Corporate Social Responsibility 2018
## Index

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Dear All,

I am pleased to share with you our fifth CSR report, which aims to offer readers an overview of Ficosa’s performance in facing the challenges of the automotive sector, and describe our actions to integrate the United Nations Global Compact and its principles into our business strategy, culture and daily operations.

At our Company, we continually strive to deliver excellence in our products and to do so, we continue to work on providing the most innovative solutions, developing and manufacturing products with high added value and high quality standards.

The automotive industry is going through a spectacular technological transformation in which electronics and electromobility are set to change business models and the products and services of the future. We are entering a new era in which cars are no longer just a means of transport, but become Smart Cars, connected devices that will form the central hub of the Internet of Things. Connected cars 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 multi-platform source of communication in which the interconnection between people, objects and infrastructures has no limits. At the same time, one of Ficosa’s future visions is to venture into the efficiency of new energy vehicles. Ficosa develops software and hardware solutions for the operation of hybrid, electric, and fuel cell vehicles. These products impress with their quality, reliability, innovative technology, and compliance with the strictest requirements.

In this regard, at Ficosa, we have undergone a profound technological transformation in recent years by focusing on three areas of growth: connectivity, safety and efficiency.
This year, 2018, we have achieved the following technological product sales:

- Ficosa has successfully accomplished the first worldwide Cellular-V2X deployment in the city of Denver under the CityNOW Project and has also been awarded to supply the TCU (Telematic Control Unit) for Harley-Davidson motorcycles, where Panasonic will provide Cloud Services through OneConnect Platform.
- Ficosa was awarded a contract for two BMS (Battery Management System) programs for a German OEM.
- Ficosa has won contracts for the success of their Intelligent Interior Mirror for light commercial vehicles with an integrated toll payment system in the interior mirror.
- Ficosa closed several deals for new Shift by Wire gearbox including a contract for an EV in Silicon Valley and several gearbox actuators.
- Ficosa developed and manufactured the digital rear-view system (CMS) of the Audi e-tron, the first vehicle on the market to include this new technology. New programs have been awarded for other OEMs.
- Ficosa won contracts for Surround View Systems and Rear View Cameras (including 16 million cameras and 3 million ECUs).

These new technological products aimed at more assisted driving, the autonomous vehicle, the connected car and e-mobility, have become the pillars of the group’s growth. We forecast that the sales of these new technological systems will increase from €100 million in 2017 to around €800 million in 2023/2024.

Furthermore, as we are committed to cutting-edge innovation to remain at the top end of the sector, 8% of revenue was invested in R&D in 2018. We expect to maintain these high rates for the future.

Ficosa has been actively working with Panasonic during 2018 to materialize synergies in three areas: Technology, Customers and Geography. New milestones have been achieved. Products like Telematics Control Units for cloud services, Gearbox Actuators and 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. For this reason, we continue to strengthen our quality standards by implementing stricter rules in the 3Q3 audits for manufacturing plant and supplier management. I would also like to highlight the strong Ficosa worldwide presence and its new premises. During 2018, Ficosa inaugurated its first production centre in Morocco and its new e-Mobility Hub in Viladecavalls (Barcelona, Spain), a pioneering centre at international level for electric mobility technology.

With an investment of €50 million, Ficosa’s new facility in Rabat will become the Centre of Excellence in Automobile Cameras for the whole group, bolstering the company’s hub for new technologies in vision, connectivity, safety and efficiency in Viladecavalls. The plant will employ 700 people and deliver an estimated yearly turnover of €150 million by 2022.

The e-Mobility Hub is positioned as the driving force for electromobility solutions for Ficosa at a global level and adds to the other Connectivity and Safety hubs that Ficosa has in Viladecavalls, consolidating its leadership in key technologies in the transformation of the automobile.

At the same time, a new technical centre in India (Hyderabad) took its first steps to support the local OEMs on customization, testing and validating needs as well as to become a future software development centre for new technologies.

Ficosa’s journey towards internationalization stands out 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 present new challenges for the company as competition for specialists is growing in the global labour markets. For this reason, we want to ensure that all our employees are provided the working conditions they deserve. Ficosa’s commitment to its employees is the result of our strong employee management programme, based on maximizing the potential of our employees.

We maintain a solid commitment towards integrity. One example of this is our continued support for the Ten Principles of the United Nations Global Compact in the areas of Human Rights, Labour, Environment and Anti-Corruption. Moreover, the new release of the Corporate Code of Ethics, approved by our Board of Directors, was shared and acknowledged by our employees in 2018.

Our Code of Ethics defines the standards and responsible behaviour expected of all those related to the Company and with which they must comply. We are all responsible for complying with these benchmark standards, which are essential guidelines in order to guarantee our management model.

The Code is an extension of our values, which convey the essence of our Company, how we think and believe we should act. I believe that the real value of a company is in its employees.

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

Sincerely yours,

Josep Maria Pujol
President
This 2018 Report aims to offer readers a transparent and balanced overview of Ficosa’s performance in relation to the non-financial or CSR challenges that the company has faced in 2018.

**Objective of the Report**

In this report, Ficosa aims to explain how non-financial and diversity risk and CSR challenges are approached, and Ficosa’s performance in 2018, for the purpose of offering stakeholders complete and reliable information. The company has centred this report on explaining how it takes environmental, ethical, labour, social, and human rights aspects into consideration during the daily operation 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 labour rights, the environment and the fight against corruption. Furthermore, this CSR report describes how our company is progressing in each of the Sustainable Development Goals (SDGs). Our core business determines which of the global sustainability goals Ficosa supports first and foremost. In particular, our activities focus on health and safety (SDG3) and combating climate change (SDG 13). In addition to this, our commitment to sustainable practices includes decent work and economic growth (SDG 8), responsible consumption and production (SDG 12), and promoting peace and justice (SDG 16).

This report has been prepared in accordance with the provisions of the Sustainability Reporting Guidelines belonging to the Global Reporting Initiative (GRI Standards). Therefore, in determining the content to be included in this report, we consider the pertinent developments, initiatives and the materiality analysis carried out in 2018. The materiality analysis took the Ficosa CSR diagnosis (gap analysis) as the starting point and the action plan prepared in 2015 involving the CEO, the members of the Executive Committees and our key Management subsidiaries. It was complemented with external sources such as the GRI Pilot version of the Automotive Sector Supplement and the Auto Parts Sustainability Accounting Standard prepared by the SASB (Sustainability Accounting Standards Board).

Other key drivers included the Drive Sustainability (biggest world automaker partnership to promote sustainability) guidelines set out in the Automotive Sustainability Guiding Principles which outline expectations for suppliers on key responsibility issues including human rights, environment, working conditions and business ethics.

In addition, the EcoVadis CSR assessments requested by several of our OEMs have also been taken into consideration. EcoVadis provides the holistic Corporate Social Responsibility (CSR) ratings service for companies.

To summarize, the key points to highlight in this report are:

- **Customer satisfaction through quality**
- **Sustainable innovation and technology**
- **Diversity and Integration**
- **Development, training and knowledge management**
- **Occupational Health and Safety**
- **Healthy lives and well-being promotion**
- **Climate change mitigation**
- **Commitment to society**
- **Responsible Sourcing, Consumption and Production**
The 2018 CSR report covers the period from 1 January 2018 to 31 December 2018. 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, is consequently, responsible for their operation and control. Thus, the report includes information from our operations in Asia, Africa, Europe, North America and South America.

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

The report focuses on the company’s the main business lines: research, development, production and sales of high-technology vision, safety, energy efficiency and connectivity solutions (connected cars, driverless vehicles, assisted driving e-mobility).

Biodiversity is not included in the scope of this report, as Ficosa operational sites are not located in protected areas or areas of high biodiversity value. Additionally, the impact of our activities, products, and services on biodiversity are not significant.

There are no IUCN Red List species or national conservation listed species with habitats in areas affected by the operations of our organization.

On the other hand, this report does not include the company Idneo Technologies, S.A., since it left the Ficosa Group in March 2018, so including three months in this report would distort the sustainability indicators. Likewise, the joint venture Tata Ficosa Automotive Systems Ltd is not included either as it is a 50% - 50% JV.

In addition, the indicators regarding occupational Health, Safety and Environment only cover the Ficosa sites where there are vehicle parts manufacturing plants due to their materiality. So, the following sites have not been considered in the OHSE indicators: Le Neubourg (France), Rüsselsheim (Germany), Köln (Germany), Lindau (Germany), Hyderabad (India), Venaria Reale (Italy), Kuala Lumpur (Malaysia), Detroit (USA) and Tokyo (Japan).
The company, headquartered in Barcelona (Spain), generated sales of €1,184 million in 2018 and has a team of more than 10,000 employees, with manufacturing plants, technological centres and business offices located throughout 18 countries in Europe, North America, South America, Africa and Asia. Ficosa has been expanding its international presence based on its strategy to be located near the decision and production centres of the majors OEMs 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 the international activity of the company. Ficosa has gained new customers and initiated new programs in all regions, mainly in Asia. In addition to boosting its global presence, Panasonic and Ficosa are combining their respective technologies to jointly develop products such as electronic mirror systems, next-generation cockpit systems and Advanced Driver Assistance Systems (ADAS), which will facilitate business expansion in fields where future growth is anticipated. With this transaction, Ficosa will accelerate the commercialization of products jointly developed by both companies.
- Dieuze
- Le Neobourg
- Dabrowa Gornicza
- Pune (two plants)
- Pant Nagar (Joint-venture)
- Hyderabad
- Venaria Reale
- Morcone
- Rüsselsheim
- Köln
- Lindau
- Wolfenbüttel
- Taicang
- Chongqing
- Shenyang
- Gyeongsangbuk-do (Joint-venture)
- Tokyo (office)
- Kuala Lumpur
- Sala Al Jadida
- Bursa
- Gemlik
- Pune (two plants) (Joint-venture)
- Pant Nagar (Joint-venture)
- Hyderabad
Ficosa is now one of the top-tier global providers operating in the research, development, manufacturing and marketing of high-technology vision, safety, connectivity and efficiency systems for the automotive and mobility sectors. Ficosa ended 2018 with sales in considerable excess of 1 billion euros for the year. The solid growth experienced by the company since 2012 is due to a clear commitment to globalization, operational efficiency, innovation and activity diversification.

Ficosa’s internationalization strategy responds to its strong commitment to keeping a close relationship with its clients to offer a better service. Therefore, the company is continually strengthening its international presence. During 2018, the company began the process of implantation in new markets. In March 2018, Ficosa inaugurated its first production centre in Morocco. At the same time, a new technical centre in India (Hyderabad) took its first steps to support the local OEMs on customization, testing and validating needs as well as to become a future software development centre for new technologies.

In 2018, the regions where Ficosa registered the greatest increase in sales volume were Asia and Europe. In Europe, growth came mainly due to a higher market volume in existing projects and the new products launched in New Technologies. In Asia, it was attributable to programs with local OEMs, growing market share. Growth in China would have been bigger if it had not been impacted by the general reduction of car production and sales in the second half of the year. The threat of commercial war with the USA led to a reduction in consumption, reducing annual sales of vehicles for the first time in about two decades.

North America sales reduced compared to last year due to unfavourable exchange rates and lower volumes in some OEMs. Nevertheless, this has become, after Europe, the most important market for Ficosa, which

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**Sales per region 2018 (€ million, %)**

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<th>Region</th>
<th>Sales (€ million)</th>
<th>Percentage</th>
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<tr>
<td>Asia&gt;</td>
<td>163</td>
<td>14%</td>
</tr>
<tr>
<td>Europe&gt;</td>
<td>779</td>
<td>66%</td>
</tr>
<tr>
<td>North America&gt;</td>
<td>214</td>
<td>18%</td>
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<tr>
<td>South America&gt;</td>
<td>28</td>
<td>2%</td>
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**Sales (€ million)**

- 2012: 902
- 2013: 925
- 2014: 939
- 2015: 1,100
- 2016: 1,153
- 2017: 1,190
- 2018*: 1,184

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(1) €828 million in sales, excluding the temporary contracts with Sony
(2) The appreciation of the euro against all the currencies of the non-euro countries where Ficosa is present (except Malaysia) led to a small reduction in 2018. At constant currency, sales would have increased by 1.7%, compared with global car production decreasing 1.0%.
began operations in this region in 1994, where it produces mirrors, gearboxes and brake systems. In the United States, Ficosa currently has a sales office and a development centre in Detroit (Michigan); a manufacturing plants in Shelbyville (Kentucky) and Cookeville (Tennessee), which replaced the Crossville factory (Tennessee) at the end of 2016. This facility, in which the company has invested more than $50 million, is equipped with the latest technology, making it the group’s most advanced plant in the world and boosting overall efficiency, operating capacity and competitiveness. Furthermore, 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.

In Brazil, sales remained stable when converted to euros but would have grown 17.2% in constant currency. The additional volume was the result of the general improvement in the economy, with car sales improving at almost 10%, and additional projects launched in late 2017. Those effects compensated the impact of the deterioration of the Argentinian economy. Ficosa also benefited from the opening of their new factory in Jandira (Sao Paulo), in 2016. This 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 has also a R&D centre that develops solutions for the Mercosur region.
Structure of Ficosa International

At present, Ficosa is a conglomerate of companies formed by engineering centers, manufacturing plants and commercial offices, distributed all over the world. The group is organized into different Business Units, most of them are detailed below.

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

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

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

04 Advanced communications:
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 Advanced Driver Assistance systems:
Develops, produces and commercializes systems that assist drivers during the driving process.

07 E-mobility:
Develops, produces and commercializes electric powertrain technologies and connected infrastructures to enable the electric propulsion of vehicles and fleets.
Ficosa is composed of two business groups: Traditional products and New Tech products. Within the traditional products category, most significant is the rear-view systems which represent around 62% of total sales. Ficosa is one of three global leading companies in this area.

In terms of product, the major increase in sales has occurred in new technological products focused on safety and comfort systems (ADAS), e-Mobility and advanced communications.

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.

Both companies are already working together in this direction on new products linked to active safety (advanced mirrors), electric cars and communication systems (connected car).
Ficosa inaugurated its e-Mobility Hub on October 8th 2018. This centre specialises in electromobility systems for hybrid and electric vehicles and is a pioneer at a national and international level. Located in Viladecavalls (Barcelona), the company has invested more than €10 million in this new 1,200m² facility, employing more than 120 engineers, 60 of which are new recruits.

The e-Mobility Hub will become a global benchmark in the development of electric mobility technology, driving Ficosa’s leadership in an area that is key for the mobility of the future. In this regard, it plays a strategic role, as it will become a driving force in electromobility solutions for the whole group on an international level.
New manufacturing plant in Morocco

Ficosa has established itself in Africa for the first time, opening a new production centre in Rabat (in the Technopolis free zone), Morocco. With an investment of up to €50 million, the new plant was inaugurated in March 2018 and will employ roughly 700 people with an estimated yearly turnover of €150 million by 2022.

