



# PEOPLE & COACHES

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## *Irizar technology*

*Page 6*

## **CREATIO** R&D Centre

*Page 4*

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## **Euro VI** The new generation

*Page 8*

---

## **Datik** Intelligent information systems

*Page 29*

---

## **People** Alain Flausch Secretary General UITP

*Page 10*

# » **Table of Contents**

## 4| **Front cover - Technology**

Creatio - The Irizar Group's Research and Development Centre  
IEB: Irizar's electric bus, full speed ahead  
EURO VI: New generation of Irizar brand complete buses

## 10| **Interview with**

Alain Flausch, Secretary General UITP

## 14| **Markets**

Irizar, the leading brand in the United Kingdom  
Long distance coaches  
A small yet great Irizar i6

## 22| **Irizar Group**

Irizar Mexico: a project in continuous expansion  
Irizar Brasil: focused on exporting  
Morocco: platform for Europe

## 27| **Diversification**

Jema in the JT60SA research project in Japan  
Datik: The fatigue detector and Ecoassits: Driving efficiency and sustainable mobility  
Masats arrives in the USA  
Hispacold launches a range of electric acclimatizing systems

## 34| **Innovation**

The Irizar i3 arrives in Europe

## 36| **CSR**

Joining the Global Compact

## 38| **On the road**

Australia - The island continent

## 47| **Rear-view**

Serene maturity: 1990 - 2000 (I)

## Together we form a strong team



I would like to highlight the fundamental milestones of our evolution throughout this year, which has been very positive in many aspects, and I would like to thank, as always, our customers for the trust they place in us, all the professionals at the Irizar Group, our partners for always being ready and available when necessary.

### **Another year of strong growth for the entire irizar group**

For 2013, we expect aggregate turnover to grow by nearly 15%, which will equate to more than €550 million and a new record.

In addition to the geographic and industrial diversification of our Group, this year there has been growth in nearly all of the companies that comprise it, including IRIZAR Ormaiztegi.

### **Technology as a top priority for consolidating the brand and promoting future growth**

CREATIO. Increasingly stronger efforts are being made in the area of knowledge and technology.

“Creatio”, the Irizar Technology and Innovation Centre, has been established to promote the Group’s capabilities of applied

research and technological development. Its duty is to work on innovation with a long-term vision, focusing on improving the Group’s sustainable competitiveness in the future as well as its employment and wealth generating growth in the areas where we operate.

The strongest research efforts are focused on our bodywork components for conventional buses as well as on all the systems in our range of complete buses.

We are also working intensively on our 100% electric bus project, and the result, in the form of the first units circulating on roads, will become a reality in 2014.

### **Talent recruitment**

We have launched a talent recruitment programme in order to make reality the objectives of increasing technology in our products and improving our management capabilities.

### **Facility expansion and improved Irizar Ormaiztegi image.**

The 1200 m2 expansion of our facility completed this year will house a large customer showroom, our R&D centre and the corporate area.

The facility’s access has also been improved, and a new, modern building has been built for delivering coaches to customers.

This improvement follows similar efforts carried out in recent years at other companies within the group such as Jema, Irizar Brasil and Irizar Mexico.

### **Manufacturing products for Europe at our Morocco plant.**

Throughout this year, the first 70 coaches for European markets will be produced, along with the more than 1,000 units manufactured at Ormaiztegi. The path established this year should be consolidated in the upcoming years.

### **Firm commitment to the environment and to improving society.**

We have expanded our support to society in cultural, environmental and sustainable mobility aspects. The strongest example of this commitment is the creation of our electric city bus.

**José Manuel Orcasitas**  
**Irizar Group Chief Executive Officer**



## **CREATIO** **The Irizar Group's Research and Development Centre**

Our strategic commitment to technology and long-term innovation has resulted in Creatio, a Research and Development Centre that has been established to promote the Irizar Group's applied research capabilities and technological development for the brand's complete products as well as for main bodywork components.

The Creatio technological centre was founded this past October by Irizar and the following joint ventures: Jema, aimed at power electronics, and Datik, a technological firm that develops Intelligent Transport Solutions (ITS) aimed at managing transport. All of this is the result of the industrial diversification policy we launched in 2009 with the dual objective of strengthening our operations and minimising the concentration of risk by entering sectors with a high potential for development, such as the energy, electronics and communications industries.

Creatio combines the synergies and technological capabilities of these companies, and aside from working on more traditional

projects, such as systems integration, it will firmly support the group in its new developments in the area of Irizar complete and electric buses.

Existing research lines can be summarised as:

- Propulsion
- Electro-mobility
- Energy generation and storage, vehicle load systems
- Intelligent Transport Solutions (ITS)

### **It is currently involved in projects**

- **Etorgai IEB (Irizar Electric Bus) project**, launched in 2011 to develop an all-electric city bus. The objective is to have the necessary technology so we can compete in the city bus market with an all-electric Irizar bus that will basically be designed at Creatio.



Together with Jema, Datik and the IK4-Vicomtech, IK4-Ceit and Tecnalia technological centres, we plan to deliver an electric bus to the San Sebastian transportation operator DBus in July 2014. This will be a 100% electric bus with a range of 250 to 300 kilometres. To do so, we have developed a power train based on actual driving cycles, optimising the propulsion and energy storage needs, while significantly reducing the vehicle's weight by using aluminium as the primary material of the structure.

This first unit will include an active safety system that will provide safer driving by detecting obstacles and traffic signals, as well as a storage system capable of efficiently identifying and managing energy flows and peaks.

- **European ZeEUS project** (still under evaluation) Next year, two electric city buses will be delivered in Barcelona as part of the European ZeEUS (Zero Emission Urban Bus System) project within the Seventh Framework Programme and the European Green Cars initiative, which has the aim of demonstrating the economic, operational, environmental and social viability of electric buses as a real mobility alternative in urban settings.

It has 42 members, a €13.6 million budget and an execution period of three years. The project will test the validity of zero emission technologies in eight European cities (London, Glasgow, Stockholm, Münster, Barcelona, Rome, Plze and Bonn) with different meteorological and orographical settings. This is a highly relevant initiative for Irizar since, aside from being one of the most important programmes being undertaken in Europe, it will be an ideal showcase for introducing its technology, aside from being a medium through which to test the market and assess its own product.

- **Innpacto.** Project granted by the Centre for Technological Industrial Development (CDTI) this year.

This is a research line focused on electric buses in which the University Institute of Automobile Research (INSIA) assists us in performing bench tests on storage and propulsion systems. This includes classifying routes, on-board elements and sensors for measuring the energy needs of each component, and to track, design and dimension what we need in order to offer the product to an operator.

Through Creatio, we continue submitting bids for new tenders, and we have launched a Trainee Program to obtain highly qualified individuals who will join the centre in accordance with our needs.





## ***Irizar's electric bus, full speed ahead***

**The 100% electric bus project continues to advance and move closer towards becoming a reality. We are in the midst of the production phase for the first units as well as the tests of the various components developed for testing and making the necessary improvements, which will then be included in the bus to ensure our objectives related to efficiency, operability and results.**

The tests have been performed at the Group's various facilities as well as at INSIA (University Institute of Automobile Research) to verify the integration of the propulsion, storage and communication systems in actual driving cycles. The results obtained guarantee the optimal performance of the various components that comprise the bus.

Specifically, the following bench tests have been performed:

### **Of the storage system**

Irizar's electric bus is equipped with batteries to power the bus as well as super condensers to absorb and provide the necessary power during short periods, such as for stopping/starting at a scheduled stop or at traffic lights, etc.

### Of the central electronics

The central electronics act as the “brain” of the bus, they receive information from the various sub-systems and, depending on the input received, they send signals to another sub-system in order to execute the necessary actions.

Many of these signals are unknowingly generated by the driver while the vehicle is in use since they form part of the normal operation of the vehicle and the various systems. Other times, an action is executed by interacting with the instrument panel.

The tests of the electronic components are being performed using real modules and based on elements that will subsequently be installed on the bus. The most important points that have been tested include the start-up sequence, the battery charging process and the vehicle’s pre-climatisation during the battery charging process.

### Power

These tests are being carried out at INSIA (University Institute of Automobile Research).

