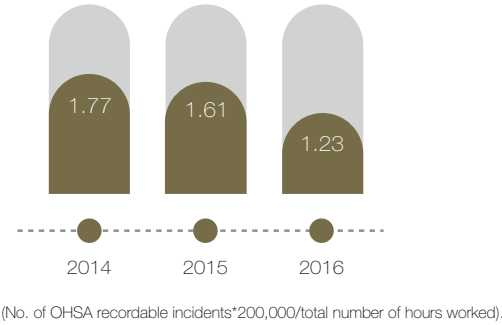
Every month, we analyze the ORIR of each site to track not only what types of injuries tend to recur, but also in what production process. This monitoring allows us to target our OSH training and action plan.

ORIR - Country

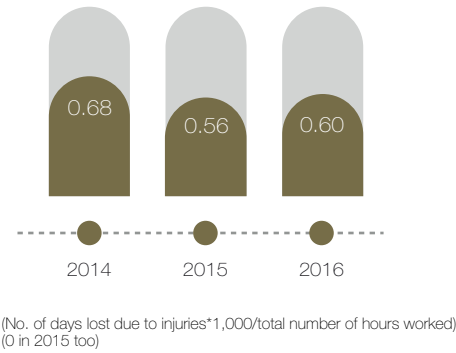
	ORIR 2016	GOALS ORIR 2017
<b>USA</b>	0.58	0.65
<b>BRAZIL</b>	2.50	1.85
<b>PORTUGAL</b>	1.57	1.57
<b>CHINA</b>	0.49	0.59
<b>SPAIN</b>	2.25	2.00
<b>MEXICO</b>	0.86	1.00
<b>GERMANY</b>	4.35	3.50
<b>TURKEY</b>	2.15	1.79
<b>ITALY</b>	0.46	0.46
<b>POLAND</b>	0.00	0.5
<b>FRANCE</b>	0.80	0.80

The main incidents that could face our employees are related with ergonomics and bump-cut and occurred mainly during the injection and assembly process.

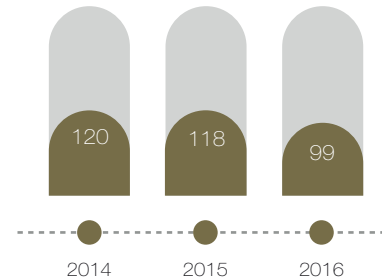
ORIR



Lost time severity rate



Total number of OSHA Recordable Incidents



0 fatalities during 2015 - 2016

## Case Studies:

### Ergonomic improvement in Turkey and Germany

Ficosa's manufacturing plant in Wolfenbüttel (Germany) has improved its manufacturing process to mitigate ergonomic risks due to overexertion when changing very heavy fixtures manually. In this regard the plant has implemented a wagon which transports the incoming/outgoing fixtures just by sliding fixtures on the wheels.

In 2016, the manufacturing plants of Bursa and Gemlik (Turkey) carried out an external ergonomic risk assessment to understand what could cause harm to people in their workplaces. This assessment enables the plants to implement different workplace improvements.

### Awards and recognition

The manufacturing plant in Bursa (Turkey) has participated in the "Golden Glove and Golden Suggestion" competition which was held by one of the biggest Union in Turkey, MESS (Turkish Employers' Association of Metal Industry). The purpose of the competition was to increase awareness and support and encourage efforts in the Occupational Health and Safety field. The evaluation was done in three different categories: best practice, recommended implementation and suggestion. As a result of this competition, 15 companies out of 135 were selected by a Jury. The award ceremony was held on November 2016 in Istanbul. During the ceremony, Ficosa won a prize in the "Golden Suggestion" category thanks to its Volvo Mirror Assembly Line ergonomic improvement project.







## Action planned for next year onward

Ficosa still wants to improve its performance in terms of OHS and make sure to achieve zero incidents and injuries in all the plants where it operates. In this regard, the corporate OHS team will work on different sets of actions, including:

- Defining a new ORIR objective at corporate and plant level. In 2017, the main goal is to maintain a corporate ORIR below 1.25.
- Increasing the employee awareness through local campaign and introducing OHS management review by plant.
- Reviewing the information on the plant's activities and data which is compiled periodically, making sure that it is prepared in accordance with the standards and criteria used by Ficosa and ensuring the accuracy of this information.
- Improving the OSH training program by increasing the training offers and sharing the internal training material prepared by the corporate OHS team.

# Commitment to environment

The increasing global population and the rapid growth of world economy have complex and diverse connections with the global environment. They also affect the environment in numerous ways. At Ficosa, we recognize that the global expansion of its corporate activities is also reflected in an increased use of natural resources and higher energy consumption and release of substances into the environment. In this regard, we perform our activities paying special attention to protecting the environment and an efficient use of natural resources. Paint application and injection machines are one of the most demanding aspects of our industry and the technology used must meet high expectations of quality and cost efficiency while remaining environmentally responsible.

At Ficosa, we are committed to bringing and offering safer, more connected and efficient systems for the automotive and mobility sectors, and to reducing our environmental impact as we do so. Our commitment to the environment extends to our whole activity cycle from R&D product design to acquiring raw materials and manufacturing and the use and disposal of our products. For example, the company is working on a new shift-by-wire system that covers multiple advantages such as reduction in weight and fuel consumption and maximization of cabin space.

Furthermore, the company has developed a first gearbox actuator based on an electronic control system that improves the features and allows freedom of design and positioning in the cabin.

In addition to strict compliance with legal regulations, we carry out our own OHSEQ policy, which ensures prevention of the environment and the mitigation and adaptation to climate change through energy-efficient processes and responsible resource and waste management.

We focus our actions on reducing energy consumption and Volatile Organic Compound (VOC) emissions and improving waste management, in order to be the most sustainable supplier for our clients. The corporate OHSE team is working with all the plants to define specific targets to reduce waste generation and energy consumption. In 2016, all the manufacturing plants have implemented the corporate reduction targets to reduce carbon footprint, electric consumption and waste generation, and specific action plans for achieving them. Furthermore, every manufacturing plant has defined its individual environmental goals adapted to the specificities of each site.

Operational facilities certified ISO 14001 (%)

94%

The Group's commitment to environmental protection is one of the main priorities and is clearly integrated into our activities through the implementation of an integrated management system in the different sites where the company operates.

Ficosa's environmental management model is based on the international ISO 14001 standard. In 2016, only one manufacturing plant in China (Shenyang) was not 14001 certified. The site has started its activity in 2016 and will be ISO 14001 certified in 2018, once the construction of the painting facility will be completed.

The ISO 14001 system provides a structure that enables every site to manage, assess, and continuously improve the effectiveness and efficiency of the management of their environmental impacts. The corporate OHSE department is responsible for formulating any new environmental standards and procedures. Furthermore, the department is responsible for establishing a global system for collecting the main environmental data from all the countries and ensuring that each subsidiary complies with the internal standards and procedures.

In recent years, the company has been committed to improving the environmental data gathering process of each site by identifying and mitigating any gap between the current state of information and that required to reach the desired state.

The company ensures that all the manufacturing processes are in line with the best environmental practices. Every year, each subsidiary shares its improvement regarding this matter.

For example, the manufacturing plant of Dabrowa Gornicza (Poland) has integrated green criteria in the purchasing process of injection, blowing and welding machines by selecting only new machines with lower energy consumption. Furthermore, the plant has implemented a new leakage monitoring water system that enables the plant to measure the water consumption in each section and identify any leak that may occur in the site.

## Plant Emission Management

A current challenge is to reduce volatile organic compounds (VOCs), which readily evaporate and become gaseous in the atmosphere. VOCs are carbon-based materials (for example hydrocarbons, halogenated, sulfonated and polyelemental organics), that can be toxic and create adverse health and environmental impacts. The company has implemented different system and control standards in its manufacturing plants to monitor and reduce the amount of air pollutants emitted during their operation. Furthermore, the company is committed to mitigating its environmental impact by implementing new eco-friendly technologies and improving its production process. For example, the manufacturing plant in Cookeville has reached an agreement with the State of Tennessee, as part of a plant operating permit, to reduce VOC emissions from 231 tons per rolling 12-month period to 11.84 tons per rolling 12-month period thanks to the implementation and use of a RTO (Regenerative Thermal Oxidizer) in the painting process.



## Case Studies: improvement in the painting process & injection machines

### | Why is it important?

The painting and injection process accounts for the largest share of environmental impact during the manufacture of Ficosa products in terms of air emissions, energy consumption and waste generation. The paint shop is the manufacturing area that causes most concern within the industry as it is a health and safety hazard because VOC emissions. Furthermore, the injection process is a large energy consumer and contributes to carbon dioxide emissions.

### | What are we doing?

In Dabrowa Gornicza (Poland), the company invests in new spray booths, which allow increasing capacity by 24% while reducing the usage of chemical components and paint waste. With this investment, the company succeeds in reducing its injection waste by 30%. Furthermore, the company has reduced its energy consumption by installing more efficient heat exchanges in paint shop.

In Soria (Spain), the company is distilling used paint in order to obtain pure solvent, which can be used as cleaning agent or can be sold.

In Bursa (Turkey), the plant has decreased its water consumption in the paint shop by using a new coagulant. Furthermore, the plant in Gemlik is implementing refrigerants R410 and R407 instead of R22 for its air conditioning system.

In Tennessee (United States), the company is building a new paint shop in order to close an inefficient installation. Through this replacement, the site will reduce its energy consumption associated to the painting process by 41%. The new painting process emits less Volatile Organic Compound (VOC) and enables less consumption of fresh air due to RTO (Regenerative Thermal Oxidizer) and recirculation

of the air on spray booths. Besides, the automation of the painting process with robots will improve OHS conditions for operators. Wet filtration on spray booths will improve paint waste separation.