At this new plant, which has a total surface area of 12,000 square metres that can be expanded to 17,000, Ficosa is inaugurating its Centre of Excellence in Cameras for the whole group, where the company will develop and produce highly complex vision systems that are crucial for the car of the future. These facilities will also produce electric cable sets. In addition, they will manufacture traditional products for the local market, such as rear-view mirrors, shifter systems and washer systems, with the goal of providing a better service.

Ficosa reinforces its presence in Portugal

Ficosa has boosted its presence in Portugal with a new 7,800 m² facility. This new space, in which the company has invested €5 million, is an expansion of Ficocables, the Ficosa plant in the city of Maia (Oporto).

These new facilities strengthen Ficosa’s capacity in Portugal by re-organizing its facilities to support its commitment to competitiveness, efficiency and productivity, as well as providing a better workplace for all of its employees.

In this regard, the new building, which is now completed and was expected to go into use on January 2019, features newly created spaces equipped with the latest-generation technology to meet the very highest standards of energy efficiency. These include technical offices, engineering rooms and laboratories, with a more modern, fresher image. Likewise, it significantly increases the social spaces available to employees, including a canteen with food services, dining halls, first-aid area, new car park and outdoor green areas.
How do we work?

Mission
In particular, our mission is to innovate, develop and create high added value products that contribute towards improving mobility in key aspects of progress such as safety, comfort, communications and the environment, exceeding market and customer expectations.

Vision
Our strength comes from our commitment. For us, success is not measured by size, but by flexibility, speed and creativity, and in understanding that being the best means meeting the needs of our employees, customers, community and shareholders alike.

Values
At Ficosa, we believe that success depends on how we live our Vision and the Values on which it is based. Our Values reflect the spirit of our company, the way we think and how we believe we should act, and have become the mainstay of our Code of Ethics. We are convinced that if we act in accordance with our values, we can achieve our Vision. The company values are on display at the different company sites and every new employee receives an explanatory leaflet informing them about our values when joining the company.
The values that guide our conduct and identify us as a company are as follows:

Caring for People:
People are a key part of our corporate project. Learning and training, respect, diversity, concern, friendly and informal relationships should reflect the very essence of us as a company.

Teamwork /Learning together
Sharing knowledge, openly communicating, learning from mistakes, cooperating, and understanding that personal success is the company’s overall success.

Commitment & Passion for Work
Enthusiasm for the corporate project, knowing how to live our values. Feeling part of the fulfillment of our vision, persevering with hard work, enjoying work and a job well-done. Everybody’s work is equally important.

Innovation & Creativity
All our employees have the capacity to exhibit and create; therefore, we have to enable their ideas to emerge through our leadership. Brave the market by being bold and assuming risks, but always with sound judgement.

Customer Focus
Helping our customers achieve success is key to us achieving ours. We should be able to build relationships based on trust with them, understanding and anticipating their needs.

Honesty & Integrity
Being honest and acting with integrity in all our actions and behaviors. Ethical principles and our values should guide us in our day-to-day decisions.

Leadership
Modesty, not taking center stage, understanding that everybody’s work is equally important, is essential in Ficosa’s leadership style. Lead by example and showing appreciation for people. Delegate, decentralize, and trust in the ability of people. Live the values that constitute the essence of the company.
FICOSA and the Sustainable Development Goals
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. CSR makes our company more sustainable and innovative, which contributes to a more sustainable economy.

In 2018, the Chief Executive Officer holds the ultimate responsibility for implementing our commitment to CSR. Any new CSR initiatives and programs are reported to the Executive Committee. The integration of CSR into daily activities is promoted through a cross-functional organization that involves different business functions and countries.

As a member of the United Nations Global Compact since 2002, we have embraced the Sustainable Development Goals (SDGs).

Sustainable Development Goals (SDGs), introduced in 2016, are an ambitious plan of action defining sustainable development priorities at a global level for 2030, with the aim of eradicating poverty and promoting decent lives with opportunities for all. There are 17 goals and 169 universal targets that are inter-connected, applicable to all nations and people, and that represent a call to action for governments, civil society and the private sector. The company reviews all the SDGs to identify areas where we can maximize our positive contributions. We focus our activities related to sustainability on those SDGs that greatly influence our business model and value chain and help us bring about real change. This mainly affects the following SDGs and associated sustainability activities:

**SDG 3 —**

**Ensure healthy lives and promote well-being for all at all ages**

According to the World Health Organization (WHO), car accidents kill approximately 1.2 million people worldwide each year, representing a quarter of all deaths caused by injury. Additionally, about 50 million people are injured in traffic accidents. If preventive measures are not taken, road traffic death is likely to become the third-leading cause of death in 2020 from ninth place in 1990. By collaborating with national and international programs to accelerate the development and standardization of connected cars and autonomous vehicles and by developing new emergency systems or new tools and products to improve the vision of the driver, help prevent collision or estimate the degree of attentiveness of the driver, Ficosa is contributing to the Health Goal to reduce road traffic fatalities by 50% by 2020.

*Learn more: Innovation in our products.*
SDG 13 —

Take urgent action to combat climate change and its impacts

The transportation sector is responsible for 14% of global greenhouse gas emissions. Reducing emissions from transport is therefore an important part of any strategy to combat climate change and its impacts, in line with Sustainable Development Goal 13. The widespread electrification of transport through the adoption of electric vehicles (EVs) is one strategy to reduce GHG emissions. If EVs are charged with electricity from emission-free sources, their use can also increase the share of renewables in the global energy mix (Target 7.2 – Affordable and clean energy), and contribute to reducing air pollution and related health impacts (Target 3.9 - Ensure healthy lives and promote well-being for all at all ages and Target 11.6 - Reduce the adverse per capita environmental impact of cities). By investing in research and development to improve efficiency, reducing the complexity of electric vehicles and developing new generations of Battery Management Systems or On-Board Chargers (OBC), Ficosa is contributing to combating climate change and its impact. Furthermore, the company is using less-carbon intensive manufacturing processes to mitigate the effects of climate change.

Learn more: Innovation in our products; commitment to environment.

SDG 12 —

Responsible Consumption and Production

Ficosa is designing and manufacturing products through the responsible use of raw materials and natural resources. The company is working to reduce its waste generation throughout the companies’ life cycle. For example, Ficosa is working in all its operational facilities to increase the recovery of cleaning solvents and other chemicals and to reduce the amounts of these substances emitted from its plants. Furthermore, one of the company’s main goals is to keep the number of defective parts at minimum level and improve both its processes and its employees’ skills, using problem-solving and analysis tools with the aim of reaching zero defects.

Learn more: commitment to environment; commitment to quality.
SDG 16 –
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Ficosa is working to ensure that conflict-free minerals are used in the manufacture of its automotive components. Ficosa implemented an annual supplier inquiry to collect the Standard Survey (EICC/Gesi template) on conflict minerals from all its suppliers. The information collected is internally processed and provides useful information to ensure procurement that is free from conflict minerals originating in the Democratic Republic of the Congo or adjoining countries.

Learn more: Conflict minerals.

SDG 8 –
Promote inclusive and sustainable economic growth, employment and decent work for all

The company has a team of more than 10,000 employees, with manufacturing plants, technological centres and commercial offices located throughout 18 countries in Europe, North America, South America, Africa and Asia. In all the countries where Ficosa operates, the company is building a safe and secure workplace where employees feel valued, where their rights are respected, and where they can do meaningful work.

Learn more: commitment to our people; commitment to health and safety.
Compliance and business 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.

In this direction, a new release of the Ficosa’s Code of Ethics was approved by the Board of Directors in 2017. Our Code of Ethics is an extension of our values and defines the standards and responsible behaviour expected of all those related to the company, and which is of obligatory compliance. We are all responsible for complying with these benchmark standards, which are essential guidelines in order to guarantee our management model. The Code is available for all employees in the Ficosa intranet and it is included in the welcome package given to new employees, to be signed the first working day together with the contract.

In 2018, Ficosa organized training sessions and awareness campaigns to ensure that employees are aware of Ficosa’s new commitments and confirm their compliance with the Code of Ethics. The Code of Ethics was provided to all indirect employees (job positions with mail address) and to all FICOSA countries through a database system requiring acknowledgement by employees. At the end of December 2018, the Code’s employee acknowledgement was 97% (2,551 employees, 10 countries out of 11 showed 100% ratio).

Our Code is available in all FICOSA languages (English, Spanish, French, German, Italian, Portuguese, Polish, Turkish, Chinese and Arabic).

During 2018, a Code of Ethics e-learning program has been designed to be used to train all company employees from 2019.

At Ficosa, we have a body called the Compliance Committee responsible for distributing and ensuring compliance of the Code of Ethics among all the company’s employees. In order to guarantee the effective application of the regulations and the guidelines of this Code, the company has established a whistleblowing channel to notify any breach of the Code of Ethics.

Furthermore, Ficosa’s policies and procedures, available worldwide, ensure compliance with J-SOX in all activities performed in the day-to-day operation of Ficosa. Controls have been implemented to monitor compliance with these procedures and are evaluated regularly to ensure its effectiveness. Periodical audits are carried out.

At 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 has decided to define a Crime Prevention Mode, which was introduced in 2016. The goal was to adopt and effectively implement the appropriate measures to prevent and detect criminal risks and ensure ethical practices within the company. This compliance is integrated as part of a corporate culture, which has always been centred on the promotion of ethical values at all levels.

Under this framework, several regulations, procedures and protocols were implemented to support crime prevention in areas such as money laundering, antitrust, corruption in business, treasury and social security and subsidy fraud, fraudulent and unfair behaviour, gifts and hospitality, intellectual and industrial property, the transportation of persons, goods and other related activities. All the different regulations, procedures and protocols focus on company and sector-specific risks and priorities and cover the facilities and sites where Ficosa holds a majority stake and is consequently responsible for their operation and control.

In 2018, a Compliance Information and Training Programme was launched in order to raise awareness in our organization. In addition, a specific workshop on competence law was prepared in 2018 to be released to our sales, purchasing and R&D teams in 2019.
Ficosa’s values underpin everything we do and must be reflected in our day-to-day behaviour. To ensure every employee understands and truly experiences the corporate values of Ficosa, the company turned them into specific operating principles and communicates them often.

At all sites, the values are displayed inside the factories and offices to make it clear what matters to us. For example, Mexico has implemented a specific program to ensure that all employees understand and “live” by 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 Shelbyville (USA), each quarter, the operational facility focuses on one value. Team members are nominated based on how well they exemplify this value. An office-wide voting determines who best embodies the values of Ficosa. The team member is announced, presented an award and recognized for their outstanding commitment at the next quarterly meeting.
Ficosa is responsible not only for its own decisions and activities, but it also wants to ensure 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. In addition to following the General Purchasing Conditions, and all laws and regulations applicable to the supplier, it is also their obligation to respect social responsibility duties and especially the requirements based on the Universal Declaration of Human Rights (UDHR) and the International Labour Organizations (ILO) conventions to respect employees’ rights, age and working-hours limits, etc. The purchase orders sent by any Ficosa company or any of its subsidiaries must include the terms and clauses of the General Purchasing Conditions.

Furthermore, the company performs a yearly control through the central employee database by calculating the age of their employees to ensure all Ficosa staff are above the legal age to work and assure no child labour is permitted.
In 2017, Ficosa strengthened its Information Security Management System (ISMS onwards) based on ISO/IEC 27001:2013 standard. A Security Committee was formally appointed and is authorized by the Board of Directors to govern the ISMS. The Committee is responsible for defining and establishing the information security strategy and management system. The current scope of the ISMS includes engineering, prototypes and testing business functions.

Currently the scope of the ISMS covers the areas dealing with most highly sensitive information, shared sensitive information with customers and contract, intellectual and industrial property law, and protected information. ISMS aims, among other internal goals, to increase the confidence of stakeholders regarding information management and the security of its information systems.

The ISMS includes the implementation of risk assessment and management scenarios based on the MAGERIT methodology (Version 3).

Ficosa has also implemented zoning (S1-S2-S3) where S3 zones correspond to those related to confidential and secret classified projects. Each zone has been provided with its own security criteria, controls, alarms, cameras, procedures, training, etc.

As part of the ISMS project, Ficosa has developed and enhanced a training and awareness program. More than 600 employees have attended the training sessions, including management.

Furthermore, the company has implemented an incident management procedure to enable any employees and stakeholders to report security concerns regarding information in order to prevent recurrences.
Commitment to quality
Policies

The rating given to a car and the value of an automotive manufacturer’s brand are dependent on the customer’s appraisal of quality. In this context, Ficosa believes that the automotive part and equipment industry has an important responsibility to constantly provide top-level quality to customers at every stage, from the planning of new products, through to development, manufacturing, distribution and sales to after-sales service.

In 2009, Ficosa implemented the Corporate Quality 3Q3 program, which aimed to improve quality threefold within three years’ time, thus propelling the business to the top of the automotive sector. The 3Q3 program is annually updated, accompanied by a specific roadmap and quality targets to make sure that all the regions are following the best practices in this area. Through the 3Q3 program, the company performs more than 100 audits per year to ensure that all the sites comply with the company’s quality requirements.

In 2015, the company implemented stricter rules in the 3Q3 audits for supplier management, project management and technical centres, using the same criteria as for Ficosa manufacturing plants. In 2016, the company implemented a new internal 3Q3 Process Design Audit to certify the design of the production process at Ficosa sites (plastic & metal injection, injection tooling, paint shop). The new internal audit is applicable to all the Company’s technical centres and manufacturing plants.

Additionally, in 2016, the company added three new checklists in the 3Q3 Plant Audit to make sure that each site adheres to Ficosa standards for the proactive management of warranties. More demanding rules were added in the 3Q3 audits for technical centres. The main goals of the new checklist is to certify that any software developed by Ficosa is aligned with the ISO/IEC 15504 guidelines. Furthermore, these stricter rules have been implemented to guarantee that the design and production of safety products comply with the highest standards of the automotive industry.

In 2018, the notice period for the communication of a 3Q3 Plant Audit was reduced from ten to two days. The objective is to obtain a true picture of the Ficosa site and avoid any ad hoc preparations being made in advance.

Quality Management

IATF 16949:2016 (replaces 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 a specific standard to the automotive industry and is based on the ISO 9001 standard.
Governance

The mission of the quality function is to improve the performance of Ficosa, thereby ensuring customer satisfaction. To do this, it is endowed with a corporate structure and local quality control organizations in the production plants and support centres (technical centres, purchasing, project management, etc.).

The main tool to ensuring the mission of the quality function is achieved, is the quality system, which is deployed on a corporate level in order to comply with international, national and local standards, and those of our customers.

Main Risks and Challenges

Customer warranties are a significant part of our quality management system. In 2018, a new warranty reporting system was launched in all Ficosa manufacturing sites. This system continuously monitors our OEMs B2B warranty applications to obtain a better picture of the current and future scenario, helping us to react quickly to any possible incident before an official warranty analysis request is issued.