This bench has two objectives: to test the optimal performance of the engine in the different uses of the bus, and to verify the integration of the elements related to the storage, cooling, traction and communications systems in order to ensure they respond in a positive manner when operating together in a closed environment.





## ***EURO VI: New generation of Irizar brand coaches***

**The new generation of Irizar brand coaches, adapted to the new Euro VI regulation, is now available**

The work to adapt Irizar's integral coaches to the new regulation that will enter into force in the near future (January 2014) has not only been focused on integrating the Euro VI engines. In fact, the efforts have been aimed at expanding and optimising fundamental concepts such as safety, consumption and weight. The result: a new generation of coaches.

If the success of the Euro V coaches is already a reality proven by the operators that currently use this type of vehicle in eight European countries, as well as by the numerous driving tests that have been performed, we continue to add improvements and new features to ensure we always offer the best products.

The large amount of valuable information gathered throughout these years of experience, the knowledge obtained, the data provided by our partners as well as from our own tests, in addition to the Euro VI project, are without a doubt the key factors for equipping the new generation of vehicles with optimal handling features, driving performance, low consumption, safety and reliability.

Although the number and weight of the engine as well as the cooling and exhaust systems are greater than in the Euro VI, we have minimised the impact on the vehicle's total weight by maintaining current levels while improving its distribution and moving the front axle. Fuel consumption is also kept at optimal levels, achieving one of the best ratios on the market. Comfort has been improved by reducing vibrations and noise levels, while improving the balance of the coach's road performance. The improvements also address the location and accessibility of certain parts.

As far as active safety, the addition of ACC, LDW and DFD are also worth mentioning. A new generation diagnostic tool that allows remote connections via SIM or WIFI has also been incorporated.

The new generation of Euro VI coaches includes the Irizar PB, Irizar i6 and Irizar i4 coach models. We have decided to continue collaborating with Paccar-Daf, ZF and Vdo Continental as the primary strategic partners of the project, and we are also continuing with our expansion in the markets we consider most strategic.



New accelerated durability tests, equivalent to travelling 1.5 million kilometres, are currently being carried out at the facilities of IDIADA Applus+, one of the most prestigious institutes on an international level, with optimal results.

### The durability tests

The elements used in the tests carried out at the IDIADA tracks include:

**Belgian cobblestones:** These create an elevated frequency of high vertical stresses that affect the vehicle's suspension systems and structure.

**Flat cobblestones and undulated surfaces:** Allows the driver to detect internal noises in the passenger area of the coach and helps assess the comfort level inside the vehicle.

**Stretch of curves and water tracks with potholes:** With river stones attached to a concrete base that produce sudden impacts that create specific vertical and horizontal stresses of various magnitudes, as well as a lateral acceleration on the vehicle.

**Gravel surface:** Makes it possible to view the intrusion of dust in the various compartments.

**Water wades:** Aside from cooling the temperature of the vehicle's shock absorbers, this is also useful for detecting possible water leaks inside the vehicle as well as corrosion of the components in the vehicle's undercarriage.

**Dynamic platform:** This is a flat surface for manoeuvres that produce lateral accelerations in order to simulate lateral stresses during the coach's life. It allows assessing its dynamic behaviour.

## PACCAR-DAF Euro 6. MX11, MX13 ENGINES

*NEW GENERATION OF 11 and 13 liter engines*



### COACH SEGMENT - IRIZAR i6 and Irizar PB integral

MX11 271, 271kw/369 hp (1.650 rpm), 1.600 Nm(1.000 - 1.650 rpm), i6(solo U.K.)  
 MX11 291, 291kw/396 hp (1.450-1.700 rpm), 1.900 Nm(1.000 - 1.450 rpm), i6  
 MX11 320, 320kw/435 hp (1.450-1.700 rpm), 2.100 Nm(1.000 - 1.450 rpm), i6, P.B.  
 MX13 340, 340kw/460 hp (1.425-1.750 rpm), 2.300 Nm(1.000 - 1.425 rpm), i6, P.B.  
 They are combined with ZF ASTRONIC 12s or ZF ECOLIFE(only MX11) gear box

### INTERCITY. IRIZAR i4 integral SEGMENT

MX11 240, 240kw/326 hp (1.650 rpm), 1.400 Nm(1.000 - 1.650 rpm), i4  
 MX11 271, 271kw/369 hp (1.650 rpm), 1.600 Nm(1.000 - 1.650 rpm), i4, i6(only U.K.)  
 MX11 291, 291kw/396 hp (1.450-1.700 rpm), 1.900 Nm(1.000 - 1.450 rpm), i4, i6  
 They are combined with ZF ASTRONIC 12s or ZF ECOLIFE gear box

### MX11 GENERAL OVERVIEW

- The MX11 engine is a completely new design.
- This engine will be a 6-cylinder in line engine with 10.8 litre capacity.
- It will have a new generation of high pressure common rail injection system with advanced electronic control.
- It will also have typically a DEB de-compression brake system and will carry all types of engine PTO's.

### MX13 ENGINE OVERVIEW

- MX13 general overview
- The MX13 engine is the replacement and evolution of the MX Euro V
- This engine will be a 6-cylinder in line engine with 12,9 litre capacity.

### MX11 and MX13 overview applied technology

- Compact Graphic Irion (CGI) cylinder block with wet liners
- One piece CGI cylinder head fit for cylinder pressures up to 220MPa and carrying two camshafts.
- Timing gears at the flywheel side of the engine.
- Common rail fuel injection with block integrated High Pressure unit pumps with pressures between 900 and 2500 bar.
- Electronic controlled single stage (VTG) Variable Geometry Turbine turbo charging system.
- SCR and DPF exhaust after treatment system together with cooled EGR technology.
- DEB (optional) de-compression brake with enhances braking power due to VGT turbo.
- Electronically controlled variable water pump.
- Electronically driven Crankcase Ventilation System, Exhaust Regeneration Valve and Brake Positioning Valve.
- This new engine platform is intended to be up-to-date up to the year 2030.

### AFTER SALES REQUIREMENTS

- The scope of this project is to develop competitive engines in the market.
- Following issues are key items to success:
  - State of the art Engine for 2013 and the years there after
  - Total Cost of Ownership
  - Maximum Up Time / Minimum Down Time
  - Market conform R&M contract
  - High Reliability
  - Low number of Faults per Engine
  - Optimal Hours to Repair
  - Customer Satisfaction



## **Mr. Alain Flausch** UITP Secretary General

**The International Association of Public Transport (UITP) is the international network for public transport authorities and operators, policy decision-makers, scientific institutes and the public transport supply and service industry. It is a platform for worldwide cooperation, business development and the sharing of know-how between its 3,400 members from 92 countries. UITP is the global advocate of public transport and sustainable mobility, and the promoter of innovations in the sector.**

*What are the most important issues that are currently being promoted by the UITP?*

The main message is that public transport should be used as a tool for green growth and creating interesting and qualified jobs. Basically if you look at city life like London, whenever public transport is down, the city stops living, to some extent. Politicians in the past praised themselves for creating jobs by promoting the car industry and that worked for them. I think we can learn from this experience. They (the politicians) are still keen to finding a way of growing again and creating jobs, as employment is a very important issue.

The 2nd message is that you shouldn't look at public transport as a dusty kind of industry. It has been quite restructured and reorganised in many places and particularly creating not only jobs for drivers, but also for technical people and engineers. I used to say some 25 years ago that the bus was four wheels and a piece of steel with a driver. it's no longer the same image. Today it has changed. You have a machine full of IT devices, which are counting, announcing where you are, regulating the traffic and all. Now it's really full of high-level technology, so to maintain all of this you really need highly qualified people.

The 3rd message is important. As you know urbanisation is on the move all over the planet especially in Europe where 70% of people live in cities. The issue is, can public transport contribute to building liveable, green and comfortable cities? The answer is yes! We believe public transport can indeed help change the tradition of 'the city with cars', but you'd have to be consistent and a bit brave. With the help of public transport you can change the world.

***How would you summarise the general guidelines that will mark your upcoming plan of action within the UITP?***

There are two issues here. We certainly have to help the industry and the operators. We have to help them in many domains. One issue is the capacity problem. Many cities are confronted with saturated public transport leaving no room for growth. It's a problem for the decision makers and also a problem to find proper funding.