The manufacturing plants in Dabrowa Gornicza (Poland), Taicang (China) and Soria (Spain) are also planning to implement a RTO system in their painting process between 2016 and 2017. The implementation of the new system will enable the companies to reduce their VOC emissions.

The manufacturing plant in Soria (Spain) has implemented a new process aspiration for its injection machines with the aim of reducing any pollutants emissions to the atmosphere.

Furthermore, the manufacturing plants in Taicang (China) has implemented a new servo-motor system in its injection section with the aim of reducing its carbon emission.

Furthermore, the company is working to increase the recovery of cleaning solvents and other chemicals and to reduce the amounts of these substances emitted from its plants.



# Addressing Climate Change

In a world often said to be carbon-constrained, reducing CO<sub>2</sub> emissions is a task to be tackled by all companies. Since 2016, we have defined a corporate guideline to reduce our greenhouse gas (GHG) emissions annually at corporate and site levels. Each plant manager is responsible for successfully achieving our annual goals.

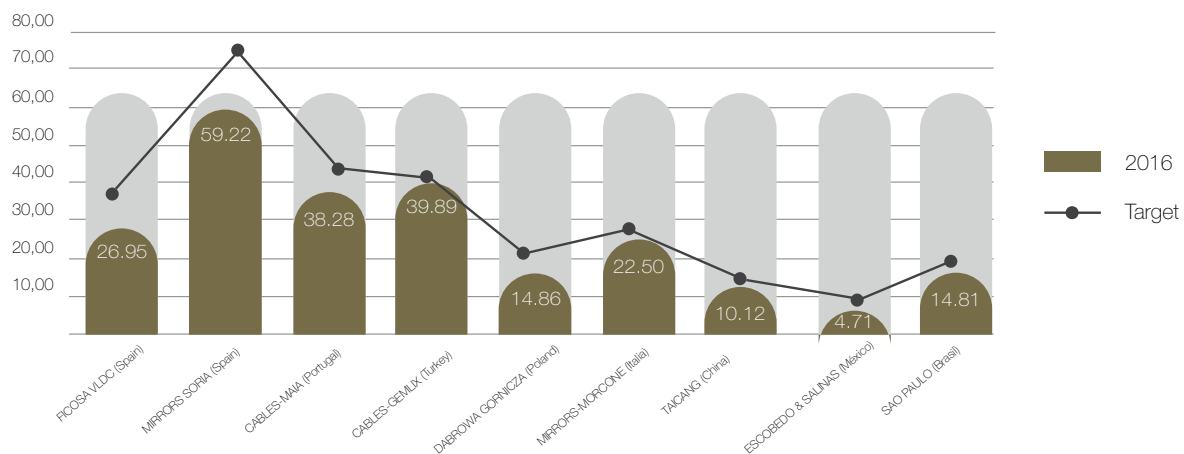
Ficosa priorities	Ficosa objectives	indicators of progress	FY 2015 results	FY 2016 results	%
Addressing Climate Change	Aim to reduce our GHG emissions intensity (Scope 1 and 2) by 3% annually	GHG emission (KgCO <sub>2</sub> eq/k€ net sales)	52.6	55.2	5%

In 2016, our GHG emissions have increased by 5%. This increase may be explained by the new manufacturing plant in Shenyang (China) and the implementation of new blinkers and die casting processes in Soria (Spain) and Dabrowa Gornicza (Poland), which consume large amounts of energy. Nevertheless, most of our sites achieved their annual goals:



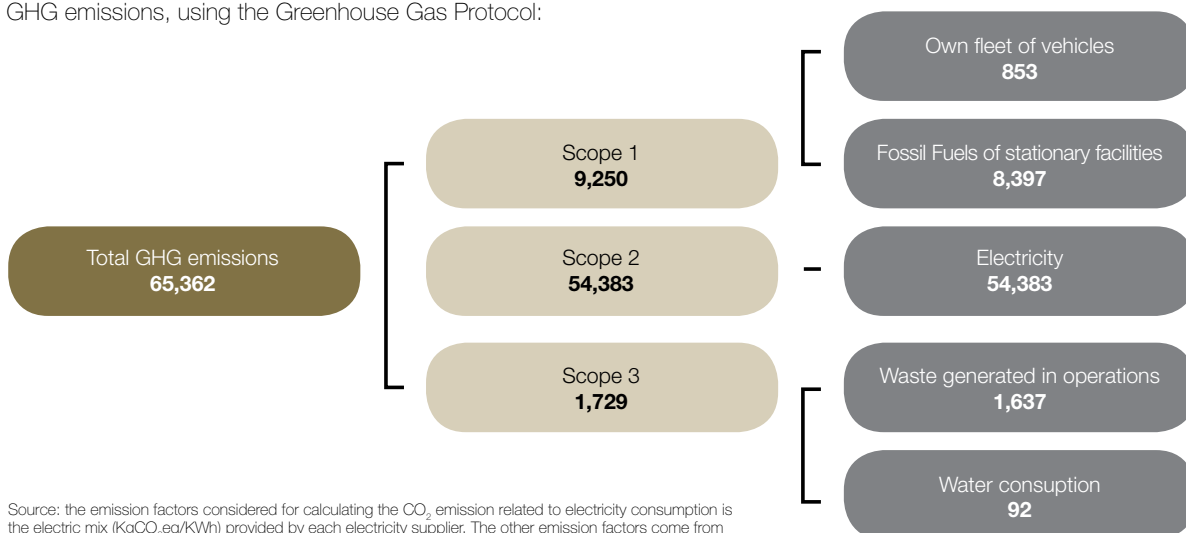


## Greenhouse Gas Emissions intensity by sites (KgCO<sub>2</sub>eq/k€ net sales)



## Greenhouse gas (GHG) emissions by type of source (t CO<sub>2</sub>eq)<sup>5</sup>

Since 2014, we have been conducting an inventory of our GHG emissions, using the Greenhouse Gas Protocol:



Source: the emission factors considered for calculating the CO<sub>2</sub> emission related to electricity consumption is the electric mix (KgCO<sub>2</sub>eq/KWh) provided by each electricity supplier. The other emission factors come from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

5. The total GHG emissions reported does not take into account the purchase of green energy in Spain.

	Scope 1	Scope 2	Scope 3	TOTAL
<b>USA</b>	1,058	13,693	426	15,177
<b>BRAZIL</b>	98	1,127	4	1,229
<b>PORTUGAL</b>	81	2,137	55	2,273
<b>CHINA</b>	808	11,099	25	11,932
<b>SPAIN</b>	3,446	9,440	445	13,331
<b>MEXICO</b>	461	6,670	132	7,263
<b>GERMANY</b>	479	200	14	693
<b>TURKEY</b>	827	3,325	92	4,244
<b>ITALY</b>	382	1,043	14	1,439
<b>POLAND</b>	1,302	5,422	514	7,238
<b>FRANCE</b>	308	227	8	543
<b>TOTAL</b>	9,250	54,383	1,729	65,362

The 2016 inventory found that our Scope 1 and Scope 2 emissions were 63,633 metric tons of equivalent carbon dioxide (CO<sub>2</sub>eq). According to the GHG Protocol, Scope 1 includes direct GHG emissions from sources that are owned or controlled by the company. These include our manufacturing plants and company-owned vehicles. Scope 2 includes indirect GHG emissions from the generation of purchased electricity consumed by the company.

According to the GHG Protocol, Scope 3 includes indirect GHG emissions that occur in the value chain of the reporting company, including both upstream and downstream emissions.

We calculate our Scope 3 emissions from our waste generation and water consumption. Nevertheless, we are planning to expand Scope 3 of our carbon footprint by quantifying other indirect emissions associated with our activities.

Since more than 85% of our GHG emissions are attributable to waste generation and energy to be used in our manufacturing plants, we are tackling climate change through energy efficiency, renewable energy and improvement in waste management.

## Energy efficiency and renewable energy

Reducing greenhouse gas (GHG) emissions in Ficosa is mainly about reducing energy consumption and improving energy efficiency. In this regard, the company is committed

to mitigating its impact on climate change by defining a strong energy strategy based on energy efficiency, increased use of renewable energy and improved manufacturing process.

Ficosa priorities	Ficosa objectives	Indicators of progress	FY 2015 results	FY 2016 results	%
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### Addressing Climate Change.