Parallel to this, the collaboration between Design and Manufacturing has been strengthened in order to analyse the “no trouble found cases” to provide faster support to our customer in the resolution of problems.

The company remains focused on improving both our processes and our employees’ skills, using problem solving, analysis tools and techniques in an aim to reach zero defects. One of the main challenges for the company will be to reduce the number of repetitive complaints by 62% in 2021 (base year: 2016). To achieve this, the companies will assign one team per problem to work on, and elaborate procedures and a handbook to standardize the solutions and share the lessons learnt. Parallel to this, the company will focus on improving the management of warranties. We will monitor the customer portals to reduce response times, since we do not have to wait to receive the official notification of defective parts in order to take action. We will continuously monitor any possible warranty incidents thanks to the improved monitoring of our customer portals. Furthermore, we will use statistical tools to predict any future trends and contrast the effectiveness of our actions. In addition, the company will focus on implementing the Lean Six Sigma methodology in all the manufacturing plants and technical centres and improving the communication between operation and product design. Finally, the company will improve its development system to ensure top-level quality in the design and development of new technology products.
Key results

Company quality is managed through the monitoring of KPIs. The company has defined a balanced scorecard system that displays the site’s monthly values versus target figures. This monthly reporting enables the company to pinpoint areas where improvement is needed.

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019 Target</th>
<th>2020 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer satisfaction (%)</td>
<td>94%</td>
<td>98%</td>
<td>98%</td>
<td>93%</td>
<td>93%</td>
</tr>
<tr>
<td>Reduction in the number of OEM QCR due to suppliers</td>
<td>65%</td>
<td>56%</td>
<td>54%</td>
<td>60%</td>
<td>51%</td>
</tr>
<tr>
<td>Warranty cost vs sales (%)</td>
<td>0.36%</td>
<td>0.27%</td>
<td>0.27%</td>
<td>0.28%</td>
<td>0.26%</td>
</tr>
<tr>
<td>Reduction in the number of recurrent complaints</td>
<td>229</td>
<td>210</td>
<td>196</td>
<td>137</td>
<td>175 (*)</td>
</tr>
<tr>
<td>Reduction in the number of customer claims</td>
<td>356</td>
<td>315</td>
<td>327</td>
<td>317</td>
<td>298</td>
</tr>
<tr>
<td>Reduction in the number of defective parts per million delivered (ppm) – Customer</td>
<td>4.4</td>
<td>4.1</td>
<td>5.1</td>
<td>7.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Reduction in the number of defective parts per million delivered (ppm) - Supplier assembly</td>
<td>32</td>
<td>32</td>
<td>28</td>
<td>35</td>
<td>27</td>
</tr>
<tr>
<td>Over sales from Non-Quality Costs (NQC) (%)</td>
<td>0.76%</td>
<td>0.46%</td>
<td>0.41%</td>
<td>0.49%</td>
<td>0.48%</td>
</tr>
</tbody>
</table>

(*) Target increase as scope of recurrent complaint have been increased

In the last three years, Ficosa has reduced their defective part indicators by 35% (Customer ppm) and by 48% (Supplier assembly ppm). In line with this improvement, the company has reduced its customer claims by 14% since 2015. These indicators show very high quality levels, although some of them reflect a small increase in 2018 vs 2017, the reason for this is the sensitivity of the indicator (parts per million calculation).

Quality management goes beyond Ficosa activities. The company wants to ensure that its suppliers also operate in line with the company’s commitment to excellence. All our suppliers must have a quality certification (ISO 9001, VDA, EAQF, and IATF) and must provide Ficosa with written evidence of the most recent certification renewal.

Ficosa conducts periodic supplier assessments to ensure that the suppliers’ quality meets the standards established. Since 2015, the supplier’s audits have been following the same criteria as the ones used for Ficosa’s manufacturing plants. Furthermore, Ficosa reviewed and made the criteria used to select suppliers for its Purchasing Optimum Panel (POP) more restrictive. From 2017 on, the company has implemented a strict program to reduce the impact of suppliers on customers by enforcing stringent rules and consolidating supplier audits in all the countries where the company operates.
Awards and recognition

In 2018, Toyota presented Ficosa with the Value Analysis award.

With this prize, the Japanese multinational recognizes the know-how and capacity of Ficosa to offer high-quality products, optimizing the ratio between function and cost, and eliminating costs that do not add value.

The Toyota Motor Europe awards ceremony was held during the 2018 Annual Supplier Business Meeting, which brought together more than 70 European suppliers. With these prizes, every year the Japanese multinational recognizes the most outstanding suppliers in the areas of quality, value analysis, project management, supply and cost.

In recent years Toyota has distinguished the work of Ficosa on various occasions, highlighting the excellent service the company provides to all its customers.

Other awards and recognitions of particular note in 2018, include the Groupe PSA distinguishing Ficosa as one of its best suppliers in the Iberian Peninsula in an event held in Vigo.

Ficosa won awards for their industrial efficiency and ability to respond to the quality requirements of Groupe PSA.
Continuous improvement (FIT Program)

Within the aim of consolidating its market positions as an automotive manufacturer and strengthening its presence in all markets, Ficosa bases its strategy on continuous improvement in terms of both products and all the processes involved in them.

Ficosa understands that continuous improvement is any change of direction to improve processes by eliminating inefficiencies and maintaining consistent quality. All Ficosa employees are responsible for continuous improvement, from the first operator to the last manager of the company. Continuous improvement affects all departments related to production as well as the financial-administrative, purchasing, commercial and R&D departments.

To ensure there is structured support in continuous improvement, the Ficosa Improvement Transformation (FIT) Program was launched at the end of 2016. This Continuous Improvement (CI) program is supported by top management and has been implemented in all of Ficosa’s operational facilities. The project is supported by an action plan aimed at implementing self-sufficient CI teams in all the countries where Ficosa operates. The program has been divided into 4 main pillars:

**MAIN GOALS**

- **CI Structures**
  - Making sure any site has responsible for implementing the FIT program

- **Fighting waste and variation**
  - Implementing and running projects and CI activities

- **Ideas and opportunities**
  - Gathering suggestion and sharing best practices

- **Transparency and Focus**
  - Gathering data to detect any issues

**WHAT DID WE DO IN 2017 & 2018?**

- Continuous improvement structure in every Plant:
  - CI Managers and experts (YB, GB, BB) in all the facilities,
  - Regional CI Directors and Corporate CI Director
  - Local CI Steering Committees held every month
  - Almost 700 employees trained as CI experts (Yellow/Green/Black Belts)
  - Using self-developed Ficosa training materials for YB and GB sessions.

- Developing a suggestion system that can be used to collect, analyze and track any suggestion.
  - Building a Yokoten culture to share best practices within plants
  - The company achieved 0.5 suggestions per employee.

- Standardization of a new 5S system to make sure that all the plants are following the same standards and criteria.
  - Big Pic: Implementation of diagnosis tools to find opportunities (e.g. VSM, yamazumi).
  - MES: Deployment of Manufacturing Execution System.

The program involves the use of continuous improvement methodologies, such as Lean Six Sigma, as well as soft skills that support employees in their everyday quest for better products and processes. Ficosa allows for the development of human resources in its broadest sense, by adapting organizational structures to globalization process needs. We have active experts (called Belts) with different levels: White, Yellow, Green and Black Belts, sharing a common goal of everyday improvements. The company’s new FIT program is not only about optimizing the manufacturing process, but also changing the culture of the company and training people to give them greater capacity to make the right decisions every day.
Commitment to our people
Ficosa’s commitment to people is at the foundation of the company’s culture.

Policies

For Ficosa, being a responsible employer involves a number of challenges: training employees, promoting them, providing them with fair salaries, looking after their well-being at work, combining operational excellence and personal development and encouraging a fluid social dialogue. Ficosa has numerous internal guidelines, policies and procedures to ensure that all their sites are following the best practices in recruitment, career management and talent development. The main ones are: Management of Personnel Database, Management of Short Term Benefits, Management of Other Employee Benefits, Procedure for Recruitment and Hiring, Procedure for Performance Evaluation, International Assignments Management Procedure, Procedure for the Planning and Follow-up of the Training and New Employees Welcome Procedure.

Furthermore, the company has defined an employee handbook available for all employees. The handbook includes information about fair business practices at work, our code of ethics, health & safety, training, performance development, prevention of discrimination and promotion of diversity, etc.

Governance

The Chief Human Resources Officer, member of the Executive Committee, is the highest responsible person for labour practices in the workplace. The Corporate Human Resource department is responsible for defining the above guidelines, policies and procedures. Every site has a Human Resources Manager, who is responsible for implementing the policies defined at corporate level in every country where the company operates.
Main risks and Challenges

Ficosa develops its activity in a very competitive and demanding industry. Since 2008, the company has tapped into new business areas and international markets and integrated them into the corporation. In this regard, Ficosa has become committed to creating high value jobs. Evidence of this is the fact that between 2014 to 2018, the number of engineers working at the headquarters in Viladecavalls (Spain) has doubled. Moreover, the company is hiring hundreds of employees worldwide with a wide variety of skillsets and educational backgrounds for its new automotive manufacturing facilities, such as the newest one in Rabat (Morocco). The need to hire new staff is posing new challenges for the company as competition for specialist and managerial staff is increasing in some areas of the global labour markets. We are therefore implementing all the necessary mechanisms to get the best out of our teams and recruit the best professionals in order to maintain our competitive advantage in the long term.

The following areas have been identified as the most significant areas of our impact on the workforce:

- Diversity and integration
- Development, training and knowledge management
- Dialogue and communication
- Health promotion and well-being
- Safe and healthy working conditions (see “Commitment to Health and Safety”)
- Absenteeism management

Key results

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Variance from previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Workforce (FTE)</td>
<td>9,855</td>
<td>10,239</td>
<td>10,243</td>
<td>0%</td>
</tr>
<tr>
<td>Non-production Indirect Turnover (%)</td>
<td>7.74%</td>
<td>9.30%</td>
<td>6.99%</td>
<td>-25%</td>
</tr>
<tr>
<td>Female staff in total (%)</td>
<td>46%</td>
<td>42%</td>
<td>44%</td>
<td>0%</td>
</tr>
<tr>
<td>Female staff in top executive positions (%)</td>
<td>14.0%</td>
<td>14.0%</td>
<td>15.2%</td>
<td>8%</td>
</tr>
<tr>
<td>Employees with a disability</td>
<td>120</td>
<td>125</td>
<td>133</td>
<td>6%</td>
</tr>
<tr>
<td>Dismissals (%)</td>
<td>2.59%</td>
<td>2.82%</td>
<td>2.70%</td>
<td>-4%</td>
</tr>
</tbody>
</table>

(1) 2018 figure is not including idneo with 310 employees in Dec’18
### Workforce by country (2018)

<table>
<thead>
<tr>
<th>Country</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>316</td>
</tr>
<tr>
<td>China</td>
<td>1,804</td>
</tr>
<tr>
<td>France</td>
<td>352</td>
</tr>
<tr>
<td>Germany</td>
<td>275</td>
</tr>
<tr>
<td>India</td>
<td>18</td>
</tr>
<tr>
<td>Italy</td>
<td>287</td>
</tr>
<tr>
<td>Japan</td>
<td>7</td>
</tr>
<tr>
<td>Malaysia</td>
<td>29</td>
</tr>
</tbody>
</table>

Total general: **10,243**

### Group Contracts - age* (2018)

<table>
<thead>
<tr>
<th>Employees</th>
<th>Permanent</th>
<th>Temporary</th>
<th>Part-time</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 30 years</td>
<td>1,569</td>
<td>303</td>
<td>21</td>
</tr>
<tr>
<td>30 &lt; 50 years</td>
<td>5,430</td>
<td>314</td>
<td>200</td>
</tr>
<tr>
<td>&gt; 50 years</td>
<td>1,349</td>
<td>51</td>
<td>42</td>
</tr>
</tbody>
</table>

### Group Workforce - job category* (2018)

- **Senior executives**: 158
- **Area managers**: 472
- **Engineers and technicians**: 1,864
- **Administrative personnel**: 302
- **Direct Production staff**: 4,992
- **Indirect Production staff**: 1,491

### Group Workforce - age* (2018)

- Employers < 30 years: **1,893**
- Employers > 50 years: **5,944**

### Group Contracts - job category & gender* (2018)

<table>
<thead>
<tr>
<th>Category</th>
<th>Permanent (Men)</th>
<th>Permanent (Women)</th>
<th>Temporary (Men)</th>
<th>Temporary (Women)</th>
<th>Part-time (Men)</th>
<th>Part-time (Women)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior executives</td>
<td>132</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Area managers</td>
<td>372</td>
<td>90</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Engineers and technicians</td>
<td>1,225</td>
<td>504</td>
<td>41</td>
<td>24</td>
<td>16</td>
<td>54</td>
</tr>
<tr>
<td>Administrative personnel</td>
<td>88</td>
<td>109</td>
<td>66</td>
<td>23</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Direct Production staff</td>
<td>1,792</td>
<td>2,604</td>
<td>193</td>
<td>256</td>
<td>14</td>
<td>133</td>
</tr>
<tr>
<td>Indirect Production staff</td>
<td>1,160</td>
<td>249</td>
<td>54</td>
<td>8</td>
<td>9</td>
<td>11</td>
</tr>
</tbody>
</table>

* To measure these indicators, the company takes the workforce figures at the end of the year.
Diversity and Integration

At Ficosa, the criteria and procedures for the recruitment of human resources embraces the principle of equality and non-discrimination based on the grounds of gender, race, national or social origin, social class, birth, religion, disability, sexual orientation, union association, political opinion, age or any other condition.

Additionally, our Code of Ethics states that Ficosa Management will take all appropriate measures to prevent acts of harassment, discrimination or violence within the company. At the same time, the employees undertake not to promote or allow situations of abuse, harassment, violence or discrimination in the workplace. These prevention actions are enhanced locally with specific equality and anti-harassment plans, like those at the Soria and Viladecavalls sites.

Furthermore, all job agencies that work with us must guarantee equality in gender, origin, ethnicity, political affiliation and religious beliefs for all candidates pre-selected for our company. All managers and middle management are responsible for ensuring non-discriminatory treatment to employees and collaborators.

In 2018, we started a specific corporate training plan focused on increasing the cultural intelligence among different cultures and nationalities. This year we have also implemented two specific training actions focused on equality at work and generational diversity in Viladecavalls (Spain).

In Soria (Spain), all managers have already received training on equality and harassment in the workplace. In Turkey, the manufacturing plants have defined local gender equality training for their employees.

Soria (Spain) collaborates with correctional institutions to foster the rehabilitation of former prisoners. In 2015, the company received a special prize “Empresa Socialmente Responsable” (Socially Responsible Company) from FADESS (“Fundación de Ayuda al Discapacitado y Enfermo Psíquico de Soria” – The Soria Foundation for Physical and Intellectual Disabilities) that recognizes their commitment to hiring, training and reintegrating released or former Soria prisoners. The company collaborates with FADESS and ASOVICA (“Asociación Virgen del Camino de Familiares de Personas con Enfermedad Mental” – Association for Families of the Mentally Ill) to promote the social inclusion of physically and intellectually disabled people. Furthermore, in collaboration with the Red Cross, the site has implemented a programme to promote the integration of disadvantaged groups.