We also have to help politicians to be smart in finding ways to help fund public transport. We are doing just that by providing our members with a sort of 'toolkit' and also getting the politicians to actually see the possible revenue rather than rely solely on public money.

The other issue is that we need to attract more people and new customers so we need to change and modernise the way we work. That is why technology is so important not only for the internal development within the industry, but also for the customer.

Apparently the young generation are happy using public transport, and this allows them to feel cool and be connected using their electronic gadgets such as iPads when on board of a bus or a coach, for example. It's about changing the life style. It's not easy! Using the car, for instance is supposed to make you feel free, but is generally becoming a nightmare for many people. It's an irritating experience being stuck in traffic. For that the future of the car has to be reinvented and public transport is the alternative.

***Do you think public transport can play a major role when taking care of the environment?***

Yes! Nice to have something which is more environmentally friendly, and public transport certainly is. This argument is hardly taken by politicians because they don't think being green

today is what people want from them. It's a collateral argument. I am convinced by it. It's part of a good change and we should continuously work towards it. The bus industry has a role to play and in that it has been trying to develop and upgrade the image of the bus.

The problem the bus industry faced, in the past was the idea of the bus being secondary when viewed against the masters of the rails. I think that's wrong! First of all, 80% of public transport users are transported by bus. There are many places where rail transport is not an option because of the way the city is built so we have to use the bus.

Secondly, the bus can be trendy and efficient. The whole idea of grading the bus is an excellent move, and the project of the European Bus System of the future (EBSF) is a great idea.

***How committed, do you think, Europe is regarding the bus industry?***

The industry is in good shape, as I understand it and according to some leading bus manufacturing companies. Competition is tough for the manufacturer, in addition to the pressure from the buyer. However, these companies are not on the brink of bankruptcy, but they are not making enough profit either. Europe should also consider electro-mobility like they're doing in Vienna and the bus industry should follow the trend. I think the industry is moving towards this principle. To be fair I think the industry is very active and dynamic despite the challenge of competition and the constantly changing technology.

***What is your opinion about the strategic guidelines the bus industry should consider when developing new products with regards to environmental issues?***

I don't have the full picture as to what is every company doing. I wouldn't want to be in the seat of the managing directors of these companies because indeed choosing one route or another can be very risky. I have noticed that some are very firm with their choice but others still hesitate as no one can predict which direction the market will go. You also have the small players who are in a worse situation because they don't produce their own engines, but they have to buy them. The future is bright but if you're not aware of the on going competitive fights, one day you'll be dead. Many cities are requesting more specific buses, and that's something we should tackle.



*Do you think there is still room for improvement?*

Of course, there is always room for improvement. Passenger information should be kept and almost all buses will have Wi-Fi sooner or later. There is still more work to be done on the design, not only in the interior but also the exterior. The bus is still some kind of a box and nothing attractive that goes with the design of the city, I'd say. I understand that there is a new project, which will follow EBSF and will be launched and financed by the commission. The industry is expected to join and to continue let's say, the modernisation of the bus.

*In terms of environmental improvements, what type or types of advances are considered in the industry of road transport?*

On the environmental issues, I think Hybrid and Electric is the future. There are still Diesel fans and a whole industry, which is quite conservative, loves Diesel for many reasons. It seems

to me, if we really want to be green, we have to go Hybrid and next Electric. Although there are some battery issues to do with capacity and induction, which need to be resolved. I am quite convinced that we'll get some excellent results. We're not far from a solution whereby the battery charge can be lowered for one route or two and also improve the loading speed. I'm sure we'll have an option soon.

*Lastly, how do you see the future of a 100% electric bus?*

I think that's the way to go in the city! There's no solution that suits all. If you have an inter-city type of bus, I'm not sure it's a good idea to continue investing a lot in electric now. In city environment, obviously the electric bus is the alternative, in terms of noise, in terms of CO2 emission and all sort of pollution. Buses today are much better, and we're very close from the goal.

*Thank you very much and good luck with your endeavours*



## ***Irizar, the leading brand in the United Kingdom***

**With 27.3% of the market share thanks to its conventional buses on a Scania chassis and its line of complete buses, Irizar has become the leading brand in the United Kingdom.**

With 27.3% of the market share thanks to its conventional on a Scania chassis and its line of integral coaches, Irizar has become the leading brand in the United Kingdom.

Through July 2013, 130 units have been registered, which doubles the number of coaches as well as the market share compared to the same period last year. There has undoubtedly been tremendous progress that is primarily the result of the trust placed in Irizar by the nation's operators, who prioritise safety, service, reliability, comfort and profitability when making their purchase decisions. The extensive list of existing customers now includes orders that have been received this year from top operators such as Translink, Redwings, City Circle, Harry Shaw, Terravision, Lucketts, Stewarts, West Coast, Allans, Clarkes of London and Guideline (the official transportation provider for the English national football team), among others.

This success is the result of Irizar's clear commitment to adapting to the demands and characteristics of the English market. The innovations and developments carried out exclusively for this market are worth mentioning. These include: the Irizar i6 with a handicapped platform for the front door, a lower floor 12.45 metre version with 53 seats plus a toilet, the Irizar i4 for school transport with a capacity for 70 children and 3+2 seats, a new 10.8 metre Irizar i6, and important weight improvements in order to offer a maximum number of seats with minimum diesel consumption.

It is worth highlighting that all Irizar coaches are already available with new Euro 6 engines. In the last 20 years, Irizar has consolidated its relationship with Scania Great Britain in the United Kingdom, and together they form a team that is capable



of offering customers a product that is attractive from all perspectives.

In addition, the introduction of Irizar's integral coach, offered through its Irizar UK subsidiary, has also helped increase its market share. Since the first prototypes were introduced in 2009, they are currently driving through Central, Northern and Eastern European countries, with excellent results in terms of customer satisfaction with the product as well as with the service. The United Kingdom is one of the countries where the market penetration has been strongest. The product catalogue offered in the United Kingdom includes the Irizar PB, Irizar i6, Irizar i4, Irizar i3 and Irizar Century coach models in a variety of length and height versions, on a Scania chassis as well as the integral version "powered by Paccar-Daf" (the Century and the i3 are not available in integral version).

*The product catalogue offered in the United Kingdom includes the Irizar PB, Irizar i6, Irizar i4, Irizar i3 and Irizar Century coach models in a variety of length and height versions*

## Translink maintains its loyalty to Irizar

Once again, Translink, the most important public operator in Northern Ireland, has placed its trust in Irizar-Scania to manufacture 23 Irizar i4H 12.2m on a Scania K320 IB chassis for its Goldline lines, and three Irizar i6 12.2m on a Scania K360 IB chassis for its Stranraer line.

Right after they were delivered, some of these last 23 i4 coaches were used to cover the transfers of major international leaders at the last G8 summit that took place in Northern Ireland around mid-June. They were also used to transfer athletes at the World Police and Fire Games that took place in Belfast at the beginning of August.

These 26 coaches, combined with the 87 that were delivered to this customer last year (78 i4 units and nine i6 units), result in a total of 113 coaches for Translink in the last year and a half. The collaboration between Translink and Irizar engineers and Scania GB during nearly two years has been essential for creating coaches that fully adapt to the needs of this operator, which is a reference in the market.



Honoring our past  
Treasuring our present  
Shaping the future

lighting the way

## 20 years of successful collaboration

Irizar and Scania GB, along with their customers, have celebrated the success they have shared during their 20-year relationship, which last year led both of them to become leaders of the UK market, with a 17% market share and 110 coaches registered in 2012, and a 20% market share and 112 units registered by July 2013.

The event to celebrate this anniversary took place at the new Irizar facility in Spain, where customers, Scania and Irizar representatives, and specialised media received a well-deserved tribute in appreciation for all these years of collaboration.

Guests were received to the sound of the txalaparta, a traditional Basque percussion instrument, which represented the announcement call for the event.

José Manuel Orcasitas, CEO of the Irizar Group, was responsible for welcoming the guests. He highlighted the excellent connection that exists between Irizar and Scania GB professionals, as well as the shared focus on the strategy of bringing together customers, products and services. He thanked the group of people from both organisations for the work and eagerness with which they took the first steps, while acknowledging the importance of the customers who placed their trust in that project, making it possible, and helping us "be where we are today". To conclude, he encouraged everyone to continue doing things the same way so the celebration event could be repeated again in a few years.