Aim to reduce our energy intensity by 3% annually

Energy intensity (kWh/k€ net sales)

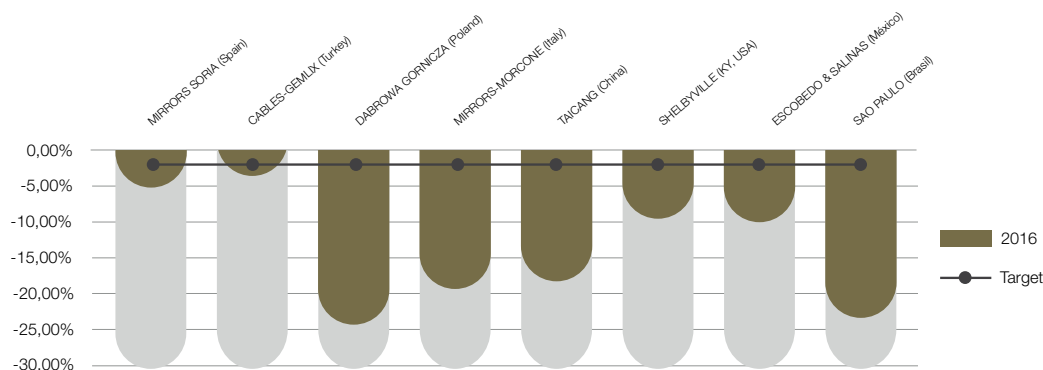
109.7

105.4

-4%

In 2016, the company reduced its energy intensity by 4%. Furthermore, 50% of our manufacturing plants achieved their annual goals:

### Reduction of electric consumption by sites (kWh/k€ net sales)



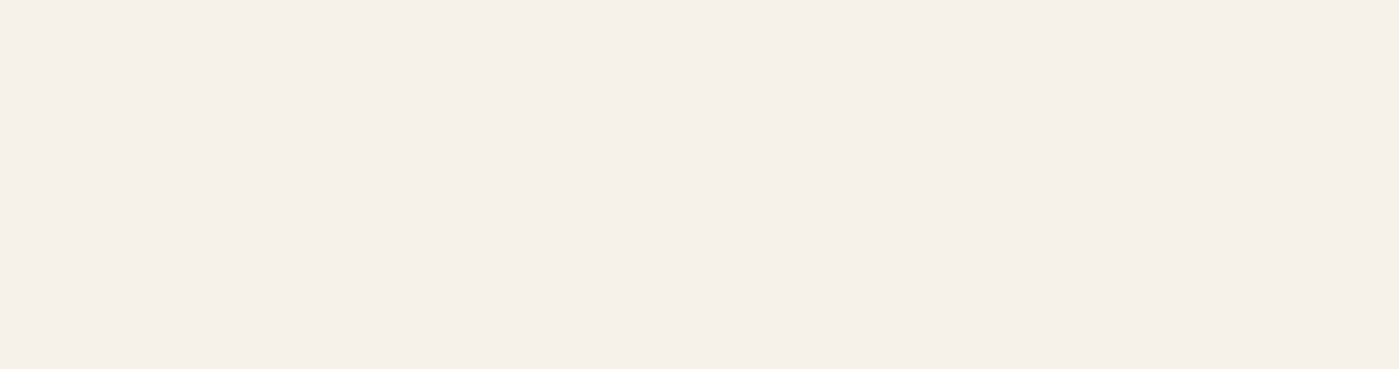
Ficosa engages in a variety of energy saving activities in its manufacturing process to reach the lowest energy consumption in its sector by introducing highly efficient equipment, improving manufacturing techniques and adopting energy saving lighting.

global operation to undertake energy audits and implement mitigation projects ahead of global regulation.

The Energy Efficiency Directive (EED) and the European country regulations that transpose it is a driver across our

The manufacturing plants in Portugal, Italy, France and Spain have already audited their energy consumption and are now defining an action plan to reduce it. The manufacturing plant in Dabrowa Gornicza (Poland) will audit its energy consumption at the end of 2017.





## Energy management in Brazil

The manufacturing plant in Brazil was chosen to participate in a selection of industries interested in implementing ISO 50001 requirements, with the assistance of “Servicio Nacional de Aprendizaje Industrial”.

The main goal of the plant is to promote a culture of energy efficiency in its DNA by including energy aspects in the decision-making processes, from system design to operation and increasing energy awareness among staff members at all levels.

## Case Studies: Energy Efficiency in Turkey & Germany

74% of electricity consumption at the manufacturing plant in Bursa (Turkey) comes from the injection area. For this reason, two projects have been carried out to reduce electricity consumption: the implementation of a waste heat recovery system from compressor to heat the injection area, and the installation of a new led lighting system. The other manufacturing plant in Gemlik (Turkey) has implemented an automatic system that turns off the lighting and electricity system after 5 minutes without production in 13 assembly lines. In 2017, the plant is planning to implement the same system in the rest of the assembly lines.

In order to reduce its electric consumption and its CO<sub>2</sub> emission, the manufacturing plant in Wolfenbüttel (Germany) has replaced the old neon lamps located outside the plant with new LED lamps. This implementation has allowed the plant to reduce its CO<sub>2</sub> emission from 21,054 Kg CO<sub>2</sub>eq to 2,098 Kg CO<sub>2</sub>eq.

## | Renewable energy

Furthermore, increased use of renewable energy is critical to the transition to a low-carbon economy. The company is striving to reduce emissions by using renewable energy. From March 2016, 100% of the electricity in Viladecavals (Spain), Soria (Spain) and Sant Guim (Spain) come from renewable sources. Other manufacturing plants, such as the ones in Dieuze (France) and Wolfenbüttel (Germany) are using renewable energy and are planning to increase their renewable power consumption.

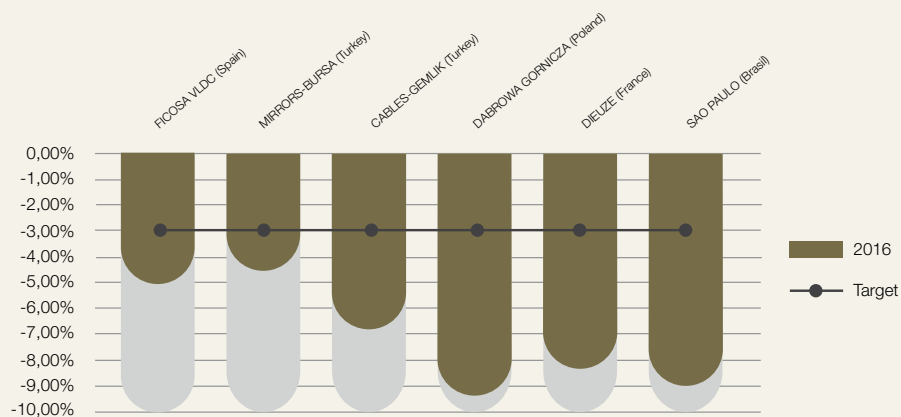
Renewable energy consumption in Spain (kWh)	GHG emissions avoided (tCO <sub>2</sub> eq)
24,004,250	7,393

## Responsible resources and waste management

Ficosa priorities	Ficosa objectives	Indicators of progress	FY 2015 results	FY 2016 results	%
<b>Responsible resource and waste management</b>	Aim to reduce our waste generation by 3% annually	Waste generation (Kg/K€ net sales)	4.6	4.5	-2%
	Aim to reduce our water consumption by 3% annually	Water consumption (m3/K€ net sales)	0.23	0.20	-13%

The company launched various awareness campaigns aimed at promoting waste recycling and reuse within the company. In 2016, the company achieved its corporate goal to reduce its waste generation by 3% annually. Some sites exceeded the current goal of the company.

### Reduction of waste generation by sites (% de reduction)



## Case Studies: Good practices of waste management

The manufacturing plant of Dieuze (France) has implemented a strong material recycling program that allowed the company to save more than 100,000 € in material cost, by increasing the recycling of injected parts and reducing the generation of scraps.

The manufacturing plant of Maia (Portugal) has organized an employee competition to raise the awareness about the waste generation and recycling within the company. Furthermore, the company has organized a campaign "Electrao Empresa" to promote the recycling of electrical appliance.

The manufacturing plant in Bursa (Turkey) has managed to reduce 50 tonnes of cardboard by promoting the use of recycled packaging among its local suppliers.

Over the years, the manufacturing plant in Shelbyville (USA) has used a lot of foam. It was very popular because it was light and clean, prevented scratching, and allowed more parts to be placed in a container than traditional dunnage. Nevertheless, foam, which is not biodegradable, was going into the trash to be landfilled. In 2016, the plant decided to define a specific target to reduce the use of foam by 25% by 2017. In 2016, the plant has already succeeded in reducing the use of foam by 50%.





## Action planned for next year onwards

Ficosa wants to continue reducing its environmental impact and make sure that all its plants are energy efficient. In this regard, the corporate OHSE team will work on different sets of actions, including:

### Mitigation of Climate Change

Ficosa's new environmental strategic line focuses on the reduction in GHG emissions through energy efficiency, the purchase of renewable energy and the reduction in waste generation. Furthermore, the company will work to improve the gathering and consolidation of environmental data, making sure that they are prepared in accordance with the standards and criteria used by Ficosa and enhancing the accuracy of this information. Finally, the company is committed to increasing the reporting on GHG emissions derived from scope 3 categories.

### Knowledge and Good Practice Exchange

Next year the company will hold an environmental forum where manufacturing plants will be able to share their actions, best practices and/or procedures implemented that contributed to the protection of the environment so that other plants can take advantage of the knowledge acquired and the results achieved.

### Environmental Risk and Opportunities

In 2017, the corporate OHSE department will implement a new methodology for all plants in order to identify the main environmental risks and opportunities related to Ficosa environmental aspects, compliance obligations and other issues.

# Commitment to society

## Responsible management of the supply chain

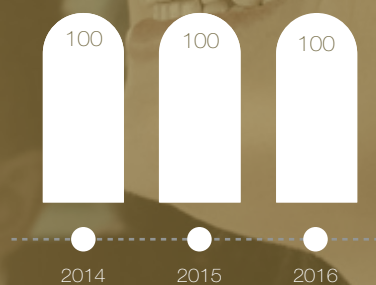
Ficosa's commitment to sustainability extends to its supply chain. Ficosa continues to focus its efforts on improving management and implementing sustainability standards through its supply chain, mainly through two instruments:

1 Implementation of quality and sustainability criteria in its supply chain

2 Adaptation of the General Purchasing Conditions

Any Ficosa supplier has to show evidence that it has an established effective quality management system in place certified by a third party. Ficosa recommends all its suppliers to certify their Quality Management system according to ISO/TS 16949 standard.