In Shelbyville (USA), new recruits are given mandatory training on Diversity, Harassment and Proper Workplace Communication. Employees are instructed in how to report any violations. Furthermore, the employees at this site are provided with multiple channels and ways to report any violations.

In Dabrowa Gornicza (Poland) received a special prize “Icebreaker” for its commitment to promoting the inclusion of people with disabilities, awarded by the Foundation for Vocational Activation of People with Disabilities and the Polish Organization of Employers of Disabled Persons. One of the main goals of the site is to reach six percent of employees with disabilities. Since 2010, the site has been using a specific programme defined to promote the employment of disabled people. Every disabled employee at the site receives special treatment with external doctors. Furthermore, the company regularly checks workplaces or job positions to make sure that working conditions are adapted to disabled people’s needs.
In Taicang (China), the company defined an action plan to improve the employment of people with disabilities. The action plan included interviews and on-site visits to various local manufacturing plants to share best practices and review different examples of infrastructure adaptation to accommodate employees with disabilities with the collaboration of the Rotary Club of Shanghai. Furthermore, employees from the Human Resources, Quality and Operating departments participated in an awareness training course conducted by the Social Inclusion Academy (SIA) and Inclusion Advisory Group. The Social Inclusion Academy training programme is the result of a cooperation between the Inclusion Factory and the German Chamber of Commerce to promote the successful integration of people with disabilities in a variety of positions in a cross-sectoral environment. In 2017, the plant hired three new employees with disabilities. The plant has defined a new action plan in 2018 to hire 20 new employees with disabilities over the coming years.

Brazil has made workplace adjustments and provided new infrastructure on the assembly line to accommodate deaf or hard of hearing (HOH) employees. Furthermore, the company has updated its emergency procedure and visual aids to effectively alert its deaf or HOH employees in an emergency situation. In different countries such as France, Brazil, and Spain, the company has conducted surveys to measure the potential impact of psychosocial risks and work-related stress experienced by its workers. The surveys included questions regarding discrimination and harassment.

All Ficosa employees are covered by local labour collective bargaining agreements except in those countries where these collective bargaining negotiations do not exist as the collective labour rights are protected and guaranteed by national laws. This is the case for Ficosa sites located in USA, China, India and Morocco.
Employee development

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

The technical and soft skills associated to each position are also assessed, generating development opportunities for each person. Finally, it is important to highlight the informal mutual feedback generated between employees and managers throughout the year, which forms the basis of the main dynamics for people development in Ficosa.

<table>
<thead>
<tr>
<th>2017</th>
<th>2018</th>
<th>Variance from previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of employees with access to performance and career development review (target)</td>
<td>1,981</td>
<td>2,173</td>
</tr>
<tr>
<td>Employees receiving regular performance and career development reviews (%)*</td>
<td>81%</td>
<td>84%</td>
</tr>
</tbody>
</table>

*.- according to the target
Growing @Ficosa

In 2014, Ficosa launched a Competency Development Programme with the aim of identifying and maximizing the potential of key employees. This programme starts with an external assessment that enables each one of the participants to gain in self-awareness and to map their strengths and development areas. This analysis forms the foundation of Growing@Ficosa, a programme that provides the resources and support for accelerated development adapted to the needs and motivation of each of the participants.

Ficosa is committed to increasing the number of participants in an ongoing process to develop key people. This is a global long-term programme, not only because it lasts two years (between 2016 and 2018 there were 136 participants), but also because each year we have a new group joining the programme. In 2018, there were already more than 20 Growing@Ficosa graduates, and we are preparing the new 2019 group with participants 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 participants with different backgrounds working together with Human Resources, managers and top lines of the Company worldwide.

The programme is based on a 3-tier 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 programme 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 in areas such as Leadership, Teamwork, People Development, Impact and Influence, and supported by coaching, mentoring and specific metrics, as 360° or other behavioural KPIs.

Successfactors

Until 2015, the company used different Human Resources 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 called SuccessFactors. This new tool is an employee-centred system and enables each employee to complete HR tasks more quickly and perform strategic HR activities more frequently such as their annual goals, performance, development plans, training programmes, etc. SuccessFactors will include the company's development module and the learning program for 2019, facilitating the creation and follow-up of development plans for each employee.
Training and knowledge management

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Variance from previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of training hours provided to employees</td>
<td>165,871</td>
<td>194,787</td>
<td>168,090</td>
<td>-14%</td>
</tr>
<tr>
<td>Training investment (€)</td>
<td>1,413,932</td>
<td>1,924,471</td>
<td>1,830,673</td>
<td>-5%</td>
</tr>
<tr>
<td>Average cost training per employee*</td>
<td>143</td>
<td>214</td>
<td>197</td>
<td>-8%</td>
</tr>
<tr>
<td>Average training hours per employee*</td>
<td>19</td>
<td>22</td>
<td>18</td>
<td>-16%</td>
</tr>
</tbody>
</table>

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 supplemented in each case with specific training programs given by professionals in our company, as well as business and training institutes and universities.

Each year, each site defines a quantified and budgeted annual training plan and submits it for formal approval by the corresponding Plant Manager, Country General Manager or Region/Business Unit Director. The company records the annual training data from each site to detect areas for improvement in the training activities implemented worldwide. More than 50% of the training sessions are related to manufacturing, quality, health & safety or engineering contents.

In order to ensure that all employees have the technical knowledge required to perform their duties successfully and are familiar with Ficosa’s tools and methodologies, Ficosa implemented a robust learning system for plant positions that includes diverse training modules related to assembly and injection process, OHSE, quality, supply chain, painting process, lean manufacturing, etc. First of all, the company prioritizes the technical knowledge required for the job position in new business and technologies. Secondly, Ficosa selects the Corporate Knowledge Owners and Local Knowledge Owners to generate, distribute and improve knowledge in the plants, technical & development centres. Ficosa has 22 Corporate Knowledge Owners who meet regularly to work on specific training materials & content adapted to Ficosa standards and processes (e.g. case studies, practical exercises & evaluation). The training materials focus on error prevention, practical cases & activities that ensure learning through close-to-reality situations and assessment tools. For example, the Corporate OHSE department has developed and taught six specific on-site 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. The Local Knowledge Owner is responsible for adapting the corporate training materials to train employees at their site. This learning system has already been implemented in the new manufacturing plants of Cookeville and Morocco, and in 2019, this new learning system will be implemented in all the plants where the company operates.

<table>
<thead>
<tr>
<th>Total number of training hours provided to employees*</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct employees</td>
<td>61,430</td>
</tr>
<tr>
<td>Indirect employees</td>
<td>106,660</td>
</tr>
<tr>
<td>Total general</td>
<td>168,090</td>
</tr>
</tbody>
</table>

*.- To measure these indicators, the company takes the workforce figures at the end of the year.

The main reasons for the training hours and investment reduction in 2018 are the previous year’s (2017) outstanding training programs (massive deployment of continuous improvement in quality and manufacturing areas) together with the 2018 perimeter change.
Gamification through e-learning is also used to train our employees on important subjects such as culture intelligence, time management, negotiation and different dimensions of leadership. Furthermore, in-house training is still one of our pillars when developing our people skills and abilities.

**Employee communication and satisfaction**

Ficosa strives to foster strong and effective communication with its employees to make sure they understand where the organization is heading and are up-to-date with key information about the company. To do this, the company has developed different channels to communicate with its employees, such as intranet, suggestion box, employee newsletter, round table meetings with plant managers, one-on-one interviews, town hall meetings, etc.

At a local level, some sites, such as Cookeville (USA), Shelbyville (USA), Dabrowa Gornicza (Poland), Dieuze (France), Taicang (China), Salinas and Escobedo (Mexico), Porto (Portugal), Bursa and Gemlik (Turkey) have introduced an employee survey in the past four years. The results were presented to the top management and followed by an action plan. In 2018, the Viladecavalls site has implemented a new employee satisfaction survey and we expect to deploy the same one in all sites worldwide in 2019-2020. The result will be not only a specific action plan adapted to each site, but also a global analysis to deploy certain corporate actions to be implemented worldwide if needed.

Furthermore, all our company sites promote and facilitate structured labour relations through the local employee representatives bodies and/or trade unions with periodical meetings to discuss and follow-up different labour topics.
International assignments

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

Ficosa has defined a specific International Assignments Management procedure to guarantee the application of homogeneous practices within all the sites of the company. In all cases, the company guarantees that employees returning to their home country will have a job position with the same level as that which they had before the international assignment and a salary level in the home country equivalent to the level of the last position held in the destination they are posted.

Workplace health promotion & work-life balance

Ficosa is working to ensure that the entire workforce receives an annual medical examination in all their countries of operation. The majority of sites have a specific healthcare program for employees. The workplace health promotion and work-life balance initiatives depend on each site and are led by the Human Resources department.

The company is defining a specific programme to make sure that all sites implement measures related to workplace health promotion, including specific objectives for stress prevention. In Dieuze (France), the members of the Health & Safety Committee and the HR department have received specific training on psychosocial risks. Every year, the site conducts a survey to identify and assess psychosocial risks. The results are presented to the top management and are followed by an action plan. In Morcone (Italy), the company has conducted a specific study to identify improvements in its company’s workplace ergonomics scheme.

Employee absences have a large impact on revenue and productivity. Knowing the driving factors behind employee absenteeism and performing employee tracking is key for Ficosa in order to prevent absenteeism. All Ficosa sites monitor the factors using an integrated system to follow-up the absences by corporate managers.

The main actions for its prevention are focused on improving employee habits through wellness programmes to promote healthier lifestyles. The local health and safety committees periodically evaluate absenteeism records to implement countermeasures.

Main local “Commitment to our people” actions:

- Official measures to promote work-life balance
- Telecommuting (remote work) policy for R&D collective
- Full acceptance for part-time working requests for parents with children under 12 years of age and shift choice
- Time flexibility for employees and subcontractors
- Bus shuttle to connect with public transport
- Flexible payment options
- Healthy life training programme (mindfulness, healthy habits, laughter therapy workshop)
- Physiotherapy service for employees
- Same holiday periods for couples working in Ficosa

- Welfare campaigns (health week, breast cancer campaign)
- Wellbeing total programme (programme offered to our employees through a psychologist)

- Welfare campaigns (health surveys to promote lifestyle, eating habits and the practice of sports)

- Psychology service for all employees
- Welfare campaigns (healthy lifestyle)
- Sport promotion
- Time flexibility for employees
- Welfare campaigns (influenza vaccination, medical eye test, anti-smoking campaign)
- Sport promotion
- Full acceptance for part-time working requests for parents
- Teleworking
- Time flexibility for white collar employees
- Welfare campaigns (overtime restraint)
Commitment to health and safety
Policies

At Ficosa, we believe that all injuries, occupational illnesses and incidents can be prevented, and we 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 a residual level
- Informing employees, contractors, visitors and the public of these hazards and impacts
- Identifying, implementing, monitoring and reinforcing the safe behaviour 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 learnt to prevent them

Operational facilities certified OHSAS 18001 (%)

84%

In 2018, 84% of our operational facilities were certified in accordance with OHSAS 18001 – the international standard for Occupational Health and Safety (OHS). In 2018, the manufacturing plants of Rabat (Morocco), Chongqing (China), Shenyang (China) and Cookeville (USA) were not OHSAS 18001 certified. Nevertheless, all operational facilities have conducted an employee health & safety risk assessment and carry out internal OHS audits on a regular basis. In 2019, the company is planning to implement the OHSAS 18001 managements system in all the manufacturing facilities where the company operates and obtain the OHSAS 18001 certification. Furthermore, the OHS department will work to make the transition from OHSAS 18001 to ISO 45001:2018 within 2019.

Since 2016, the corporate quality audit “3Q3” questionnaire has included OHS issues regarding safe behaviour and equipment safety.
Governance

The corporate OHSE team is responsible for developing any new OHS standards and procedures. Furthermore, the department is responsible for establishing a global system to collect the main OHS data from all 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 standards and procedures.

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 get 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.

In 2018, the company held a global forum on OHSE in Viladecavalls that brought together all the OHSE managers from each Ficosa manufacturing plant to share experiences and explore common issues focusing principally on the environmental, health and safety dimension. The forum recognized the efforts in OHSE management made by overseas Group companies. Additionally, a workshop was organized with a renowned global company to discuss how the Industry 4.0 project can help in the management of health and safety systems.

All the Ficosa manufacturing plants, except the Rabat site, have local health and safety committees or employee representatives aimed at promoting safety activities and sharing with management the responsibilities for implementing and monitoring Ficosa’s safety programme. The new site in Rabat is working to launch the health and safety committee in 2019.

Main Risks and Challenges

The main incidents that our employees may face are related with ergonomics and bumps, cuts and burns occurring mainly during the injection and assembly process.

Key Results

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Target 2018</th>
<th>Target 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group - ORIR</td>
<td>1.22</td>
<td>1.17</td>
<td>1.07</td>
<td>1.20</td>
<td>1.10</td>
</tr>
<tr>
<td>ORIR - South Europe</td>
<td>1.98</td>
<td>1.87</td>
<td>1.64</td>
<td>1.76</td>
<td>1.56</td>
</tr>
<tr>
<td>ORIR - North Europe</td>
<td>0.76</td>
<td>1.02</td>
<td>0.89</td>
<td>1.04</td>
<td>0.97</td>
</tr>
<tr>
<td>ORIR - Asia</td>
<td>0.49</td>
<td>0.12</td>
<td>0.44</td>
<td>0.50</td>
<td>0.48</td>
</tr>
<tr>
<td>ORIR - NAFTA</td>
<td>0.72</td>
<td>0.72</td>
<td>0.76</td>
<td>0.90</td>
<td>0.82</td>
</tr>
<tr>
<td>ORIR - South America</td>
<td>2.50</td>
<td>2.15</td>
<td>0.86</td>
<td>1.85</td>
<td>1.20</td>
</tr>
</tbody>
</table>

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

Our corporate ORIR has been reduced year after year. Although this is encouraging, we continue to focus our efforts on safety to reduce incidents, mostly due to ergonomic issues, possible bumps, cuts and burns in the injection or assembly process.

Every month, we analyse the ORIR of each site to track not only what types of injuries tend to be recurring, but also in which production process they occur. This monitoring helped us to target our OHS training and action plans. In 2019, the challenging goal will be to maintain a corporate ORIR below 1.10.
The company is investing in training to make employees aware of the OHS risks associated with their duties. In recent years, corporate development has designed different learning modules that have been implemented in each site. The main goal is to ensure a skilled OHS team and prepare them for any changes within the company. Furthermore, every manufacturing plant launches an annual awareness campaign on OHS aimed at promoting safety in the workplace. During 2019, the corporate training materials will be updated using new technologies and innovative tools in order to increase the training effectiveness and impact.