Gotzon Gomez, Director of Exports at Irizar, stated, "It is incredible to think that more than 1800 coaches have been manufactured during these 20 years, and 550 of them were delivered to customers who are here today. We are proud to be able to say





that we are market leaders. I would like to highlight the passion with which these challenges have been undertaken, allowing us to offer coaches that are increasingly safer, reliable, comfortable, luxurious, and with an attractive design. The unconditional support of customers has made it possible to develop these products and services.”

Martin West, General Manager of Retail Sales at Scania GB, presented an overview of the coach models that have travelled in the United Kingdom during these years. Since the first Century, delivered in 1993, to the Irizar i6, presented in 2011, including the Intercentury, the Irizar PB (which in 2012 left many customers open-mouthed thanks to its futuristic design) or the i4, with 20 variations, developed specifically for the market in the United Kingdom.

As far as the Irizar i6 Euro 6 displayed in the delivery area, where the event took place, Martin pointed out that *“this Euro 6 on display today is proof of the tremendous effort that has been made this year to be one step ahead of the regulation that will enter into force on January 1st.”*

Afterwards, a sculpture was presented that had been exclusively designed for this event by the Basque sculptor Juan Luis Biain as a symbol of the strength of the union between both companies.

A special mention was made of the customer Harry Shaw, the first customer to place its trust in Irizar-Scania 20 years ago and that remains true to the team today. The company received a traditional txapela as an honour of a champion, granting the tribute the txapeladun category.



The ceremony concluded with a family photo and an honourable auresku, a Basque dance for showing respect with the aim of honouring and welcoming the guest in a hospital manner. The event included a guided tour of San Sebastian in the afternoon as well as a black tie dinner with the incomparable setting of the La Concha Bay in the background.

## Irizar UK surpasses its objectives

The company has just announced the sale of its 50th unit, and the Irizar UK team, which exclusively works on commercialising Irizar's complete buses, is thoroughly pleased because the objectives proposed in 2011, the year it was launched, have been surpassed. The keys lie in the reliability of the coaches and the 24/7 service.

Irizar UK's After-Sales Centre offers comprehensive 24/7 service and has an extensive stock of spare parts as well as a single portal for their location and purchase. Mr. Terry Newman, the CEO of Clarkes, states, "Now that the Irizar i6 is available as a complete bus and with a DAF power train, we are pleased to offer the maximum number of seats, in accordance with passenger demands. Aside from being elegant, the Irizar i6 is also a very stable, silent, comfortable and reliable vehicle. "We always make buying decisions based on the profitability of the company. We meticulously monitor market trends and clients' needs before making our decision as well as cost effectiveness. It is not a process that is taken lightly and the feedback from clients has been extremely positive". "Prior to making the order, we visited the factory in Northern Spain and witnessed first-hand the developments they have made in providing their customers with

*quality products, which will ultimately shape the future for the UK's coach industry," said. "Irizar has developed into a modern, quality-driven manufacturer, particularly with regard to UK customers. The attitude of everyone we have met is 'What can we do for you?' which is so refreshing."*

As the Chief Director of Stewards has admitted, since he already has eight units, the Irizar i6 conveys emotions. "We are a transportation group that is focused on the future" he states. "Our brand is our top priority, and this means having aesthetically pleasing vehicles that are capable of 'attracting' passengers and making drivers feel even more special about working for us." "I can honestly say that the decision to buy the first unit was based only on appearance," he admits, after discovering it at a fair in 2011, but now that he has purchased directly from Irizar, he concludes, "We buy from people, and the individuals I met in the United Kingdom and in Spain were first rate." He adds, "What impressed me the most was that, although Irizar's production is done on a very large scale, the product continues to be highly configurable and the company is very flexible."





## ***Coaches for long routes***

**An increasing number of European operators are requesting coaches for long routes with which to offer passengers a luxury service.**

**Passengers who use this type of service request to travel in the utmost comfort and safety since they spend many hours inside the coach. This is why a number of lines in Spain and Europe are focusing on this type of coach.**

### **Samar Group in Spain**

This year, the Samar Group has renewed part of its fleet with Irizar, and it has also presented a new project to create a service focused on passengers in which everything is centred on offering the best travel experiences.

The new coaches stand out thanks to their new, modern, elegant and exclusive exterior design. Equipped with the most advanced active and passive safety systems, the coaches meet the strictest energy efficiency and environmental standards. The best journey with the lowest consumption.

Comfort is another aspect that the operator has focused on to in order to provide passengers with inviting and welcoming spaces so they feel at home. The company has included state-of-the-art seats built using luxurious and appealing materials, combined with more space between seats so the journey is relaxing and restful.

The coaches are equipped with the latest multimedia technologies (audio, video and on-board Internet), and they also include acclimatised compartments for pets.



The Samar Group is currently one of the leading groups in the area of passenger transport by road in Spain. With more than 85 years of experience, a fleet of more than 650 vehicles, the Samar Group has evolved to address the various mobility needs of its customers on a regional, national, international, intercity and private basis.

### **Ankara, the Aegean and the Black Sea**

Irizar has arrived in Turkey this year by signing a commercial agreement with Ulusoy Global Investment Holding and delivering ten high range coaches.



The agreement between Irizar and Ulusoy was signed in June at the Turkish company's headquarters in Istanbul, and it counted on the presence of the ten first coaches acquired by Ulusoy. The coaches will cover the lines being operated in Ankara, the Aegean, the Mediterranean and the Black Sea.

The ten coaches, the high range i6 model on a Volvo chassis, are the first 15 metre coaches that Ulusoy has added to its fleet. Six have a VIP configuration with a 2+1 layout of the 42 seats, and the other four have a 2+2 configuration with 38 seats.

According to the CEO, Mr. Ulusoy, *"This is the first time we have added 15 metre coaches to our fleet in Turkey. We want to offer comfortable coaches, like the ones used in Europe. These low consumption coaches will enable us to be more environmentally friendly. We have selected the prestigious Spanish brand Irizar because it is the company that best meets our needs, and we want the best for our passengers."*

Safety is a priority for Ulusoy and Varan, which is why the vehicles have been equipped with breathalysers. *"The coaches will not operate if the driver has not undergone the breathalyser test first."* *"Passenger travel will be more entertaining thanks to the 13" touch screens that have been installed on the seat backs. At Ulusoy and Varan, our objective is to offer the best service and attain the highest level of passenger satisfaction."*



## Czech Republic

Student Agency is another operator, the largest in the Czech Republic, that has once again acquired 30 new, high range Irizar PB coaches. In 2004, the company started to revolutionise coach services in the Czech Republic by offering high range coach services to students. Today, it has become a synonym for luxury service in domestic and international lines that cover 28 Czech cities and 14 European countries.

Its coaches have hostesses during the entire route who offer coffee services (cappuccino, chocolate or tea), headphones for the radio or films, newspapers and magazines.

*"In 2012, nearly five million passengers travelled in our high range coach lines. Each day, our coaches travel a total average of 43,000 km in the Czech Republic and 24,000 km in other European countries. This is why we must be at the cutting edge of our sector, providing customers with the safest and most modern coaches equipped with state-of-the-art entertainment systems. We have found all of this in the coaches manufactured by Irizar."*

## The Baltic and Northwest Russia

This year, the Sebe Group and Lux Express have once again acquired high range coaches for the services they offer in the

Baltic and in Northwest Russia. These include a total of highly equipped 15 m Irizar i6 and Irizar PB units on a Scania chassis, with different configurations and seat layouts. The on-board entertainment systems are one of the aspects that stand out. These units will cover the Tallinn-Parnu-Narva line services, the Warsaw-Vilnius-Berlin international line, as well as other international lines between Baltic nations and Northwest Russia. The Irizar i6 units delivered in July will inaugurate the Tartu-Tallinn line.

This customer covers a total of 73 international lines, transfers more than six million passengers each year, and its coaches travel more than 1.9 million kilometres each month. Lux Express Estonia AS was founded 19 years ago and it coexists in parallel with Eurolines. Due to the increased popularity of low cost airlines in Europe, the pan-European coach network, Eurolines, saw a drop in its sales, but Lux Express changed its strategy and began offering a high quality service for medium and long distance international lines. It currently holds a very strong position in the Tallinn-St. Petersburg and Tallinn-Riga lines.