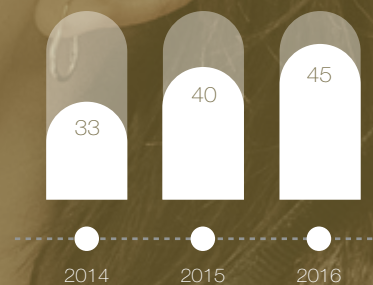
#### Suppliers certified ISO 9001 (%)



The General Purchasing Conditions establish the relationship between Ficosa and its suppliers. The purchase orders sent to suppliers by any Ficosa company or any of its subsidiaries or affiliates have to be accepted in accordance with these terms and conditions. In addition to all applicable laws and regulations to be observed by the suppliers, it is also their obligation to respect social responsibilities and duties, especially but not limited to the requirements based on the Universal Declaration of Human Rights and the International Labor Organization (ILO) conventions.

Any supplier who wants to be included in the Ficosa Supplier Panel must comply with the environmental regulations and requests of the country where the product is going to be produced and/or used, including but not limited to the Directive of end-of-life vehicles ELV (2000/53/EC and its updated Annex II), REACH (Registration, Evaluation, Authorization and Restriction of Chemicals), CLP/GHS (Classification, labelling and packaging of substances and mixtures) and the Dodd-Frank-Act in respect to Conflict Minerals.

#### Suppliers certified ISO/TS 16949 (%)



In addition, any new supplier has to fulfill a Specific Company Self-Assessment and be approved by the Ficosa audit process. The aim here is to examine the supplier's suitability to provide over the term by using specific indicators, including financial and quality criteria as well as general corporate aspects.

Ficosa regularly monitors the performance of its suppliers and evaluates them to confirm its performance versus the defined targets. These assessments enable the company to track the improvement of its suppliers and determine the potential support that they may need from Ficosa.

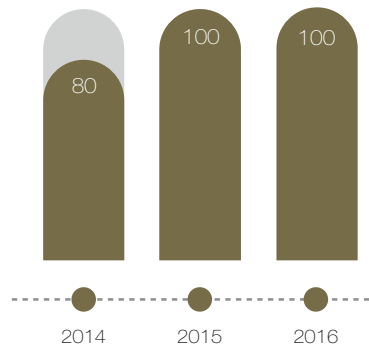
## | Conflict Minerals

In the last years, there has been an increasing international focus on “conflict minerals” emanating from mining operations in the Democratic Republic of the Congo (DRC) and adjoining countries. Armed groups engaged in mining operations in this region are believed to subject workers and indigenous people to serious human rights abuses and are using proceeds from the sale of conflict minerals to finance regional conflicts.

On August 22, 2012, in response to these concerns, the US Securities and Exchange Commission (SEC) adopted a final rule to implement reporting and disclosure requirements related to “conflict minerals”. The “conflict minerals” are cassiterite (tin), columbite-tantalite (coltan), gold and wolframite (tungsten), as well as their derivatives and other minerals that the US Secretary of State may designate in the future (Dodd–Frank Section 1502).

For that purpose, Ficosa implemented an annual supplier’s inquiry and collect from all its suppliers the Standard Survey (EICC/Gesi template) on conflict minerals. The collected information is internally processed and provides useful information to monitor suppliers and report to clients about the company use of minerals for each plant.

**% of suppliers for which conflict mineral information is available**







## Social responsibility

The decentralized locations are responsible for charitable projects, donations and other social initiatives. The social initiatives depend on the site-specific challenge and are led by the Human Resources department. Examples of Ficosa social initiatives in locations where the company operates:



- Blood donations campaigns
- In-kind and financial donations to several institutions, such as "Rarissimas" (an institution that supports children with rare diseases), "National League Child Hope-Renaissance", "House of the People of Vermoim", "Institute of Social Support - A Life A Smile"
- Collaboration in several initiatives with the City Hall of Maia (culture, sport)
- Participation in several campaigns, among which we highlight the collaboration with the Holy House of Mercy of Maia through the delivery of baskets of food of first necessity with aid processes approved by this institution



- Blood donation campaigns
- Painting donations for the maintenance of school sponsored by Ficosa
- Fico Jugueton" Donation of toys for children of low income families
- Collaboration with the Red Cross
- Recycle to help
- Visiting to nursing home
- Program "Adopt a tree" for promoting reforestation
- Small citizen program (training program to elementary students)



### Soria:

- Collaboration with social institutions (FADESS, AECC, LINCECI, etc.)
- Blood donations campaigns
- In-kind and financial donations (computers, etc)
- Sponsorship of sports activities

### Viladecavalls:

- "Take Action" plan for involving the employees in social issues
- Campaign against cancer
- In-kind donations (clothes)





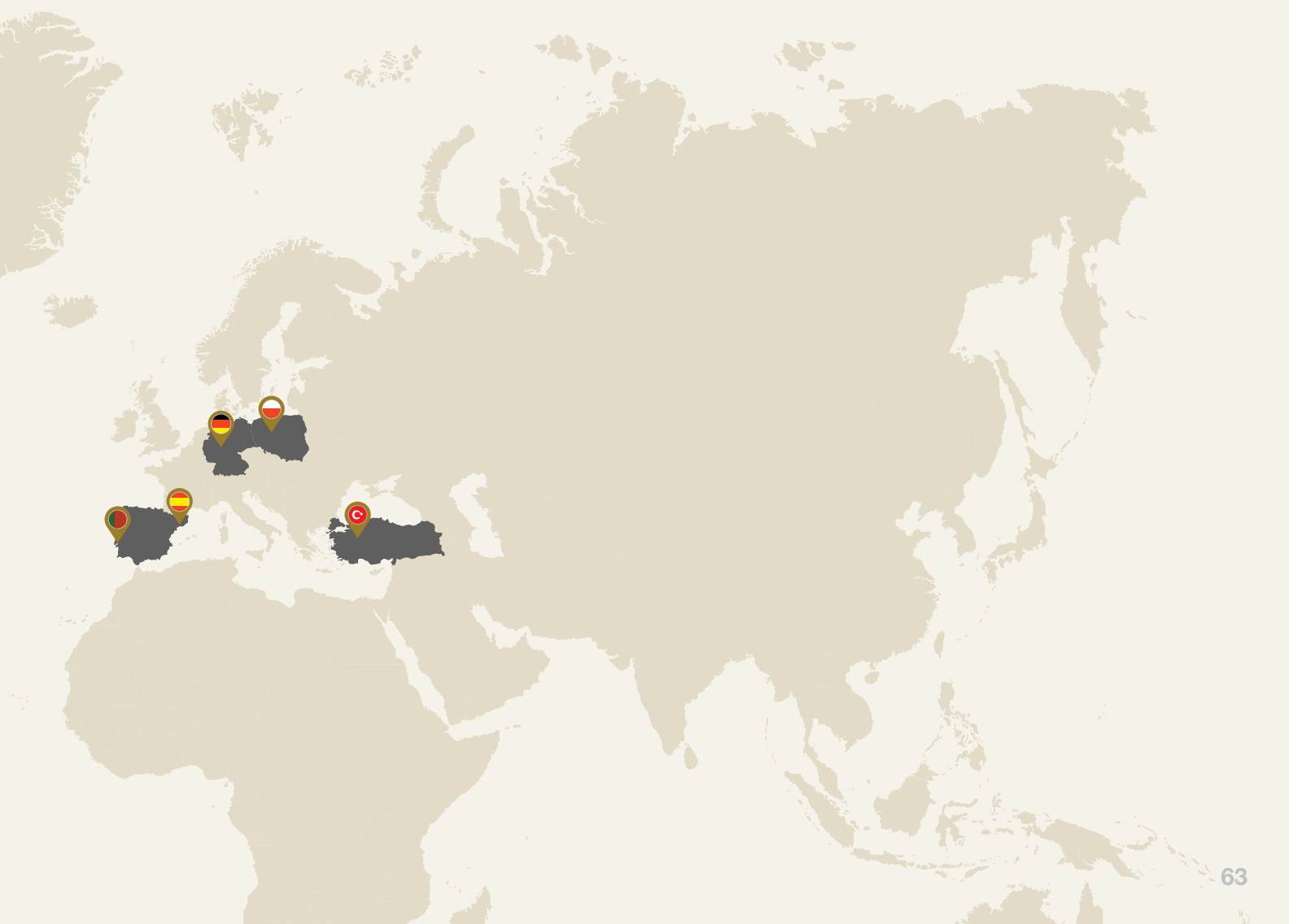
- Sponsorship of sports activities



- In-kind donations for hospitals
- Supporting found for employees and their families in difficult financial situations



- Donations of books and toys for children of low income families through the campaign "No keeping, Yes sharing"





## Case Studies:

### Ficosa & Uniraid

UniRaid consists of a 10 day itinerary through the Moroccan desert with cars which are at least 20 years old. The main objective of this adventure is the will of helping those who are in need as well as surpassing several challenges which promote the value of mutual support and the need for teamwork. Every team has to bring a minimum of 30 Kg of clothes, school supplies or food, in order to give them out to the different desert villages as they pass by. In the 2017's edition, the RedFury Team, integrated by two industrial engineering students, counted on Ficosa's sponsorship to complete such a project. Thanks to their collaboration, Ficosa helped the team to share more than 60 Kg of school supplies and clothes and to cross the finish line after 3.500 Km of desert sand, heat, mechanical problems and fatigue.

"The satisfaction of achieving what we came for by sharing with them more than 60 kilos of school supplies and clothes, and watching them be so happy about it was extraordinary. It only took us four days of navigation to realize that teamwork can actually move mountains, and especially in such a competitive world like the one we live in where cooperation is gradually gaining more importance. In this raid it was clear to us that working together can help you achieve anything. We thank all of our sponsors, we thank Ficosa, because if it wasn't for them we wouldn't have been capable of accomplishing such challenge."







