

# Corporate Social Responsibility

2021

# Index

**01**

Letter from the president

**04**

How do we work?

**07**

Living by the values at Ficosa

**02**

About our report

**05**

Ficosa and the Sustainable Development Goals

**08**

Human Rights

**03**

Ficosa at a glance

**06**

Compliance and business ethics

**09**

Information security

**10**

**Commitment  
to quality**

**13**

**Commitment to  
the environment**

**16**

**Innovation in  
our products**

**11**

**Commitment  
to our people**

**14**

**Responsible  
sourcing**

**17**

**Content Index**

**12**

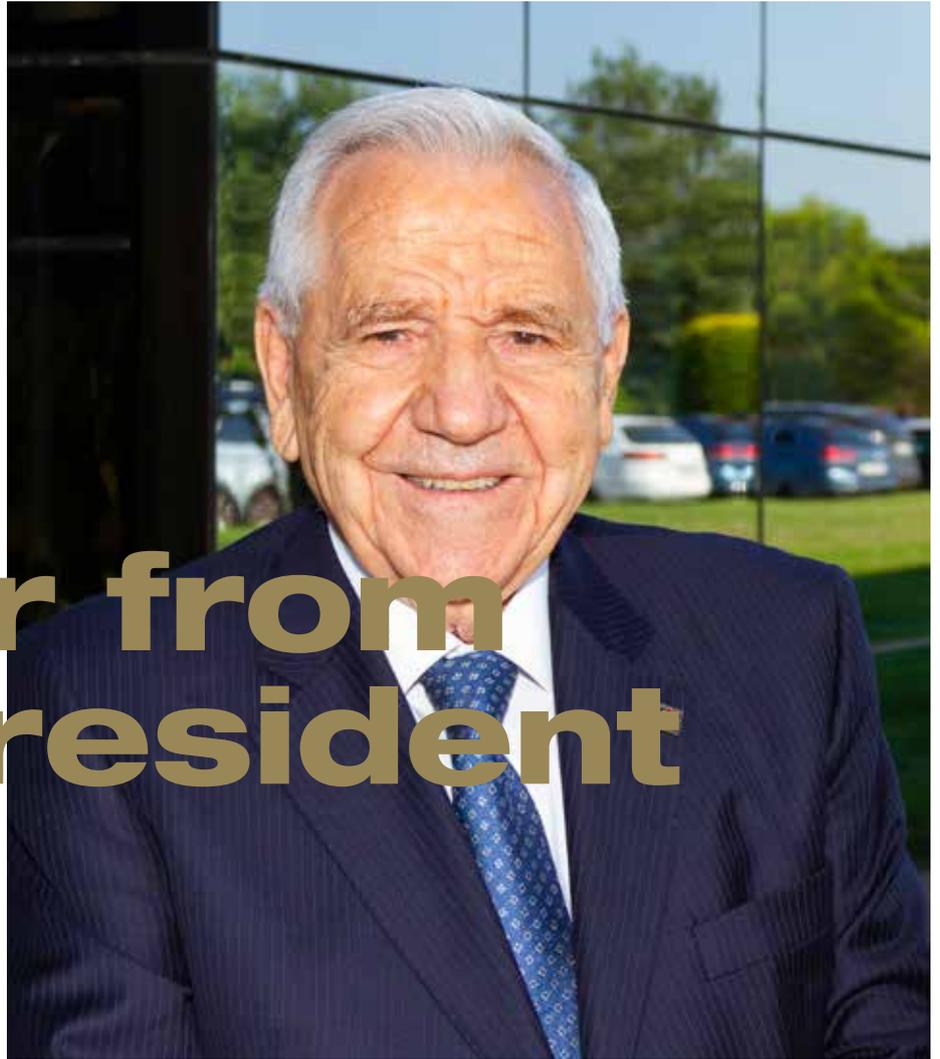
**Commitment to  
health and safety**

**15**

**Commitment to  
society**

**18**

**Appendix 1 –  
OHSEQ Policy**



# Letter from the president

Dear all,

I am pleased to share with you our annual report report on Corporate Social Responsibility, which attempts to offer an overview of Ficosa's performance to face the challenges of the automobile sector and describes our actions to integrate the United Nations Global Compact and its principles into our values, culture, business strategy and daily operations.

Last year I mentioned the challenges the automotive industry was and is facing, worsened by the advent of COVID-19, a world cataclysm!

In 2021, the pandemic has continued to hit hard the automotive sector, especially the semiconductor crisis. The automotive industry continues to suffer from shortages of chips, or semiconductors, and the majority

of brands must restructure their production plans to adapt to this reality, derived from the high global demand for these components and the pandemic-related drop in production.

The chip manufacturing industry is struggling to meet the huge demand not only from the automotive industry, but also from mobile phone companies, computer companies and electronics companies in general.

An effect caused by a pandemic that has brought a global supply crisis, which, together with changes in people's habits, have been the triggers for the situation we are now experiencing.

But we must always think positively, this pandemic must be a motivation to strengthen our creativity and solidarity.

One of the main keys to our progress lies in our historical ability to anticipate the future, combined with a clear commitment to innovation. Furthermore, the secret of our success also lies in our philosophy of doing a lot with little, our solid human values of humility, work culture and entrepreneurship, as well as in the great human team that has formed the company at different times in its history.

In our company, we continually strive to ensure excellence in our products and, thus, we continue to work to provide the most innovative solutions, develop and manufacture products with high added value and high quality standards, always ensuring their sustainability.

Our social vocation for improvement and innovation has a direct impact on our

commitment to corporate social responsibility, materializing in the reduction of accidents, connectivity, energy efficiency, less pollution, driver assistance and comfort.

All these new products and technological services aimed at more assisted driving, the autonomous vehicle, the connected and less polluting car have become the pillars of Ficosa's growth. In this sense, it is worth highlighting the fruits of our technological commitment in 2021, with new orders won in the field of electric and autonomous vehicles for several OEMs:

It is important to highlight the new integrated ECUs, radar and ultrasound systems that Ficosa is going to supply to one of the main North American brands for their autonomous vehicles.

It is also worth mentioning that the CPD (Child Presence Detection) technology, offered by Ficosa to detect children forgotten inside the car by the driver, has already been approved by a premium manufacturer to be incorporated in its next models.

In the field of electro-mobility, we continue to grow by providing efficiency to achieve zero emissions with battery management systems, high voltage boxes and on board

charging devices that manufacturers entrust us to develop and produce.

Ficosa was a pioneer in developing and manufacturing since the end of 2018 a CMS (Camera Monitoring System) digital external rear-view system. In 2021, the first project of this kind was launched to the market for a major commercial vehicle manufacturer.

Technological changes, new consumer habits, the rapid advances towards electric, connected and autonomous mobility, raise a series of legislative, technological, cultural and economic changes that are causing disruptive effects in the value chain of the automotive sector. We need to be alert and prudent, the coming years will be characterised by great opportunities and at the same time great risks. Ficosa will work to manage and mitigate the risks, taking advantage of the opportunities arising from this situation of transformation.

I invite 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

# About our report

This Report aims to offer readers a transparent and balanced overview of Ficosa's performance in relation to the sustainability challenges that the company has faced in 2021.

## Objective of the Report

In this report, Ficosa aims to explain how non-financial and diversity risk and CSR challenges are approached, and the company performance in 2021, 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 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).

For the preparation of the information, some standards of the Global Reporting Initiative (GRI) have been selected according to

their materiality for the company and their alignment with the information required by law. 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 (Original Equipment Manufacturer) have also been taken into consideration. EcoVadis provides

an entire 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





## Scope and boundary

This report covers the period from 1 January 2021 to 31 December 2021. 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 main business lines: research, development, production and sales of high-technology vision, safety, energy efficiency and connectivity solutions (connected cars, driverless vehicles, assisted driving and 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 Tata Ficosa Automotive Systems Ltd as it is a 50% - 50% Joint Venture.

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), Hyderabad (India), Venaria Reale (Italy), Detroit (USA) and Tokyo (Japan).

# Ficosa at a glance

## Group Highlights

The company, with headquarters in Barcelona (Spain), generated sales of €944.4 million in 2021 and has a team of more than 7,700 employees, with manufacturing plants, technological centres and commercial offices located throughout 17 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.

- €944,4 million sales.
- Production plants, technical centres or sales offices in 17 countries, over 4 continents.
- Established in 1949 in Barcelona (Spain).
- 7,752 employees.
- Pioneers in high-technology vision, safety, connectivity and efficiency systems for the automotive and mobility sectors.
- 18 manufacturing plants.
- 13 R&D and technical centres.



- Barcelona
- Soria
- Sant Guim



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



- Salinas-Victoria
- Escobedo



- Sao Paulo



- Porto



Plants Technical Center Commercial Office Research



· Dieuze  
· Le Neobourg



· Rüsselsheim  
· Köln  
· Wolfenbüttel



· Dabrowa Gornicza



(Licence agreement)



(Licence agreement)



· Taicang



· Gyeongsangbuk-do (Joint-venture)



· Tokyo (office)



· Pune, Sanand, Chennai, Pantnagar (Joint-venture)

· Hyderabad



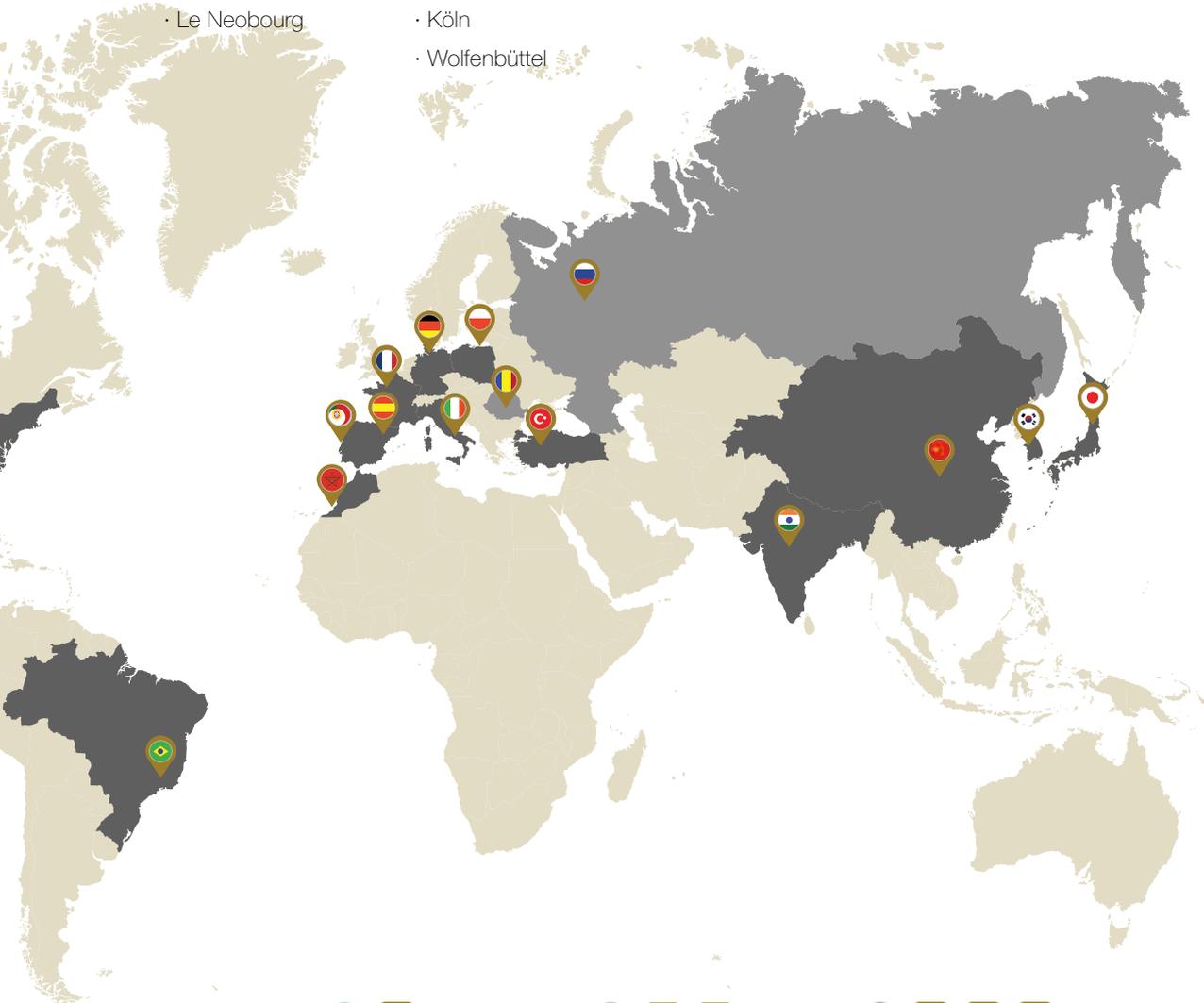
· Sala Al Jadida



· Venaria Reale  
· Morcone



· Bursa  
· Gemlik

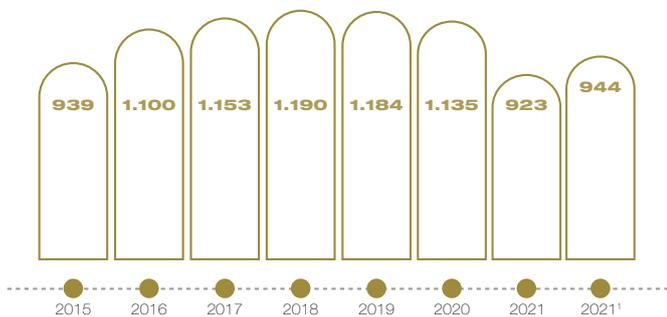


Ficosa is now one of the top-tier global providers operating in the research, development, manufacturing and marketing of high-technology vision, safety, connectivity and efficiency systems for the automotive and mobility sectors.

Ficosa ended 2021 with annual sales below 1 billion euros. The solid growth experienced by the company in recent years, due to a clear commitment to globalization, operational efficiency, innovation and diversification of activity, was affected by the advent of the global coronavirus pandemic (COVID-19) in 2020 that affected all the world's key economies.

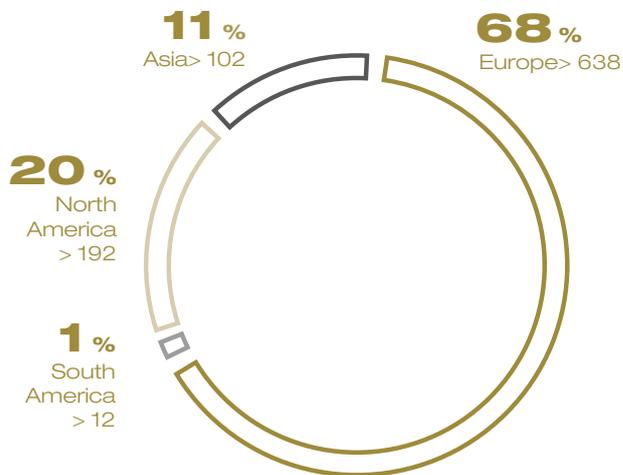
2021 was characterised by a weak recovery from the pandemic of the previous year. Global car production amounted to 77 million units, 3.4% higher than in 2020 but still far from the 95 million reached in 2017. This weakness is attributable to ongoing uncertainties about the transition to more sustainable mobility and propulsion models, but above all to the supply shortages experienced. This shortage has been particularly severe in the semiconductor segment, where the industry competes with consumer electronics and capacity increases are not immediate. By market, the recovery has varied depending on the reopening strategy followed and

Sales (€ million)



<sup>(1)</sup> The sales reduction in 2020 is mainly explained by the advent of the coronavirus pandemic in all the key economies of the world and by the slowdown in the world economy that began in previous years.

Sales per region 2021 (€ million, %)

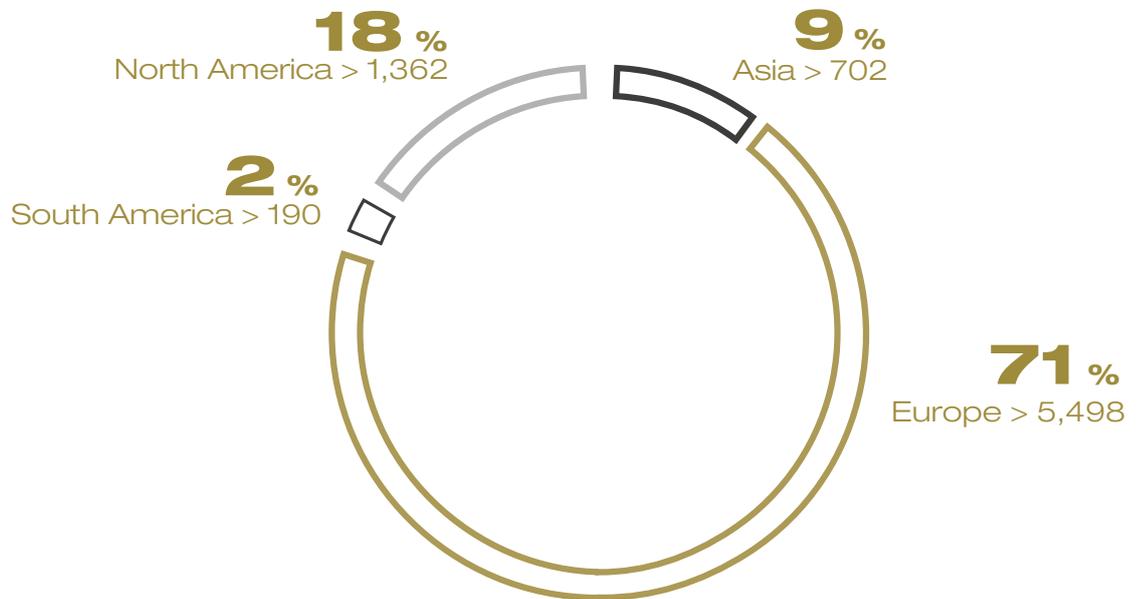


the supply shortage. In China, production increased by 5.3%, being the first country to experience the first wave. In Europe there has been a 4.3% reduction centred on the lack of components and North America has remained at the same levels as in 2020.

This has led Ficoso to show only a slight increase in sales over the previous year. Unforeseen supply shortages have led to a drop of 185 million sales or -16.4% against budget.

The outlook for 2022 according to independent analysts is for moderate growth with increases to 82 million units. On the one hand, capacity increases will take time to enter production. Shortages are therefore expected to persist until 2023. On the other hand, the global economy is showing signs of overheating (employment in the US or inflation in the US and Europe), which may lead to a change in the economic cycle and in the monetary policy experienced since the 2008 crisis.

Distribution of employees per region  
2021 (N. employee, %)



## Structure of Ficosa International

At present, Ficosa is a conglomerate of companies formed by engineering centres, manufacturing plants and commercial offices, distributed all over the world. The group is organized into different Business Units, most of which 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 in the vehicles' under-hood.

### 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, the most significant is the rear-view systems which represent around 64% of total sales. Ficosa is one of three global leading companies in this area.

In the new ADAS and E-Mobility business units, Ficosa continues to consolidate its position and generate growth. During 2021, sales of new technologies have increased by 21% compared to the previous year and 15% compared to pre-pandemic years.

## Ficosa reaches the milestone of more than 6 million rear-view cameras sold

This good result and its commitment to R&D consolidate the company as a benchmark in vision systems.

This figure has been recorded since 2014, when the multinational started providing this solution.

Sales of rear-view cameras have doubled in the last three years and forecasts point to volumes that will exceed 25 million by 2028.

Ficosa has integrated these systems into the Surround View System, a pioneering solution that offers 360° vision and represents an important step towards autonomous driving.