Sebe has become the largest domestic passenger transportation service, and it continuously invests to improve its services and passenger comfort. Its philosophy is based on offering a service using coaches with new colours and appearances in order to attract more passengers interested in travelling comfortably.



## ***A small yet great Irizar i6***

**Irizar has developed the 10.8 m version of the Irizar i6 coach to fulfil a niche of the English market with specific requirements.**

This vehicle has been manufactured with a Scania K series engine and the first four units were delivered to the London customer City Circle in March. Three additional units were delivered to the Scottish customer Allans in June.

The result of this engineering project has led to the creation of a very versatile and proportioned vehicle that can carry up to 47 passengers, with a case compartment capacity of up to 7.5 m<sup>3</sup>, without having to give up all the benefits offered by the existing Irizar i6, including a cutting-edge design, comfort, safety, low consumption and maximum quality, as recognised by Neil Pegg, Director of City Circle: *"The manufacturing quality of this coach is excellent"*

This new alternative of the i6 is available in different versions (central or rear door, with or without a toilet, different number of seats as per the type of service, etc.) so it can adapt, as much as possible to the needs of different customers.

Although it has only been commercialised for a short period of time, there is already a great deal of interest on the market and it will be available with the new generation of Scania Euro 6 chassis.

The production and sale of this product is especially significant to Irizar for two reasons: because it has awakened the interest of a new customer in the London metropolitan area and the benefits this may bring, and because it marks the design of the first coach with special dimensions and equipment based on interesting options, such as flotex flooring, rear catering, seats, etc.

# *Irizar Mexico: A project in continuous expansion since the 2008 crisis*

IRIZAR MEXICO continues surpassing production records, and in 2013, it will reach the historic number of 900 units. Thanks to a strategy based on closer customer relationships, backed by the Irizar Group's main values, which are Reliability, Profitability, Comfort, Safety and Service, Irizar Mexico has been able to penetrate the Mexican market to the degree that most carriers in Mexico have Irizar units, which are considered to be the most profitable and advanced on the market. For the people at Irizar Mexico, service is a fundamental value to be offered to customers, along with a high degree of personalisation. These aspects are widely valued and recognised by leading Mexican carriers, making it possible to maintain most of the initial customers throughout these years, while expanding them with new ones to reach the 60% market share Irizar currently holds.

After the successful launch of the Irizar i6 model in 2012, Irizar has completed the range with the new generation of coaches it began with the Irizar PB in 2007 and followed with the Irizar i5 in 2005.

## **Recognised by the nation's leading operators**

After the trust placed by the Estrella Blanca and IAMSA groups in the past and based on the Mexican market's consolidation and

the work of many years, recognition has arrived in 2013 in the form of the first order from the ADO Group. The order consists of 200 i6 units with different configurations. The ADO Group is one of the most important business groups in the country. It is present in 15 of the Mexican Republic's states, it is the leader of the transportation sector in the central-south-southeast region of Mexico, it transfers an average of 120 million passengers each year, and it is one of the main partners of the airports in southeast Mexico. It recently acquired the Avanza Group in Spain.

In recent years, IRIZAR has performed a number of tests for ADO that have helped confirm the quality, profitability, comfort and reliability of the i6 and PB products as well as of the service offered, and all of this has resulted in the trust the company places in us.

Of the 200 units, 119 units are for OCC and will have a length of 13 metres and 44 seats, a rear WC, audio and video, while 81 units are for AU and will have a length of 13 metres and 49 seats.

With this order, IRIZAR reaffirms itself as the undisputed leader of the Mexican market.





## ***Focused on exporting: Irizar Brasil expands its domestic and export markets***

The 2012 launch of the Irizar i6 and its positioning strategy in the Premium segment, directly below the Irizar PB, for the Brazilian markets as well as in the leading markets the group serves from Brazil, has strongly boosted Irizar's market share in Brazil as well as in the country's natural export markets.

As a result, in 2013 Irizar Brasil will reach the highest production record for its 16-year history.

Its primary export markets this year will continue to be Chile and Australia.

These are very demanding markets in terms of safety regulations and quality, which drives us to improve on a daily basis in order to fulfil customer needs.

In the domestic market, extremely important customers such as the Comporte Group have placed their trust in Irizar and in

this new model by purchasing 88 Irizar i6 coaches that will be manufactured and delivered this year

### **The key to growth: the Irizar i6.**

Launched in October 2012 in Rio de Janeiro, it has proven to be the most reliable and top quality product available in the Brazilian market. This coach has been adapted to the demands of leading transportation operators and maintenance supervisors for line, tourism and private services, making it a symbol of safety, comfort, reliability and profitability.

These coaches include the structural safety elements that characterise the Irizar brand, from roll-over resistance to front and side impact resistance, and their comfort and reliability are the result of durability tests performed on





European test tracks and laboratories a year before the model's launch.

The collaboration with the Comporte Group has been very important for the Irizar Group since it has allowed us to show in Brazil the top operating profitability of the Irizar i6.

The decision to include the Irizar i6 in its fleet is proof of the additional step in service quality that the Comporte Group wants to offer passengers.

*In July of this year, Irizar Brasil attended the São Paulo Transpublic Fair to officially present the group's new brand image.*

## **New brand image at Irizar Brasil**

In July of this year, Irizar Brasil attended the São Paulo Transpublic Fair to officially present the group's new brand image.

The star of this change is the new logo, which better represents the present-day Irizar: a solid brand that continues growing and diversifying, researching to include more technology in its coaches and always thinking about the well-being of its customers and the future.



## ***Irizar Morocco: Platform for Europe***

The Irizar Group has started to make reality its objective of serving the European market with coaches from its Morocco plant.

This development will affect mid-range coaches as well as older models such as the Century, which continues to be successful in many countries.

The Group's strategy has shifted to manufacturing the high-end products at its Ormaiztegui plant and, depending on market growth, undertaking the rest of the range at the Skhirat plant.

The first units of the Irizar i3 Low Entry have already been produced for the Spanish, English and Danish markets. The entire offering of this model will be handled by the Moroccan plant.

A batch of 60 Century model coaches on a Scania chassis are also being produced for Poland. All of these units will be delivered this year.

The group has paid special attention to the quality standards offered by ensuring they are the same as those of Irizar Ormaiztegui. In all coach manufacturing processes, between 10 and 20 people from the group's headquarters travel on site in order to reach the objectives set by the first units.

The Irizar Group began its Morocco operations in 1996, and in 2008 it inaugurated the new Skhirat plant.

This plant, located near the motorway that connects Tangier and Marrakesh, 20 km from Rabat and 80 km from Casablanca, can manufacture up to 1000 each year with the same quality standards as the rest of the group.

The Century model is currently being manufactured for the local market, and the launch of the i6 model is being prepared with the aim of providing the group's loyal customers in this market with a higher-level product. The new i3 model that is currently being manufactured was presented at the FIAA in 2012.

To date, Irizar Morocco has built nearly 2000 Century model coaches and it has consolidated itself as the undisputed leader of the top quality high range segment with a market share of nearly 100%.

It is currently a reference in terms of reliability and profitability for our customers, and of safety and comfort for their users.

## ***Jema in the JT60SA research project in Japan***



### **Jema is awarded the procurement of the power supplies for the JT60SA research project in Japan**

This past March, the CEA research centre awarded Jema Energy the contract for the procurement of the JT-60SA superconducting magnet power supplies (SCMPS).

For Japan, the signed contract includes the design, production, transportation, installation and start-up of the toroidal field coil power supply (TF PS) and of four equilibrium field (EF) coil power supplies (EF2, EF3, EF4 and EF5 PS). Furthermore, in order to reduce technical risks on site, Jema will carry out a complete set of tests at full power in the Lasarte-Oria factory before the items are shipped to Japan.

The systems will be delivered to the customer in August 2017.

Jema has extensive experience in supplying custom systems for nuclear fusion laboratories, and it has participated in international projects such as JET and MAST. The company is currently also manufacturing for CEA a high precision power supply for the resolution of the NeuroSpin magnetic resonance imaging system.