## Visits to the factory

The company organizes factory visits in different countries where the company operates. These visits enable the company to attract new joiners and demonstrate the strength of their manufacturing capabilities.

Every year, the manufacturing plants in Gemlik (Turkey), Maia (Portugal) and Soria (Spain) organize visits to the factory for students. The students can visit our different production areas (injection of plastic, smelting, painting and assembly of rear-view mirrors), where the managers explain to them the characteristics of the production process.

The manufacturing plant of Viladecavalls (Spain) has organized visits for MBA IESE and the students of the La Vall school.

In Morcone (Italy), the plants have arranged an Open-house dedicated to the environment for the families of employees. The day included awareness games for children and the plantation of flowers and plants in the external part of the plant. In Mexico, the company every year organizes an Open House for all the families of employees.

## Case Studies:

### Social collaboration in Portugal

Since 2015, the plant in Maia (Portugal) has been collaborating with a social organization that works with people with physical and intellectual disabilities. Every year, the plant donates wooden pallets to the organization, which serve as raw materials for creating new products that are manufactured by workers with physical and intellectual disabilities.

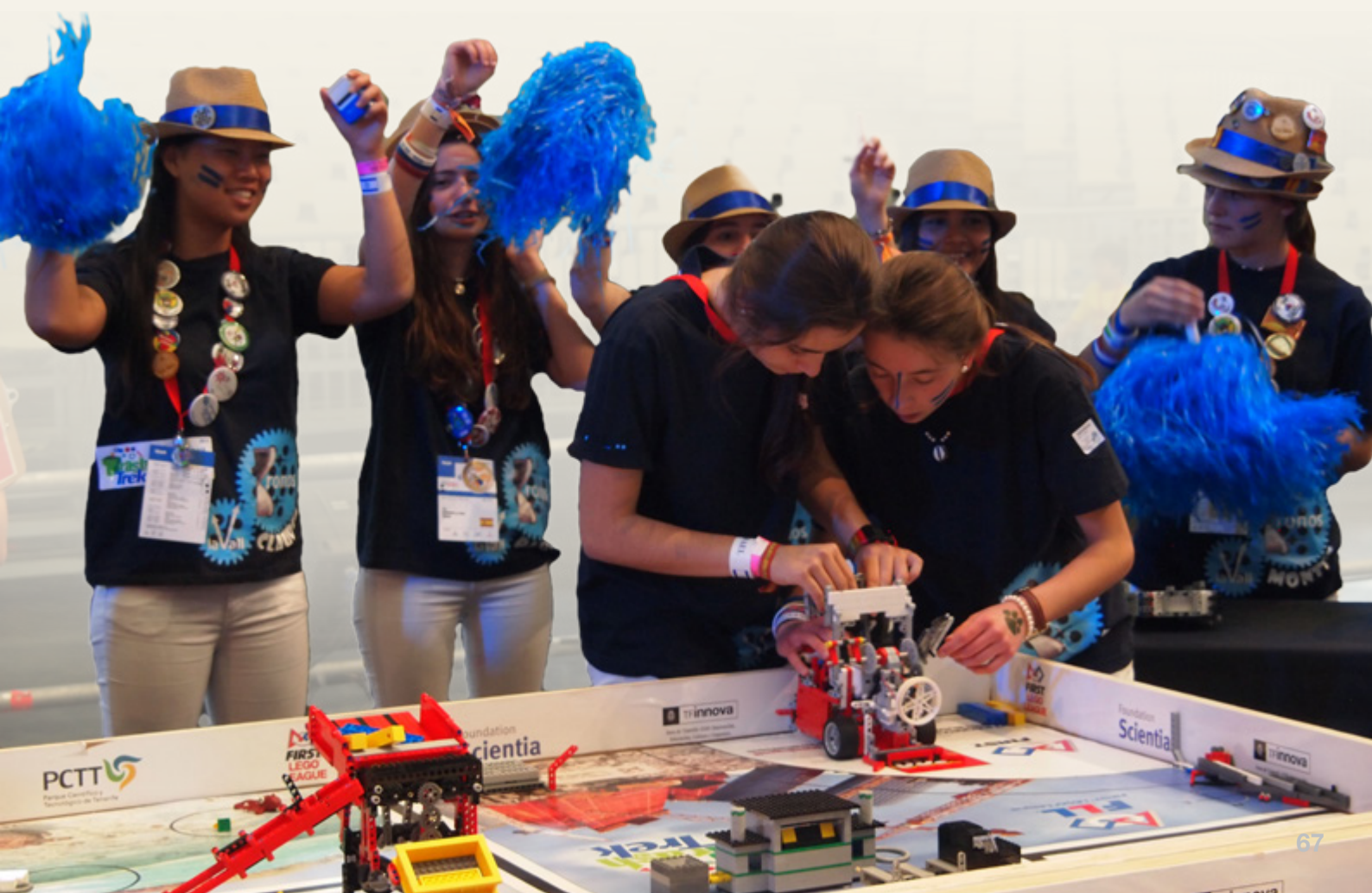




## Case Studies: FIRST® LEGO® LEAGUE Open European Championship 2016

The competition, FIRST® LEGO® LEAGUE Open European Championship, focuses on engaging children in science and technology through play and learning. The young participants, between 10 and 16 years old, come from around 45 nations and from 6 continents. In 2016, the competition took place in Tenerife, Spain. 89 FLL-Teams from 40 countries from all over the world competed in the FLL 2015/2016 Trash Trek challenge at the OEC. The teams had to find solutions for better recycling, waste management and waste reduction.

In the 2016's edition, the Kronos Team, integrated by 7 students from Colegio La Vall de Bellaterra, counted on Ficosa's sponsorship to participate in the event. The group ended up with the second prize in the best presentation category.