# 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 Ficoso, 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 fulfilment 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

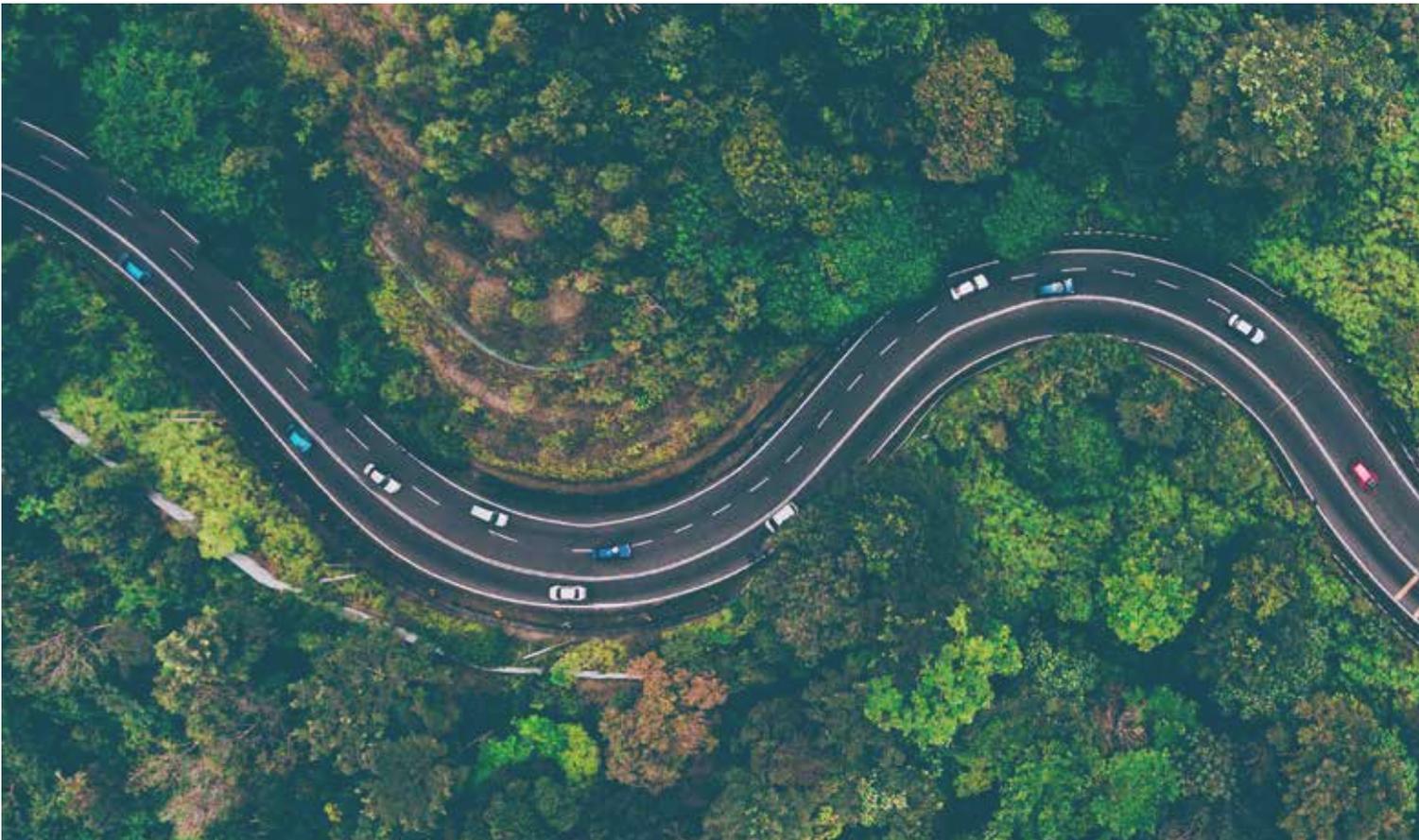
Being honest and acting with integrity in all our actions and behaviors. Ethical principles and our values should guide us in our day-to-day decisions.



### Leadership

Modesty, not taking center stage, understanding that everybody's work is equally important, is essential in Ficos'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. As a member of the United Nations Global Compact since 2002, we have adopted 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), traffic accidents kill approximately 1.3 million people worldwide every year, which means that every day around 3,500 people die on the roads. Tens of millions of people suffer injuries or disabilities each year. Children, pedestrians, cyclists and the elderly are the most vulnerable users of public roads. Additionally, about 50 million people are injured in traffic accidents. If preventive measures are not taken, death from a car accident is likely to become a top five cause of death in the coming years 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.

*Learn more: Innovation in our products.*



## SDG 13 –

### Take urgent action to combat climate change and its impacts

The transportation sector is responsible for 24% 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, Ficosa is working to reduce its CO<sub>2</sub> emissions associated with its manufacturing processes.

*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 some 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 main objectives of the company is the continuous improvement of quality, reducing the number of defective parts and improving both its processes and the skills of its employees with the aim of achieving zero defects. Additionally, the Taicang (China) and Maia (Portugal) plants have solar panels to generate electricity.

*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](#).*



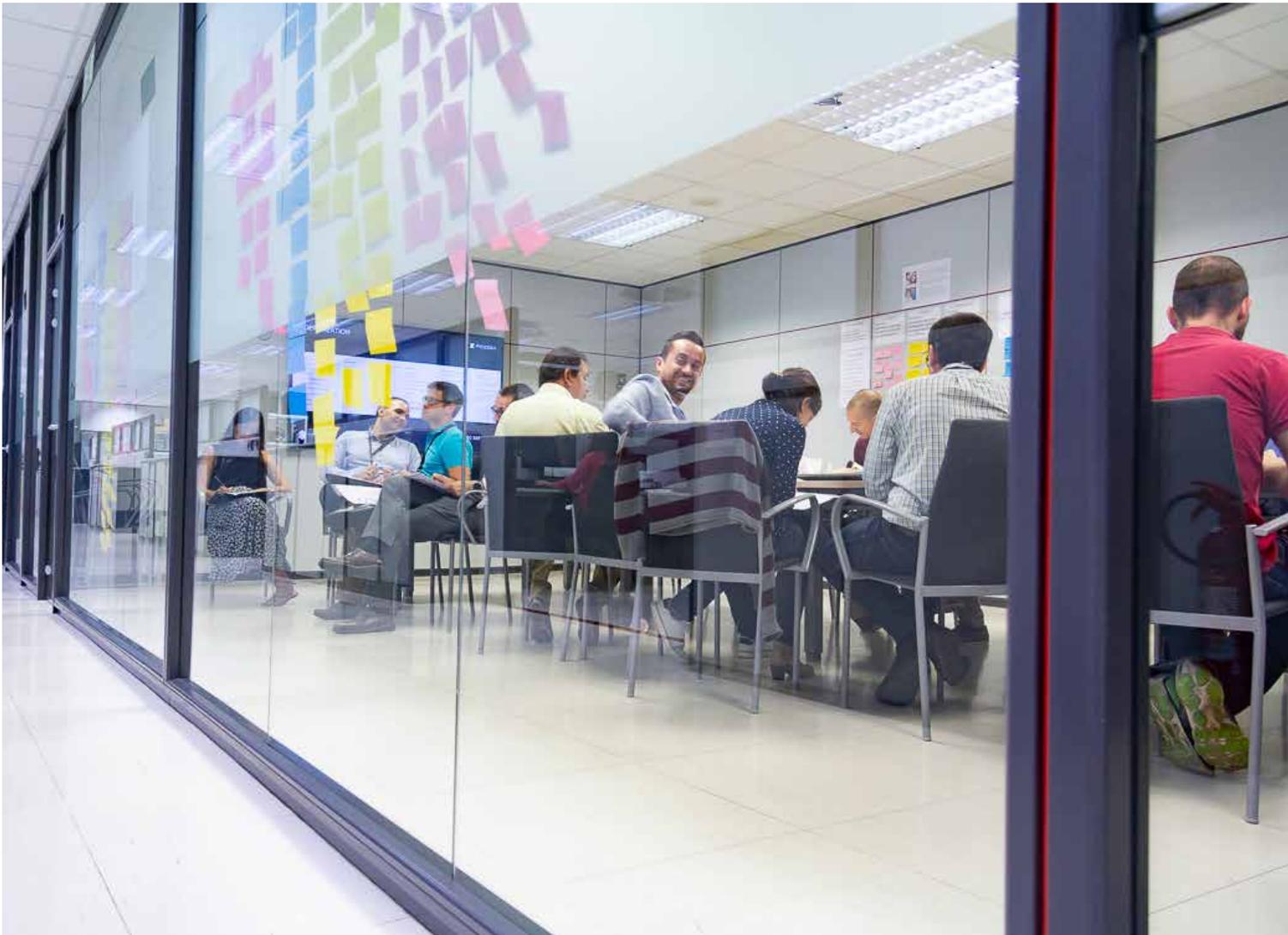
## SDG 8 –

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

The company has a team of more than 7,700 employees, with manufacturing plants, technological centres and commercial offices located throughout 17 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.

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

Since 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. In 2018, employee acceptance of the Code was launched, achieving 97% acceptance (2,551 employees, 10 countries out of 11 showed a 100% rate). Since then, the Code is available to all employees on the Ficosa intranet and is included in the welcome pack given to new employees to sign on the first working day together with the contract.

In October 2019, the e-learning of our Code of Ethics was launched to the indirect employees, available in the 9 languages of Ficosa. This training is interactive and uses graphics, text and sound, making the training easy to understand and very easy to manage. Upon completion, employees must pass a 15-question exam (randomly

generated from a sample of 45 questions) following corporate training guidelines. The completion rate at the end of 2021 was over 95%, based on a target of 2,254 employees, with the 2022 target of reaching 100%.

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 periodically evaluated to ensure their effectiveness. Periodic self-assessments, internal and external 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, in 2019 a specific workshop on competition law was prepared and launched, covering the most sensitive positions in our commercial, purchasing and R&D teams, including examples of real situations. This workshop is repeated all the years including new examples and risks detected during the last year.

In 2021, the third anonymous Compliance Awareness Survey was carried out with the aim of increasing awareness of Compliance and detecting opportunities for improvement. The questions, available in all Company languages, were sent to 2,170 employees in 13 countries. The survey covered various areas such as the level of knowledge of the Company's values, the Code of Ethics, the Whistle-blower Channel, awareness-raising in Compliance at the different levels of Management, etc. The overall result on a weighted score of 10 was 8.2, slightly improving the result of the previous years despite the potential negative impact of two years with COVID-19.

The results of the survey will be shared in 2022 with the management teams of each country to promote internal forums in all the Group's subsidiaries where they can discuss and increase awareness of Compliance and be able to establish the relevant improvement action.

# Living by the values at Ficosa

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.

## **Global Campaign of Ficosa Values and Ficosophy**

In 2019, it was launched a global campaign to reinforce the concept of Ficosophy and the values of Ficosa, which constitute the DNA of our employees, what identifies us in any of our centres and plants in the world, as well as being the mainstay of our code of conduct.

Ficosophy is the values that unite all the people who are part of Ficosa. A unique way of doing things that helps us move forward into the future together.

Having values is important, but we need to apply them. That is why, we always put our Ficosophy at the centre of everything we do and we encourage our employees to live them in their day to day.

This campaign reached all Ficosa employees as different tools and formats were used to be able to work, during the 18 weeks that the campaign lasted, with all levels of the organization. Emails, pop-ups, social networks, posters, murals, tablecloths with messages were used also in the centres that had a canteen, activities connected with each value, etc.

This campaign is alive on our website, within Ficosa People and our Ficosophy.

**FICOSA PEOPLE**

# FICOSOPHY

Our way of doing things

## INTEREST IN PEOPLE



People are at the core of our business. Training, learning, respect, diversity and friendly relationships are part of who we are.

## LEADERSHIP



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

## INNOVATION & CREATIVITY



All our employees have the ability to innovate and create, therefore we must encourage the expression of these ideas through our leadership.

## TEAMWORK



Knowledge-sharing, open communication, learning from mistakes, cooperation and understanding that personal success contributes to overall success.



## COMMITMENT & PASSION FOR ONE'S WORK



Enthusiasm for doing a good job and knowing how to live the values. Participating in achieving our vision through perseverance, work enjoyment and a job well done.

## CUSTOMER FOCUS



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

## HONESTY & INTEGRITY



Honesty and integrity in our actions and behaviors. Ethical principles and values should guide our daily decisions.



# Human Rights

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 sustainability 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.

Learn more: [Responsible sourcing](#).

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.

# Information security

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. Since the start of this training, more than 1,183 employees have already attended the training sessions, including the 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.

In 2019, an e-learning was also launched to increase the awareness

of all employees on the correct use of Software licenses, including intellectual property, the purchase and use of software, examples of cases of illegal use, false beliefs on software licenses and the potential impacts of illegal use. This e-learning has been translated into all Ficosa languages, with a completion rate of over 78% by the end of 2021 (out of a target of 2,000 employees), with a target of 100% by 2022.



# 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 related to internal 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.

During 2019, the 3Q3 program was carried out, auditing all the company's support centres and manufacturing plants.

During 2020 and 2021, it has not been possible to carry out the 3Q3 audits in person, due to travel restrictions due to the pandemic generated by COVID-19, so they have been replaced by a self-assessment carried out by each of Ficosa's plants and functions. During these two years, the corporate quality team reviews the self-assessments, so that in the event of finding assessments that need to be contrasted, this can be done with the interested parties. The modality of the audit plan for 2022 will be decided on the basis of mobility constraints and availability of resources.

The reviews of the self-assessments results carried out so far show a high level of compliance with the assessment criteria required by the corporate quality team.

## 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.

Operational Ficosa facilities certified IATF 16949 and ISO 9001 (%)

**100%**

## 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.

The system has been consolidated, with a global warranty indicator, by plant, customer and product, which, through standardised analysis, allows control and reduction of the number of warranty charges.

Parallel to this, the collaboration between

Design and Manufacturing has been strengthened in order to analyse the “No Fault Found cases” (NFF) 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. We 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 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 is focused 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 continuously 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.

	2020	2021	Target 2021	Target 2022
Customer satisfaction (%)	95%	95%	95%	95%
Number of Customer claims due to Suppliers	82	85	100	77
Number of Customer claims	537	493	583	461
Number of defective parts per million delivered to Customer (ppm)	22.00	5.87	6.50	5.85
Number of defective parts per million delivered to Ficosa due to Suppliers responsibility (ppm)	7.40	4.10	8.00	4.00
Non-Quality Costs over sales (NQC) (%)	1.28%	0.62%	0.64%	0.66%

The 2021 indicators show that all quality targets have been achieved.

The increase in non-quality costs target for 2022 is due to the incorporation of costs that were not considered as non-quality costs until now (customer rework and transport of urgent sales due to lack of quality).

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.

Since 2015, the supplier's internal management system 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

Toyota awarded Ficosa Otomotive, Bursa plant in Turkey, with the Toyota Award “0” world class certificate. The world class program is a method to avoid critical quality problems within one year through prevention activities in five basic quality pillars.

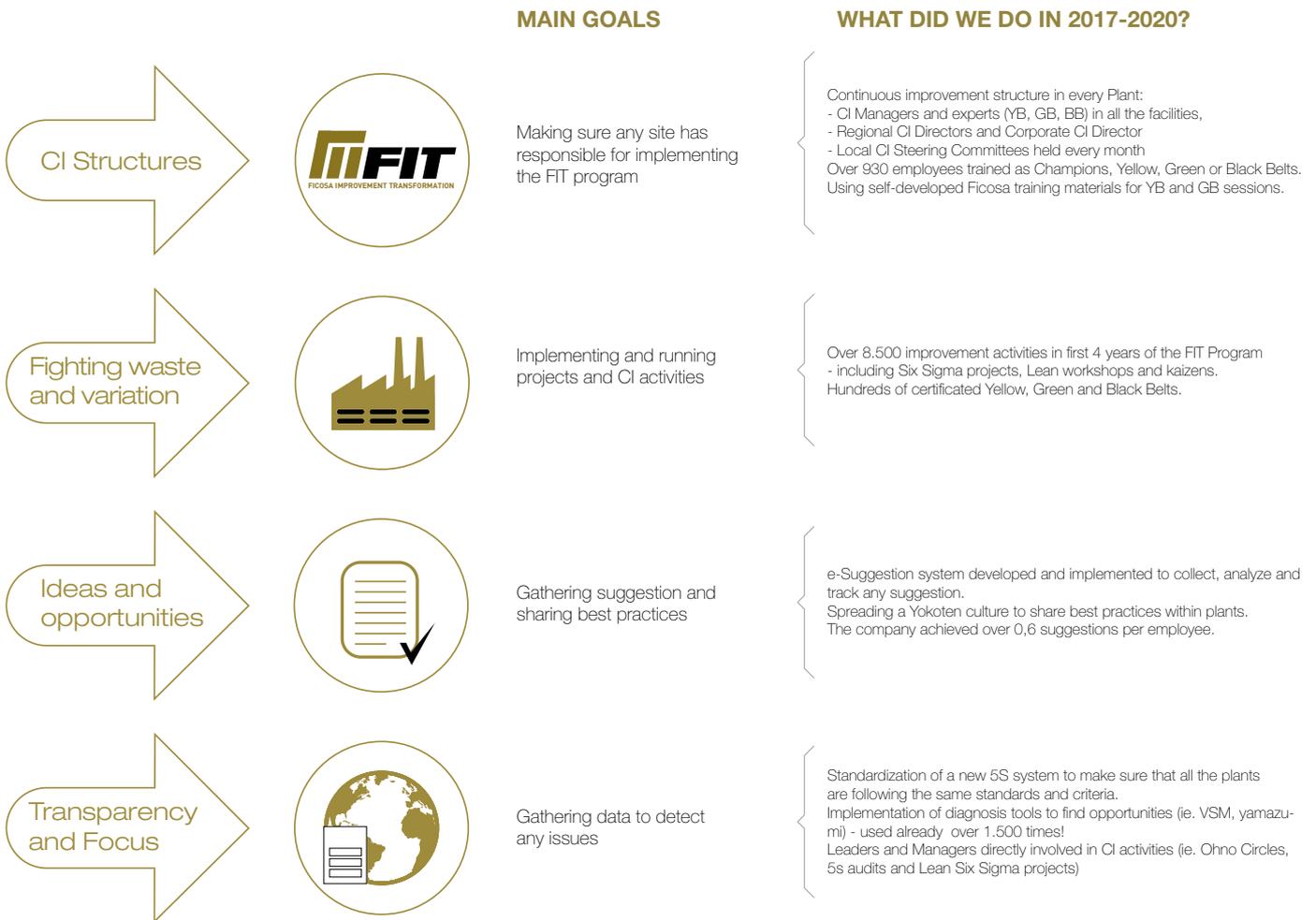
Toyota also awarded the Ficosa plant in Taicang, China, the “annual quality cooperation award” for its quality results.

## 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:



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



© 2021 FICOSA. All rights reserved. Photo by iStockphoto.com



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, Recruitment procedure, Performance

Evaluation procedure, International Assignments Management procedure, Training procedure, Training Planning and Monitoring instruction, 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 firmly committed to creating high-value jobs in all areas of the organization, with a special focus on engineering. 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:

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

## Key results

	2019	2020	2021	Variance from previous year
Average number of employees (FTE)	9,978	8,116	8,357	2,97%
Number of employees at year end	9,049	8,509	7,752	-8,90%
Non-production Indirect Turnover (%)	8.6%	10.2%	10.8%	0,56%
Female staff in total (%)*	45.4%	46.6%	46.9%	0,35%
Female staff in executive positions (%)*	16.0%	15.4%	14.6%	-0,82%
Employees with a disability	127	116	108	-6,90%
Dismissals	495	627	590	-5,90%

\* - To measure these indicators, the company uses the workforce at the end of the year (7,752 employees).