#### **What is the JT-60SA?**

JT-60SA is a fusion experiment designed to support the operation of the ITER and to research the best way of optimising the operation of fusion power plants built after the ITER. It is an international joint research project involving Japan and Europe, and it will be built in Naka (Japan) using the infrastructure of the existing JT-60 upgrade experiment. SA stands for "super advanced" since the experiment contains superconducting coils and it will study advanced methods for plasma operations.

#### **What is fusion?**

Fusion is the energy source of the sun and stars. On the ground, fusion research has the aim of proving that this energy source can be used to produce electricity in a safe and environmentally friendly manner, with sufficient energy resources, to meet the needs of a growing world population.

# ***Ecuador: New photovoltaic projects***



This year, Jema will deliver its powerful photovoltaic systems in Ecuador. These two ambitious projects in the region of Manabí, of 30MW and 12MW, will have a solar radiation of 1,737 kWh per square meter and year.

For Jema, this project marks the launch of the new Worldwide Solutions service that supplies and starts-up photovoltaic inverters anywhere in the world. These are turnkey projects in which customers place the entire power portion in the hands of expert engineers at Jema. Depending on the technical specifications of the photovoltaic plant, Jema's engineering team designs a custom solution for each customer. In this case, and

for the two Ecuador projects, several maritime containers will be supplied with the 600 kW photovoltaic inverters, medium voltage systems, security and communications.

These systems offer high performance and efficient cutting-edge technology, and they will inject the power grid with an estimated energy production of 62,181 MWh each year.

Ecuador actively promotes the use of renewable energy as a source for generating clean and lasting energy for the nation's development.



# ***New Jema implementations in Brazil and Mexico***

After establishing the first Jema subsidiary in the United States in 2012, the company continues its commitment towards undertaking new markets and large energy projects on the other side of the Atlantic. The new additions this year are Brazil and Mexico, which are previously familiar destinations in the critical power systems area for which Jema has already delivered projects to off-shore oil rigs along Mexico's Pacific coast.

With the aim of strengthening the company's presence in Mexico while offering customers with a closer and more personalised service, Jema has launched its commercial operations in Queretaro, Mexico. Without a doubt, Irizar's infrastructure and solidity in this

country gives JEMA an unbeatable opportunity to achieve its short-term commercial objectives.

Brazil also offers great business opportunities for the company. The economic growth and the increased demand for energy reveal a promising future for the energy sector and critical power system suppliers. Large engineering firms are being awarded the construction of numerous power plants, which are often combined cycle, steam and renewable, to fulfil the nation's needs. JEMA's products are already prepared to offer their maximum performance and quality, complying with the strictest international technical regulations.



## ***EcoAssist, Driving efficiency and sustainable mobility***



**Datik presents its new EcoAssist product at the Busworld International Bus and Coach Fair. This solution has been designed to contribute towards driving that is safer, more efficient and environmentally responsible, while reducing fuel consumption**

Aside from providing the necessary features for improving driving styles, making drivers aware of transportation's impact on nature and increasing energy efficiency, EcoAssist especially makes it possible to reduce fuel consumption and increase safety while driving.

This on-board interactive solution works with a display that is installed on the bus and provides drivers with visual alerts in real time so they can correct their driving style and minimise

fuel consumption. It is also possible to transfer data from the vehicle to iPanel, DATIK's fleet manager, where the fleet manager may analyse the KPIs and prepare action plans for reducing consumption.

The driver assistance tool is completely ergonomic thanks to visual indications. It is aimed at regular transportation and it is primarily for urban or short distance settings.

The device has been fully developed by DATIK and it can be installed in new or retrofitted vehicles, regardless of the brand.

The new product has been tested and certified by DBus, the San Sebastian Tram Company, which has introduced this system in several bus lines with the aim of reducing fuel consumption in the short-term and continuing its commitment to sustainable mobility. The results have been very satisfactory.

DBus, the company that provides public transportation services in San Sebastian, is constantly introducing new technological solutions in vehicles as well as in depots with the aim of improving urban bus services in the city. It also strives to improve the fleet on a daily basis through the use of increasingly environmentally friendly vehicles.



## ***The fatigue detector, a device already in use***

Pesa, La Unión, Autocares Moreno and Bilman Bus are the first customers to include the device known as Magic Eye – Fatigue.

Magic Eye is an advanced technological support system for minimising the risks of distractions and collisions by detecting and forecasting situations through the use of artificial vision technologies, which contributes towards more reliable driving.

This system includes the detection of pedestrians, cyclists, motorcycles, parked and moving vehicles, obstacles and traffic signals. It handles the calculation of safety distances, involuntary lane changes, speed limit notifications, and more importantly, the detection and notification of driver fatigue and distraction.



The detection and notification of driver fatigue and distraction is the most differentiating element compared to other conventional products. It monitors blinking as well as eye and head movements in order to detect anomalous actions that lead to risky reactions on behalf of the driver. If this occurs, the driver notification alarms are activated.

The system includes a camera, a processing device and an alarm that can be audio or visual, or both at the same time. Additional alert mechanisms that are more selective are currently being worked on, such as a vibrating seat so passengers are not disturbed when the alert is activated. It is easily installed and can be personalised according to each customer's needs in terms of the finish and visual alerts so it is perfectly integrated in the coach dashboard or in the fleet management platform.

It also works in reduced lighting conditions, without disturbing the driver, through the use of infrared lighting. This avoids brightness issues and also allows the system to operate when drivers are wearing lenses or glasses.

It also offers an important competitive advantage over other conventional products that are focused on only notifying the driver. It includes services for recording images as well as registering alerts or events. Information is also sent to a central unit via a web platform, making it possible to extract conclusions and manage all the information that has been gathered in order to detect any infractions that have been made, plan safer routes, and optimise driving habits.

According to the IFV, fatigue and falling asleep for one second while driving are the causes behind 20% of fatal traffic accidents (source: data from the eSafety Forum). This primarily affects industrial vehicles, whose drivers spend many hours on the road each day.

Magic Eye is a comprehensive solution that has been designed to manage fleets, save fuel and minimise the risks of distractions and collisions, resulting in driving that is safer, more efficient and reliable.



# The iPanel platform arrives in Mexico



**The iPanel will be integrated in the management systems of the Flecha Amarilla customer, the leader of the carrier sector in Mexico.**

Datik has just signed a contract with the Flecha Amarilla customer in order to integrate the iPanel solution in its management systems and to offer a comprehensive tool for optimising fleet management.

The solution purchased has exclusive DCB (Datik Computing Board) and iPanel adaptations, which enables the customer to record all the data and events that occur on the journeys of its coaches and to send that information to the control centre (iPanel platform) immediately. This allows the fleet manager to have all the necessary information about the key business indicators in order to perform control and monitoring tasks, and to make the right decisions, both in real time as well as in the analysis phase for aspects related to costs, improving services and increasing productivity.

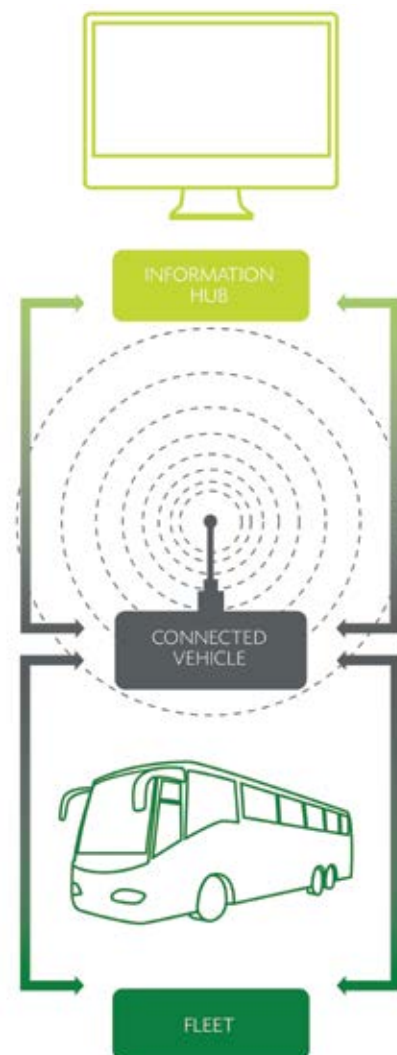
The iPanel platform also makes it possible to obtain safety, efficiency, comfort and operations management indicators, and it is a Cloud Computing solution that can be accessed from any computer with an Internet connection.