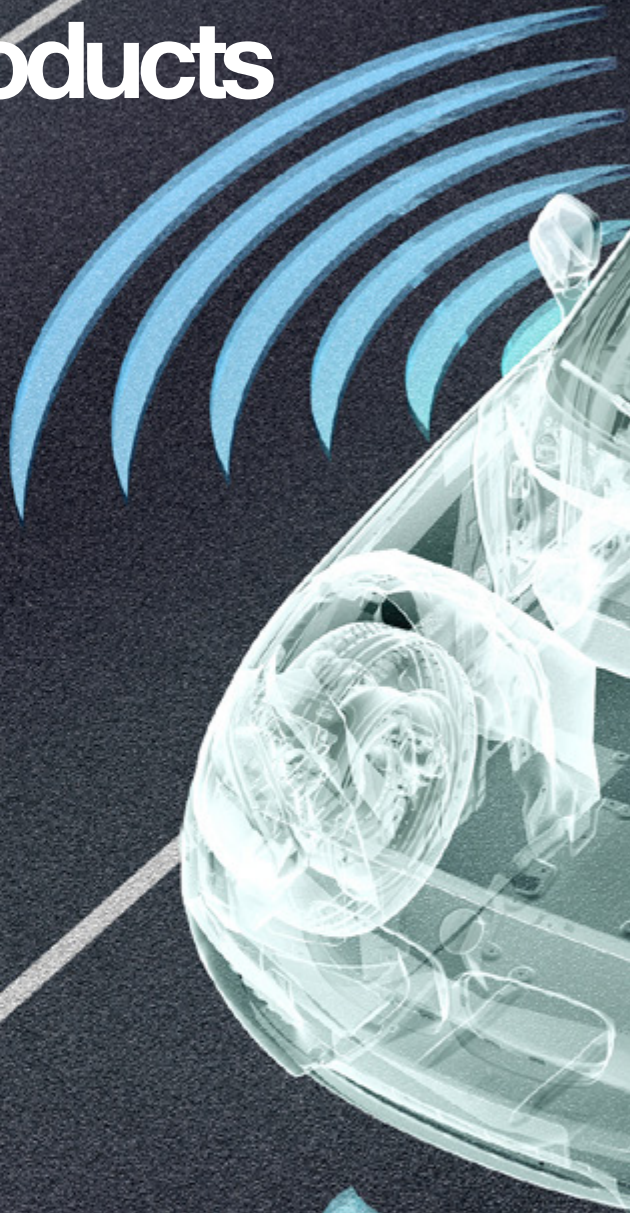




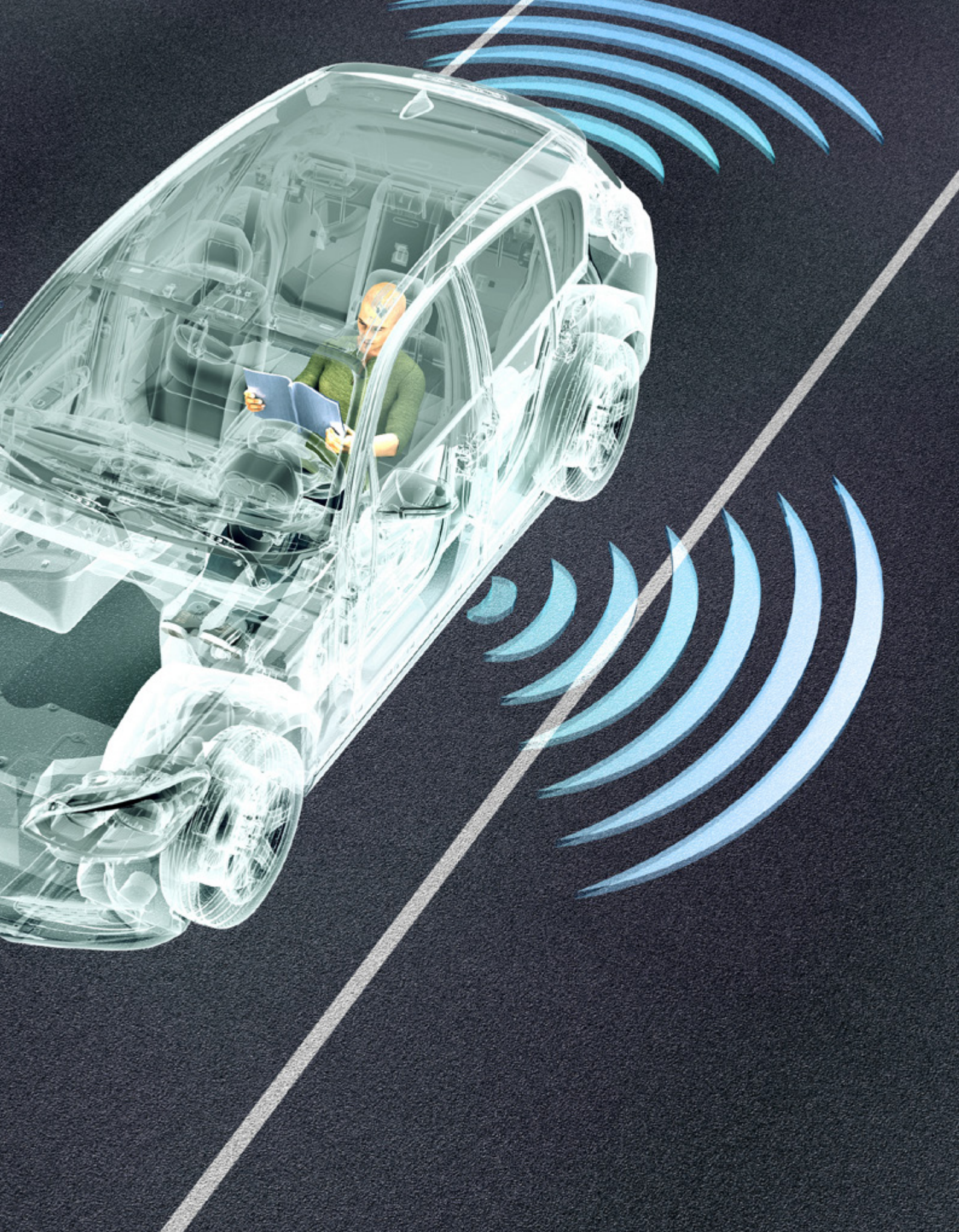
# Innovation in our products

Ficosa vision of innovation is based on a commitment to the most advanced technology. In this regard, the company invests in the research and development of products and solutions based on the fields of connectivity, safety and efficiency to maintain its position of leadership and anticipate the needs of the automotive, medical equipment, consumer electronics and industrial sectors.

The company is now a technological partner of a vast majority of automotive companies from all over the world and seeks new ways to bring about further optimization and contribute to sustainable mobility.







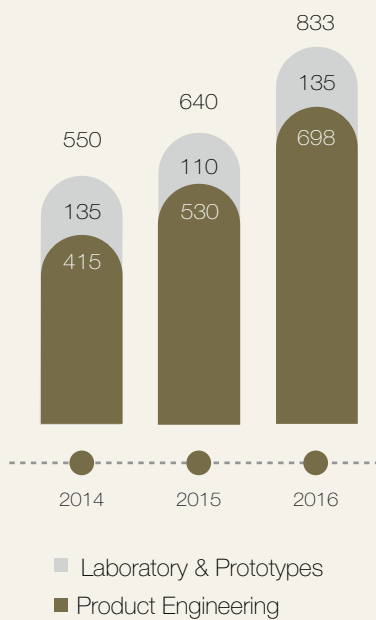


## R&D Capabilities

With great dedication to innovation and a clearly global focus, we have created a solid network of R&D centers in Europe, North America, South America and Asia. They are divided into centers of expertise focused on the same product family and local engineering centers closely located to customers' design centers.


### R&D Capacities (No.)



This strong commitment to innovation has also resulted in high added value job creation. Ficosa is convinced that the company needs an excellent and experienced team of engineers on board to face the new challenges of the company.



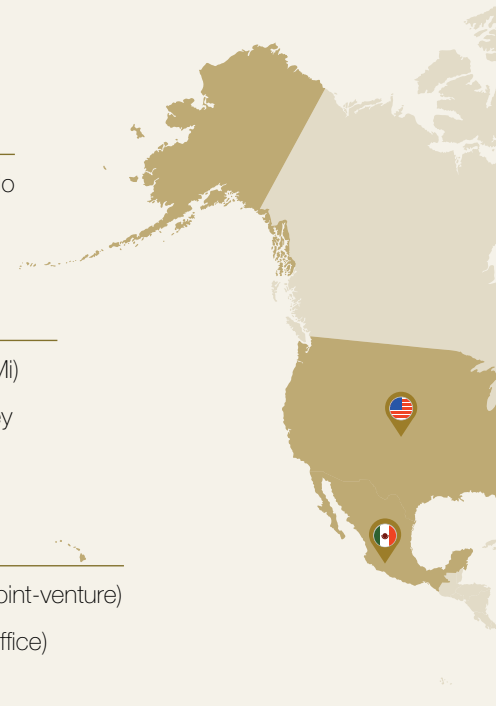
### Research centers

-  · Viladecavalls
-  · Wolfenbüttel / Lindau (Denso JV)
-  · Dieuze
-  · Porto
-  · Gemlik

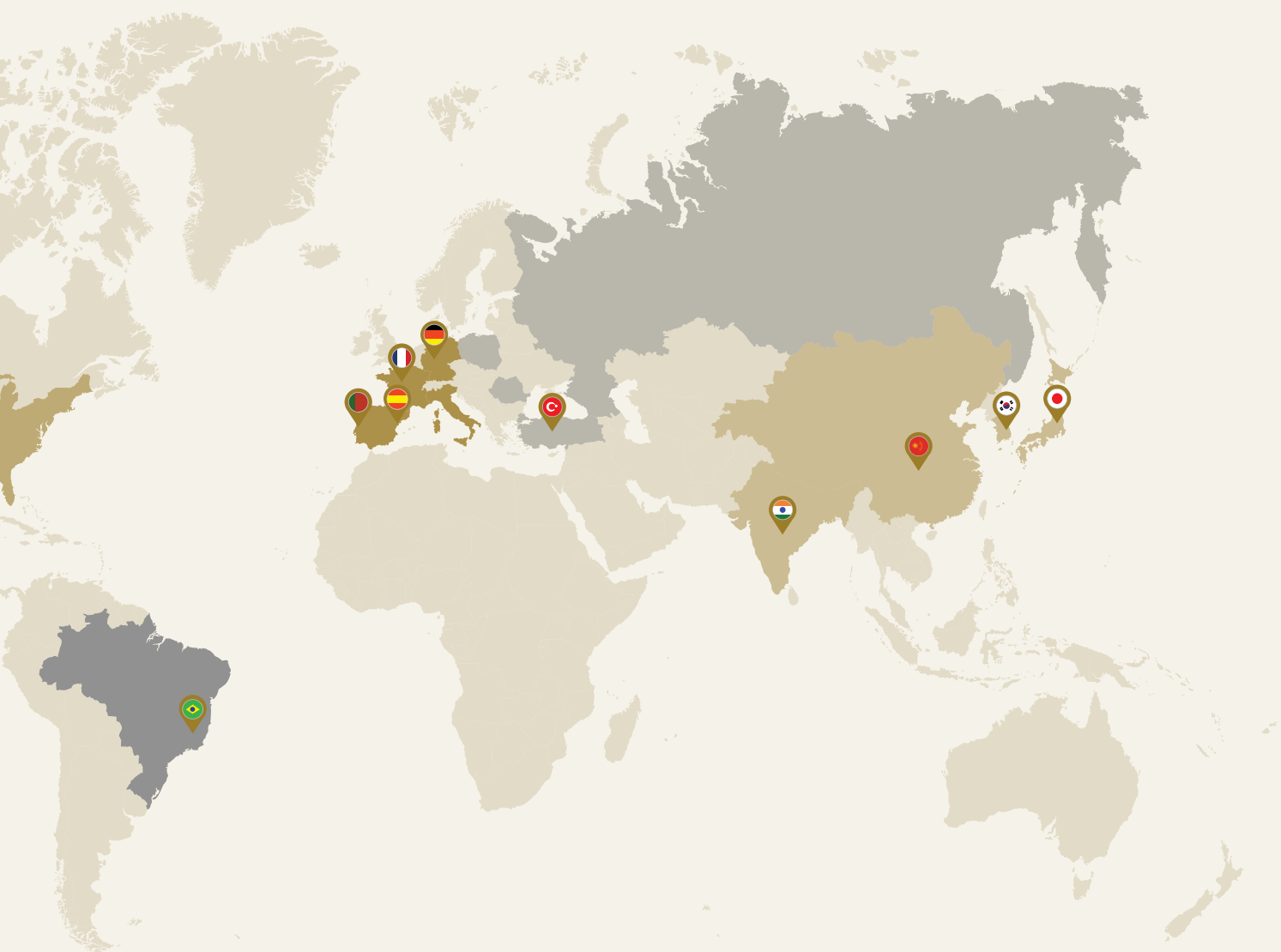
-  · Sao Paulo

-  · Detroit (Mi)
-  · Monterrey

-  · Korea (Joint-venture)
-  · Tokyo (Office)
-  · Shanghai
-  · Pune (Joint-venture)



**The Technology Centre in Viladecavalls (Spain) acts as the driving force for the group's global research efforts and fuels the 13 development centers we have around the world.**