Workforce by country

	2020 (FTE)	2021 (FTE)	2020 (at year end)	2021 (at year end)
Brazil	182	171	203	190
China	1,331	1,048	765	629
France	206	232	261	236
Germany	203	200	216	190
India	57	58	56	68
Italy	201	216	226	223
Japan	5	5	4	5
Malaysia	32	3	0	0
México	479	574	554	569
Morocco	465	585	570	498
Poland	822	854	748	690
Portugal	890	840	1,015	957
Spain	1,725	1,793	2,062	1,857
Turkey	732	874	904	847
USA	786	904	925	793
<b>Total general</b>	<b>8,116</b>	<b>8,357</b>	<b>8,509</b>	<b>7,752</b>

Group Workforce - age\*

	2020	2021
Employees < 30 years	1,582	1,104
30 < Employees < 50 years	5,325	4,868
Employees > 50 years	1,602	1,780

Contract types (2020)\*

	Full time	Part time	Total
Permanent	7,466	289	7,755
Temporary	673	81	754
<b>Total</b>	<b>8,139</b>	<b>370</b>	<b>8,509</b>

Group Workforce - job category\*

	2020	2021
Senior executives	155	144
Area managers	427	388
Engineers and technicians	1,520	1,419
Administrative personnel	179	163
Direct Production staff	4,811	4,239
Indirect Production staff	1,417	1,399

Contract types (2021)\*

	Full time	Part time	Total
Permanent	6,902	267	7,169
Temporary	544	39	583
<b>Total</b>	<b>7,446</b>	<b>306</b>	<b>7,752</b>

Working hours are organized in the same way in all production centres depending on the workload. Operations areas with three daily shifts (morning, afternoon and night) and the rest of the departments with a central shift.

## Diversity and Integration

At Ficosa, the criteria and procedures for the recruitment of employees 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, its 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 Cookeville, Detroit, 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. In 2019, the Viladecavalls (Spain) and Maia (Portugal) plants underwent a training program related to communication, leadership and how to act in the event of discrimination. All the operations team leaders of these centres have participated.

In Soria (Spain), all managers have already received training on equality and harassment in the workplace. Additionally in 2021, a coaching programme has been conducted with middle management (10 sessions throughout the

year) to improve communication, motivation and conflict management. In Turkey, the manufacturing plants have defined specific local training on gender equality for their employees. All employees at US plants carry out specific diversity and harassment prevention training every three years; new hires have mandatory diversity, harassment and proper communication training in the workplace, being instructed on how to report any non-compliance.

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 the commitment towards this group. The company collaborates with FADESS and ASOVICA (“Asociación Virgen del Camino de Familiares de Personas con Enfermedad Mental” – Association for families with mental illness members) to promote the social inclusion of physically and intellectually disabled people and hires new employees through entities that promote the employment of people with disabilities (Asamis, Ilunion).

The plants in Mexico have a program called “total well-being” where awareness sessions are done by psychologists on issues of sexual harassment, discrimination, emotional intelligence, conflict resolution and stress management. In turn, Ficosa México belongs to the local Automotive Cluster, participating in the conference “Forward for Gender Equality”.

In 2015, 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 (in 2021 5.9% was achieved, increasing this ratio more than one point). 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.

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. The company has staff trained in sign language to support these employees.

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. Consequently, the percentage of group employees covered by the collective agreement is 74%.

## Employee development

Employee development is a priority for Ficoso. Since 2011, Ficoso has adopted system-wide performance, which focuses on setting performance goals for employees according to their responsibilities and departmental objectives. This is complemented by a mid-year review in order to update the existing objectives with the new information provided 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 skills and knowledge associated with each position are also evaluated, generating development opportunities for each person. This evaluation process is enriched throughout the year with an informal communication flow between employees and managers, which is the basis of the main dynamics of people development generated in Ficoso.



	2020	2021	Variance from previous year
No. of employees with access to performance and career development review (target)	2,072	1,845	-11.0%
% of employees receiving regular performance and career development reviews	78.1%	85.2%	+7.1%

The 2020 reduction in the number of employees with access to the performance review is mainly due to the decrease in the number of employees caused by the impact of the COVID-19 pandemic on demand.

## Growing @Ficosa

Ficosa has 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.

Growing @Ficosa is a long-term global programme with a duration of two years. In 2022 it will move to an online format due to the extraordinary circumstances generated by the COVID-19 pandemic.

Since its launch, a total of 136 employees from different countries and functions have participated. By 2021, we already have more than 95 graduates on the Growing @Ficosa workforce since its launch in 2016. This programme is helping to create a homogenous people development culture across the organisation. It involves participants with different profiles working in teams with Human Resources, managers and the company’s main management lines around the world.

The programme is based on a 3-tier commitment (manager, human resources and the participant) and is structured around:

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

an ad-hoc plan resulting from an external assessment and individual interviews with participants and their managers to better understand their main expectations and define their development plan. It 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.

**70** Experimental learning  
Work-related collaboration  
On-the-job performance support

**20** Social learning  
Peer learning and coaching  
Mentoring

**10** Formal learning  
Learning program support  
High potential development

## Successfactors

Until 2015, the company had different HR systems and tools supporting personnel administration processes, requiring a global and integrated solution. To improve efficiency, Ficosa implemented a new HR Information System called SuccessFactors. This new tool is an employee-centric system and allows each employee to complete HR tasks faster and perform strategic HR activities with greater frequency and agility, such as their annual objectives, performance, development plans, training programmes, etc. Since 2019, SuccessFactors includes the development module and the company’s training programme, facilitating the creation and follow-up of development plans for each employee. In 2021, the Talent Review & Succession process was implemented for all countries and the on boarding process for new employees is being worked on for implementation next year.

## Training and knowledge management

	2020	2021	Variance from previous year
Total number of training hours provided to employees	97,798	108,453	+10.9%
Training investment (€)	418,611	668,102	+59.6%
Average cost training per employee <sup>1</sup>	49	86	+75.5%
Average training hours per employee <sup>1</sup>	11	14	+27.2%

In 2021, despite the exceptional circumstances caused by the pandemic, we have continued our commitment to quality online training.

At Ficosa, we understand that the best way to learn is to take advantage of 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 practical experience is complemented in each case by specific training programmes provided by professionals in our company, as well as business 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.

### Total number of training hours provided to employees\*

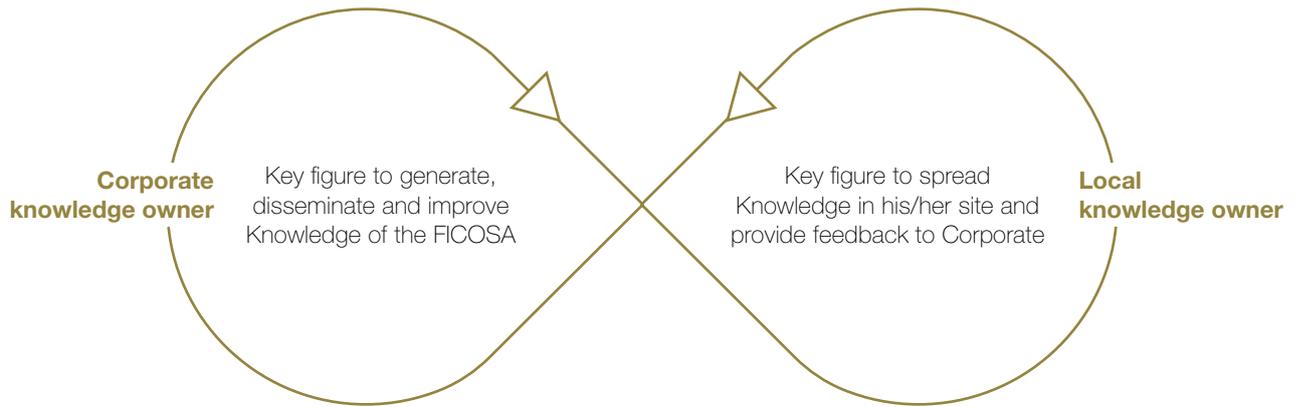
	2020	2021
Direct employees	72,043	57,401
Indirect employees	25,755	51,052
<b>Total general</b>	<b>97,798</b>	<b>108,453</b>

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

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 25 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. The Local Knowledge Owner is responsible for adapting the corporate training materials to train employees at their site. This learning system is implemented in all plants where the group operates.

In recent years, the offer of technical e-learning accessible to the entire organisation has

been expanded, improving the agility and efficiency of access to this training. In 2021, more than 20 online training courses were made available to employees.



In addition, internal training continues to be one of our pillars when developing the skills and abilities of our employees.

## 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), Morcone (Italy) have introduced an employee survey in the past years. The results are presented to the top management, including an action plan. In 2018, the Viladecavalls work centre carried out a new employee satisfaction survey and a plan was established to implement it in all centres around the world in 2019-2021. The centres that have already carried it out in 2019 are: Jandira (Brazil), Wolfenbüttel (Germany), Morcone (Italy)

and Soria (Spain). In 2020 and 2021, due to the effects of the COVID-19 pandemic, it was not possible to continue this initiative. At the end of 2021, an initiative called Ficosa Culture was carried out to improve the Viladecavalls work centre. A group of people with a fresh approach took on the task of gathering different ideas whose main objective was to make us a better company and an attractive workplace for both current employees and future incorporations. The result has been a series of actions with a local and/or corporate scope, which have been analysed and prioritised based on their impact/investment. During 2022, a good part of the proposals identified as priority 1 will be articulated and implemented.

In addition, all of the company's workplaces promote and facilitate structured labour relations through local employee representative bodies and/or trade unions with regular meetings to discuss and follow up on various labour matters.

## 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 has specific local programs to ensure that all centres implement measures related to promoting health in the workplace, including formal goals for stress prevention.

During 2020, a corporate communication and training campaign was launched for the entire Company focused on combating the adverse effects of the pandemic on our employees with more than 40 emails, videos, webinars and infographics with recommendations for healthy habits during the pandemic, advice for working from home, suggestions on mental health, ergonomics in teleworking, management of work stress, prevention of mental fatigue, mindfulness exercises, etc.

Employee absences have a major impact on results and productivity. Understanding the factors that drive absenteeism and monitoring our employees are key to preventing absenteeism. All Ficosa work centres monitor these factors using an integrated system to track absences together with corporate managers.

The main actions for prevention are focused on changing employee behaviour through wellness programmes to promote healthier lifestyles. Local Health and Safety Committees periodically evaluate the records of absenteeism due to work-related causes in order to launch countermeasures.

On the other hand, although Ficosa has not developed an internal policy establishing the right of employees to digitally disconnect from work, many initiatives have been launched locally to ensure that employees' rest time, as well as that of their families, is respected.

## Main local "Commitment to our people" actions:



- Official measures to promote work - life balance
- Telework policy (remote working)
- Guaranteed acceptance of requests for reduced working hours for both maternity and paternity leave
- Flexitime for employees
- Shuttle bus to connect to public transport
- Flexible remuneration options
- Medical and nursing service at major centres
- Same holiday period for couples working at Ficosa
- Christmas drawing competition among employees' children/family members for FICOSA's institutional cards. All participants receive a gift
- Offers to employees / collaborations with gyms, local vehicle dealers
- Inclusion of the vegetarian menu in the canteen



- Health week (vaccinations, health talks, visits by optometrists and dentists, etc).
- Total wellness programme (programme offered to our employees through psychologists specialising in emotional intelligence, stress management, etc.)
- Breast cancer campaign (conferences to promote early detection)



- Flexitime for employees
- Promotion of teleworking

The health crisis caused by COVID-19 has forced much of society to adapt quickly and unexpectedly to remote working, a relatively minority practice in most countries and companies. In this sense, Ficosa has promoted teleworking in all its centres and countries as an effective mechanism to maintain jobs and ensure the continuity of economic activity in the context of COVID-19.



- Psychology service for all employees
- Wellness campaigns (promotion of healthy lifestyles)
- Promotion of sport with offers to employees / collaborations with gyms
- Promotion of teleworking
- B-Ergo programme (to promote ergonomics in the workplace)
- Care initiatives (psychologist and occupational physician service, medical examinations)
- Job rotation for operators
- Regular health and safety campaigns
- Air quality and temperature monitoring



- Welfare campaigns (flu vaccination, first aid kit)
- Promotion of sport
- Promotion of teleworking
- Anti-smoking campaigns



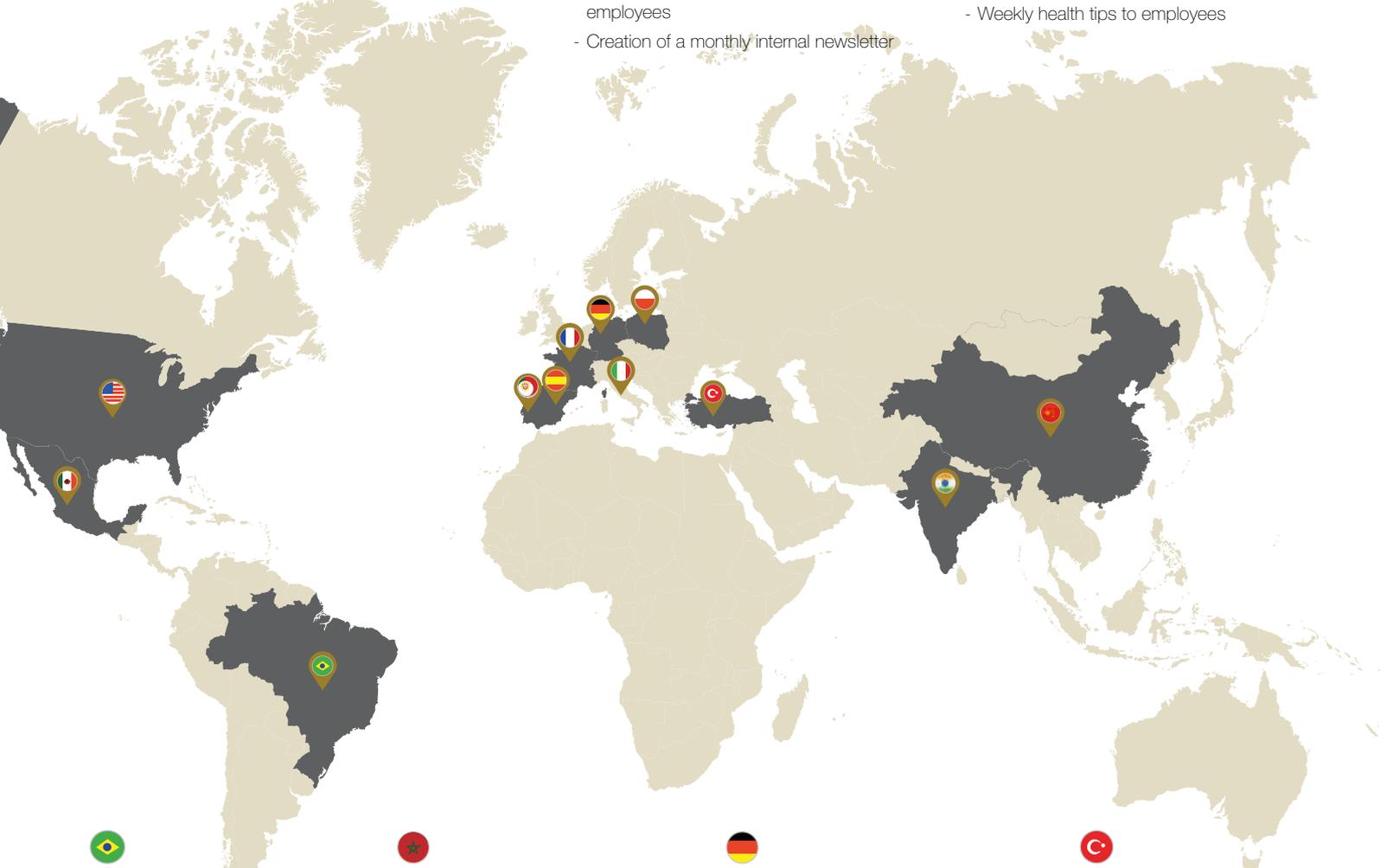
- Well-being campaigns (promotion of a multi-purpose room for the care of employees who are pregnant, breastfeeding, etc.)
- Sports promotion (participation in Taicang marathon, badminton tournaments, etc.)
- Annual recognition ceremony for the most senior and committed employees.



- Partnership with a public organisation for the adequacy of jobs for people with disabilities
- Guaranteed acceptance for part-time work applications for parents
- Telework
- Flexitime for non-production indirect employees
- Creation of a monthly internal newsletter



- Creating a health and wellness calendar.
- Wellness sessions
- Weekly health tips to employees



- Assembly lines and emergency procedures adapted to accommodate deaf and hard of hearing employees. The company has staff trained in sign language to support these employees.



- Telework
- Transport service for employees (bus)
- COVID-19 vaccination campaigns in collaboration with local authorities



- Flexitime for employees
- Teleworking
- Promotion of sport with offers to employees / collaborations with fitness centres
- Medical service with voluntary check-ups, flu vaccination campaigns, skin cancer prevention campaigns, etc.



- Welfare campaigns (limitation of overtime)
- Transport service for employees (bus)
- Promotion of work-life balance with photo or drawing competitions related to certain days (Mother's/Father's Day, etc.)

# 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
- Identifying, implementing, monitoring and reinforcing the safe behaviour we expect in our business to eliminate unsafe acts and practices
- Establishing measurable OHS objectives and targets, recognizing and celebrating their achievement
- Providing appropriate OHS training to employees and contractors
- Identifying, assessing and controlling hazards and impacts, and adopting an approach that will strive to eliminate or reduce the risk to a residual level
- Investigating incidents and sharing the experiences learnt to prevent them
- Informing employees, contractors, visitors and the public of these hazards and impacts
- Guarantee participation and consultation among our employees, in aspects related to health and safety.

Operational facilities  
certified ISO 45001:2018

100%

We adopted a common approach across the company to manage health & safety. In addition to strict compliance with legal regulations, we implement our own Occupational Health, Safety and Environment (OHSE) policy and stringent OHS procedures that include hazard identification and risk assessment, employee health control, risk control planning, chemical products management, PPE management for employees as well as contractors, etc.

Annually we review all the Policies and procedures including the improvement options identified during the internal and external audit processes, new requirements from our clients, as well as the best practices identified within the group. In this way, we guarantee continuous improvement in the performance of all our activities.

Currently, all Ficosa's production centres have audited the occupational health and safety management system based on the ISO 45001: 2018 standard.

Additionally, risk assessments are carried out in all production centres and internal health and safety audits are carried out periodically to guarantee the highest safety standards in all our operations.

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

Furthermore, the corporate OHS department is leading the ISO 45001:2018 internal audits in all sites. These audits are carried out at all production centres and constitute the tool to ensure compliance with homogeneous standards in terms of safety, health and the environment. During 2021, due to mobility restrictions as a result of the COVID-19 pandemic, the internal audits were carried out online, with the exception of the Soria, Viladecavalls and Sant Guim, Bursa, Gemlik plants, where they could be carried out in person as there were no mobility restrictions.

The internal audit checklist has been improved compared to previous versions:

- Including criteria related to working conditions that measure the level of implementation of operational control requirements.
- Simplifying the existing verification of documentary aspects compliance.
- Establishing a new scoring system by weighing the two previous points.



## COVID-19

The year 2021 continued to be marked by the COVID-19 pandemic. The “Business continuity during the COVID-19 pandemic” protocol provided the necessary protection for our employees during the performance of their duties.

Weekly monitoring of cases has been carried out globally. When circumstances required, mass testing was carried out in some sites, such as Viladecavalls, Gemlik, Bursa, Maia or Mexico, to detect cases early and prevent transmission.