We would like to highlight the implementation of a couple of effective actions at the Wolfenbüttel site in 2018: a new battery charging area to prevent overloading and help protect the environment at the same time, and the implementation of new hand washing routines for skin protection promoted among manufacturing employees with new dispenser systems and new materials available in all manufacturing area bathrooms.

The Dieuze plant launched several actions in 2018 such as additional exhaust ventilation in the injection area to eliminate exposure to plastic fumes, safety ladders to access the higher parts of the manufacturing machines, new ergonomic working tables adaptable to the employee’s height, and a pilot test on a new components supply rack to avoid awkward postures based on the Karakuri method.

In Mexico, the plant organized a Safety Week in an aim to increase awareness among employees on health and safety and reduce incidents. During the week, several dynamic training sessions were given: Safety and environment at work, Proper use, care and storage of personal protective equipment, and Noise and Fire Fighting.

To reduce the risk of falls during production tracking, the Shelbyville plant launched a couple of actions: the area around the platform was altered to enable the operator to check the count from floor level, scales were added to several presses so that the parts are weight counted. This improves safety and increases productivity.

---

<table>
<thead>
<tr>
<th>Group - Lost time severity rate(^{(1)})</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Variance from previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NA</td>
<td>NA</td>
<td>0.14</td>
<td>NA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group – Injury frequency rate(^{(2)})</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Variance from previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NA</td>
<td>NA</td>
<td>0.53</td>
<td>NA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of fatalities</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Variance from previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OHSA training (hours)</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Variance from previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25,186</td>
<td>30,179</td>
<td>29,901</td>
<td>-1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nº OHSA improvement actions</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Variance from previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,288</td>
<td>2,399</td>
<td>2,737</td>
<td>14%</td>
</tr>
</tbody>
</table>

\(^{(1)}\) No. of days lost due to injuries*1,000/total number of hours worked.  
\(^{(2)}\) Incidence rate of over-1-day absence injury per 100,000 workers
Commitment to environment
Operational facilities certified ISO 14001 (%)

The Group's commitment to environmental protection remains clearly demonstrated in 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 14001:2015 standard. In 2018, the manufacturing plants in Shenyang (China) and Rabat (Morocco) were not ISO 14001 certified. The site in Rabat began operating in 2018, and the company will implement the ISO 14001 management system in 2019. Furthermore, the manufacturing plant of Shenyang already obtained the ISO 14001 certification at the beginning of January 2019.

Since 2016, the corporate quality audit “3Q3” questionnaire has included environmental questions regarding waste disposal, waste storage, environmental emergency means, prevention of spills, industrial hygienic protection of equipment and machines, etc. In 2017, the corporate OHSE department implemented a new methodology for all plants in order to identify the main operational risks and opportunities related to Ficosa's environmental aspects, compliance with obligations and other issues. In 2018, the corporate environmental department reinforced the OHSE internal audit governance and procedure by making sure that all operational facilities are following the same standard for ISO 14001 and OHSAS 18001. The corporate department leads and performs the ISO 14001 internal audits in Europe. Accordingly, an internal audit checklist has been introduced to perform the internal environmental audits. The checklist has more than 500 scored questions (245 related to Environment) and gives a global scoring of the ISO 14001 implementation system status for each site. During 2018, the internal auditor team was reinforced by incorporating two new OHSE technicians who have been trained by the corporate department covering internal audit standards and processes.

Ficosa applies the precautionary approach introduced by the United Nations in Principle 15 of ‘The Rio Declaration on Environment and Development’ in order to prevent environmental degradation. Applying the Precautionary Principle help us to reduce or avoid negative impacts on the environment. In order to avoid environmental damage that could be caused by the acquisition of new products and / or processes, and in order to determine effective actions to counter any damage, Ficosa has established different internal procedures in relation to the purchase of chemical products, purchase of productive and non-productive equipment, and the purchase of new industrial facilities. All the company investments include the corporate OHSE department verification and approval.

These procedures are aimed at evaluating, in advance, any environmental impacts that may occur due to the purchases mentioned above in order to be able to authorize or reject acquisitions. In the case of authorization, a series of preventive measures are determined, implemented and monitored, ensuring a final effectiveness check.
Governance

The corporate OHSE team is responsible for developing 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. Each plant has managers or technicians in charge of implementing the company’s environmental instructions and systems.

In January 2018, the company held the first OHSE worldwide meeting organized at the Viladecavalls (Spain) facilities, attended by all the technicians from all company sites. This meeting served to present the strategic lines and objectives for the year as well as providing the opportunity for the plants to present their best practices implemented and share their concerns with the aim of benchmarking and improving.

Ficosa has taken out a civil liability insurance against accidental environmental pollution, covering material and/or personal damage and their consequences caused by the contamination of soil, water or atmosphere.

Main Risks and Challenges

At Ficosa, our activities are carried out paying special attention to protect the environment and to ensure the efficient use of natural resources. Each manufacturing plant evaluates and maps its environmental impacts every year. The painting and injection processes account for the largest share of environmental impact during the manufacture of Ficosa products in terms of air pollution, energy consumption and waste generation. The paint shop is a manufacturing area that raises concern because of its VOC emissions. Furthermore, the injection process is a large energy consumer and contributes actively to carbon dioxide emissions.

In this context, the technology used in the paint application and injection machines must meet high quality standards, remain cost efficient, and also be environmentally responsible. In 2018, our main activities were centred on reducing our CO₂ emissions in our value chain, particularly by improving our energy efficiency activities and waste management. At the same time, we are working on reducing our Volatile Organic Compound (VOC) emissions.

Since 2016, all manufacturing plants have implemented individual reduction targets to reduce their GHG emissions, electric and water consumption and waste generation, and specific action plans to achieve them. These targets follow the corporate guidelines and from 2018 (base year), under the strategic line “Climate Change Mitigation”, a midterm goal have been set: to Reduce Ficosa CFP and Energy consumption (target year 2023) based on the historical annual reduction goal trend.

Furthermore, each plant establishes its own objectives based on the significant environmental aspects detected in the environmental impact assessment.

Key results

Reducing local pollution

A current challenge is to reduce volatile organic compounds (VOCs), which readily evaporate and produce gas in the atmosphere. VOCs are carbon-based materials that can be toxic and create adverse health and environmental impacts. The company has implemented different systems and control standards in its manufacturing plants with painting process to monitor and reduce the amount of air pollutants emitted during their operation.

In Taicang (China), Cookeville (USA), Soria (Spain) and Dąbrowa Górnicza (Poland), the company installed a catalytic burner (RTO) to reduce the volatile organic compounds (VOC) present in the paint shops. The RTO destroys VOC emissions by creating a chemical reaction within the air pollutant and oxygen at elevated temperatures. This reaction destroys VOC emissions in the airstream by converting them to gas, water and heat. The heat is recycled and used in pro-
Addressing Climate Change

Since 2016, we have defined guidelines to reduce our greenhouse gas (GHG) emissions annually at site levels. Each site has to reduce its GHG emission intensity by 3%. Each plant manager is responsible for successfully achieving this goal. In 2018, the company worked to improve the gathering and consolidation of carbon footprint data, by implementing a more robust internal tool to ensure that each operational facility reports the data in accordance with the Ficosa standards and criteria. The tool has enabled the company to increase its reporting on GHG emissions throughout its value chain and products.

Additionally, Ficosa has worked on reducing GHG emissions based on the SBTi methodology. The SBTi (Science Based Targets initiative) has developed a publicly available Excel tool to calculate science-based corporate scope 1 and 2 emission targets. This tool uses the Sectoral De-carbonization Approach (SDA). The SDA tool calculates emission reduction targets based on the relative contribution of the company to the total sector activity and their carbon intensity in relation to the sector’s intensity in the base year. This is in line with IPCC (Intergovernmental Panel on Climate Change) recommendations and provides companies a benchmark from which to develop long-term climate targets up to 2050.

Consolidation of shipping containers: Shipments to the USA from Barcelona are consolidated in the port and no shipment is made until the container is full. Ficosa has a similar initiative in Mexico and China. In China containers also have to be full before sending them to the manufacturing plants of Vitadecavalls and Soria (Spain).

In the manufacturing plant of Dabrowa Górnicza (Poland), all the Shanghai imports are carried out through container trains.

From 2018, the freight transportation emissions have been monitored to be included in the scope 3 of CFP.

Most Ficosa manufacturing plants have implemented a milk run delivery method. Instead of each supplier sending a vehicle every week to meet Ficosa’s needs, one vehicle visits each supplier on a weekly basis and picks up the purchased products for Ficosa. This way, each vehicle load delivers Ficosa’s full weekly requirements from each supplier.

From 2018, the CFP analysis has included the air conditioning and emissions from climatic chamber refrigerants in order to monitor and prevent any leakage. Ficosa advocates the use of refrigerant gases with zero ozone depletion potential and fully supports the use of refrigerants with lower Global Warming Potential (GWP). These refrigerants are mandatory in all related investments.

Furthermore, the company is working on four main initiatives to optimize the transportation and distribution of purchased products or products sold by the company:
## Greenhouse gas (GHG) emissions by type of source

Since 2014, we have been conducting an inventory of our GHG emissions, using the Greenhouse Gas Protocol. In 2018, we completed our GHG inventory with the relevant categories for our company (through size, influence and reporting availability assessment).

<table>
<thead>
<tr>
<th>In t of CO₂e</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Variance from previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope 1, direct GHG emissions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From refrigerant and other</td>
<td>NA</td>
<td>NA</td>
<td>972</td>
<td>NA</td>
</tr>
<tr>
<td>From fossil fuels</td>
<td>8,397</td>
<td>7,178</td>
<td>8,232</td>
<td>14.7%</td>
</tr>
<tr>
<td>From owned vehicles</td>
<td>NA</td>
<td>NA</td>
<td>10</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Scope 2, indirect GHG emissions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location-based emissions from electricity consumption²</td>
<td>N/A</td>
<td>65,055</td>
<td>61,440</td>
<td>2.9%</td>
</tr>
<tr>
<td>Market-based emissions from electricity consumption²</td>
<td>57,311</td>
<td>60,547</td>
<td>51,873</td>
<td>-26.1%</td>
</tr>
<tr>
<td><strong>Scope 3, other indirect GHG emissions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste generated in operation³</td>
<td>NA</td>
<td>NA</td>
<td>1,251</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Total GHG emissions¹</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total market-based GHG emissions</td>
<td>65,708</td>
<td>67,725</td>
<td>61,087</td>
<td>NA</td>
</tr>
<tr>
<td>Total location-based GHG emissions</td>
<td>NA</td>
<td>72,233</td>
<td>70,653</td>
<td>NA</td>
</tr>
<tr>
<td>Total location-based GHG emissions per sales (tCO₂e/MEUR)</td>
<td>NA</td>
<td>60.7</td>
<td>59.7</td>
<td>NA</td>
</tr>
</tbody>
</table>

¹ Total emissions are based on actual data. The most appropriate emission factors have been used for each activity data type, from internationally recognized (IEA 2018) and regional sources or if more relevant, from country or contract specific sources. The factors include all GHGs where possible and the gases' Global Warming Potential as per the IPCC assessments.

² For the location-based emissions from electricity consumption, emission factors from IEA (2018) were used for the countries where Ficosa operates. For the market-based emissions from electricity consumption, emission factors from each supplier were used for the countries where Ficosa operates (for countries where the information were not available, Ficosa uses the emission factors from IEA).

³ This category includes emission from disposal treatment of the following solid waste that goes to the landfill: Asbestos, wood, glass, clothing, mixed municipal waste, organic waste, waste electrical / electronic equipment, batteries, metals, plastics and paper. This category also includes the emissions from the disposal of wastewater.
### Greenhouse gas (GHG) emissions by region

<table>
<thead>
<tr>
<th>In t of CO₂e</th>
<th>Asia</th>
<th>Nafta</th>
<th>North Europe</th>
<th>South Europe</th>
<th>South America</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total location-based GHG emissions (Scope 1&amp;2)</td>
<td>9,141</td>
<td>20,175</td>
<td>17,532</td>
<td>23,502</td>
<td>303</td>
</tr>
<tr>
<td>Total market-based GHG emissions (Scope 1&amp;2)</td>
<td>10,206</td>
<td>20,167</td>
<td>19,412</td>
<td>10,999</td>
<td>303</td>
</tr>
<tr>
<td><strong>Scope 1, direct GHG emissions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From refrigerant and other</td>
<td>334</td>
<td>245</td>
<td>-</td>
<td>393</td>
<td>-</td>
</tr>
<tr>
<td>From fossil fuels</td>
<td>72</td>
<td>1,573</td>
<td>2,570</td>
<td>4,005</td>
<td>12</td>
</tr>
<tr>
<td>From owned vehicles</td>
<td>4</td>
<td>-</td>
<td>2</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td><strong>Scope 2, indirect GHG emissions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location-based emissions from electricity consumption</td>
<td>8,731</td>
<td>18,357</td>
<td>14,960</td>
<td>19,101</td>
<td>291</td>
</tr>
<tr>
<td>Market-based emissions from electricity consumption</td>
<td>9,796</td>
<td>18,349</td>
<td>16,840</td>
<td>6,597</td>
<td>291</td>
</tr>
<tr>
<td><strong>Scope 3, other indirect GHG emissions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From waste management</td>
<td>58</td>
<td>423</td>
<td>131</td>
<td>579</td>
<td>60</td>
</tr>
</tbody>
</table>

Each site has to reduce its location-based GHG emission per sales by 3% annually.
Energy efficiency and renewable energy

Reducing greenhouse gas (GHG) emissions in Ficosa is mainly about reducing energy consumption. In this regard, the company is committed to mitigating its impact on climate change by defining a solid energy strategy based on energy efficiency, the increased use of renewable energy, and process optimization.

In 2017, the OHSE policy was updated to include each employee’s responsibility for the company’s energy saving strategy. To do this, the different sites organize regular employee meetings and energy awareness campaigns. In its manufacturing process, Ficosa engages in a variety of energy saving activities to reach the lowest energy consumption by introducing highly efficient equipment, improving manufacturing techniques and adopting energy saving lighting or sensors with presence detectors.

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Variance from previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity consumption (MWh)</td>
<td>121,887</td>
<td>129,503</td>
<td>132,392</td>
<td>2.2%</td>
</tr>
<tr>
<td>Electricity from renewables in Spain (MWh)</td>
<td>24,004</td>
<td>33,851</td>
<td>33,997</td>
<td>0.4%</td>
</tr>
<tr>
<td>Electricity consumption in kWh per sales (kWh/MEUR)</td>
<td>106</td>
<td>109</td>
<td>112</td>
<td>2.8%</td>
</tr>
</tbody>
</table>

(1) The appreciation of the euro against all the currencies of the non-euro countries where Ficosa is present led to a small reduction in 2018 sales. At constant currency, sales would have increased by 1.7% and this energy intensity rate would show no increase.