The system developed exclusively for this customer includes, in addition to the consumption meter (a system that DATIK will install on coaches for the optimisation and efficiency of fuel consumption, which is especially relevant for cost structures and especially considering the oil prices currently on the market), an innovative device for detecting fuel theft, which is a feature that is demanded by the Mexican market.

The objective of DATIK is to provide transport service operators with added value in the management of the information generated about fleets for better monitoring, control, service improvements and increased productivity.

## Flecha Amarilla

The Flecha Amarilla Group is one of the most important companies in Mexico, and it transports approximately seven million passengers each month in the sum of all the market segments it targets. It is continuously implementing technological innovations with the aim of achieving more efficient operating processes and guaranteeing improved safety and comfort for customers.







## ***Masats arrives in the USA***

With the name Masats Ilc and headquartered in Calhoun, Georgia, Masats has founded its subsidiary in the United States.

The American market represents a new challenge for Masats after the company found it necessary to establish itself in the USA in order to comply with the Buy America Act (BAA). This norm states that in the case of public transportation operators that request federal subsidies to purchase vehicles, 60% of those products must be manufactured and assembled in the United States.

Masats Ilc. plans to manufacture aluminium doors and some of the mechanisms in the Calhoun plant, while the pneumatic systems will continue to be provided by Masats S.A. In the first phase, an annual demand of 600 vehicles and 1200 doors is expected.

The American market is interesting for Masats because of its relevant potential, but it is very demanding and its specifications are significantly different from other regions such as Europe, where there is virtually a single door supplier.

## ***Hispacold launches a new range of electric climate systems***

The new range of Hispacold electric acclimatising systems has a new design and significant improvements to its efficiency, ecology, weight and volume parameters.

Thanks to the modular design, the new electric acclimatising systems can adjust their configuration to customer specifications for optimal equipment operation and improved comfort inside the vehicles, adapting to the warmest or the coldest climates. They are characterised by their easy installation and maintenance, and



their small size combined with the materials used make them light systems.

The new devices include extraction devices for preserving air quality.

They also include the eCo3 air purifier, which cleans, disinfects and purifies the air inside the vehicle.



## ***The Irizar i3 arrives in Europe***

**A year after the official launch of the Irizar i3 Low Entry coach in the Spanish market at the FIAA, the conventional version of the Irizar i3 is now available for commercialisation in European markets in a first phase.**

Spanish and Portuguese customers join the first European orders from Great Britain and Denmark. The coaches being manufactured for these countries are the 11 metre and 12 metre two-axle vehicles. The orders from Great Britain will be built on a Scania Euro VI chassis, while the Denmark orders will be built on a Volvo EuroV chassis. The acceptance so far has been excellent, and customers are pleasantly surprised with the product upon seeing it.

The first unit produced for Great Britain will be presented at the international Busworld fair that will take place in Kortrijk (Belgium). This version is built on a Scania Euro VI chassis and it is adapted to the needs of the operators in this market.

The Irizar i3 is a vehicle that complements the product range with a new low entry. It has been created to address the customer

needs that up until now we could not meet. We worked together with customers to search for a more functional product that would cover the Low Entry range, which is a growing market segment, with a full guarantee.

The main features are related to accessibility and the ability to adapt to the configurations requested by each customer. In the front, customers can choose between an entrance with a single door or a double-sheet door, depending on how the coach will be used. The reduced height between the ground and the floor (up to 340 mm) also helps improve accessibility.

The model has a more versatile interior, offering more configuration alternatives in terms of the number of seats and standing passengers. There are no steps between the front and central doors, which facilitates access tremendously.

***safety,  
reliability,  
profitability,  
service  
and the Irizar  
guarantee.***



Equipped with an integrated access ramp in the central door, our coach has an area for people with reduced mobility and baby carriages. Its interior design, made using anti-vandalism materials, facilitates cleaning and maintenance. The front is modular and removable, which facilitates replacing components that have a greater risk of damage from accidents.

We have optimised its weight and distribution, maintaining the safety and rigidity attributes intact. The structure has been designed as per the R66/01 roll-over resistance regulation, and some of the aspects that have received the most attention include improving performance in the case of a frontal crash and the rigidity of the ceiling.

The driver position is very ergonomic and comfortable, and has extensive visibility.

The vehicle includes an integrated acclimatising system and offers maximum comfort for passengers.

This coach can be certified in class I and class II.

In terms of the design, we have created a product that, despite the high degree of front accessibility, maintains all of our characteristics. As for the rest, our new Irizar i3 model adds functionality while maintaining all the attributes of the product family and what this represents in terms of safety, reliability, profitability, service and the Irizar guarantee.



## ***IRIZAR - A Brand that is Socially Responsible in: Human Rights, Labour Rights, the Environment and Anti-Corruption***

At Irizar, we are convinced that our brand is our main asset and our objective is to strengthen it by offering customers the best products and services in order to gain their trust and loyalty. We are committed to a better world, and in line with our mission, we promote the commitment of our entire team with sustainable competitiveness in social, environmental and economic aspects.

Which is why we work hard to be recognised as a socially responsible brand. Along these lines, we recently joined the United Nations Global Compact to reflect our commitment towards: Human Rights, Labour Rights, the Environment and Anti-Corruption.

The United Nations Global Compact is an international initiative that promotes implementing ten universally accepted principles in the areas of Human Rights, Labour Norms, the Environment and the Fight Against Corruption within the activities and business strategy of companies.

With more than 10,000 supporters in over 130 countries, it is the largest voluntary corporate social responsibility initiative

in the world. The Spanish Network of the Global Compact has 2,182 organisations, of which 1,519 are SMEs, 305 are large corporations and 358 are other entities.

Backed by the CEOs of the companies that comprise it, the Global Compact is a practical framework for developing, implementing and disclosing policies and practices related to corporate sustainability, offering its supporters a wide array of management tools and resources to help them implement sustainable business models.

The United Nations Global Compact has two related objectives:

1. To incorporate the Ten Principles in corporate activities throughout the world.
2. To channel actions that support the most extensive objectives of the United Nations, including the Millennium Development Goals (MDG).

## THE TEN PRINCIPLES

### Human rights



1. Businesses should support and respect the protection of internationally proclaimed human rights.
2. Businesses should make sure that they are not complicit in human rights abuses.

### Labour



3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.
4. Businesses should uphold the elimination of all forms of forced and compulsory labour.
5. Businesses should uphold the effective abolition of child labour.
6. Businesses should uphold the elimination of discrimination in respect of employment and occupation.

### Environment



7. Businesses should support a precautionary approach to environmental challenges.
8. Businesses should undertake initiatives to promote greater environmental responsibility.
9. Businesses should encourage the development and diffusion of environmentally friendly technologies.

### Anti-corruption



10. Businesses should work against corruption in all its forms, including extortion and bribery.



## ***Australia The island continent***

***With an ever present sun, Australia is a country of endless beaches, cosmopolitan cities and, above all, kilometres and kilometres of plains with no signs of civilisation. Beaches, tropical forests and deserts are within reach for personal enjoyment with just a bit of luck.***

One of the country's attractions is without a doubt the feeling of space. In the largest island in the world, most of the population has settled along the coast, while the inland areas are practically empty. Australia's vast territory is full of spectacular landscapes, ranging from barren deserts to tropical jungles and mountain ranges.

The Australian fauna, although indigenous, is well known, especially the famous koalas and kangaroos, and also wallabies, dingoes and emus (which is similar to an ostrich, but smaller). Just as famous is the Uluru formation (also known as Ayers Rock), the largest monolith in the world. Its reddish-orange colour is the result of the sun's reflection, and it is one of the country's icons.

As far as its cities, Sydney is very cosmopolitan while Melbourne is considered intellectual and bohemian. Brisbane is the perfect

starting point before visiting the tropical areas in the north. Adelaide, calm and traditional, is a sharp contrast with the casual and young atmosphere of Perth in the west coast. And Cairns, in the north, is a destination that cannot be skipped before visiting the impressive Great Barrier Reef, which is the largest coral reef on the planet.