During 2021, the European plants in Portugal (Maia), Spain (Viladecavalls, Soria and Sant Guim) and France (Dieuze) continued to use the approved masks manufactured at the Ficosa Taicang plant in China.

## 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 2021, due to restrictions as a result of COVID-19, the global OHSE forum was held online. The strategic lines and objectives for the year were presented.

All the Ficosa manufacturing plants 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.

## Main Risks and Challenges

The main incidents are related to the human factor, followed by the machine factor and the organisational factor.

By type of risk, the main risks are ergonomic, followed by cuts and traps, mainly occurring in the injection and assembly process.

In this sense, the main challenges for the organisation are also focused on each of the factors. With regard to the human and organisational factor, the company's strategic line aims for Ficosa to be a leading company in terms of safety culture and has defined a solid programme of actions to achieve this.

As for the technical factor, in 2021 the OHSE corporate department, together with a multidisciplinary team including process engineers from different plants and corporate specialists in different processes such as assembly, plastic and aluminium injection, has reviewed the design and procurement procedure for equipment, updating and reinforcing the safety requirements for new equipment and facilities.

## Key Results

	2019	2020	2021	Target 2021	Target 2022
<b>Group - ORIR</b>	<b>1.05</b>	<b>1.08</b>	<b>0.92</b>	<b>0.95</b>	<b>0.00</b>
ORIR - South Europe	1.47	1.43	1.23	1.40	0.00
ORIR - North Europe	0.98	1.40	0.93	1.33	0.00
ORIR - Asia	0.44	0.82	0.44	0.50	0.00
ORIR - NAFTA	0.86	0.25	0.74	0.50	0.00
ORIR - South America	0.49	0.72	0.00	0.50	0.00

The result of the ORIR has exceeded the proposed target, with a reduction in the total number of accidents compared to 2020. This improvement in the accident rate is the result of a combination of technical improvements and awareness-raising actions aimed at reinforcing safety leadership and encouraging safe behaviour.

The accident indicator used by Ficosa at the corporate level is ORIR (OSHA Recordable Incidents Rate) and each production centre has its own annual objective, in addition to establishing objectives by country, region and group level. ORIR is a widely used measure in the US industry to track on-the-job injuries. The ORIR in the tables represents the number of Ficosa employee injuries per 200,000 hours worked. The lower the number, the closer we are to the objective of our Policy.

Each Plant Manager is responsible for successfully achieving the annual goals. Our corporate ORIR has been reduced year after year. While this is encouraging, we continue to focus our efforts on safety to reduce incidents, mainly due to ergonomic issues, potential cuts

and entrapment. 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.

Our ambition in 2022, as the ultimate expression of our commitment to accident avoidance, will be to achieve a corporate ORIR of 0. Far from discouraging, we believe that this ambitious target is an exciting challenge for all our teams and reinforces our conviction as a company that all accidents can be avoided.

No fatal accidents have occurred in the group in the 2021 period.

	2019	2020	2021	Variance from previous year
Group - Injury severity rate <sup>1</sup>	0.11	0.18	0.11	-39%
Group - Injury frequency rate <sup>2</sup>	5.26	5.38	4.62	-14%
Number of fatalities	0	0	0	0%
OHSA training (hours)	18,677	17,520	25,413*	45%
N° OHSA improvement actions	2,258	1,390	1,706	23%

<sup>(1)</sup> No. of days lost due to accident \* 1,000 / Total No. of hours worked <sup>(2)</sup> Incidence of accidents with more than one day lost for every 1,000,000 hours you work

\* - The training hours do not include internal training in the Safety Dojo area, in which 2,699 employees have been trained. These trainings have an average duration of one hour. Also not included are the internal CARE programme training sessions for middle management (a total of 427 managers trained in sessions lasting an average of one hour), and the OHSE talks received by employees, lasting around 15 minutes.

Training hours have increased considerably compared to the previous two years, with a positive impact not only on the accident rate, but also on the satisfaction and motivation of our employees. There has also been an increase in the number of improvement actions implemented.

With regard to the distribution by gender of both accidents and occupational illnesses:

	2019		2020		2021	
	Men	Women	Men	Women	Men	Women
Group - Injury severity rate <sup>(1)</sup>	0.11	0.1	0.23	0.12	0.09	0.13
Group - Injury frequency rate <sup>(2)</sup>	5.9	4.48	5.61	5.11	4.96	4.24
Number of accidentes <sup>(1)</sup>	49	31	39	31	34	26
Number of professional illness	1	14	4	14	2	13

<sup>(1)</sup> Not including accidents in itinere.

To prevent occupational diseases, some of the centres involved have implemented the following activities:

- Portugal: has implemented a protocol to provide kinesiotherapy sessions and ergonomic training at the workplace with the aim of improving posture and preventing long-term injuries leading to occupational disease.
- Dieuze: A working group has been set up to implement an action plan to improve the working conditions of employees in the assembly sector. The working group is made up of

four workers' representatives, the plant manager and the safety officer. The actions carried out are mainly based on ergonomic aspects suggested by the workers themselves.

- Gemlik: has developed an ergonomic improvement project for coil loading, which has been a finalist in the "Mess Health and Safety Stars Competition".

## Local and corporate initiatives to strengthen the commitment towards health and safety

Interest in people is one of the values of our company and guaranteeing their safety and health is our priority. All our plants work to strengthen a culture of safety in all our activities.

### CARE Program

It is a five-year plan that aims to consolidate the company's safety culture. The plan focuses on four aspects:



**Commitment**, of the entire health and safety command line. Leading by example, participation and communication are key to achieving excellence in safety.



**Attitude**, improving the attitude of all our workers towards safety-related aspects is the basis for achieving safe behaviors.



**Recognition**, the job well done and the efforts to contribute to company safety must be recognized. Thus, we manage to motivate employees and guarantee continuous improvement towards excellence in safety.



**Empowerment**, the ultimate goal is to ensure that our employees are able to identify and self-correct behaviors or unsafe behaviors.

In 2021, the implementation of the first pillar of the CARE program, ENGAGEMENT, has started in the plants of the entire group with the exception of Cookeville, Shelbyville and Poland. The activities carried out:

- Middle management training: a total of 424 middle managers have received training on how to make safety leadership visible.
- OHSE talks: a total of 66 OHSE talks, among all the centers that have started the program. These are monthly talks on different aspects related to safety, at the end of which each worker acquires a specific individual commitment.

- Safety first in our meetings: a protocol has been incorporated to ensure that our customers and visitors to our work centers receive, as the first information, the instructions for action in the event of an emergency, as well as the safety rules to be followed during the visit to the work center.

### Safety Dojo

The company is investing in training to make employees aware of the health and safety risks associated with operations. In the last year, Safety Dojo training areas have been set up at the Viladecavalls, Dieuze, Maia, Rabat, Bursa, Brazil, Poland, Cookeville plants, in addition to the existing one at the Gemlik plant, Soria and Mexico.

The Safety Dojo is a training concept based on "Learning by doing", through which our employees can safely experience the consequences of different safety failures: trapping, projections, handling loads, etc.

Throughout 2021, and despite the restrictions imposed by COVID-19, a total of 2,699 Ficosa workers have received Safety Dojo training.

The rest of the plants are in the process of designing and building the training stations and it is expected that by 2022, 100% of the plants will have these training areas completed.

### World Day for Health and Safety at Work

To celebrate World Day for Safety and Health at Work on 28 April, Ficosa organised a number of awareness-raising activities, including the following:

- Bursa and Gemlik: leaflets and 2 podcasts on health and safety were shared via email. Leaflets were also placed at the two entrances. A poster with games (attention quizzes, word searches and team games) was prepared and distributed to all employees.
- Rabat: a specific webinar was organised on safety aspects in which 39 employees participated.

- Viladecavalls: a game was organised related to the safety rules of the work centre as well as the COVID-19 prevention protocols, the structure of which consisted of 28 questions with three possible answers for each one, with a prize for the winner.

All these actions encourage the participation of workers and their involvement in the different areas of occupational safety and well-being at work. With activities such as Safety Day we contribute to SDG 3 Promoting the health and well-being of our team.

## Other good practices

Dieuze:

The plant has made significant improvements to working conditions in the injection molding section:

- Pallet dispenser to improve the ergonomics of workers using the pallet trucks.
- Acquisition of an electric pallet truck to improve employee conditions related to forced posture.
- New internal passage circuit for motorized vehicles with safety equipment and new safety signage to limit the risk of collision with pedestrians.

Bursa and Gemlik:

- The sectoral occupational health and safety practices course at the University of Beykoz was attended by one of the Health and Safety specialists from the Ficosa team, who spoke about occupational safety practices in the automotive sector.
- With the aim of increasing awareness and participation of workers, a quiz was organized to determine employees' knowledge of occupational health and safety, environmental, quality and information security management systems, consisting of 12 multiple-choice questions. A total of 159 employees participated in the initiative. The 90 participants who gave 10 or more correct answers received their gifts with a ceremony.





# Commitment to environment



Solar panels in Taicang plant

## Policies

The increasing global population and the rapid growth of the world economy have complex and diverse connections with the global environment. They also affect the environment in numerous ways. At Ficosa, we are committed to bringing and offering safer, more connected and efficient systems for the automotive and mobility sectors, and to reducing our environmental impact as we do so. Our commitment to the environment extends to our whole activity cycle from R&D product design to acquiring raw materials

and manufacturing, and the use and disposal of our products.

In addition to strict compliance with legal regulations, we implement our own OHSEQ<sup>1</sup> policy, which ensures environment protection, energy efficiency, the mitigation and adaptation to climate change, and a responsible resources and waste management.

<sup>(1)</sup> Please see Appendix 1

100%

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. All the group's production centres have this certification in 2021.

In addition to certification audits, the company carries out different monitoring audit processes:

- Corporate Quality Audit "3Q3" which includes environmental issues related to waste disposal and storage, waste storage, environmental emergency means, spill prevention, industrial hygienic protection of equipment and machines, etc.
- Internal OHSE management system audits whereby we ensure that all operational facilities follow the same standards of ISO 14001:2015 and ISO 45001:2018. The corporate department leads and performs ISO 14001:2015 internal audits worldwide.
- A new methodology based on ISO 31000 has been implemented for the analysis of risks and opportunities related to environmental aspects and climate change mitigation.

During the year 2021, due to mobility

restrictions as a result of the COVID-19 pandemic, internal audits have been carried out online, with the exception of the Soria and Viladecavalls plants, which were able to carry them out in person as there were no mobility restrictions.

Ficosa applies the precautionary approach introduced by the United Nations in Principle 15 of the Rio Declaration on Environment and Development to prevent environmental degradation. The application of the precautionary principle helps 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 to determine effective actions to mitigate such damage, Ficosa has established different internal procedures in relation to the purchase of chemical products, productive and non-productive equipment and the purchase of new industrial facilities. All company investments include verification and approval by the corporate OHSE department.

In addition, in 2020, a new category of analysis was included in the document for the acquisition of new products and/or processes that allows the impact of each purchase on the environmental indicators established for each plant by the Corporate OHSE department to be analysed.

These procedures are intended to assess, in advance, the environmental impacts

that may occur from the aforementioned purchases and, therefore, to be able to authorise or reject acquisitions. In the case of authorisation, a series of preventive measures are determined, implemented and monitored, ensuring effective final verification.

In 2021, new requirements related to sustainability in the supply chain have been established:

- Special requirements for component approval: in relation to legislation and customer requirements.
- Restricted and controlled substances: in relation to legislation, good business practices and environmental protection policies, Ficosa has established the restriction and/or control of raw materials and substances, including conflict minerals.
- Gathering data on the carbon footprint of suppliers: with the aim of monitoring emissions and establishing reduction initiatives in our value chain.

In this way we reinforce and ensure the deployment of key sustainability aspects in our supply chain.

## Governance

At FICOSA we work to anticipate and identify the challenges of the sector in order to provide our clients with the best solutions on the market. With this determination to anticipate, we have always been convinced that choosing sustainable solutions is synonymous with opting for a better future in all areas.

Following this reflection, we have made sustainability a key pillar of our strategic vision, convinced that growth is only possible if it is accompanied by socially responsible actions and behaviour.

Our commitment is based on international agreements with which we are fully aligned, FICOSA has adopted the Sustainable Development Goals of the Global Compact, of which we have been a signatory member since 2002, as well as the needs of our stakeholders. We remain vigilant of our environment in order to adapt to the context and to new environmental and social needs.

The OHSE corporate team is responsible for formulating new internal environmental standards and procedures. In addition, the department is responsible for establishing a global system for collecting key environmental data from all countries and ensuring that each subsidiary complies with internal standards and procedures. Each plant has managers or technicians in charge of implementing the company's environmental instructions, procedures and systems.

In 2021, due to restrictions as a result of COVID-19, the global OHSE forum was held online. The strategic lines and objectives for the year were presented.

## Main Risks and Main Challenges

### Local pollution

At FicosA, we carry out our activities with special attention to environmental protection and the efficient use of natural resources. Each manufacturing plant identifies and assesses its environmental impacts every year. The painting and injection moulding processes represent the largest part of the environmental impact during the manufacture of FicosA products in terms of air pollution, energy consumption and waste generation. The painting process is an area of manufacturing to be taken into account due to its Volatile Organic Compound (VOC) emissions. In addition, the injection moulding process is a major energy consumer and actively contributes to carbon dioxide (CO<sub>2</sub>) emissions.

In this context, the technology used in paint application and injection moulding machines must meet the highest expectations of quality and cost efficiency while remaining environmentally responsible.

### Noise and light pollution

In the environmental impact analysis of each plant, luminous contamination has not been identified as a relevant material issue. With regard to environmental noise, all FicosA's plants carry out

In compliance with current Spanish legislation, it is reported that the costs incurred in the acquisition of systems, equipment and facilities whose purpose is the elimination, limitation or control of the possible impacts that the normal development of the company's activity could cause on the environment, these amounts are considered investments in fixed assets. In 2021, investments amounting up to 0.7 million euros have been made. In the previous year, the Group made investments amounting to 0.3 million euros.

The rest of the expenses related to the environment, other than those incurred for the acquisition of fixed assets, have been recorded in the consolidated income statement. In 2020, expenses of 1,708 thousand euros were incurred. In the previous year, expenses amounted 1,536 thousand euros for this concept.

FicosA has taken out an environmental liability insurance policy that covers civil liability for personal injury and material damage caused by polluting events in, on, under or emanating from its insured facilities, as well as the cleaning and associated emergency expenses that it must legally face in, on, under or outside the insured facilities and expenses arising from damage to natural resources in, on, under or emanating from the insured facilities.

controls at the intervals established in local legislation to ensure compliance with the limits.

### Addressing Climate Change

FicosA works to reduce CO<sub>2</sub> emissions associated with its manufacturing processes and throughout the value chain.

Since 2016, all manufacturing plants have implemented individual reduction targets to reduce their greenhouse gas (GHG) emissions, electricity consumption, water consumption and waste generation, along with specific action plans to achieve them. These targets follow corporate guidelines under the strategic line "Climate change mitigation", with the aim of reducing FicosA's carbon footprint and energy consumption considering the historical annual trend of reduction targets.

In 2021, FicosA has worked to include in the calculation of emissions all Scope 3 categories with the aim of defining a roadmap for the reduction of indirect emissions.

The Corporate OHSE department has conducted several communication and awareness-raising sessions, worldwide,

Involving more than 200 people from different departments, including regional managers, country managers, production plant managers, human resources managers, logistics workers, R&D, sales and plant environmental technicians.

In addition, in 2021 Ficosa participated in the Climate Ambition Accelerator learning programme promoted by the United Nations Global Compact Spain. This is a six-month learning programme in which companies expand their knowledge and learn the skills they need to help halve global emissions by 2030 and reach net zero by 2050 by setting science-based targets.

The initiative has included a range of capacity building sessions, access to best practice, member-to-member learning opportunities, roundtable discussions and events to help companies set ambitious science-based targets and take business action to achieve the global goal of keeping global warming below 1.5°C.

## 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 Dabrowa Gornicza (Poland), the company installed a catalytic burner (RTO – Regenerative Thermal Oxidizer) 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. Additionally, the recovered heat is used to adjust the temperature values within the painting process itself, as it done

Throughout the development of the programme, the Global Compact has been supported at the global level by partners such as Science Based Target and the World Resources Institute and, at the national level, by partners such as Comunidad por el Clima and the Spanish Climate Change Office, which collaborate with the UN Global Compact Spain and the companies adhering to the initiative at the local level.

Once the full emissions inventory has been finalised and the Climate Ambition Accelerator programme has been completed, the next challenge has been to join the SBTi initiative in January 2022, with 2019 as the base year.

in the Poland production facility. Thanks to RTOs, VOC emissions have been reduced by 92-95%.

A real-time VOC monitoring system has been installed at the Taicang plant (China), allowing the plant to react immediately to any unforeseen issue.

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 several initiatives to optimize the transportation and distribution of purchased products or products sold by the company:

## 01

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 Viladecavalls and Soria (Spain).

## 02

The manufacturing plants of Dabrowa Gornicza (Poland) and Rabat (Morocco), import their moulds from Asian suppliers through containers by train.

## 03

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, minimizing the kilometres and the associated logistics.

## 04

The Group's inter-company sales seek to optimize routes between production plants, delivering at an agreed point where the other Ficosa plant has a regular route.

## Noise and light pollution

Environmental noise measurements are regularly carried out at all of the group's production plants. All comply with the limits established in local regulations. In 2021, one measurement point outside the limits

was detected in Brazil. Following the analysis of the environmental conditions and surrounding activities, it has been determined that the noise does not have its origin in Ficosa's activity.

## Addressing Climate Change

Since 2016, we have defined a guideline to reduce our greenhouse gas (GHG) emissions annually at the production site level. Each production site must reduce its GHG emission intensity by a certain % based on the previous year's performance. Each plant manager is responsible for successfully achieving the target. Since 2018, the company has worked to improve the collection and consolidation of the carbon footprint, by implementing a more robust internal tool that ensures that each operating facility reports data in accordance with the standards and criteria used by Ficosa. The tool has enabled the company to increase reporting of GHG emissions across its value chain and products.

In 2021, aligned with the main international environmental commitments, the company has improved the emissions inventory to include all Scope 3 categories from 2019, this year becoming the base year. Our target, aligned with the SBTi initiative, is to reduce emissions in Scope 1 and 2 by 46% and Scope 3 by 27.5% by 2030.

To achieve the Scope 1 and 2 emissions reduction target, all our plants have developed a decarbonisation plan through different actions:

- Energy efficiency measures: reducing the energy we use is key to success in reducing emissions.
- Photovoltaic panels: the Taicang (China) and Maia (Portugal) plants currently have photovoltaic installations on the roof, which produce a total of 2% of the company's total demand. The Soria plant will soon start up a similar installation. The objective is to have photovoltaic panels in 9 of our 16 plants by 2025.
- Purchase of green energy: 5 of our plants currently use electricity that comes from 100% renewable energy sources, which represents 33% of the company's total consumption. Our target is to reach 100% by 2030.

To achieve the scope 3 emissions reduction target, by 2021 Ficosa has deployed its commitments to sustainability throughout the supply chain. To this end, we ensure that our suppliers comply with reference standards regarding the absence of minerals from conflict zones and restricted or banned substances. We also assess their environmental performance and emissions, encouraging them to set carbon footprint reduction targets.

## Greenhouse gas (GHG) emissions by type of source

We have a GHG emissions inventory according to the Greenhouse Gas Protocol.