The 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 Spain sites (Vilaecavalls, Soria and Sant Quim) has come from renewable sources or high-efficiency cogeneration. Furthermore, the manufacturing plant of Wolfenbüttel (Germany) and the plant in Dieuze (France) buy energy that comes from renewable sources. At the end of 2017, the manufacturing plant in Taicang (China) set up 6,160 solar panels on its roof with a total power generated of 1.66MWh/year. This action has helped the company to actively contribute to the mitigation of climate change in addition to reducing grid electricity consumption by 13.24% vs previous year.

Each site has to reduce its energy intensity by 3% in 2018. Most of our sites achieved their annual goals:

Reduction of electricity consumption by sites (% of reduction)

The new reduction target for 2019 has been set at -2.5%.
ISO 50001 in Ficosa Brazil

Ficosa do Brasil is the first plant in the group to obtain the ISO 50001 – Energy Management certification. Using energy efficiently helps organizations save money as well as helping to preserve resources and tackle climate change. ISO 50001 supports Ficosa do Brasil to use energy more efficiently through the development of an energy management system.

By implementing the ISO 50001 requirements, the Brazilian plant mapped all their processes and obtained a diagnosis of their energy consumption. The Energy Management System (EMS) was able to recognise the global energy consumption and the main energy sources contributing to CO₂ emissions.

Based on this mapping, the management team identified significant energy uses and opportunities to improve the energy performance of the processes involved. After finalizing the energy consumption diagnosis, Ficosa do Brasil defined the objectives and targets to reduce energy consumption and improve its carbon footprint, gathering elements to identify opportunities and improvement actions to add into their integrated management system and strategic planning. Such actions contributed to their energy performance improvement.

Following these measures, the Brazilian plant expects to be able to calculate and report their work in terms of energy efficiency and implement specific actions to reduce energy consumption.

As a result, the main projects in 2018 were:
- Utilities: Air compressor installation and high performance dehumidifiers;
- Lighting: Replacement of fluorescent lamps and mercury vapour with LEDs, providing up to 80% energy savings;
- Air conditioning: Replacement of air conditioners by inverter system, and implementation of operational control to establish operating temperature limits;
- Plastic Injection: Replacement of four plastic injection machines with high-performance machines with embedded frequency inverters;
- Awareness: Awareness campaigns and communication programs by Ficosa do Brasil for its employees.

Water management

Most Ficosa manufacturing plants do not use water for industrial processes. Nevertheless, all the plants have to reduce their water consumption intensity (m³/net sales) by 3%. Around 30% of the manufacturing plants use water in cooling towers or for the painting process. In most cases, the manufacturing plants are using closed cooling systems. The company is committed to employing new technology to reduce its water consumption and increase the amount of recycled water in the painting process. In Poland, the manufacturing plant 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 at the site. In Bursa (Turkey), the manufacturing plant decreased its water consumption in the paint shop by eliminating the water curtain and using a new dry filter painting system. This action supported the annual water reduction achievement of -36%.

The Ficosa plants in Soria (Spain), Taicang (China), Bursa (Turkey) and Salinas (Mexico) with painting installations are distilling used paint in order to obtain pure solvent, which can be used as a cleaning agent. In Viladecavalls (Spain), 36% of the water is reused. In Dieuze (France), the manufacturing plant implemented a new oil collector to reduce the treatment of wastewater coming from the compressor.

<table>
<thead>
<tr>
<th>Water consumption in m³</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Variance from previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>234,069</td>
<td>237,838</td>
<td>241,704</td>
<td>1.6%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water consumption in m³ per sales (m³/MEUR)</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Variance from previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>203</td>
<td>200</td>
<td>204</td>
<td>2.0%(1)</td>
<td></td>
</tr>
</tbody>
</table>

(1) The appreciation of the euro against all the currencies of the non-euro countries where Ficosa is present led to a small reduction in 2018 sales. At constant currency, sales would have increased by 1.7% and this energy intensity rate would show a decrease.
Waste management

During 2018, the waste reporting systems have been improved to comply with the GHG Protocol. The plants report the tons of waste that go to landfill (waste that is not recycled or reused) and the total waste generated at the different sites.

Ficosa plants have different waste containers in all areas (production and otherwise) in order to collect waste by type and character, facilitating specific future treatment. Ficosa is working in all its operational facilities to increase the recovery of cleaning solvents and other chemicals and to reduce the amounts of these substances emitted from its plants. Furthermore, all the manufacturing plants organized awareness campaigns for workers aimed at reducing packaging waste and sorting at source. Ficosa considers that the involvement of its employees is essential to reducing waste generation.

Recyclability ratio (%) by sites

In order to increase the percentage of Ficosa recyclability, a 2019 individual plant recyclability objective has been established based on the table below. The target depends on the previous year result.

<table>
<thead>
<tr>
<th>2018 Result</th>
<th>Target 2019 (% of improvement)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 50%</td>
<td>9.0%</td>
</tr>
<tr>
<td>50-90%</td>
<td>5.0%</td>
</tr>
<tr>
<td>90-99%</td>
<td>1.0%</td>
</tr>
<tr>
<td>&gt;99%</td>
<td>0.01%</td>
</tr>
</tbody>
</table>

Several initiatives were carried out plant wise in order to address this objective. In 2018, the Dieuze plant (France) launched, under the continuous improvement FIT programme, a project to reduce non-hazardous waste due to last year’s weight increase. After measuring and analysing the current process, a new standard operation procedure was put in place, aiming to achieve a 5% reduction in 2019. A new parts supply train collecting waste and providing specific assembly parts supports this new procedure. Furthermore, the train drivers and line operators have been trained to prepare and collect the right waste. The Gemlik plant in Turkey, worked on a product life cycle assessment by D&P-FMEA. The project objective was to work together with the design team and our customers to use components with a higher recyclability ratio, thus reducing the environmental impact. A standard shifter cable was selected to run the above analysis. The recycling, recovery, disposal and loss during the recycling process ratios together with internal scrap management and warranties/spare parts figures were considered for the FMEA. An improved design, raw materials and assembly processes were the output with recommended action plans.
Also in Turkey, the Bursa plant implemented a new programme in 2018 for the correct segregation of waste based on educational seminars and the daily monitoring of waste containers. The results were very positive as industrial waste was reduced from 39,630 kg in 2016 to 15,500 kg in 2018.

The manufacturing plant in Shelbyville (USA) implemented the A4 Continuous Improvement Program. All areas of the plant are challenged to come up with ideas to make improvements. The ideas can come from anyone. A team works on the project and presents it to management. Improvements can be anything - improving quality, cutting costs, making a job easier. These concepts also apply to safety and environment not just production. In the last two years, the plant has implemented foam reuse to promote waste reduction. The manufacturing plant was using 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 landfill. In the last two years, it is reused as delivery packaging resulting 60% foam waste reduction.

The Poland plant reduced paint sludge from 72,000 kg in 2017 to 38,000 kg in 2018 (while painting roughly the same number of parts). It was achieved thanks to a robotized application which generates less overspray and new chemicals which produced less water content sludge.

The Taicang plant also reduced paint sludge from 84,792 kg to 72,663 kg. This was achieved by changing chemical treatment to bacteria treatment. Today sludge has almost no solvent odour in the sludge pits.
Responsible sourcing
Policies

Ficosa works with two types of suppliers:

- Productive Suppliers: suppliers that are essential to the performance of the company’s operations. Ficosa’s purchases are oriented towards a specialization in product families, which are divided into three large areas: Electrics and Electronics (Batteries, connectors, semiconductors, PCB, glass mirrors, pumps, etc.), Chemicals (painted parts, chromed parts, blow moulding, etc.) and Metals Commodity (zamak, aluminium parts, tubes, wire rope, etc.).

- Indirect Suppliers: Suppliers that supply products and services of a general nature, not directly related to the business, such as office materials, paper, computer consumables, maintenance, suppliers, travel, training, temporary employment agencies, consulting, legal services, insurance, investment, etc.

Our production processes demand the achievement of optimum quality and service levels, as well as competitive prices when buying the materials used to supply our production line. In this context, the company has developed its own standards and quality processes that regulate the company’s purchasing activity.

The Ficosa Purchasing Policy and Procedures and the segregation of duties ensure compliance with J-SOX and with all applicable laws. Additionally, 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. The Supplier and any products or services supplied by them must comply with all laws and regulations applicable to the destination countries where the product is going to be produced and/or used, or related to the production, labelling, transportation, importation, exportation, approval and certification of products or services. This includes, but is not limited to, those related to the environmental issues directive set out in the ELV, REACH (Registration, Evaluation, Authorization and Restriction of Chemicals), CLP/GHS (Classification, labelling and packaging of substances and mixtures) and the Dodd-Frank-Act relating to Conflict Minerals (gold, tin, tantalum and tungsten sourced from conflictive regions as the Democratic Republic of Congo and adjacent countries); labour laws in general, working hours and employment conditions, workers’ rights, employment benefits, subcontractor selection, safety of vehicles and installations, etc.

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 Labour Organization (ILO) conventions for the respect for employees’ rights, age and working hour limits, etc.

At the beginning of 2019, the general purchasing conditions were updated to include a business ethics and anti-corruption provision requiring suppliers to act in accordance with the highest standards of integrity and ethical conduct, in compliance with current laws, and to follow all relevant regulations and standards, particularly with regards to local and international anti-corruption law, in addition to Ficosa’s Code of Ethics.

Furthermore, the company has developed a Supplier Quality Manual that details the main procedures and systems used for supplier selection, business assignment, component approval, performance follow up and supplier development. The supplier quality manual specifies that all suppliers wishing to be included in the Ficosa Supplier Panel should base their code of conduct on the ten principles of the United Nations (Global Compact) in the areas of human rights, labour, environment and anticorruption. This manual is available on Ficosa’s website.

Lastly, the company has developed other standards and procedures in order to improve the communication and simplify processes for better logistics.
Governance

The Corporate Team consists of the Purchasing Director, Commodities and Project Managers, as well as support and consultancy teams such as Quality, Human Resources, Logistics, and Control functions who coordinate all purchasing activities worldwide. Every country has a Local Purchasing team led by a LPD (Local Purchasing Director), who is managed by both the Purchasing and Regional Directors. The LPD coordinates the country’s purchasing functions (Commodity Buyers, Purchasing Project Leaders, and STAs).

Main risks and challenges

Our production processes demand optimum quality and service levels, as well as competitive prices, and continuous assurance of the responsible sourcing of our supply chain.

The supplier selection process is key to guaranteeing the quality levels and the sustainability of our supply chain, and is focused on working together with our suppliers to attain the highest standards in business integrity and social and environmental performance.

Ensuring that Ficosa is using conflict-free minerals is also essential to our organization and our customers.

Key results

To become a Ficosa Supplier it is compulsory to have the ISO/TS IATF 16949 certification. All the suppliers must provide Ficosa with written evidence of the most recent certification renewal. Ficosa specially appreciates and promotes IATF 16949, OSHAS 18001 and ISO 14001 certifications from their suppliers.

In addition, any new supplier must fulfil 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 throughout the term established 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 improvements in its suppliers and determine the potential support they may need from Ficosa. In recent years, the 3Q3 supplier audit also includes questions about the compliance with REACH Authorization and Conflict Minerals regulation.

Ficosa has developed an internet platform for suppliers called FPSS (Ficosa Purchasing System Software) that is used for the different purchasing Processes: Supplier Registration, Offers, Assignments, Quality and Service incidents management and Suppliers Development.

The platform includes all the relevant documents from each supplier (REACH declaration, conflict minerals declaration, certifications, etc.). This platform is a quick, preferential, and clear communication channel linked to the Purchasing Department, allowing Ficosa to manage the purchases of all materials. All the productive suppliers must be registered in the FPSS and the company expects to increase the scope and include the indirect suppliers too.
On the other hand, Ficosa customers (OEMs) encourage and support the use of sustainable, renewable natural resources while reducing waste and increasing reuse and recycling. Accordingly, the raw materials used by Ficosa follow the customer technical requirements or belong to their certified material list. To promote reuse, most automotive parts are shipped through returnable packing to our customers. These initiatives also come from Ficosa. As an example, our Morcone plant in Italy implemented a new packaging in 2018 to reduce CO₂ emissions by more than 75% compared to the previous system. This initiative strengthens our commitment to sustainability and was launched by us thanks to our involvement in “CONAI” (private non-profit consortium which in Italy is the instrument through which producers and packaging users guarantee the recycling and recovery targets for packaging waste set by law).

**Conflict Minerals**

In recent 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).

Tin, tungsten, tantalum and gold (3TG) are used in some vehicle parts and components made by Ficosa, such as circuit boards or heater terminals. We enforce due diligence to investigate the origin of the conflict minerals in our products. Our goal is to work with DRC conflict-free suppliers. Accordingly, 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’s use of minerals for each plant.

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of suppliers and materials for which conflict mineral information is available</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Commitment to society
Visits to the factory

Every year, the manufacturing plants in Dieuze (France), Salinas and Escobedo (Mexico), Dabrowa (Poland), Cookeville (USA), Taicang (China), Sao Paulo (Brazil), Gemiilik (Turkey), Maia (Portugal), Soria and Viladecavalls (Spain) organize factory visits for students, employee family members, and local businesses to explain the main characteristics of the production process. These visits enable the company to attract new members and demonstrate the strength of their manufacturing capabilities.

Family day at the Viladecavalls site

On September 15th, as part of our “Committed to you” campaign, the company opened the doors of its facilities in Viladecavalls for the first time. The employees were able to share their work environment with their families and enjoy a fun day with activities for adults and kids. A total of 2,100 people attended this initiative. This open day was organized with the main objective of recognizing the great work and all the success achieved throughout history by all the Ficosa team members.

“Committed to you” is an initiative launched at a global level in an aim to reaffirm the company commitment with all its teams through different actions and activities such as Family Days or the launch of satisfaction surveys, etc.

The same day, a food collection campaign took place with the main aim of covering the basic needs of the most disadvantaged families in the city of Terrassa, in collaboration with the Busquets Foundation and the INSERCIÓ eco Association.

Both the Busquets Foundation, a century-old entity in Terrassa that serves the most needy families daily through its food bank, the INSERCIÓ Association, whose mission is the creation of jobs through the development of economic activities related to the environment, and Ficosa, valued very positively the results of this joint action.

Ficosa employees, together with members and volunteers from both entities were in charge of carrying out the food collection that took place during Family Day.

Ficosa and the Polytechnic University of Catalonia (UPC)

In collaboration with the Universitat Politècnica de Catalunya (UPC), Ficosa has designed the Automotive Embedded Systems course addressed to Master’s students in Telecommunications Engineering.

After detecting the need to offer a specialization to all those engineers interested in the development of electronic communications systems for the automotive sector, Ficosa, the UPC and CARNET (academic-industrial consortium to support new mobility) created and launched the first pilot test of this training course at the beginning of 2018. Due to the great success of the first edition, the UPC has decided to include this course again in its new academic programme 2018 - 2019.