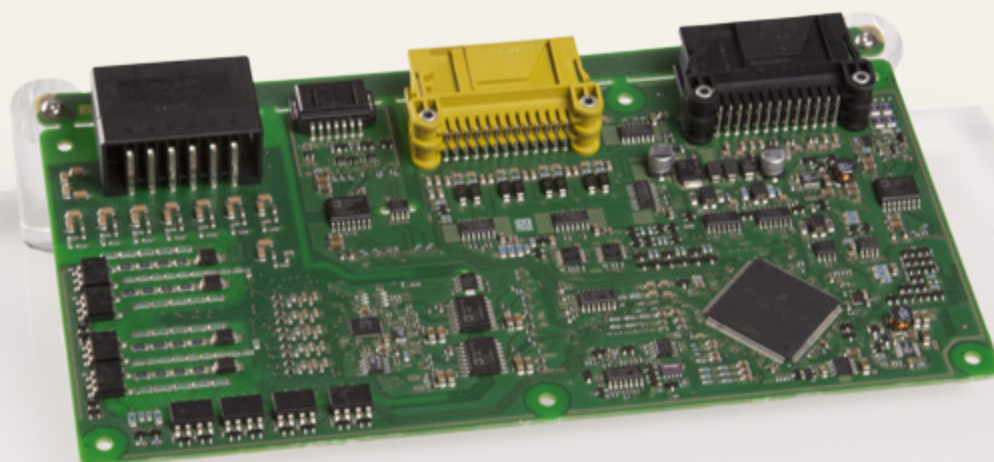


We also collaborate, both nationally and internationally, with other companies, engineering firms, universities and technical centers on studies, training, advisory services, technology transfer, validations, tests, etc., that allow us to develop products with greater value added, exchange synergies, optimize and share resources and, above all, generate and manage knowledge.

In 2016, the company has invested nearly 6% of its annual revenue in R&D in order to give its customers the most innovative solutions possible. Ficosa currently holds 470 active patents and it is one of the most active companies in Spain in terms of patenting.

R&D Expenditure (thousand €)

64,316



 FICOSA  
 FICOSA

## | Innovation in high-value products

Ficosa is convinced that its success and future are founded on innovative products that benefit people and help them to have safer and more efficient ways of driving.

## | SAFETY - VISION

### The Challenge

Actions to reduce death and injuries on roads are urgently needed. About 1.25 million people die each year as a result of road traffic crashes. Without action, road traffic crashes are predicted to rise to the 7th leading cause of death by 2030. Over the last decades, the EU has made great progress in reducing road fatalities. Between 2001 and 2010, Europe cut the number of road deaths by 43% in spite of the increased traffic volumes, and reduced it by another 17% since 2010. Nevertheless, there is still work to do to achieve the ambitious road safety target of halving the global number of deaths and injuries from road traffic crashes by 2020 (Source: 2030 Agenda for Sustainable Development).

### Collaboration with national and international program

#### (I\_HeEro) Harmonized eCall European Deployment

- Ficosa is participating in the deployment of eCall service in Europe. The deployment project is aimed at the preparation of the PSAP in EU Member States for the deployment of eCall based on 112 as reference implementations.



In these projects, 14 EU participating Member States and 1 associated country analyzed the feasibility and robustness of the eCall service with pilot installations on both the PSAP and vehicle side. After March 2018, the system eCall will be installed in all new type of cars and light vans sold in the European Union.

## ESCAPE (European Safety Critical Applications Positioning Engine)

- ESCAPE (European Safety Critical Applications Positioning Engine) is a three-year project funded under the Fundamental Elements program of the GSA (European GNSS Agency). Its aim is to exploit the services offered by Galileo, the European satellite navigation system, by designing a dedicated reliable and accurate engine natively targeted for the automotive safety-critical applications.



- The project, kicked-off in October 2016, is led by Ficosa in collaboration with Renault, GMV, ST Microelectronics, IFSTTAR and ISMB. As project coordinator, Ficosa manages the financial and contractual matters of the project and acts as the bridge for all communications between GSA and the consortium. Ficosa also leads the development of the engine's hardware and software.

## C2C-CC (Car to Car Communication Consortium)

- The CAR 2 CAR Communication Consortium (C2C-CC) is a nonprofit, industry driven organization initiated by European vehicle manufacturers and supported by equipment suppliers, research organizations and other partners. The C2C-CC is dedicated to the objective of further increasing road traffic safety and efficiency by means of cooperative Intelligent Transport Systems (C-ITS) with Vehicle-to-Vehicle Communication (V2V) supported by Vehicle-to-Infrastructure Communication (V2I).



- It supports the creation of European standards for communicating vehicles spanning all brands. As a key contributor, the C2C-CC works in close cooperation with the European and international standardization organizations. In cooperation with infrastructure stakeholders the C2C-CC promotes the joint deployment of cooperative ITS.



## What we are offering our customers

### ERA GLONASS SYSTEM

- For the first time, the company has manufactured telematic modules certified for ERA GLONASS. The ERA GLONASS system is the Russian equivalent to the European eCall system. The emergency system inside the vehicle consists of a telematic unit (In Vehicle Telematic Unit, iVTU) that incorporates a special SIM card as well as a user interface module. The safety systems and emergency services are fundamental to save lives on the road. Getting an immediate alert in the event of an accident and knowing the exact location of the crash site cuts emergency services' response time by 50% in rural areas and 40% in urban areas.

### V2X (VEHICLE-TO-X) UNITS

- Vehicle-to-everything (V2X) communication is the passing of information from a vehicle to any entity that may affect the vehicle, and vice versa. It is a vehicular communication system. The main push for V2X is safety, with energy savings also being important. In addition, V2X technology offers a range of everyday convenience benefits. For example, V2X systems integrate automatic payments for tolls, parking, and similar fees.

- V2X systems are mainly geared toward safety, and they can be programmed to be aware of all surroundings in order to help prevent collision. In a traditional vehicle, V2X systems can convey important information to the driver regarding inclement weather, nearby accidents and road conditions, and the dangerous activities of nearby vehicles. Similarly, in autonomous vehicles, V2X provides extra information beyond the reach of the vehicle's existing system. As V2X use expands, its advantages will become more pronounced.

- V2X communication is based on WLAN technology and works directly between vehicles or the infrastructure, which form a vehicular ad-hoc network, as two V2X senders come within each other's range. Hence it does not require any infrastructure for vehicles to communicate, which is key to assure safety in remote or little developed areas. It is particularly well-suited for V2X communication, due to its low latency and the ability to communicate instantly. It transmits messages known as Common Awareness Messages (CAM) and Decentralized Notification Messages (DENM) or Basic Safety Message (BSM). The data volume of these messages is very low. The radio technology is standardized as part of the WLAN IEEE 802.11 family of standards and known in the US as WAVE (Wireless Access in Vehicular Environments) and in Europe as ITS-G5.

- The main motivation for vehicular communication systems is safety and eliminating the excessive cost of traffic collisions. According to World Health Organizations (WHO), road accidents annually cause approximately 1.2 million deaths worldwide; one fourth of all deaths caused by injury. Also about 50 million people are injured in traffic accidents. If preventive measures are not taken road death is likely to become the third-leading cause of death in 2020 from ninth place in 1990. A study from the American Automobile Association (AAA) concluded that car crashes cost the United States \$300 billion per year. It can be used for automated traffic intersection control.

- There has been a significant rise in the use of electronics in vehicles. Vehicles today have shifted from being conventional vehicles to intelligent vehicles and are equipped with communication systems that alert to or assist the driver in a potential accident. Moreover, the rising consumer demand for convenience features has forced various OEMs to incorporate V2X communication systems. The implementation of V2X communication will not only increase safety but will also provide an enhanced driving experience.

## Intelligent Rearview Monitor System (IRMS)

- In March 2016, Ficosa has developed an intelligent interior mirror (IRMS), the first product codeveloped with Panasonic as a result of the alliance between both companies. This system, which has an integrated display in the structure of the interior rearview mirror, works as a mirror or as a monitor that relays images from the camera located at the rear of the vehicle, according to the driver's needs. The intelligent interior mirror provides a significant added value to the conventional mirror, enhancing the driving experience and increasing safety and driving comfort. This solution extends the rearward field of vision up to a value of 50°, which considerably reduces blind spots.

- Ficosa is already working with several vehicle manufacturers on the development of mirrorless cars that will be on mass production after 2019. The rear-view and side-view mirrors are replaced by three cameras and a special screen to show drivers what is behind and around their cars. The car's software stitches all of the video feeds together for a very wide view of the road.

## Camera Monitor System (CMS)

- In 2015, the company developed an electronic mirror composed of cameras and displays which implies an alternative option to the exterior rear-view mirrors of the car. This pioneering system, also known as CMS, means an authentic revolution for the automotive industry as well as an important progress towards the autonomous car. The electronic mirror offers a new safer and more comfortable driving experience through the inclusion in the vision systems of Advanced Systems Driver Assistance (ADAS), such as the traffic detection function, which provides information to the driver about the vehicles around it. Currently, Ficosa is working with an Original Equipment Manufacturer (OEM) on the integration of CMS, customizing it according to its requirements.

## Sensors and Cameras Cleaning

- Ficosa has patented a product that expels water and air to remove dirt from sensors and cameras. Any dirt that adheres to the lens can disable its function and affect the driver's visibility. In that sense, this innovative product removes dirt from cameras and sensors through a hybrid system that expels water and/or pressurized air depending on the need and lenses position, guaranteeing at all times a proper performance. The first 3 production orders have been booked for this system.

## | COMMUNICATION & CONNECTIVITY

### The Challenge

The automotive industry is undergoing a series of transition, the industry moving towards digitalization and connected mobility. While automotive digital technology has traditionally focused on optimizing the vehicle's internal functions, attention is now being drawn to developing the car's ability to connect with the outside world and make the care experience safer, more comfortable and more informed.