(In t of CO <sub>2</sub> e)	2019	2020	2021	Variance from previous year
Scope 1, direct GHG emissions	10,062	9,113	9,167	0.6%
From refrigerant and other	1,662	1,387	1,013	-26.9%
From fossil fuels	8,357	7,715	8,142	5.5%
From owned vehicles	43	11	12	5.4%
Scope 2, indirect GHG emissions				
Location-based emissions from electricity consumption <sup>2</sup>	49,128	41,173	43,961	6.7%
Market-based emissions from electricity consumption <sup>2</sup>	37,896	30,232	31,006	2.6%
Total GHG emissions (Scope 1 & 2) <sup>1</sup>				
Total market-based GHG emissions	47,959	39,345	40,173	2.1%
Total location-based GHG emissions	59,190	50,286	53,128	5.6%
Total location-based GHG emissions per sales (tCO <sub>2</sub> e/MEUR)	42	43	43	-0.2%

<sup>1</sup> Total emissions are based on actual data. The most appropriate emission factors have been used for each type of activity data, from internationally recognised sources (GHG protocol, IPCC AR5) and regional or, if more relevant, country-specific sources (Spain MITECO, US EPA, DEFRA).

<sup>2</sup> For the location-base emissions of electricity consumption, the emission factors of the International Energy Agency 2018 were used for the countries where Ficosa operates. For the emissions of electricity consumption market-based, the emission factors of the International Energy Agency 2018 were used, with the exception of the data reported for the plants in Spain, since they have guarantees of origin (GDO), which prove that all the energy used comes from renewable sources. The emissions for the years 2018 and 2019 published in this report differ from the values published in the previous reports since the data has been updated based on the latest available emission factors (corresponding to 2018).

In 2021, Ficosa has increased its CO<sub>2</sub> emissions in absolute value of scope 1 and 2 on a market based by 2.1%. This increase is due to the increase in production in 2021 after overcoming the worst months of the COVID-19 pandemic. If we refer this figure to the base year 2019, Ficosa has reduced its emissions by 16%.

## Greenhouse gas (GHG) emissions by region

(In t of CO <sub>2</sub> e)	South Europe	North Europe	Nafta	Asia	South America
Total location-based GHG emissions (Scope 1&2)	16,385	14,433	15,592	6,472	246
Total market-based GHG emissions (Scope 1&2)	8,567	14,254	8,537	8,187	628
<b>Scope 1, direct GHG emissions</b>	<b>3,579</b>	<b>2,917</b>	<b>1,584</b>	<b>1,073</b>	<b>13</b>
From refrigerant and other	270	278	128	332	4
From fossil fuels	3,298	2,639	1,455	742	9
From owned vehicles	11	0	1	0	0
<b>Scope 2, indirect GHG emissions</b>					
Location-based emissions from electricity consumption	12,806	11,516	14,008	5,399	233
Market-based emissions from electricity consumption	4,987	11,337	6,953	7,113	615

Each country has to annually reduce its location-based GHG emissions on parts produced. The reduction targets are in a range between -0.5% and -10%. By 2022, all production plants will have to reduce their emissions, in absolute value, by -12.6% to be in line with the medium-term targets of the SBTi initiative.

Ficosa has been working to calculate the Scope 3 emissions (t of CO<sub>2</sub>e) of all those categories relevant to the group. The following table shows the emissions from 2019 (base year) and their evolution compared to 2019.

## Greenhouse gas (GHG) emissions by type of source

(In t of CO <sub>2</sub> e)	2019	2020	2021	Variance from base year (% vs 2019)
Scope 3, indirect GHG emissions from value chain				
From purchased goods and services	475,845	399,729	344,604	-27.6 %
From capital goods	25,678	16,957	12,757	-50.3 %
From fuel- and energy-related activities *	13,003	11,860	12,782	-1.7 %
From upstream transportation and distribution	8,148	6,558	7,981	-2.0 %
From waste generated in operations	1,129	980	7,316	548.3 %
From business travel	2,304	586	331	-85.6 %
From employee commuting	47,254	10,880	34,588	-26.8 %
From upstream leased assets	239	693	320	33.9 %
From downstream transportation and distribution	7,375	5,522	5,863	-20.5 %
From processing of sold products	26,979	20,483	19,841	-26.5 %
From use of sold products	-	-	-	-
From end-of-life treatment of sold products	1,630	1,231	1,171	-28.2 %
From downstream leased assets	208	174	216	3.8 %
From franchises	-	-	-	-
From investments	-	-	-	-
<b>Total Scope 3 GHG emissions (tCO<sub>2</sub>e)</b>	<b>609,792</b>	<b>475,655</b>	<b>447,770</b>	<b>-26.6 %</b>

\* Not included in scope 1 or scope 2

Ficosa has managed to reduce its Scope 3 emissions by 26.6% if we compare the reporting year emissions to the base year.

It is worth highlighting the emissions obtained in 2021 in the waste category with an increase of 548% due to a change in the calculation methodology. In 2021, all the waste generated in the production plants has been broken down by type of waste, hazardousness and final treatment. This methodological change is the cause of the increase in emissions.

## Energy efficiency and renewable energy

Reducing greenhouse gas (GHG) emissions at Ficosa is mainly related to reducing energy consumption. In this regard, the company is committed to mitigating its impact on climate change through a robust energy strategy based on the increased use of renewable energy, energy production through solar photovoltaic panels and energy efficiency. Increased use of renewable energy is critical to the transition to a low-carbon economy.

As of March 2016, 100% of the electricity of the work centres in Spain (Viladecavalls, Soria and Sant Guim) comes from renewable sources or high-efficiency cogeneration. Furthermore, in 2021, the plants in Turkey purchased renewable energy certificates (I REC) for 100% of their electricity consumption, with renewable energy accounting for 33% of the total electricity consumed by Ficosa. Ficosa has increased its renewable energy consumption by 21% compared to the previous year.

At the end of 2017, the manufacturing plant in Taicang (China) installed 6,160 solar panels on its roof with an expected annual generation of 275Wh per panel. This action has enabled the company to actively

contribute to climate change mitigation, in addition to reducing grid electricity consumption by 1.57 GWh during 2021.

At the end of 2019, the Maia (Portugal) manufacturing plant installed 644 solar panels on its roof with an expected annual generation of 270Wh per panel. The installation of photovoltaic panels has enabled the company to actively contribute to climate change mitigation, achieving a 2% ratio of the group's photovoltaic energy to total energy consumed in 2021.

During 2021, OHSE's corporate department promoted a transversal action for all the company's production centres, providing them with a guide with different energy efficiency actions by type of installation, as well as an energy savings calculator to assess the effectiveness and return of each of the potential actions. With this tool, each of the plants has identified and planned energy efficiency actions whose impact has been incorporated into their decarbonisation plan. The results in terms of energy consumption are shown in the following table:

	2019*	2020*	2021	Variance from previous year
Electricity consumption (MWh)	129,980	107,684	114,725	6.5%
Electricity consumption in kWh per sales (kWh/MEur)	115	117	122	4.2%
Electricity from renewables in Spain (MWh)	33,306	29,089	29,998	3.2%
Electricity from renewables in China (MWh)	1,586	1,611	1,575	-2.2%
Electricity from renewables in Portugal (MWh)	28	222	233	4.6%
Electricity from renewables in Turkeyl (MWh)	0	0	5,604	N/A
Electricity from renewables in FICOSA (MWh)	34,920	30,922	37,410	21.0%
Renewables vs total consumption ratio	27%	29%	33%	3.9%

<sup>(1)</sup> The values for the years 2019 and 2020 published in this report differ from the values published in the previous reports as the reporting system and internal control procedures have been improved due to our adherence to the SBTi initiative..

Total electricity consumption in absolute value has increased compared to last year's value by 6.5%. The intensity reduction target could not be achieved, although sales increased compared to the previous period. The COVID-19 pandemic combined with the semiconductor supply crisis led to significant disruptions in production planning, which did not allow the company to optimise energy consumption.

Most of Ficosa's production processes run on electricity, in addition to which several plants use natural gas, diesel and propane for general uses not associated with production.

	2019	2020 <sup>1</sup>	2021	Variance from previous year
Propane gas consumption (Kg)	21,101	18,303	41,518	126.8% <sup>(2)</sup>
Butane gas consumption (Kg)	63,068	82,149	60,612	-26.2%
Diesel fuel consumption (l)	340,054	295,478	271,780	-8.0%
Natural gas consumption (MWh)	36,709	34,328	37,047	7.9%

<sup>1</sup> The value of 2020 natural gas consumption published in this report differs from the value published in previous reports as the reporting system and internal control procedures have been improved due to our adherence to the SBTi initiative.

<sup>2</sup> Propane consumption increases significantly in 2021 because the Morcone plant (Italy) has changed its heating system from diesel to propane gas to make it more efficient.

## Water management

Most of Ficosa's manufacturing plants do not use water for industrial processes. However, all plants must reduce their water consumption intensity (m<sup>3</sup>/employees) between 1% and 3% depending on the results obtained in the previous year. In 2020, the intensity indicator was modified by replacing net sales in the denominator with the number of employees.

The water used in all Ficosa's plants comes from the municipal network, with the exception of the water used in the Brazil and Salinas (Mexico) plants, which use well water. A significant part of our manufacturing plants use water in cooling towers or in the painting process. In most cases, the manufacturing plants are using closed cooling systems. The company is committed to employing new technologies to reduce its water consumption and increase the amount of recycled water in the

painting process. In Bursa, Turkey, the manufacturing plant reduced its water consumption in the paint booth by eliminating the water curtain and using a new dry filter paint system.

Ficosa's plants in Soria (Spain) and Bursa (Turkey) with painting facilities are distilling used paint to obtain pure solvent, which can be used as an internal cleaning agent. The plant in Salinas (Mexico) recovers the used solvent through an external supplier and reuses it in the cleaning of the paint tanks, floors and pumps of the paint facility. In Viladecavalls (Spain) from 2020, all water used for irrigation is 100% recycled. These actions are part of the group's contribution to the circular economy.

	2019	2020	2021	Variance from previous year
Water consumption in m <sup>3</sup>	229,217	193,634	206,410	6.6%
Water consumption in m <sup>3</sup> per sales (m <sup>3</sup> /MEUR)	202.0	209.8	218.6	4.2%
Water consumption in m <sup>3</sup> per employees* (m <sup>3</sup> /employees)	23.8	24.6	25.4	3.3%

(\*) Employees of manufacturing plants

During the year 2021, due to the increased use of water for personal hygiene and the increase in the frequency of the cleaning service of the facilities as a result of the COVID-19 pandemic, it has not been possible to reduce water consumption in absolute terms, with an increase of 6.6% compared to the previous year.

## Waste management

In 2021, Ficosa's production centres monitored the production and management of waste based on criteria of hazardousness and final treatment.

### Waste generatoin

	2021	%
Waste generation (Kg/K€ net sales)	10.7	
<b>Total waste generated (t)*</b>	<b>10,080</b>	
<b>Non Hazardous waste (NHW) generated (t)</b>	<b>7,838</b>	<b>78%</b>
Quantity with other recovery operations (t)	5,606	56%
Quantity disposed of in landfill (t)	1,728	17%
Quantity incinerated without energy recovery (t)	0	0%
Quantity incinerated with energy recovery (t)	504	5%
<b>Hazardous waste (HW) generated (t)</b>	<b>2,242</b>	<b>22%</b>
Quantity with other recovery operations (t)	1,938	19%
Quantity disposed of in landfill (t)	0	0%
Quantity incinerated without energy recovery (t)	0	0%
Quantity incinerated with energy recovery (t)	304	3%

It should be noted that only 17% of the waste generated in the company is landfilled. The rest is treated in various ways, including incineration with energy recovery (8%).

The company's objective is to reduce the % of waste disposed of in landfill by increasing the recovery ratio at each plant.

(\*) The total waste value for 2020 published in previous reports was 9,393 mt

## Waste recovery ratio (%) by sites

	2019	2020	2021	Variance from previous year
Morcone (Italy)	100%	100%	99%	-0.6 %
Dabrowa (Poland)	99%	100%	100%	0.0 %
Bursa (Turkey)	96%	92%	94%	2.5 %
Gemlik (Turkey)	95%	86%	90%	3.6 %
Maia (Portugal)	95%	99%	99%	0.0 %
Viladecavalls (Spain)	94%	95%	98%	3.2 %
Wofenbüttel (Germany)	93%	96%	100%	4.0 %
Taicang (China)	90%	92%	99%	7.4 %
Cookeville (USA)	83%	72%	70%	-1.9 %
Rabat (Morocco)	76%	92%	96%	4.4 %
Escobedo & Salinas (México) <sup>1</sup>	79%	76%	76%	0.0 %
Sao Paulo (Brazil)	76%	87%	94%	6.7 %
Dieuze (France) <sup>2</sup>	44%	52%	61%	8.9 %
Sant Guim (Spain)	71%	79%	76%	-2.6 %
Soria (Spain)	63%	70%	69%	-1.5 %
Shelbyville (USA)	51%	56%	50%	-6.4 %
<b>Total Average FICOSA</b>	<b>83.3%</b>	<b>82.5%</b>	<b>82.9%</b>	<b>0.4 %</b>

Ficosa's plants have different waste containers in all areas (production and other) to segregate waste by type and character, facilitating specific future treatment. Ficosa is working in all its operating facilities to increase the recovery of cleaning solvents and other chemicals and to reduce the quantities of these substances emitted by its plants. In addition, all manufacturing plants organise awareness-raising campaigns for workers with the aim of reducing packaging waste and its selective collection at source. Ficosa believes that the participation of its employees is fundamental to reducing waste generation. These actions have enabled the results to show a slight increase of 0.4% in the recovery ratio in 2021.

An individualised recovery target has been set for each plant in 2022 according to the table below. The target depends on the previous year's result.

2021 Result	Target 2022 (% of improvement)
0 - 50%	9,0%
50-90%	5,0%
90-99%	1,0%
>99%	0,01%

## Reporting CDP

CDP Global is an international non-profit organisation comprised of CDP Worldwide Group and CDP North America, Inc. CDP has regional offices and local partners covering more than 50 countries. Currently, companies, cities, states and regions from more than 90 countries report through CDP annually.

CDP Global's vision and mission is to aspire to see a prosperous economy that works for people and the planet over the long term. CDP Global focuses investors, companies and cities on taking action to build a truly sustainable economy by measuring and understanding their environmental impact.

The CDP Scorecard enables companies to understand their score and indicate which categories require attention to achieve higher levels. This allows companies to move towards environmental stewardship through benchmarking and comparison with peers, in order to continuously improve their climate governance.

Ficosa subscribes to this initiative. During the 2021 assessment, Ficosa received a B-, which is in the Management band. This result is higher than the average of the Powered Machinery sector whose average grade is C.

Ficosa also subscribes to the CDP initiative on water management. This module collects information on our organisation's quantitative and qualitative water-related targets to demonstrate commitment to progress in water management and safety by improving water management.

During the 2021 assessment, Ficosa received a B-, which is in the Management band. This result places Ficosa in the same band as the Powered Machinery sector average.

## Local initiatives to protect the environment

In our desire to achieve excellence in all our areas of work, including sustainability, we are always looking to create synergies with key partners that allow us to build strategic alliances to continue generating value. Participation in Air France-KLM's SAF (Sustainable Aviation Fuel) programme is a clear example of these partnerships and our commitment to sustainability, as it allows us to contribute to solutions to global challenges such as decarbonisation. SAF is a sustainable aviation fuel made from renewable sources such as used cooking oil.

In this case, the SAF programme has given us the possibility to play an active part in reducing CO<sub>2</sub> emissions in the aviation sector, and of course to reduce our own emissions, as emissions from business travels are part of our carbon footprint. Specifically, thanks to this project, we have reduced more than 18 tonnes of CO<sub>2</sub> on flights with Air France KLM. This is equivalent to the trips between Spain and the USA made by Ficosa with these airlines in 2019.

The Group's subsidiaries have managed several initiatives in 2021 to raise awareness and promote their employees' commitment to the Environment. The main initiatives are:

### Poland - Elimination of landfilled waste

By 2021, the Polish plant has achieved the elimination of the final disposal of its waste to landfill. This means that 100% of the waste generated is recycled, processed or used for the production of biofuels.

### Spain, Italy, Morocco, Poland and Turkey - World Water Day

At Ficosa we celebrated World Water Day with different initiatives to raise awareness among our employees about the responsible use of water. The plants that participated in 2021 were Spain, Italy, Morocco, Poland and Turkey. Thanks to initiatives like this, in 2021 we achieved greater awareness among our employees of the importance of rationalising water consumption. In addition, at our Viladecavalls headquarters, 100% of irrigation water is recycled. This is one of our ways of contributing to SDG 6.

### Spain, Italy, Morocco, Poland and Turkey - World Environment Day

Our plants in Spain, Italy, Portugal, Poland and Turkey celebrate World Environment Day with a wide variety of activities, such as a drawing competition for children, awareness-raising messages on all computers or awareness-raising talks about the important role of maintaining ecosystems. This is one of our ways of contributing to SDG 13.

### Dieuze - PRS Green Label

The Dieuze plant in France has been awarded the PRS Green Label. This label recognises the plant for its efforts to actively contribute to improving the environment by giving a second life to the wooden pallets used in the plant.

### Viladecavalls - Face up to plastic!

In 2020, our head office, located in Viladecavalls (Spain), launched the campaign "Plant a face to plastic" with the aim of reducing the CO<sub>2</sub> emissions generated at the site. A video was distributed to all the centre's employees to explain the actions included in the campaign:

- Elimination of plastic bottles from the daily menu.
- Use of compostable coffee capsules
- Replacement of plastic cups in the vending machines with paper cups to encourage the use of cups (environmental campaign 2019).

During 2020, due to the hygienic measures established in the production centre as a result of the COVID-19 pandemic, it was not possible to complete the implementation of the campaign, and the target was set for 2021.

In July 2021, the last phase of the “Face up to plastic” campaign was implemented with the elimination of individual water bottles from the lunch menu. This action has reduced plastic bottle waste by 51%, equivalent to 522.7 kg of waste.

The 2019 environmental campaign, which consisted of the use of GOT in the cafeteria and vending machines to reduce the generation of waste from plastic cups, has managed to reduce it by 31% compared to 2018 prior to the launch of the campaign.

In addition, the Viladecavalls plant has established a packaging return system in the canteen, managing to eliminate single-use cardboard and plastic waste used to transport fruit, vegetables and meat. This action has led to a reduction of 1.63 tonnes of plastic packaging waste compared to the year 2019 prior to the launch of the campaign.

## Sant Guim - Reusable water bottles

The best impact on the environment is one that does not occur and, for this reason, in 2021, the Sant Guim production plant distributed a reusable water bottle to each of its workers in order to reduce the number of plastic cups generated every time a worker drinks water. In addition, the Sant Guim plant celebrated International Plastic Bag Free Day by giving all its workers a reusable organic cotton bag. Under the slogan: Try it, no plastic bags!



## Mexico - Adopt a tree campaign

The Mexico plant, with the aim of contributing to environmental care, has launched a tree adoption activity among its employees. This activity promotes the culture of reforestation of trees endemic to the state of Nuevo Leon, helping to prolong the endemic species and avoiding the spread of invasive species. The result of the campaign was the adoption of 20 trees.

# 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).

## Key results

To become a new Ficosa component 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.

	2019	2020	2021	Variance from previous year
Suppliers certified ISO 9001* (%)	100%	100%	100%	-
Suppliers certified ISO/TS 16949* (%)	67%	64%(1)	64%	-

<sup>(1)</sup> Productive suppliers

<sup>(1)</sup> The number of ISO / TS 16949 certified suppliers remained the same as in 2019, the small % decrease is justified by the balance of new suppliers and old suppliers eliminated in 2020.