Ficosa, whose specialists will teach part of this course, offers both the possibility of receiving a scholarship to study this course, as well as the opportunity to join the company once the course has finished. In this way, the company strengthens its links with the university and fulfils the objective of training and attracting new talent in electronics, communications and telematics for the automotive industry, a key field for the car and the mobility of the future.
Each decentralized location is responsible for organizing its own charity projects, donations and other social initiatives. The social initiatives depend on the site-specific challenge and are led by the local Human Resources department.

Examples of Ficosa social initiatives in locations where the company operates:

- Volunteering programme with local community organizations (Habitat for Humanity)
- Food and cleaning supplies drive
- Farm and warehouse distribution centre collaboration for disadvantaged citizens
- Soup kitchen for the homeless
- Adopting a family for Christmas
- Senior Centre volunteering
- Walk for kidney disease
- Donation to caring organization (United Way)
- Adopt a road Programme

- Donation of toys for children from low income families
- Collaboration with the Red Cross
- Visits to nursing homes
- Programme “Adopt a tree” to promote reforestation
- Small citizen programme (training programme for elementary students)
- Donation of school benches to local elementary school
- Collaboration with “Sweet hands” association (integration in society for young people with Down syndrome)
- Volunteering programme with local community organizations (Habitat for Humanity)
- Food and cleaning supplies drive
- Farm and warehouse distribution centre collaboration for disadvantaged citizens
- Soup kitchen for the homeless
- Adopting a family for Christmas
- Senior Centre volunteering
- Walk for kidney disease
- Donation to caring organization (United Way)
- Adopt a road Programme

- Collaboration with the municipality of Itapevi to donate clothes for people in a situation of social vulnerability

**Soria:**
- Partnership and collaborations with entities who promote employment for disabled people (Asamis, Ilunion), National Association against cancer (AECC), National League Against Cancer in Children (LINCECI)
- Sponsorship of sports activities
- Blood donation campaigns
- Collaboration with correctional institutions for fostering the rehabilitation of prisoners

**Viladecavalls:**
- Blood donation campaigns
- Partnership and collaborations with entities who promote the employment for disabled people (Friends Specialisterne)
- Collaboration with the Multiple Sclerosis Foundation (Mulla’t and Gospel Girona)
- Financial donations to social entities (ANAET) through a profit sharing vending machines agreement
- Collaboration with a local symphony orchestra (Orquestra Sinfònica del Vallès) to promote and foster musical culture.
- Sponsorship of sports activities
- Donation to children’s villages

- In-kind and financial donations to several institutions, such as the Holy House of Mercy of Maia, “Rarissimas” (an institution that supports children with rare diseases), “National League Child Hope-Renaissance”, “House of the People of Vermoin”, “Institute of Social Support - A Life A Smile”
- Collaboration in several initiatives with the City Hall of Maia (culture, sport)
- Supporting found for employee who has a son with a serious illness
- Awareness campaign to support children and young people with intellectual disabilities and/or multidisciplinary

- Sponsorship of sports activities
- In-kind and financial donations for several institutions (Noble Pack, Great Orchestra of Christmas Help, local fire brigade festival for children)
- Sponsorship of sports activities

- In-kind and financial donations (book and toys)
- Collaboration with TEMA, the Turkish Foundation for Combating Soil Erosion, for Reforestation and the Protection of Natural Habitats

- Sponsorship of sports activities
Innovation in our products
Ficosa’s vision of innovation is based on our 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 mobility industry.

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

Our great dedication to innovation and a clearly global focus, has enabled us to create a solid network of R&D centres in Europe, North America, South America and Asia. These are divided into centres of expertise focused on specific product families – technologies and local engineering centres closely located to our main customers’ design centres.

The Technology Centre in Viladecavalls (Spain) acts as the driving force for the group’s global research efforts and fuels the 14 development centres we have around the world. This facility is a benchmark in electronics, SW development and electro-mechanics technology for developing new solutions in safety, connectivity and energy efficiency as well as world class testing and prototyping laboratories.

Our strong commitment to innovation has also resulted in high added value job creation. Ficosa has an excellent and experienced team of engineering talent on board to face the company’s new challenges. The total number of engineers devoted to R&D was 1,130 in 2018.
Partnerships

We also collaborate, both nationally and internationally, with other companies, engineering firms, universities and technical centres on studies, training, advisory services, technology transfer, validations, tests, etc., that allow us to meet more demanding time to market and complex system requirements. New technologies require a much higher level of open innovation and strategic partnerships than traditional electromechanical products.

R&D Expenditure (thousand €)

In 2018, Ficosa spent more than €94 million in R&D to provide its clients with the most innovative solutions that anticipate the challenges of a constantly changing industry.

This figure represents an investment by the company of nearly 8% of its annual revenue in R&D in order to provide customers the most innovative solutions possible. Ficosa currently holds 769 active patents and it is one of the most active Spanish holding companies in Spain in terms of patenting.

<table>
<thead>
<tr>
<th>Partnerships</th>
<th>Research centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detroit</td>
<td>· Vilademavalls</td>
</tr>
<tr>
<td></td>
<td>· Wolfenbüttel/Lindau</td>
</tr>
<tr>
<td></td>
<td>· Dieuze</td>
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<td></td>
<td>· Porto</td>
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<tr>
<td></td>
<td>· Bursa</td>
</tr>
<tr>
<td></td>
<td>· Sao Paulo</td>
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<td></td>
<td>· Detroit</td>
</tr>
<tr>
<td></td>
<td>· Salinas Victoria</td>
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<tr>
<td></td>
<td>· Waseong-Gun</td>
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<td></td>
<td>· Tokyo</td>
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<td></td>
<td>· Taicang</td>
</tr>
<tr>
<td></td>
<td>· Hyderabad/Pune</td>
</tr>
</tbody>
</table>
Innovation in high-value products

Ficosa is convinced that its success and future are founded on innovative products that benefit our society, providing safer, more efficient, sustainable and comfortable ways of mobility.

SAFETY

The Challenge

According to the World Health Organization (WHO), car accidents kill approximately 1.2 million people worldwide every year, representing a quarter of all deaths caused by injury. Additionally, about 50 million people are injured in traffic accidents. If preventive measures are not taken, road traffic 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) revealed that car crashes cost the United States $300 billion per year.

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 or assist the driver in a potential accident. 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

RobustSENSE (ECSEL)

The main objective of RobustSENSE is to improve the reliability of automated driving in all types of driving conditions. RobustSENSE gives Ficosa the opportunity to prove the capability of this system to interoperate in any conditions with other systems and then make its products available to a broader range of applications, with particular regard to automatic driving, thus widening its market opportunities.

Ficosa is participating in the deployment of a Camera Monitoring System featuring Lane Change Assist, Soil Detection and a Driver Monitoring system that analyses the respiratory signal and records it on video in order to estimate the degree of attentiveness of the driver.
SOMNOADAS (IBEROEKA)

This project consists of the development of a system of cameras integrated into a vehicle to detect the breathing pattern of the driver and estimate their state of drowsiness.

The main objective of this project is to design and manufacture a contactless drowsiness detection system using camera technology that allows the involuntary movement of the subject caused by breathing to be analysed. The system consists of a high-resolution camera integrated into the vehicle’s interior and focused on the upper part of the thorax. Video recordings are analysed in real time in order to estimate the degree of drowsiness of the driver from the extraction of the respiratory signal from the video signal.

SOMNOADAS II (IBEROEKA)

This project develops a system of cameras integrated on the vehicle to detect the facial expressions of the driver in order to estimate their state of drowsiness.

The main objective of this project is to develop a camera-based system that analyses facial expressions related to pre-defined drowsy stages. The system consists of a mono iR camera integrated into the vehicle’s interior aimed at the face and upper part of the thorax. Video recordings are analysed in real time in order to estimate the degree of drowsiness of the driver combining the drowsiness detection index from the extraction of the respiratory signal and the drowsiness detection index from the analysis of facial expressions, both from the video signal.
Ficosa participated in the deployment of eCall service in Europe. In these projects, 14 EU participating Member States and 1 associated country analysed the feasibility and robustness of the eCall service with pilot installations on both the PSAP and vehicle side. As from October 2018, the eCall system will be installed in all new car models and light vans sold in the European Union.

Ficosa has developed an in-vehicle telematics control unit that is able to perform Next Generation 112 emergency calls (NG112 eCall), which is the next paradigm to be supported for this life saving technology. This Next Generation eCall supports LTE and newer networks, based on IP Communications, and provides a future-proof solution for the regulatory eCall, which was originally designed for voice circuit-switching networks like 2G and 3G. Also, moving to an IP-based solution has extra benefits, i.e. leveraging existing standards such as SIP, and enhancing communication by sending extra data or video feeds. The project was successfully closed in 2018 with the final validation test with the European 112 Services.

PRYSTINE

Ficosa is developing an interior camera for driver monitoring that comprises an IR mono camera integrated in pillar A and a laser integrated in the interior of the rear view mirror which aims a cloud of points at the driver’s chest. The camera records these points and the algorithm processes the video data in order to extract the respiration signal using the distance between points. Once the respiration signal has been detected, the Thoracic Effort Drowsiness Detection algorithm (TEDD) analyses this data in order to estimate the degree of drowsiness of the driver.

V-RECON (EUREKA!)

This project consists of producing a CMS system (Camera Monitoring System) to replace vehicles’ exterior mirrors (Class III-traditional). The system developed during this project will initially be for passenger vehicles but may extend to other types of vehicles (cargo, industrial, etc.). In order to achieve the final objective, research and development activities are required to design a demonstrator with the three main elements that make up the integrated system:

1. External wing or mechanical camera support to capture the rear view.
2. The camera itself.
3. An electronic control unit (ECU) that will also contains a display where the images are projected.

(I_HeEro) Harmonized eCall European Deployment

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ESCAPE

The “European Safety Critical Applications Positioning Engine” (ESCAPE) is funded by the European GNSS Agency (GSA) under the European Union’s Fundamental Elements research and development programme. 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, and is led by Ficosa in collaboration with Groupe Renault, GMV, ST Microelectronics, IFSTTAR and ISMB.

The in-vehicle unit, produced by Ficosa during this project, was displayed during the Mobile World Congress 2018 in Barcelona. This development is an electronic board able to precisely indicate the position of the car with an innovative GNSS receiver developed by our partner STMicroelectronics. The unit is going to be implemented as the positioning engine in a self-driven car made by a first level OEM.

C2C-CC (Car to Car Communication Consortium)

Ficosa participated in the deployment of eCall service in Europe. In these projects, 14 EU participating Member States and 1 associated country analysed the feasibility and robustness of the eCall service with pilot installations on both the PSAP and vehicle side. As from October 2018, the eCall system will be installed in all new car models and light vans sold in the European Union.

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5G Automotive Association

Ficosa became the first Spanish company to join the 5G Automotive Association (5GAA). The mission of this association is to accelerate development, standardization and marketing of solutions for connected cars and autonomous vehicles and their integration into Smart Cities, as well as laying the groundwork for implementing 5G technology in the automotive sector.
SECREDAS

SECREDAS stands for “Product Security for Cross Domain Reliable Dependable Automated Systems. The SECREDAS consortium comprises 69 partners from 16 European countries. The goal of this project is to build a benchmark architecture for Secure and Safe Automated systems compliant with the new GDPR Regulation. The focus will be on automotive, rail and personal healthcare, all of which demand high security and safety, covering technologies such as radar, lidar, Vehicle-to-Infrastructure and in-vehicle networks.

Ficosa will contribute to the project with a full-fledged V2X HW platform with a secured storage and signing environment. These HW mechanisms will prevent cybersecurity attacks involving stealing private keys and damages caused by impersonating a legitimate vehicle. Ficosa’s platform will be capable of integrating SW technologies from third parties, such as V2X Firewall and V2X misbehaviour detection. Ficosa will also provide DSRC High-performance antennas to achieve best platform performance.

As part of the same project, Ficosa ADAS will also provide an in-cabin driver monitoring system based on an IR camera plus laser for respiration signal detection and analysis. The main system objective is to continuously analyse the status of the driver and ensure that the driver is in a fit state to drive if the autonomous vehicle decides to return the command to the driver in the event of a cyber-security attack.

CARAMEL

CARAMEL brings together expertise from eight different European countries to solve cybersecurity issues for future mobility. In order to address cybersecurity for current autonomous and connected vehicles, well-established methodologies developed in the ICT sector will be adopted in order to assess vulnerabilities and potential cyber-attack impacts. Although past initiatives and cybersecurity projects related to the automotive industry have led to security assurance frameworks for networked vehicles, several newly introduced technologies like 5G, autopilots, and smart charging of Electric Vehicles (EVs) reveal gaps in cybersecurity, which have not yet been addressed satisfactorily. Considering the entire supply chain of automotive operations, CARAMEL aims to reach out to commercial anti-hacking IDS/IPS products for the European automotive cybersecurity and demonstrate their value in extensive attack and penetration scenarios.

Ficosa will contribute a full-fledge V2X (802.11p) HW platform to the project designed for very robust security which will include enhancements that have not yet been included in other similar developments.

PREDICA

Cybersecurity is one of the main concerns for OEMs. PREDICA is a project in which an OEM, a security software provider and FICOSA as integrator have set the goal to develop a new cybersecurity mechanism to detect and prevent intruder entry to our telematics units. The cyber-security level achieved, evaluated by an independent company, reached a remarkable score without big penalties on memory or performance.

Thanks to this experience, OEMs are considering increasing their level of protection retrofitting already built products.
FLAME (Facility Large-Scale Adaptive Media Experimentation)

FLAME is an initiative designed to create a sustainable Future Media Internet (FMI) ecosystem through experimentation, collaboration and innovation. FLAME aims to optimize media content delivery by enabling deep interactions between media service providers and an underlying communications infrastructure using software defined networking and information centric networking techniques.

Within this project, FICOSA proposes an experiment to broadcast video content on the V2X network. The experiment will merge Cellular V2X and FLAME networks to provide better, localized information to the driver in a safer way.

CarCom

The company also offers the CarCom platform, which integrates several connectivity solutions in a modular way. This solution meets the goal of facilitating quick prototyping of a new technology. The modular integration allows the reuse of common parts, introducing just hardware and software for the new technology at hand. This platform already implements hardware and software technologies to provide cellular, V2X, C-V2X, Wi-Fi, localization (GNSS) and HMI capabilities. Some of the future modules on plugable technology are high-precision positioning, digital tuning antenna, as well as cellular 5G new modules. This covers the needs of companies to be able to exploit latest technologies in short time, improving development speed and reutilization. At the same time, CarCom offers a platform that meets OEMs sample-A requirements for a large number of applications and can be deployed worldwide.

COLORADO C-DOT

This project carried out in collaboration with Panasonic USA and The Colorado Department of Transportation (CDOT) is building a pilot program to begin real-world deployment of the most advanced vehicle-to-everything (V2X) environment in the USA. This collaboration represents the largest shared investment in V2X technology in the United States.