### What we are offering our customers

#### **SMART CONNECTIVITY MODULE (SCM)**

- Ficosa is working to create a more interconnected world, where communication has no limits. In February 2016, Ficosa presented the latest technological developments in automobile connectivity carried out by its Advanced Communications Business Unit at the Mobile World Congress 2016 in Barcelona. The company has developed a pioneering system that allows all the passengers to have connectivity simultaneously and independently. This innovative solution was created to merge Smart Connectivity Module (SCM) designed by Ficosa with one of its telematic 4G LTE connectivity modules. The new product called SCM is able to integrate into a single device the following features: 4G internet connection, WiFi hotspot, Bluetooth, GPS positioning for each specific market, analog radio services (AM/FM), digital radio (DAB) and satellite radio (SDARS). It also incorporates the mandatory emergency call in Europe (eCall) and Russia (ERA GLONASS), as well as optionally the V2X service (for communication vehicle-to-vehicle or vehicle-to-infrastructure).

#### **Connected Police Car**

- In March 2016, Ficosa presented the Connected Police Car, a vehicle equipped with the most advanced technology that converts patrol cars into real mobile police stations. This project, carried out in collaboration with Telefónica, has been presented at SICUR 2016 (International Security, Safety and Fire Exhibition). The Connected Police Car project, which is in its pilot phase, has already been implemented in seven cars currently circulating in the provinces of Madrid, Zaragoza and Valencia. After this trial period, it is expected to be implemented in 150 to 200 patrol cars throughout Spain.

#### **Rearview mirror that incorporate electronic toll function**

- In September 2016, Ficosa and Panasonic signed the first contract for co-developing a product. Both companies will produce an interior rearview mirror for a major European manufacturer (OEM), which will incorporate an electronic toll function that allows the automatic payment of motorway tolls without having to stop the vehicle. The project, which will last for seven years, is valued at 50 million euros and will be produced in Ficosa's plant in Viladecavalls (Barcelona).



## | EFFICIENCY

### The Challenge

The reduction in greenhouse gas global emissions the progress on decarbonization economy and the expected growth in mobility in the upcoming years highlight the need for efficient and environmentally sustainable vehicle technologies.

### Collaboration with national and international program

#### Alise Consortium



- Ficosa is participating in the ALISE consortium. ALISE is a pan European collaboration focused on the development and commercial scale-up of new materials and on the understanding of the electrochemical processes involved in the lithium sulphur technology. In this collaboration, Ficosa is working on the development of the full Battery Pack, using the Li-Ion modules developed. The Battery will include a Battery Management System (BMS) adapted to the new LiS chemistry developed during the project.

#### 3Ccar



- Ficosa participates in the European collaborative project 3Ccar founded by the ECSEL Joint Undertaking. The 3CCar solution brings together a consortium of 50 partners from 11 countries covering the complete value chain from the semiconductor supplier up to the vehicle manufacturer. The main goals are improving the efficiency and reducing the complexity of the electric vehicles control architecture and its subsystems. In this project, Ficosa is working on a new concept of On-Board-Charger (OBC) for optimizing the manufacturing and materials costs, while improving volume, weight and reliability.

#### RIS3CAT (Research and Innovation Strategies for Smart Specialization)



- Through the Notecar project, Idneo is working on a new concept of OBC for high-voltage electric and hybrid vehicles batteries. The main objective is to minimize the device and simplify its industrialization. The new concept will be offered to manufacturers who are interested in improving the current technology, and will serve as a basis for the development of new devices for different sectors, such as the renewable energies. This project is in line with the Greentronics project and the working group called Eco-mobility created through the RIS3CAT R&D Strategy and led by Ficosa.

## CAR-NET (Cooperative Automotive Research Network)



- The Cooperative Automotive Research Network, initiated by SEAT, Volkswagen Group Research and Universitat Politècnica de Catalunya (UPC), is an open hub for industrial and academic partners from the areas of automotive and mobility research & innovation.
- Ficosa is a member of this knowledge hub for automotive science and technology, focused on urban mobility, and based in Barcelona. Its ambition is to become a benchmark in this area, in close alliance with European counterparts. CARNET is a cooperation platform for the mobility industry, local universities and institutional partners that has the following strategic goals:
  - a) Organizing urban mobility activities in Barcelona
  - b) Contributing to strengthening the automotive sector in Spain, and Catalonia in particular
  - c) Recruiting proactively for the automotive industry
  - d) Networking to seek international research funding (in cooperation with international partners)

### What we are offering our customers

#### Battery Management System

- Ficosa has been developing jointly with German OEM's the new generation of Battery Management System. The focus areas of the e-mobility lay mainly in efficient and reliable high-voltage energy control.

#### On-Board Charger System

- The company is working on the promotion of a new integrated concept of On-Board Charger (OBC) with Panasonic. The OBC is a system that is able to provide energy to charge Electric/Hybrid vehicles batteries, such as cars, buses or motorbikes. The technology under development fits on AC network as well as DC infrastructure.

## | Idneo

Idneo provides services of development, validation and manufacture of technological products to clients of global scope.

In the last four years, Idneo has doubled its turnover by exceeding 9 million of euros and has increased its workforce by 40%. Idneo has now a team of more than 300 professional engineers, highly qualified and with a wide expertise in Ficosa targeted markets: automotive, medical equipment, consumer electronics and industrial sectors.

The company commitment to internationalization has also played a key role in the company's growth. With presence in the United States, Germany and France through local partners, Idneo invoiced 26% of its sales abroad, representing 51% more than the previous year.

In 2019, Idneo expects to increase by 77% (base year: 2014) by opening offices in the United States and Germany and focusing on new sectors beyond the automotive industry such as the field of medical devices and Industry 4.0.





## | On-board Ventures

At Ficosa, we understand that innovation is a must if we want to stay a leader in a dynamic competitive landscape. At the same time, we are experimenting every day how difficult it is to bring a technology concept to a consolidated business. In this context, the company has decided to create Onboard Ventures, an open innovation eco-system with the aim of:

- Exploring innovative and business models to gain new business opportunities for Ficosa and Idneo
- Accessing entrepreneurial talent and energy
- Being a group reference for Entrepreneurship initiatives
- Networking with Universities, VC, accelerators and other corporate ventures

Onboard Ventures' mission is to establish a mutually beneficial business relationship with start-ups. This open innovation initiative aims to identify start-ups in the automobile, mobility, industry 4.0, medical equipment and smart vision systems sectors that can benefit from Ficosa's and Idneo's know-how. This new business unit is based on allowing start-ups to take advantage of all Ficosa's and Idneo's potential to develop their ideas and projects successfully and generate new business opportunities by offering different ways of partnering with them, such as commercial/ technical agreement, licensing, joint production, services as equity or access to capital.

In 2017, the business units will implement two main programs:

### 1 **Discovery:**

This program is designed for early and seed stage projects. The main goal is to move from Minimum Valuable Products (MVP) to delivering products with our engineering capacities.

### 2 **Open Innovation:**

This program is designed for projects in a growing stage, having customers already on board and looking for scaling capacity. This program offers any start-up the chance to create a joint venture, through a commercial deal giving them access to Ficosa's and Idneo's portfolio and promoting projects to give them global reach.

## | APPENDIX 1 – OHSQE POLICY

Ficosa's integrated management policy is based on Upper Management's commitment and the participation of all the staff in order to ensure continuous improvement in their work.

With this aim, Management affirms its commitment to and responsibility for implementing, maintaining and continually improving an integrated management system, based on:

It must be communicated and understood by the whole Company and reviewed periodically. It must be of interested parties' domain. It must be appropriate to the nature of our Company (activities, products and services).

1. The organization's values and philosophy of operations, clearly established in the MISSION, are the guidelines for each member of Ficosa.
2. Ficosa permanently believes that each product and project developed for our customers shall fulfil and exceed their expectations regarding time, quality, safety and cost.
3. The company firmly believes that excellence in each project and product are achieved with the participation of all the people that comprise Ficosa. Daily enthusiasm and permanent challenges for improvement are essential for this purpose and each leader's responsibility.
4. Occupational health and safety is a fundamental part of our work; that is the reason why we are committed to supporting and fulfilling the policies and regulations related to the preservation of our personnel health.
5. The development of our Company must be guided toward continual improvement in our work (in occupational health and safety, quality and environment). It is our obligation to improve the effectiveness of our Integrated System every day.
6. Respect for nature and the observance of universally declared pollution prevention and control principles shall be kept as a reference framework for the performance of our activities. The development of our organization can and must walk alongside the preservation of the environment and the mitigation of and adaptation to climate change.
7. Environmental questions are a common issue, therefore, each of the internal members (workers and collaborators) and external members (suppliers and subcontractors) have the right and the moral obligation to participate in their implementation and to collaborate in their maintenance.
8. Ficosa has a framework for establishing objectives and goals for occupational health and safety, quality and environment, and reviewing these objectives is a high priority function in the development of our Company. These objectives must be based on the stakeholders' requirements, as established in the MISSION.
9. Compliance with current legislation and regulations on occupational health and safety, quality and environment for Ficosa.

Ficosa reaffirms its support for the Ten Principles of the United Nations Global Compact in the areas of Human Rights, Labor, Environment and Anti-Corruption. In this third CSR report, Ficosa describes its actions to integrate the Global Compact and its principles into its business strategy, culture and daily operations.







## **Grupo FICOSA**

Gran Vía Carlos III, 98 08028 Barcelona (Spain)

Tel + 34 93 216 34 00

Fax + 34 93 490 10 63

**[www.ficosa.com](http://www.ficosa.com)**