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 2019, the supplier audit (known as 3Q3) was revised with a new specific section on CSR, including questions on compliance with the REACH Authorization regulation, conflict minerals, reporting with the IMDS system, the commitment to compliance and adherence to the principles of the Ficosa's Code of Ethics and to good practices

## 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.

in the field of Occupational Health and Safety and respect for the Environment. This section of the audit ends with the identification of the degree of requirement of these same concepts to the sub-suppliers or value chain. This new section is part of the supplier's final score, a score that implies, depending on the value obtained, corrective action plans, proposals for specific improvements or recognition of the good work carried out by the supplier.

In 2021, 259 audits were carried out at our suppliers. There are 3 audit types: The objective of the T1 (System) audits is to check to what extent the Quality System of the potential supplier can meet our Quality requirements. T2 (Process) aims to approve a new component or process change, reviewing the whole process and T3 (Non-conformities) aims to close identified non-conformities.

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.

In 2021, new sustainability-related requirements have been established for our supply chain, reinforcing an internal procedure that sets out the information to be required from all suppliers with a focus on:

- Special requirements for raw material approval
- Restricted and controlled substances
- Collection of carbon footprint data from our suppliers

## 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 productive 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.

In the last years, there has been a growing international focus on

In this way, we ensure the deployment of key sustainability aspects in our supply chain.

In 2021 we launched a supplier survey to assess their environmental performance and emissions generated, encouraging them to set carbon footprint reduction targets in the coming years.

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, follows the customer technical requirements or belongs 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).

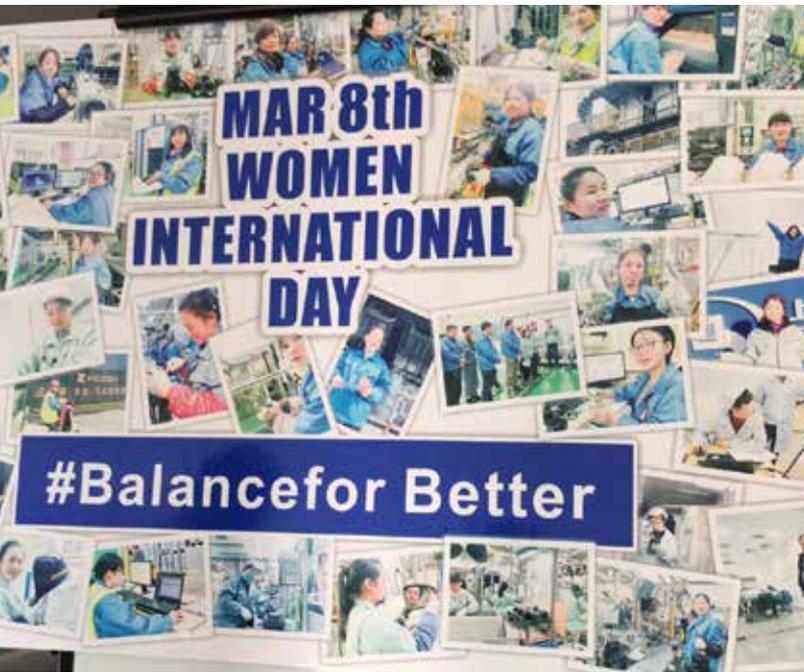
another mineral called mica. Mainly from Madagascar and India, where a variety of factors contribute to poor working conditions, including the use of child labour.

Mica is used in various applications in the automotive supply chain. In paints and coatings, mica creates a pearly visual effect. Vehicle bumper plastics, mirror housings and insulating materials use mica as filler.

Ficosa launched a process to identify the processes or purchased parts or components that use mica. Natural mica was found only in paints, but it came from reliable sources that had already implemented a number of supervisory mechanisms in previous years (monitoring, audits, inspections, etc.). These providers confirm that they take these matters very seriously. Most of them are members of the "Responsible Mica Initiative" (RMI) that was formed in Paris on January 31, 2017 with the aim of sharing resources to implement responsible supply practices and eradicate child labour, improving the livelihood of communities within the supply chain in India in the next 5 years.

	2019	2020	2021	Variance from previous year
% of productive suppliers and materials for which conflict mineral information is available	100%	100%	100%	0%

# 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), Gemlik and Bursa (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. The COVID-19 pandemic has limited these activities in most plants during 2020.

## 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 specialisation 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 at the beginning of 2018. Due to the great success of the first editions, the UPC decided to keep this course in its academic programme. The course was updated in 2020 to include an Advanced Driver Assistance Systems (ADAS) module.

Ficosa, whose specialists teach part of this course, offers the possibility 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.

## Ficosa do Brasil – C.M.R. ITAPEVI

Ficosa do Brasil collaborates with the C.M.R. ITAPEVI cooperative, which specialises in daily selective waste collection in the municipality of Itapevi, in the Greater São Paulo region. The aim is to minimise the impact of waste generated by the city and disposed of in nature, in addition to generating work and income for more than 20 families through its co-operative members.

In March 2021, through a C.M.R. ITAPEVI partnership letter with FICOSA DO BRASIL, the cooperative began weekly collection of various recyclable materials, such as polystyrene, paper, carton, plastics and scrap metal.

With this measure, Ficosa do Brasil reaffirms its commitment to preserving the environment and helping the most disadvantaged groups.

## Socially Responsible Company Distinction for Ficosa North America (Mexico)

The Mexican Centre for Philanthropy (Cemefi) and the Alliance for Corporate Social Responsibility (AliaRSE) awarded the ESR® Distinction to Ficosa North America (Mexico) for the second year.

In Mexico, this is the main business award that recognises the work carried out by companies in the field of CSR in the country, which have a direct and positive impact on the internal environment of their companies and their social environment.

With the recognition awarded to Ficosa, the existing commitment in the management of the business with the real and sustainable development of its environment is valued.

## Ficosa social initiatives worldwide



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.

- Food and cleaning supplies drive
- Farm and warehouse distribution centre collaboration for disadvantaged citizens
- Soup kitchen for the homeless
- Popular walks in support of research on diseases such as cancer (physical exercise and collection of funds / donations for cancer research)
- Adopt a Road Programme
- Campaigns encouraging employee donations to local charities

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



### Soria

- Participation and collaboration with entities that promote the employment of people with disabilities (Asamis, Ilunion).
- Sponsorship of sports activities
- Collaboration with penitentiary institutions to promote the rehabilitation of inmates.

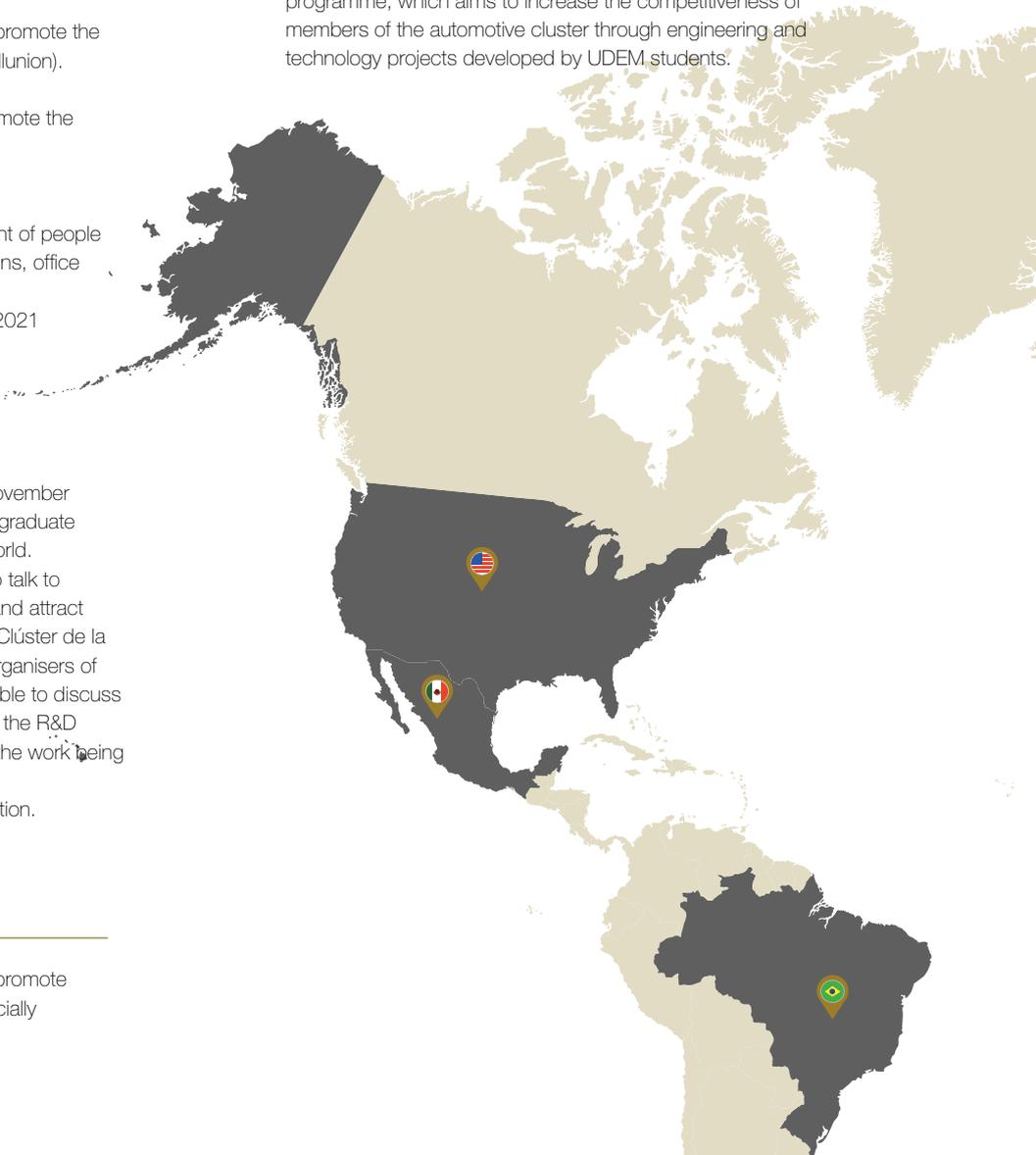
### Viladecavalls

- Contracting entities that promote the employment of people with disabilities in services such as water fountains, office material and the management of company trips.
- Sponsorship of the e-Tech Racing Team 2020-2021 made up of 37 students from the EEBE (Escola d'Enginyeria de Barcelona Est), of the Universitat Politècnica de Catalunya (UPC) who compete in international Formula Student competitions.
- Attendance at the Automotive Talent Show in November 2021. An event dedicated to students about to graduate who are interested in entering the automotive world. Companies in the sector have the opportunity to talk to students, publicise the company and discover and attract talent from educational centres. In addition, the Clúster de la Indústria de l'Automoció de Catalunya (CIAC), organisers of the event, invited several speakers to a round table to discuss innovation in the sector. One of our members of the R&D Engineering area attended and gave visibility to the work being carried out in our company.
- Collaboration with the Multiple Sclerosis Foundation.



- Participation and collaboration with entities that promote the employment of people with disabilities or socially disadvantaged groups.

- Adopt a tree" programme to promote reforestation.
- Volunteering campaign with vulnerable elderly people
- Collection of PET plastic to donate to the Children's Anti-Cancer Centre
- Donation of school supplies to the local primary school
- Collaboration with the UDEM (University of Monterrey) Projects programme, which aims to increase the competitiveness of members of the automotive cluster through engineering and technology projects developed by UDEM students.





- In-kind and financial donations to several institutions, such as the Holy House of Mercy of Maia (delivery of basic food for families with few resources)



- Members of the BYOH (BeYourOwnHero) association, sponsoring a project in South Africa focused on the help and development of children and young people in rural areas with a lack of resources.
- Sponsorship of sporting activities



- Collaboration with local universities and institutes (for trainees and host students)



- Blood donation campaign among employees



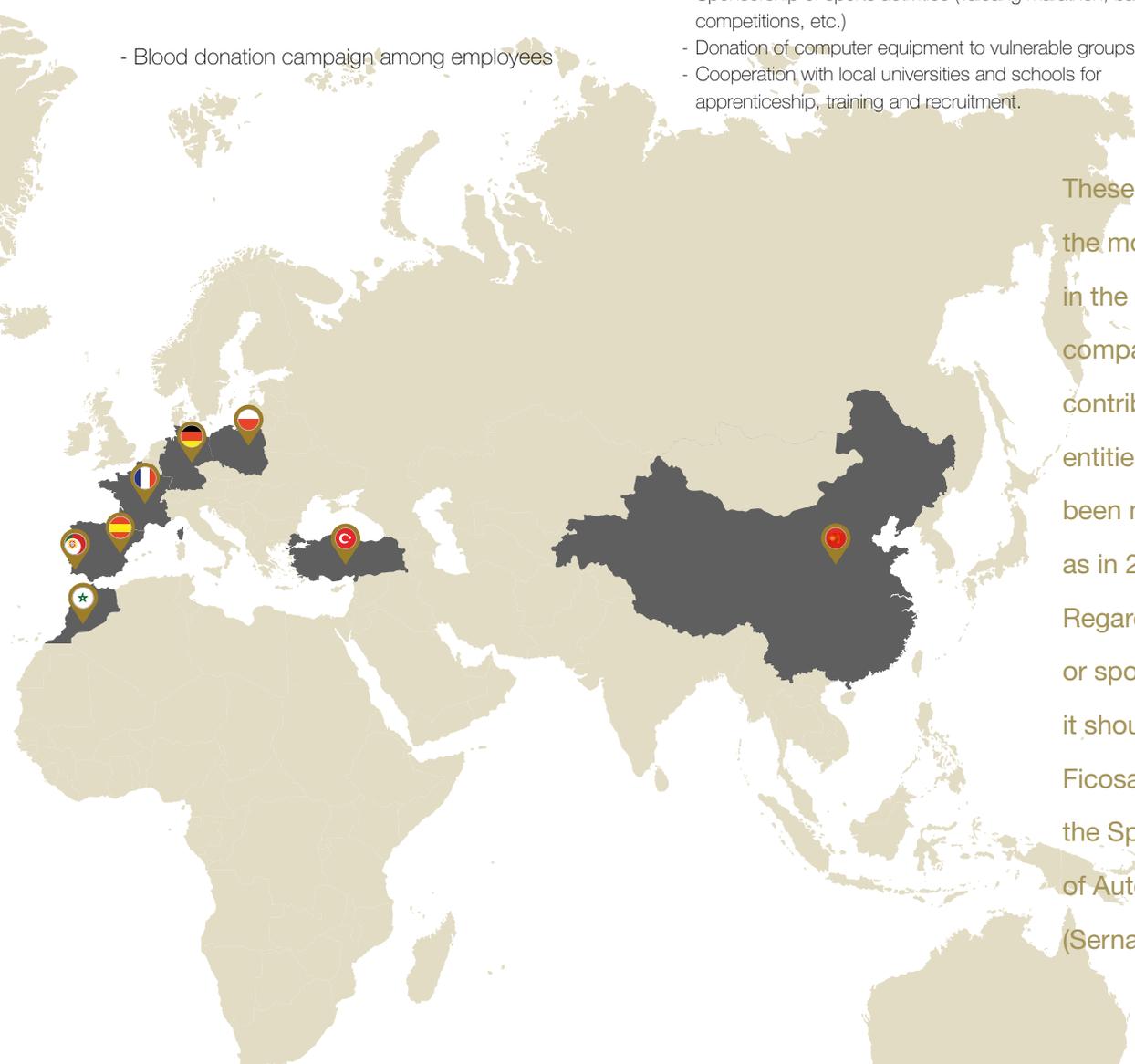
- In-kind and financial donations for local institutions or events (charity action with the Centre for Special Education and Child Care) and employees in difficult life situations.
- Collaboration with the Silesian University of Technology in dual studies, annually several students carry out 6-month internships in our company.



- Environmental awareness campaign with the collection of used batteries.
- Collaborations of our employees with Kızılay and AFAD associations (one of the largest associations in Turkey providing emergency and natural disaster relief).



- Sponsorship of sports activities (Taicang marathon, badminton competitions, etc.)
- Donation of computer equipment to vulnerable groups.
- Cooperation with local universities and schools for apprenticeship, training and recruitment.



These social initiatives are the most relevant of Ficosa in the places where the company operates. The contributions to non-profit entities in 2021 have not been material or relevant, as in 2020.

Regarding association or sponsorship actions, it should be noted that Ficosa is a member of the Spanish Association of Automotive Suppliers (Sernauto).

# 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.





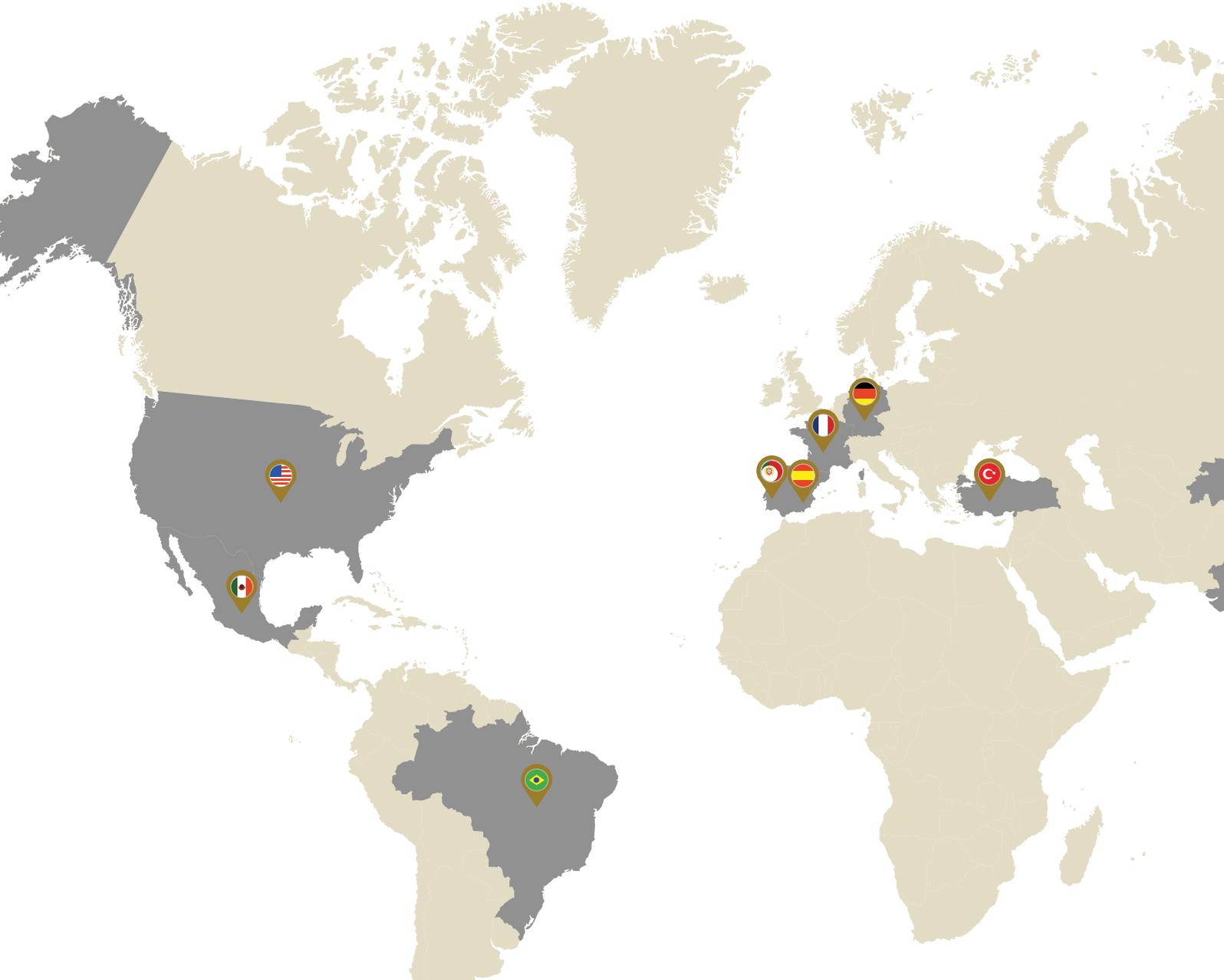
## R&D Capabilities

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 other 12 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.