During the pilot deployment that was recently completed, it was successfully installed and tested five V2X roadside units and six V2X vehicle on-board units (Ficosa units), and established a Network Operations Centre to manage the overall system. These efforts set the stage for deploying the V2X system in a real-world environment along a major Colorado highway.

By creating this connected system—an “internet of roads”—drivers and traffic managers will receive real-time information about road conditions such as traffic delays, icy conditions, and crashes through continuous and automatic communications between individual vehicles and roadside infrastructure. Once deployed, this system has been designed to result in an 81 percent decrease in unimpaired multi-vehicle crashes, as well as more reliable travel times and, eventually, the ability to communicate with self-driving cars.
What we are offering our customers

Vision systems

Most aggressive projections estimates that no more than 2.4% of vehicles will be autonomous by 2030, vision will keep being one of the most significant pillars in our business, either through traditional mirrors systems with added functionality or through the emerging smart digital view systems where Ficosa is also taking a leading position (CMS, parking cameras, etc).

V2X (VEHICLE-TO-X) UNITS

The main purpose of incorporating these units into vehicles is for safety reasons. This technology will be able to reduce the number of accidents. Vehicle-to-everything (V2X) transmissions allow cars to communicate with each other as well as with the infrastructure, pedestrians and others. This communication path provides enough information in the vehicle regarding its surroundings. This fact enables drivers to be alerted on impending dangers in a first phase. In the future, the vehicle will be able to act in response to this knowledge. In addition to the safety aspects, there will also be convenient features such as easing vehicle parking, toll payment, weather, road conditions and information about surrounding commercial facilities. Ficosa has been granted a patent on a V2X high performance antenna for platooning. This fact increases Ficosa’s interest in supplying OEMs with fully integrated system solutions instead of separate parts.

Intelligent Rearview Monitor System (IRMS)

During 2018, Ficosa has been working on the industrialization phase of the Intelligent Rearview Monitor Display version for LCVs and Vans, where currently drivers have no central rear vision due to the lack of rear windows. In this case, IRMS provides full rear vision to the driver, improving driving safety and providing the same extensive horizontal and vertical fields of vision as passenger cars. This product will start mass production by 2020.
Driver Monitoring Systems

In 2017, the company developed a driver monitoring system in order to estimate the capability of the driver in adverse situations, such as fatigue. Today Ficosa has two different lines of products that detect any unsafe driver behaviour:

**Somnoalert ® Driver Behaviour**

The algorithm located in an ECU analyses existing data in CAN bus and data provided by a Lane Recognition System in order to identify inadequate driving states related with driving quality. The system studies the driver’s gradual worsening over a predetermined time period.

**Somnoalert ® Contactless**

This system comprises a mono camera recording the upper body of the driver, a laptop, a breathing extraction from video algorithm and a drowsiness detection algorithm. The system analyses respiratory data in real time to estimate the driver’s degree of awareness.

Sensors and Camera Cleaning

During 2018 Ficosa started the deployment of the LiDAR Cleaning System, which has now been applied in four different ranges of car for a premium German car manufacturer. Parallel to this, Ficosa is upgrading its product portfolio for Sensor Cleaning devices, expanding its ability to clean all kinds of sensors, specifically up to Level 5 Autonomous cars, ensuring that all detection systems function, and quality and integrity are safe during driving.
Camera Monitor System (CMS)

In 2015, the company developed an electronic mirror composed of cameras and displays which represents an alternative option to the exterior rear-view car mirrors. This pioneering system, also known as CMS, is a true revolution for the automotive industry as well as 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 their requirements.

Vehicle cameras and expertise in vision systems and machine vision

Ficosa offers customers wide exterior and interior small size cameras for 360 degree vehicle vision, parking, mirror substitution and driver monitoring. Stand-alone or in-system cameras, with low power dissipation, EMC robustness and cost optimized, covering both entry level and high performance systems and offering state-of-the-art technology for next generation machine vision systems. These vision systems are also provided through exterior and interior mirror substitution, using high performance cameras optimizing video path and image quality, offering the most advanced display and ECU performance for machine vision integration with the most advanced 2D and 3D machine vision software developments.

ERA GLONASS SYSTEM

FICOSA is manufacturing telematics modules certified for ERA GLONASS. The ERA GLONASS system is the Russian equivalent of the European e-Call system. Safety systems and emergency services are fundamental to saving 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 times by 50% in rural areas and 40% in urban areas. The emergency system inside the vehicle consists of a telematics unit (In Vehicle Telematic Unit, IVTU) and a user interface module.
Shift-by-wire systems

In 2018, FICOSA expanded its product portfolio of Shift-by-Wire systems. FICOSA develops and produces not only e-SHIFTERs, but also Electronic Control Units and actuators, enabling the automation of traditional transmission or the integration of locking requirements to the new developed ones. Current customers are reputed Asian automotive manufacturers. In 2018, this product line was deployed for Internal Combustion Engine, Hybrid Electrical and pure Electrical Vehicles. Besides fuel efficiency enabled by the combination of engine nature and robotized transmissions, Shift-by-Wire technologies enables safety features to be implemented that control transmission to avoid risky conditions by human errors.

For this product line, FICOSA is researching and developing to offer a broad portfolio of next generation actuators, with reduced packaging and weight (actuator and electronic control unit below 750 gr), which can be implemented in any vehicle type, resulting in a reduction versus traditional automatic external shifters.

COMMUNICATION & CONNECTIVITY

The Challenge

The automotive industry is undergoing a series of transitions as the industry is moving towards digitalization and connected mobility. While automotive digital technology has traditionally focused on optimizing the vehicle’s internal functions, attention is now focused on developing the car’s ability to connect with the outside world and make the car experience safer, more comfortable and more informed. In this context, Ficosa is working to create a more interconnected world.

Collaboration with national and international programs

ERTICO - ITS Europe

The ERTICO Partnership is a public/private partnership comprising over a hundred companies and institutions involved in the production of Intelligent Transport Systems (ITS). Together, ERTICO Partners conduct a range of activities to develop and deploy ITS to save lives, protect the environment and sustain mobility in the most cost-effective way.
What we are offering our customers

Telematics units

These units connect the vehicle with the internet. The most used technology is cellular using 2G, 3G and LTE for data communications. Our units use embedded antennas, which facilitates integration with many vehicles. These units incorporate services, such as e-call, b-call and lights & horn. Some models also enable in-car Wi-Fi communications.

Emergency call Human Machine Interface

EMU is an Emergency call Multimedia Unit for vehicles, consisting of a button, some indicators, a microphone and a speaker. The button manually triggers the emergency call, speaker and microphone are used for voice communication with the 112 Services and the indicators show the mobile coverage and e-call status. All these elements are managed by a telematics control unit inside the vehicle.

Integrated antennas

We design and develop antennas for different services such as radio broadcasting (AM/FM/DAB), telephony (2G, 3G, LTE and 5G), satellite positioning systems (GNSS) covering multiple satellite constellations (GPS, Galileo, Glonass, Beidou), satellite digital radio (SDARS) for the US Market as well as other services like RKE, Wi-Fi, Bluetooth and BLE. Antennas for new technologies such as V2X and C-V2X (omnidirectional or directive) and for the latest 5G technologies are also developed and ready to go to market.

As the number of antennas inside a car is increasing considerably, the trend is to integrate them on non-visible locations of the vehicle. We have the expertise to integrate antennas for different services in different locations assuring optimal operation and performance with zero or minimal visual impact. Some examples of locations for antenna integration in the car are inside exterior rear-view mirrors, dashboard, windshield, embedded in the vehicle roof, inside plastic parts of the car such as spoilers, etc.

Rear-view mirror that incorporates electronic toll function

During 2018, Ficosa started to produce an interior rear-view mirror for a major European manufacturer (OEM), which incorporates a Panasonic electronic toll function for the automatic payment of motorway tolls without having to stop the vehicle. This product will be installed in 28 different car models for this OEM group.
The Challenge

One of the toughest environmental challenges of our time is managing the mobility of people and goods. By 2030, passenger traffic will exceed 80,000 billion passenger-kilometres, a fifty percent increase, and freight volume will grow by 70 percent globally. The number of vehicles on the road is globally expected to double by 2050.

The reduction in greenhouse gas emissions, the progress in the decarbonization economy and the expected growth in mobility in the upcoming years highlight the need for efficient and environmentally sustainable vehicle technologies. The widespread electrification of transport through the adoption of electric vehicles (EVs) is one strategy to reduce GHG emissions.

Collaboration with national and international programs

Electromobility Hub

In 2018, the company opened a Technological Electromobility Hub with 120 people and 1200 square metres, dedicated to the company’s different products in Hybrid and Electric vehicles (HEV/BEV). The e-Mobility Hub is set to become a global benchmark in the development of electric mobility technology, driving Ficosa’s leadership forward in an area that is key for the mobility of the future. In this sense it plays a strategic role, as it will become a driving force in electromobility solutions for the whole group on an international level.

The deployment of all these HEV/BEV products form part of the company’s long-term strategy. For this reason, it will be carried out in different phases. During the first phase, Ficosa will focus on three products:

- Battery Management Controllers: Devices to control the HV Battery and its energy flow.
- HV Junction Box: Safety device that disconnects the HV battery from the rest of the vehicle system.
- On board charger: Charger integrated into the vehicle that transforms the alternating current of the electrical grid into a direct current to charge the HV Battery.
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 LiS 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 to improve the efficiency and reduce the complexity of electric vehicles’ control architecture and its subsystems, with a positive impact on cost, maintenance, monitoring and functionalities update.

FICOSA’s roles in 3Ccar project are as follows:

- Leader of supply chain 10 “Cost effective On-Board battery charger”: FICOSA proposes a new concept of On-Board-Charger (OBC) to optimize the manufacturing and materials costs, while improving efficiency, volume, weight and reliability.

- Partner of supply chain 5 “High speed communication”: FICOSA is contributing to improve the cost and weight of the vehicle by preparing a V2X unit with enhanced connectivity able to be connected to a high speed backbone network in the car.

RIS3CAT (Research and Innovation Strategies for Smart Specialization)

Through the Notecar project, Ficosa is working on a new concept of OBC (Onboard Battery Charger) for high-voltage electric and hybrid vehicle 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 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.
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:

- Organizing urban mobility activities in Barcelona
- Contributing to strengthening the automotive sector in Spain, and Catalonia in particular
- Recruiting proactively for the automotive industry
- 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 main OEMs 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 development of a new integrated concept of On-Board Charger (OBC) together 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.
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<td>GRI302-1</td>
<td>Pg 56/57</td>
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<tr>
<td><strong>Climate Change</strong></td>
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<tr>
<td>Relevant aspects regarding greenhouse gas emissions</td>
<td>GRI 305-1, GRI 305-2, GRI 305-3</td>
<td>Pg 53/54/55</td>
</tr>
<tr>
<td>Measures to adapt to climate change</td>
<td>(1)</td>
<td>Pg 20/21/52/53</td>
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<tr>
<td>Objective related to GHG reduction</td>
<td>GRI 305-4</td>
<td>Pg 53</td>
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<td><strong>Biodiversity</strong></td>
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<td>Biodiversity</td>
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<tr>
<td><strong>Respect for Human Rights</strong></td>
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<tr>
<td>Management approach</td>
<td>(1)</td>
<td>Pg 5/24/26</td>
</tr>
<tr>
<td>Implementation of human rights due diligence procedures</td>
<td>GRI 102-16, GRI 102-17</td>
<td>Pg 17/23/24/25/26/61</td>
</tr>
<tr>
<td>Measures to prevent and manage potential human rights abuses</td>
<td>GRI 102-16, GRI 102-17</td>
<td>Pg 23</td>
</tr>
<tr>
<td>Promotion and compliance with ILO’s provisions</td>
<td>(1)</td>
<td>Pg 26</td>
</tr>
<tr>
<td><strong>Anti-corruption and bribery matters</strong></td>
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<tr>
<td>Management Approach</td>
<td>(1)</td>
<td>Pg 22/23</td>
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<tr>
<td>Measures to prevent corruption and bribery</td>
<td>GRI 102-16, GRI 102-17</td>
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<tr>
<td>Measures to prevent money-laundering</td>
<td>GRI 102-16, GRI 102-17</td>
<td>Pg 22/23/24</td>
</tr>
<tr>
<td>Contributions to non-for-profit organizations</td>
<td>N/A</td>
<td>Pg 7</td>
</tr>
<tr>
<td><strong>Social commitment</strong></td>
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<td>Management Approach</td>
<td>(1)</td>
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<tr>
<td>Commitment with sustainable development</td>
<td>GRI 413-1</td>
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<td>Sustainable supply chain management</td>
<td>GRI 308-1, GRI 414-1</td>
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</tr>
<tr>
<td>Consumer relationship management</td>
<td>(1)</td>
<td>Pg 29/30/31</td>
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</table>

N/A - Not applicable, non material
(1) Internal framework: qualitative description
Appendix 1 - OHSEQ policy

The policy of integrated management of the company is based on the compromise of Upper Management and the participation and consultation of all the staff, and their representatives where they exist, in order to ensure the continuous improvement of their labour.

It must be communicated and understood by all the 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).

With this aim, the Direction affirms the compromise and responsibility with the implementation, maintenance and continuous improvement of an integrated system of management, based on:

1. The values and philosophy of operations of the organization, established clearly 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 fulfill and exceed their expectations of time, quality, safety and cost.

3. The company firmly believes that the excellence in each project and product are achieved with the participation of all the people that constitutes FICOSA. The maintenance of the daily enthusiasm and the imposition of challenges of permanent improvement are clues for this purpose and a responsibility for each leader.

4. Occupational health and safety is a fundamental part of our work; Our commitment in the prevention of accidents and occupational illnesses, focuses our efforts on ensuring safe and healthy work environments, prioritizing the elimination of hazards and the minimization of risks.

5. The development of our Company must be guided toward the continual improvement of our work (in occupational health and safety, quality, environment and energy efficiency). It is our obligation to improve every day the effectiveness of our Integrated System.

6. The respect for nature and the observance of the universally declared principles of pollution prevention and control shall be kept as a frame of reference for the development of our activities. The development of our organization can and must walk alongside the preservation of the environment and the mitigation and adaptation to climate change, as well as towards energy management.

7. The environmental questions are a common problematic, 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 implantation and to collaborate in their maintenance.

8. FICOSA has a framework where the establishment of objectives and goals for occupational health and safety, quality and environment, as well as the availability of information, resources, acquisition of efficient products and services. The review of these objectives is a high priority function in the development of our Company. These objectives must be based on the requirements of the interested parts, established in the MISSION.

9. The fulfillment of the current legislation and regulation regarding occupational health and safety, quality, environment and energy for FICOSA. We include in this section any other requirement.
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 CSR report, Ficosa describes its actions to integrate the Global Compact and its principles into its business strategy, culture and daily operations.