## Capabilities

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 close to a thousand in 2021.



## Partnerships

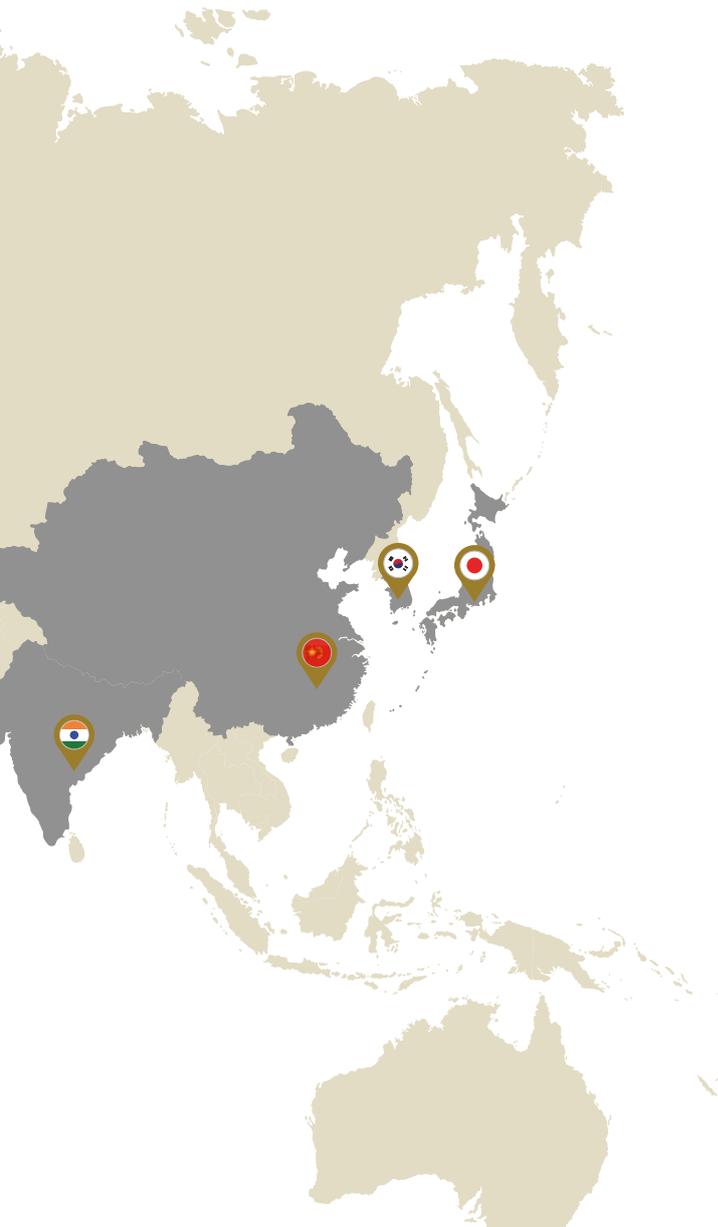
We also collaborate, both nationally and internationally, with other companies, engineering firms, universities and technical centres on studies, training, advisory services, technology transfer, validations, tests, etc., that allow us to meet more demanding time to market and complex system requirements.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

## R&D Expenditure (thousand €)

In 2021, Ficosa spent more than €65 million in R&D to provide its clients with the most innovative solutions that anticipate the challenges of a constantly changing industry.



This figure means that the company has invested around 7% of its annual sales in R&D to offer its customers the most innovative solutions possible. Ficosa currently has 720 active patents in full ownership and is one of the most active Spanish companies in terms of patents in Spain.



## - Research centers

-  — Viladecavalls
-  — Wolfenbüttel
-  — Dieuze
-  — Porto
-  — Bursa
-  — Sao Paulo
-  — Detroit
-  — Salinas-Victoria
-  — Whaseong-Gun
-  — Tokyo
-  — Taicang
-  — Hyderabad / Pune

## 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), traffic accidents kill approximately 1.35 million people worldwide every year, which means that every day around 3,500 people die on the roads. Tens of millions of people suffer injuries or disabilities each year. Children, pedestrians, cyclists and the elderly are the most vulnerable users of public roads. About 50 million people are injured in traffic accidents. If preventive measures are not taken, death from a car accident is likely to become a top five cause of death in the coming years from ninth place in 1990.

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 adopted by the 2030 Agenda for Sustainable Development.

#### Collaboration with national and international programmes

### SUaaVE

SUaaVE proposes to enhance public acceptance of highly automated CAVs (Connected automated vehicles) by increasing trustworthiness via Human-Driven Design including the participation of all road users as well as stakeholders through:



- A social-psychological research on CAV acceptability.
- A cross-cultural framework for ethical and legal issues to facilitate CAV deployment.
- The conceptualisation and demonstration of a newly defined “Level of Automation Four+ Reliable Empathic Driver” (ALFRED), defined as a concept in CAV technology aimed to understand passengers’ state, and from this information, manage corrective actions in vehicle for enhancing trip experience.
- The generation of a set of tools and services to further implement the ALFRED concept, beyond SUaaVE.

The role of Ficosa in the project is to evaluate the “best in class” solutions of the emotions detection systems that are currently in the market.

The idea is to embark those systems in the tests and study which emotions are relevant to detect on board and which requirements does a camera should fulfil to detect those emotions.

## ESTIBA

ESTIBA's goal is to advance in the provision of strategic technologies that bring us closer to the port of the future (the Smart Port). We think that is the only way to satisfy the growing demand of efficiency, economy, security and environmental sustainability according to the "Industry 4.0" concept. Together with the highest levels of automation, as required in the scenarios that integrate different automated ground transport vehicles (GVs) in port operations.



Ficosa designs and validates in a real environment an interior camera adapted to the detection of laser patterns. Ficosa also develops a driving monitoring system (DMS) composed of camera and radar technology with the aim of monitoring the driver. This innovative technology will make possible in the future to have greater robustness in detecting driver states that are unsuitable for driving by means of non-contact sensors in critical environments.

## VIZTA

VIZTA project, coordinated by STMicroelectronics, aims at developing innovative technologies in the field of optical sensors and laser sources for short to long-range 3D-imaging and to demonstrate their value in several key applications, e.g., automotive.



The developed differentiating technologies allow the development and validation of innovative 3D imaging sensors products with the following highly integrated prototypes demonstrators:

- High resolution (>77 000 points) time-of-flight ranging sensor module with integrated VCSEL, drivers, filters and optics.
- Very High resolution (VGA min) depth camera sensor with integrated filters and optics.

Ficosa will use the developed technologies for In-Cabin monitoring, specifically, obtaining 3D face analysis and breathing using a single camera.

## PRYSTINE



Ficosa developed a Driver Monitoring System (DMS) 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.

This system is integrated and validated in simulation and vehicle environments, as part of demonstrators for fail-operational SAE Level 3+ ADFs in urban environments, where Ficosa has a leading role.

## 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.

## sAFE

The sAFE (Aftermarket eCall for Europe) project was funded by the Innovation and Networks Executive Agency (INEA) under the Connecting Europe Facility CEF program. The main goal of the project is to study and prepare specifications for eCall Aftermarket for vehicles of many categories.



The project started on January 2019 and ended in June 2021. It comprised 23 partners from many countries in Europe, such as Germany, Spain, Netherlands, Slovenia, Cyprus, Austria, Luxembourg or Italy.

Ficosa has contributed to the specification of eCall Aftermarket for M1 / N1 vehicles (passenger vehicles up to 7 seats and light vans), as well as specified and performed the homologation process which will acknowledge an aftermarket eCall as valid for being used in the European market.

## SECRETAS

SECRETAS stands for “Product Security for Cross Domain Reliable Dependable Automated Systems. The SECRETAS consortium comprises 69 partners from 16 European countries. The goal of this project was to build a benchmark architecture for Secure and Safe Automated systems compliant with the new GDPR Regulation. The focus is 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.



The project ended on October 2021 and Ficosa contributed 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 has been capable of integrating SW technologies from third parties, such as V2X Firewall and V2X misbehaviour detection. Ficosa has also provide DSRC High-performance antennas to achieve best platform performance.

As part of the same project, Ficosa ADAS has 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.

## CARMEL

CARMEL 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, CARMEL 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 provide to the project a full-fledged V2X (802.11p) HW platform designed for a very robust physical and logical security that will include enhancements still not found in other similar developments.

## LTE-V2X

LTE-V2X is an advanced information and communication technology applied in road transportation systems, with the objective of enabling information exchange between vehicle, human, infrastructure, and network. The overall goal of the project is to investigate and evaluate the behaviour of a unit with LTE technology, as an initial step to assess the requirements on 5G for the functionality of CV2X (Cellular V2X).

The research of LTE technology as a transport layer for V2X communications, prior to the advent of 5G technologies, aims at the following objectives:

- Build a demonstrator with this technology.
- Evaluate its performance and detect critical needs.
- Create a pre-product for our catalogue of solutions in 4G and 5G.

Project ended on September 2021 with the objectives achieved: On the one hand a pre-product was developed which also improved the current V2X units that only integrate 802.11 providing a dual system ideal for V2C and V2I solutions, and on the other hand, a perspective of requirements, functionalities and limitations to be considered for a future implementation in 5G protocols has been obtained, defining the desirable minimums for a correct operation that the different newcomer protocols must provide.

It has also been estimated that the use of CV2X (communications based on mobile technologies) will become a connected car facilitator, which can bring different outcomes like:

- Zero accidents environment: Every year, about 1.25 million people die in the world due to car accidents, mostly due to human factor representing a high social cost, but also economic and political.
- Sustainable environment: Adjust the speed not only to the road condition, but also proposing alternative routes based on the current traffic which reduce congestion situations that translates into pollution and emissions reduction.
- Travel experience: The connected cars can receive information to improve the travel, proposing alternative routes, places to stop according to tourist or gastronomic guides. A whole catalogue of services can be opened for real-time travels.

## TRANSLIGHT

The main goal of the Translight project is the development of innovative products and processes intended for the automotive and electronic component markets thanks to the development and optimization of electronic inks applying a combination of inkjet digital technologies and LIFT.

Inside the consortium, Torrecid was acting as project coordinator, developing the new electronic inks. Ficosa was acting as a technological member developing connectivity solutions using the functional inks developed in the project. The other participants were Maier, Electronica Falcón and Egatel, working on different fields of application of the functional inks.

The Project started on January 2018 and ends on the 31st March of 2021.

Ficosa has been able to make specific designs and validate the technology developed in this project mainly on printed antennas directly in the Telematics Control Unit (TCU) boxes allowing its miniaturization.

## MOVILIDAD 2030

Movilidad 2030 aims to develop technologies in the field of smart mobility, contributing to the achievement of sustainable mobility for 2030, both at the national and international level.



The project focuses on four main pillars: embedded systems for the deployment of Connected and Automated Vehicles (CAVs) on a large scale, design of the sustainable mobility model of the future, infrastructure technologies, and regulation and business models for future of mobility.

The role of FICOSA is the development of new ADAS functions based on a multi-camera vehicle perception system, with a specific focus on safety of vulnerable road users.

## INPERCEPT

INPERCEPT arises from the need to advance the key enabling technologies for autonomous driving, as one of the flagship automotive R&D projects in Spain.



FICOSA leads a consortium of eight companies developing technologies for vehicle autonomy, safety and connectivity with the focus on Smart Cities applications.

The technical role of FICOSA is the development of the vehicle perception system that provides a surround view of the vehicle environment for an improved situational awareness. The main application focuses on safety of vulnerable road users and detection and tracking of vehicles under challenging weather conditions.

## SELFY

SELFY's strategic vision is to become the main European provider of a toolbox for the self-management of the security and resilience of highly automated vehicles.



The project focuses on four pillars:

- Situational awareness: addressing what kind of data needs to be generated and collected, and how it is used to monitor any given cooperative, connected and automated mobility (CCAM) ecosystem;
- Data exchange: addressing advanced processing for malicious event detection and decision making;
- Resilience: through the development of new tools to increase the capacity to adapt and respond to cyber threats and cyber attacks on assets, services and products in the CCAM domain, reducing their impact and the interruption of associated services;
- Confidence: to all interested parties, increasing the acceptance and adoption of CCAM services and solutions, developing tools to guarantee the privacy, confidentiality, integrity and immutability of data in a CCAM environment.

FICOSA's role is to develop computer vision models for improved situational awareness, and tools for privacy protection and cybersecurity related to sensor data and vehicle connectivity.

## What we are offering our customers

### Vision systems

As a leading company in the development, manufacture and marketing of rear-view mirrors, FICOSA is constantly improving the performance and safety of its products, with a particular focus on sustainability to help achieve both company and industry targets and commitments in this area.

In the case of rear-view mirrors, this means integrating in the preliminary stages of product design the use of recycled materials, as well as some methods of assembly and fixing of components that allow easier disassembly of parts at the end of their service life, as well as a modular repair method in case of failure during service life.

In parallel, FICOSA is developing an innovative rear-view mirror concept that reduces the CO2 impact of the vehicle by reducing its aerodynamic resistance and which will be presented to the market in the coming months.

On the other hand, most aggressive projections estimate that 10% of vehicles will be autonomous by 2030, and vision systems 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 Ficoso is also taking a leading position (CMS, surround view, parking cameras, etc.). The company is developing state-of-the-art vision systems based on cameras, fusion with other sensors (LiDAR, radar, etc.) and AI models that perform detection and tracking of the elements in the vehicle surroundings, improve situational awareness and enable development of novel ADAS for better safety, energy efficiency and connectivity.

Internal research efforts and collaborative projects put Ficoso at the forefront of the science and technology behind the vehicle perception for ADAS.

### 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 other road actors. This communication path provides a lot of information in the vehicle regarding its surroundings. This fact enables drivers to be alerted on impending dangers in a first phase (Day 1 use cases). In the future, the vehicle will be able to act in response to this knowledge (Day 2 use cases) and coordinate manoeuvres with other vehicles (Day 3 use cases). 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. Ficoso has been granted several patents on specific V2X high performance antennas. This fact increases Ficoso's capacity in supplying OEMs with fully integrated system solutions instead of separate parts.

### Intelligent Rear-view Monitor System (IRMS)

The innovative Intelligent Rear-view Monitor System for LCVs and Vans developed by Ficoso, able to provide a full rear vision to the driver even if his vehicle lacks of rear windows, is now starting mass production, and will be gradually deployed over the next months in different LCV carlines from a major European LCV leader.

During 2021, this system has been acclaimed by the sector and more OEM's have been showing a high interest in this safety device and are planning to introduce it in their next LCV or recreational vehicle models.



## Sensors and Camera Cleaning

After a successful launch and deployment of the LIDAR Cleaning System in the last three years, applied now in seven carlines of a premium German carmaker, Ficosa is achieving the development of a complete portfolio of Sensor Cleaning devices.

Those components applies for the cleaning of all sensors up to level five autonomous cars, ensuring that all detection systems function, quality and integrity are safe during driving.

A special focus is given to the water consumption reduction during cleaning sequence, as well as a low noise level, keeping at the same time the best system performance, bringing to a new generation of breakthrough-integrated system, currently under testing, to be marketed in the coming months.

## 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 system studies the driver's gradual worsening over a predetermined time period.

### **Somnoalert ® Contactless**

The system analyses respiratory data in real time to estimate the driver's degree of awareness.



## Child presence detection (CPD)

In order to reduce the heat stroke fatalities worldwide, especially affecting young age deaths, Ficosa is incorporating a child presence detection system based on radar.

The system detects life through subtle change in wave frequencies and hence can distinguish between inanimate objects or children.

Ficosa's CPD does not require line of sight, so children can be covered by a blanket, or be on the footwell or facing backwards with the same system performance.

## Camera Monitor System (CMS)

In 2015, the company started to develop 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. This first version of the product came to reality on September 2018. Currently, Ficosa is working with several Original Equipment Manufacturer (OEM) on the integration of different CMS concepts, customizing it according to their requirements. In this sense, Ficosa has already achieved important nominations in the second generation of these CMS systems, a strategic product for the company, as in the medium term it is the evolution of rear-view systems and a key element for the future autonomous car.

## Surround View System (SVS)

Ficosa cameras are small and have low power consumption, which facilitates their integration into a multi-camera system. Ficosa's Surround View System (SVS) provides a 360° view of the vehicle surrounding, a necessity for development of vehicle autonomy in dynamic urban driving environment. These systems incorporate the state-of-the-art machine vision features such as occlusion detection, online and offline calibration, and object detection. Fusion with other sensors and vehicle connectivity allow development of cooperative perception, thus extending the visibility beyond the one provided by the on-board cameras.

## Shift-by-wire systems and Gear Box Actuators

Back into 2015 Ficosa started the development of its first transmission actuators, being able to offer a full Shift-by-Wire system. In 2020, Ficosa made ready the next generation of Shift-by-Wire systems with smart actuators, which can be easily integrated in CAN Base architectures, fulfilling the highest requirements in terms of functional safety, ensuring reliability in all conditions.

This product line has been 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 also enables to add into vehicle strategy safety features avoiding hazard conditions due to human errors.

In the Human interface, Ficosa is also bringing the latest technology, to make Shift-by-Wire shifter intuitive and fool proof, defining and co-designing functional patterns and fault tolerance strategies with our customers. As well, the current designs take into consideration sustainability drivers to address both company and industry targets and commitments in this area.

In this case, this means, among others, identifying materials with less CO2 impact, introducing sustainability guidelines in our design procedures or defining standard solutions to facilitate disassembly, recovery and/or segregation of materials for recycling.

## 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 programmes

### COMPEX

For 5.9 GHz Car-to-Car Communication is very important the localization of the antennas in the vehicle in order to achieve omni-directional coverage. This leads to have antennas integrated in the vehicle and physically separated from the ECU (Electronic Control Unit) connected with a coaxial cable. Coaxial cable at these frequencies attenuates significantly the signal, causing a system performance degradation.

COMPEX project is willing to solve the issue caused by the coaxial cables from the antennas until the Car-to-Car communication ECU due to the losses at the V2X frequencies (5.9GHz). Main objective of the project is to design an electronic system able to correct the degradation caused by the coaxial cable in DSRC and Cellular V2X communications.

### MAGICA

During the MAGICA project, the first multi-constellation Galileo antenna with multi-frequency capability specially adapted to automotive applications is under development.

The MAGICA antenna is intended to be going beyond the state of the art since, for the first time, it will provide a cost-effective high precision positioning antenna (providing multi-frequency characteristic and phase stability as the most relevant performance feature) commercially ready to be integrated on a vehicle for Autonomous Driving operation.

Current mass-market GNSS antennas are optimized for cost and dimensions rather than performance.

This consortium is composed of Rohde & Schwarz, SEAT and Ficosa and our goal is the development of a high performance antenna design adapted to the automotive needs very near to commercialisation phase.



### SAPPHIRE

SAPPHIRE stands for "Smart Automotive antennas with optimal Performance Printed on existing Housings during manufactuRE".

The main goal of the project is to develop a technology able to manufacture embedded antennas and electronic components onto existing housings, replacing existing surface mounted, manually assembled units.

SAPPHIRE will significantly reduce production costs and optimise antenna performance though maximising available volume. This will be applicable across a range of smart automotive antennas, including: 3G, 4G, and new 5G cellular service, WiFi, Vehicle to vehicle (V2X), Bluetooth and GPS antennas.

## 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 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 pluggable technology are a high-precision positioning, digital tuning antenna, as well as cellular 5G modules. It covers the needs of the company 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 big number of applications and is able to be deployed worldwide.

Latest developments of stick modules are a cyber-secured V2X module on NXP and uBlox silicon and an adapter for M.2 format pluggable modules.

What we are offering our customers

## Telematics units

These units connect the vehicle with the internet. Most used technology is cellular using 3G, 4G-LTE and 5G for data communications. Our units are capable of having embedded antennas, which facilitates the integration on many automobiles. These units incorporate services, as e-call, b-call, lights & horn and a myriad of other services customized by the OEM to their preferences. Some models also enable Wi-Fi communications inside or outside the vehicle.

## 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 state of cellular coverage and e-call status. A telematics control unit inside the vehicle manages all these elements in order to allow occupants to have full control of the system.

## Integrated antennas

The design and development of different 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 is part of our activity. 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. We also design antennas for millimeter wave frequencies at 24 or 60 GHz.

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

The interior rear-view mirror incorporating a Panasonic electronic toll function is deployed from 2019 in all the carlines of a major European manufacturer, extending this device to next upcoming models. This device allow the automatic payment of motorway & urban tolls without having to stop the vehicle, keeping driver attention to a safe and effective driving.



## Efficiency

### 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 decarbonisation 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. Furthermore, energy availability becomes a key aspect for novel mobility systems; in this sense, Ficosa is working in systems that transform the vehicle not only in a net energy consumer but in an active grid energy storage. Also, to make this appealing to the customer novel methods of ultra-fast charge are being explored within our activities.

### Collaboration with national and international programs

## Electromobility Hub

In 2018, the company opened a Technological Electromobility Hub with 120 people and 1,200 square metres, dedicated to the company's different products in Hybrid and Electric vehicles (HEV/ BEV). During 2019 these facilities were extended with additional 300 m<sup>2</sup> and in 2020 a second 400 m<sup>2</sup> area have been added. The e-Mobility Hub has 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 has become a driving force in electromobility solutions for the whole group on an international level.

The deployment of all these HEV/BEV products is a constituent part of the company's long-term strategy. This strategy deployment is planned in a series of phases. During these phases, Ficosa is focusing mainly on the following three products:

- Battery Management Controllers: Devices to control the HV Battery pack (BMC - Battery Management Controller) and battery cells (CMC - Cells Management Controller). As well, as BMC has the embedded algorithm to control the state of the battery (charge, health, temperature) and to manage the different actuators needed to permit battery charge or vehicle drive.
- HV Battery Junction Box: device that connects or disconnects the energy flow of the HV battery from the rest of the vehicle system or the charging system.
- Charging Systems: On Board Battery Charger that converts grid alternating current (AC) into direct current (DC) at a varying voltage level compatible with the battery state-of-charge and systems devoted to communicate the vehicle with an EVSE. As a future evolution, Ficosa is also working in the Battery Charging Management System as stand-alone solution.

## MARBEL

Design, manufacturing and validation of the next generation of battery packs for the automotive mass-market. A circular economy approach in EV battery packs.



This project develops an innovative and competitive lightweight battery with increased energy density and shorter recharging times with the objective to accelerate the mass market take-up of electric vehicles.

The project innovation is based on the following main pillars:

- Advanced battery packaging using a Design for Assembly (DfA) and Disassembly (DfD) methodology.
- Lightweight and sustainable Battery Packaging.
- Solutions and processes for the sustainable dismantling and 2nd life.
- Flexible advanced battery management systems.
- Ultra-Fast Charging strategies and enhanced thermal management.
- Procedures for characterisation and validation of future performance and safety.

Ficosa e-Mobility is coleading the working packages related to Ultra-Fast Charge, EVSE Communication, Power-circuit Dimensioning, BMS Functional Safety and Sensor Selection. The consortium of the Marbel project is formed by 16 partners from 7 European countries.

## Development of new technologies to improve the management and charging technologies of the electric vehicle battery at the cell level

The objective of this project, under the funding opportunity of CDTI (Spanish public business entity fostering the technological development and innovation of Spanish companies) is to advance in the development of sensing, control and charging solutions for electric batteries in electric and hybrid automotive sectors. The proposal specifically seeks to improve the efficiency in the management and charging of the battery module and reducing its dimensions at the same time.

In a first stage, the project will focus on applying machine-learning technologies to improve the accuracy of the BMS measurement throughout its useful life. Then, the second stage will be focused on the vehicle's on-board charger efficiency and size improvements. This goal will be based on increasing the switching frequency and operating voltage. To this end, the implementation of transistors based on SiC (Silicon Carbide) and GaN (Gallium Nitride) will be explored.

This project aims to keep Ficosa at the forefront of the development of technologies for sensing, control and battery charging. A technology, which is ubiquitous in any electrically powered vehicle and, by extension, in any battery powered equipment.

## FCEVLDTRUCK

Ficosa is participating together with four other companies (Ajusa, BonArea, Avia Ingeniería and CIE Egaña) and research centers and universities such as Tecnalia, CMT (UPV) and CITCEA (UPC), in a project called "Industrial research into a solution for hydrogen propulsion in light and semi-heavy duty electric vehicles with fuel cell", with the acronym FCEVLDTRUCK.

The objective is the development of a new type of fuel cell electric vehicle and the implementation of a fuel cell that converts hydrogen gas into an electric current inside the fuel cell. This electrical energy will be used to power the electric motor.

This project has a structure of five activities, three of them aimed at industrial research and two at experimental development and implementation. An interdisciplinary approach will be used to combine the capabilities of each of the partners, creating synergies and overcoming current technological barriers. The execution of this prototype will take 26 months.

Ficosa's role in this project is in cooperation with its partners to develop the different Electronic components embedded into the Ajusa fuel cell to control it and also to control the voltage conversion from the Fuel Cell to the High Voltage battery.

## EGVIA for 2Zero

The "Towards zero emission road transport" (2Zero) partnership is part of the new framework program of the EU: Horizon Europe. It is the continuation and extension of the European Green Vehicles Initiative. Building upon the success of previous initiatives (Green Cars and Green Vehicles), the 2Zero partnership will address the challenge of decarbonization of road transport in a systemic way. Involving a wide range of stakeholders, the 2Zero partnership will make a key contribution to achieve the Green Deal objectives and help the EU to have the first climate-neutral road transport system by 2050.



The following items as main pillars will be approached under the scope of the 2Zero partnership:

- Vehicle technologies and vehicle propulsion solutions for BEV and FCEV
- Integration of battery electric vehicles into the energy system and related charging infrastructure
- Innovative concepts and services for the zero emission mobility of people and goods
- LCA approaches and circular economy aspects for sustainable and innovative road mobility solutions

## CIAC

The Automotive Industry Cluster of Catalonia (CIAC) is a non-profit association open to companies operating in the automotive industry, that are based in Catalonia, and pursue R&D+i activities. Over 190 companies linked to the industry have joined the Catalan automotive cluster since it was established. This group of companies has a turnover of more than €20,000 million and provides employment for over 40,000 people.



The main aim of the association is to boost the competitiveness of the automotive industry as the driving force behind the Catalan economy. To achieve this, a strategic plan has been designed, with a series of short, medium, and long-term objectives that guarantee its development in the new industrial global framework.

## CAR-NET (Cooperative Automotive Research Network)

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



- 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 Systems. The focus areas of the e-mobility lay mainly in accurate, efficient and reliable high-voltage energy control. To do so, Ficosa combines its deep industrial knowledge with the last trends in machine learning and physics modelling within its advanced development projects.

#### Battery Junction Boxes

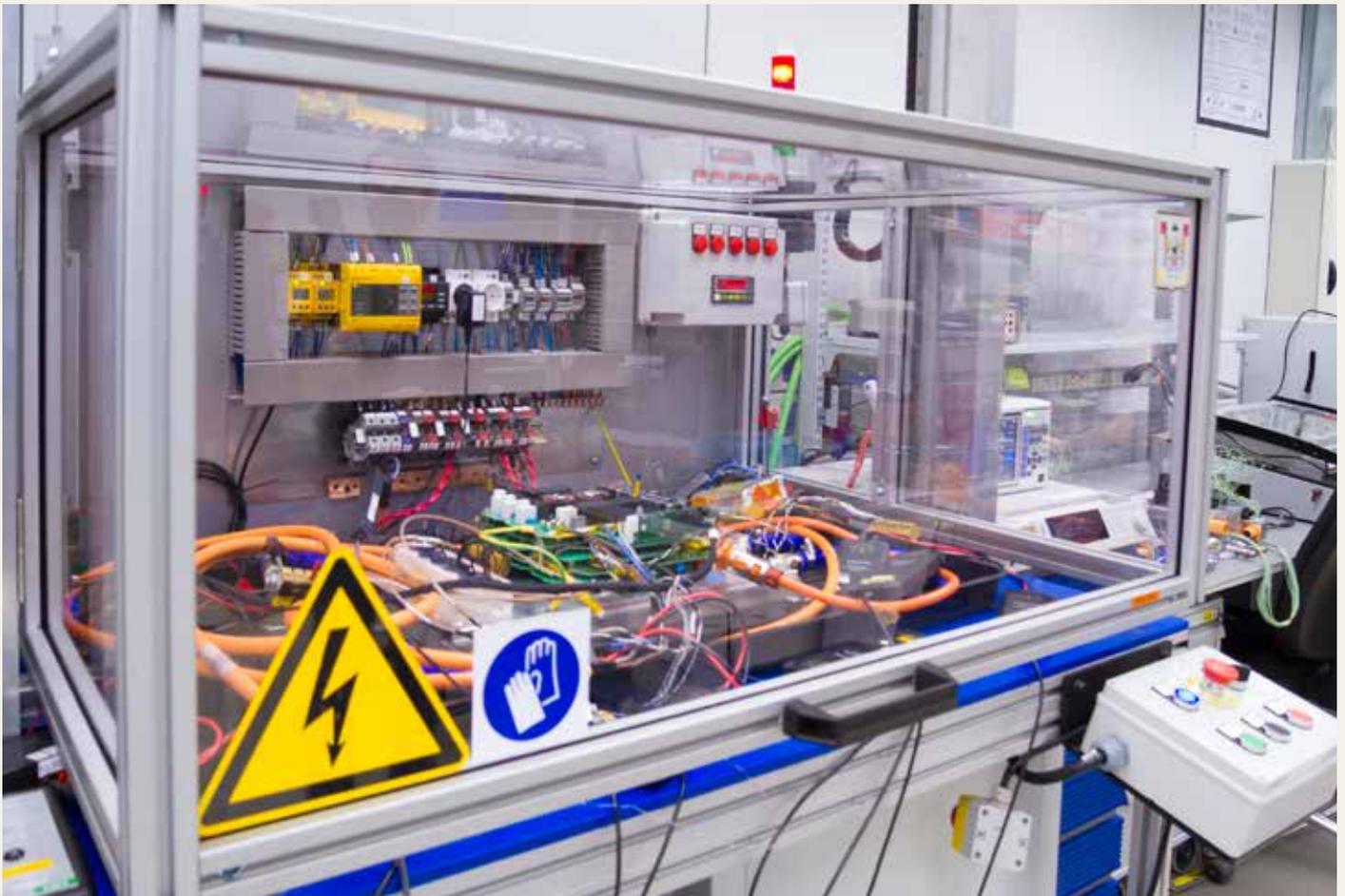
The battery junction box is a core component devoted to commute current from the batteries to the active vehicle parts. Year after year, this component is integrating more technology and adapting to different vehicle architecture (low-sized cost-savvy for low-range urban cars or modular for high-range cars with ultra-fast charge capabilities).

## 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. The technology under development fits on AC network as well as DC infrastructure.

## Charge management systems

Ficosa develops technologies able to manage the charge not only from a power-control scope but also from a standard communication technical approach. In that sense, cryptography becomes a key asset to deliver ready-to-market solutions.



# Content Index

Area	Reporting criteria	Page
<b>General Information</b>		
Description of the business model	GRI 102-1, GRI 102-2	Pg 4-6/8-9/12
Organization and structure	GRI 102-7	Pg 8-12
Geographic presence	GRI 102-4, GRI 102-6, GRI 102-7	Pg 8-9
Objectives and strategies	GRI 102-15	Pg 4/8
Main factors and trends that may affect future performance	GRI 102-15	Pg 4-6/8-12
Reporting framework used	GRI Standards	Pg 6
Materiality assessment	GRI 102-46, GRI 102-47	Pg 6-7
<b>Environmental matters</b>		
<b>Management approach</b>		
Description of the policies applied by the Group and their result	GRI 103-2	Pg 52-53
Main risk related to matters linked to the Group's operations	GRI 102-15	Pg 54-55
<b>Environmental management</b>		
Details of the current and foreseeable impacts of the undertaking's operations on the environment, and on people health and safety	GRI 102-15	Pg 52-55
Environmental assessment and certification procedure	GRI 103-2	Pg 53
Resources devoted to environmental risk prevention	Environmental expenditures and investments in accordance to accountable criteria	Pg 54-55
Implementation of the precautionary principle	GRI 102-11	Pg 53
<b>Pollution</b>		
Measures to prevent, reduce or repair CO2 emissions with a material impact on the environment (including noise and light pollution)	GRI 103-2	Pg 54-55
<b>Circular economy, sustainable use of resources and waste prevention</b>		
Measures related to prevention, recycling, reuse and other form of waste recovery and disposal	GRI 306-2	Pg 62-63
Actions to avoid food waste	Not relevant due to company activity type	NA
<b>Sustainable use of resources</b>		
Water consumption and supply in accordance with local restrictions	GRI 303-3 (2018)	Pg 61
Use of raw materials and measures adopted to enhance efficiency in their use	GRI 301-1	Pg 67
Direct or indirect consumption of energy	GRI 302-1, GRI 302-3	Pg 60-61
Measures taken to enhance energy efficiency	GRI 103-2	Pg 60-61
Use of renewable energies	GRI 302-1	Pg 60-61
<b>Climate change</b>		
Relevant aspects regarding greenhouse gas emissions caused by undertaking's activity, including the use of the products and services produced	GRI 305-1, GRI 305-2, GRI 305-3, GRI 305-4,	Pg 54-59
Measures adopted to adapt to the consequences of climate change	GRI 103-2	Pg 18/52,54-55
Targets to reduce greenhouse gas emissions	GRI 103-2	Pg 54-59
<b>Biodiversity</b>		
Measures taken to conserve or restore biodiversity and impacts caused by the company's activities	Not relevant due to company activity type	Pg 8
<b>Social and employee matters</b>		
<b>Management approach</b>		
Description of the policies applied by the Group and their result	GRI 103-2	Pg 27/44
Main risks related to matters linked to the Group's operations	GRI 102-15	Pg 28/47
<b>Employment</b>		
Total number and breakdown of employees by gender, age, country and professional classification	GRI 102-7	Pg 34-35
Total number and breakdown of types of employment contracts	GRI 102-8	Pg 35
Total number of dismissals	GRI 401-1	Pg 34
Policies to allow employees to disconnect from work	GRI 103-2	Pg 42-45
Employees with disabilities	GRI 405-1	Pg 34
<b>Working organization</b>		
Working hours organization	GRI 103-2	Pg 35
Measures designed to facilitate work-life balance	GRI 103-2, GRI 401-2	Pg 42-43
<b>Health and Safety</b>		
Occupational health and safety conditions	GRI 103-2	Pg 44-46
Occupational health and safety rates	GRI 403-9 (2018)	Pg 47-48
Occupational illness cases	GRI 403-10 (2018)	Pg 48
<b>Labor relations</b>		
Social dialogue organization	GRI 103-2	Pg 37
Percentage of employees covered by collective agreements broken down by country	GRI 102-41	Pg 37
Results of collective agreements, especially in the field of health and safety	GRI 403-4 (2018)	Pg 47

<b>Training</b>		
Policies implemented in the area of training	GRI 103-2, GRI 404-2	Pg 33/40
Training indicators	GRI 404-1	Pg 40
<b>Universal accessibility of people with disabilities</b>		
Universal accessibility of people with disabilities	GRI 103-2	Pg 36-37
<b>Equality</b>		
Measures adopted to promote equal treatment and opportunities of men and women	GRI 103-2	Pg 19-21/24/36-37
Equality plans (Chapter III of Ley Orgánica 3/2007, de 22 de marzo (the Gender Equality Act), measures adopted to foster employment protocols against sexual or gender harassment)	GRI 103-2	Pg 36-37
Integration or and universal accessibility of people with disabilities	GRI 103-2	Pg 36-37
Policy against all forms of discrimination and, where appropriate, the policy on diversity management	GRI 103-2, GRI 406-1	Pg 19/36
<b>Respect for human rights</b>		
<b>Management approach</b>		
Description of the policies applied by the Group and their result	GRI 103-2	Pg 19/24/67-68
Main risks related to matters linked to the Group's operations	GRI 102-15	Pg 24/68
<b>Specific information</b>		
Implementation of human rights due diligence procedures	GRI 103-2	Pg 19/24/67-68
Prevention of risks of human rights violations and, where appropriate, measures taken to mitigate, manage and repair potential abuses committed	GRI 103-2, GRI 102-17	Pg 19/24/67-68
Promotion and compliance with ILO's provisions on respect for freedom of association and the right to collective bargaining	GRI 103-2	Pg 24/37/68
Elimination of job and workplace discrimination	GRI 103-2	Pg 36-37
Elimination of forced or compulsory labor	GRI 103-2	Pg 24/68
Effective abolition of child labor	GRI 103-2	Pg 24/68-69
<b>Anti-corruption and bribery matters</b>		
<b>Management approach</b>		
Description of the policies applied by the Group and their result	GRI 103-2	Pg 20-21
Main risks related to matters linked to the Group's operations	GRI 102-15	Pg 20-21
<b>Specific information</b>		
Measures taken to prevent corruption and bribery	GRI 103-2, GRI 102-16, GRI 102-17	Pg 20-21
Measures taken to fight money laundering	GRI 103-2, GRI 102-16, GRI 102-17	Pg 20-21
Contributions to foundations and not-for-profit organizations	GRI 103-2	Pg 72-73
<b>Information on society</b>		
<b>Management approach</b>		
Description of the policies applied by the Group and their result	GRI 103-2	Pg 67
Main risks related to matters linked to the Group's operations	GRI 102-15	Pg 68
<b>Company's commitment to sustainable development</b>		
Impact of the Company's activities on employment and local development	GRI 103-2	Pg 34/70-73
Impact of the Company's activities on local populations and territories	GRI 103-2	Pg 34/70-73
Relations with actors in the local communities and forms of engagement with them	GRI 103-2, GRI 102-4	Pg 36-37
Partnership or sponsorship actions	GRI 102-13	Pg 70-73
<b>Subcontracting and suppliers</b>		
Inclusion in the procurement policy of social, gender equality and environmental matters	GRI 103-2	Pg 24/67-68
Consideration in relationships with suppliers and subcontractors of their social and environmental responsibility	GRI 103-2	Pg 24/67-68
Supervision and audit systems and their outcomes	GRI 103-2	Pg 68-69
<b>Consumers</b>		
Consumer health and safety measures	GRI 103-2	Pg 26-31
Claim systems	GRI 103-2, GRI 102-43	Pg 29
Complaints received and their outcome	(1), GRI 103-2	Pg 29

(1) Internal framework: see the methodology used in the corresponding pages

# 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 fulfil 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 fulfilment 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.
10. The compliance with all Customer Specific Requirements that affect our products.

COMMUNICATION  
ON PROGRESS



This is our **Communication on Progress** in implementing the Ten Principles of the **United Nations Global Compact** and supporting broader UN goals.

We welcome feedback on its contents.



### Grupo FICOSA

Gran Vía Carlos III, 98 08028 Barcelona (Spain)

Tel + 34 93 216 34 00

Fax + 34 93 490 10 63

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