The roads between urban and rural areas are first rate. Some motorways have several lanes, but most of the main roadways have two. Traffic signs are international and vehicles drive on the left.

One of the most important things to keep in mind when travelling by car is the endless distances. On a map, the distance between Sydney and Melbourne seems short, but it is actually 1,041 km. And from Sydney to Perth there are no less than 3,869 km.

Roads in remote areas tend to be in poor condition and can only be travelled in a 4x4. Some hardly have any vehicular traffic. If you plan to travel along these roads to reach certain isolated areas, it is essential to have enough petrol, water and supplies in the event of any unforeseen circumstances. It is also suggested to inform other people about the route as well as the departure and arrival itinerary (even if it is estimated).

The gastronomic aspect is essential. In fact, Australia offers delicacies for all types of budgets: wines and cheeses in Tasmania, coffee in Melbourne, oysters and seafood in Sydney, wines with bite in Southern Australia, river crayfish in Western Australia, or Aboriginal food in the northern region..

## TOP TEN DESTINATIONS IN AUSTRALIA:

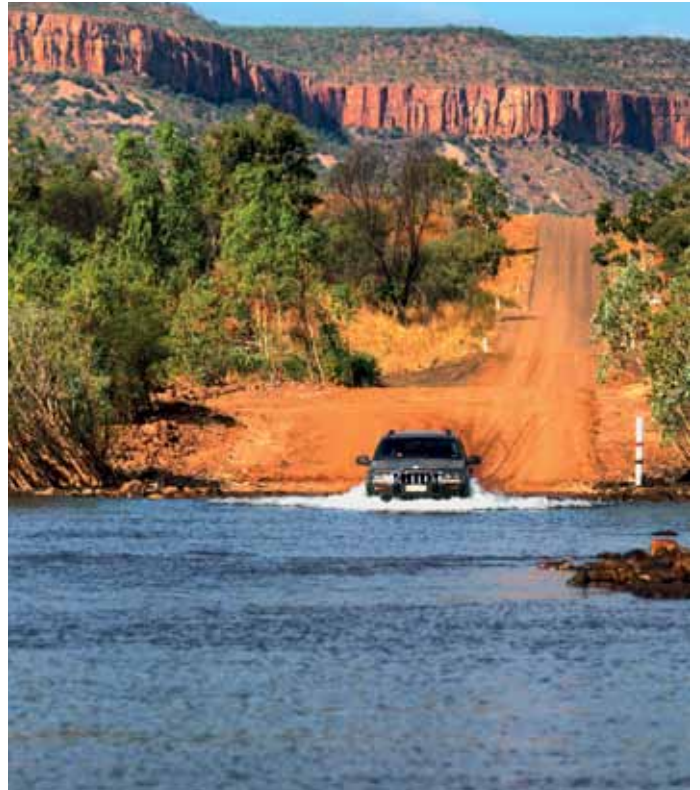
### 1 *Flinders Ranges*

Many tourists who visit Australia never go to the southern part of the island, which makes visiting the Flinders Ranges even more special. The mountain range is located in the Flinders Ranges National Park, dotted with towns and cities where little or nothing has changed throughout the years, and also where the true Australian character can be found. However, if you want a little more action, the beautiful city of Adelaide is only 200 km away.



### 2 *GibbRiver Road*

For a road trip full of adventure, there are few options as ideal as this 600 km road that crosses Kimberley. Not only is it famous for its views, but also for the rawness of the terrain, which can only be travelled in a 4x4 vehicle. There is a shorter itinerary at the end of the western part of the road.





### 3 *(GreatBarrierReef)*

Many of Australia's most famous tourist attractions are located along the eastern coast, including some of the most famous beaches in the world for surfing as well as Fraser Island, a natural paradise. However, the Great Barrier Reef is a mandatory destination. It is the largest coral reef system in the world and has a length of 2,400 km.

From the Queensland end, in Australian waters, it reaches Guinean coasts to comprise one of the best marine parks in the Pacific. The extraordinary variety of its species and habitats make it a paradise for divers. The most common way of reaching it is with a boat trip to the Whitsunday Islands, and it can be explored with diving goggles and fins, or on a sail boat, a panoramic flight, or a glass bottom boat. Another option is to stay on one of the many islands surrounded by coral reef.

### 4 *Great Ocean Road*

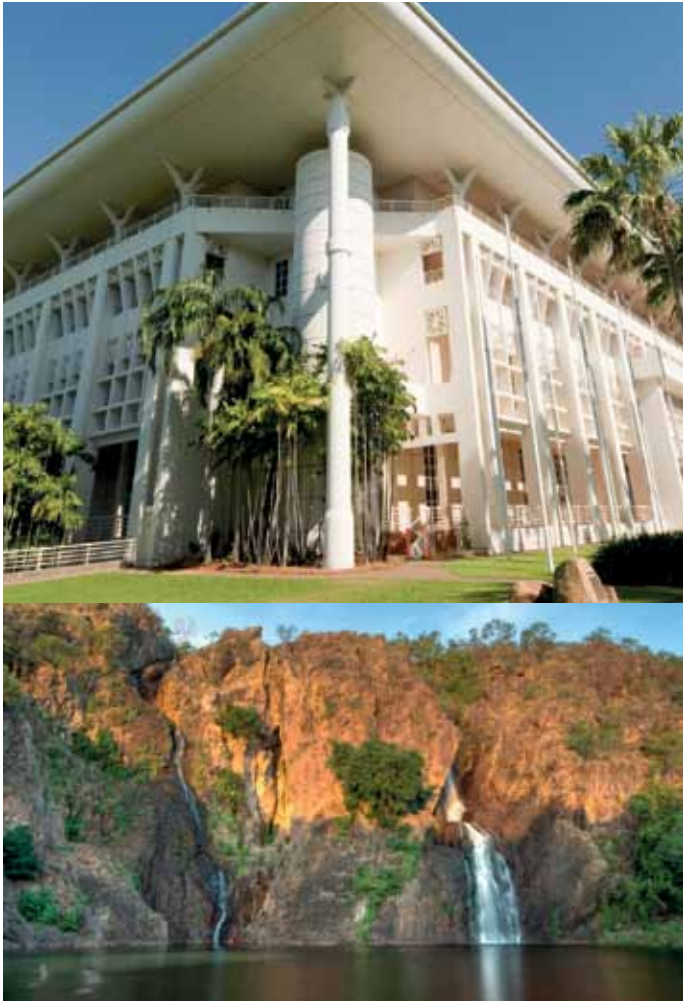
This 250 km stretch of road travels through one of the best coastal areas in the world for surfing, and it winds through the Twelve Apostles rock formations that emerged from the turbulent ocean.

It is easily accessed from Melbourne and can be completed in two days if you are in a rush, or take all the time in the world and enjoy the fantastic beaches that you will encounter along the way.

It is just as impressive to reach this destination along a winding road that crosses beaches, jungles and villages. Further on, the Great Ocean Road takes us to the maritime jewel of Port Fairy and the isolated Bridgewater Cape.



## 5 Darwin and Kakadu National Park



Destroyed by World War II bombings and Cyclone Tracy, Darwin knows how to reinvent itself. This remote city has emerged from the tropical climate to become a multicultural and hedonistic urban area.

It is the starting point for visiting Kakadu National Park: Aboriginal rupestrian art, rugged cliffs and idyllic pools fed by waterfalls with a spiritual meaning for Australian Aborigines. The park offers 22,000 km of untouched nature with a wide variety of animals (kangaroos and wallabies, of course, as well as crocodiles, frogs and birds) and plants, in addition to an incredible collection of ancient Aboriginal rock paintings.

## 6 Melbourne, the garden city

For many people, Melbourne is the perfect city. It stretches across the estuary of the Yarra River, and it is one of the Australian cities with the highest quality of life. Uniquely multicultural and with a tremendous number of beautiful parks per square meter, Melbourne is famous for its excellent restaurants and a night-life unlike anything else in all of Oceania. Its streets offer a perfect combination of Victorian architecture, striking urban artworks, and avant-garde buildings designed by famous architects. The city is also a paradise for people who enjoy good food, music (it has a number of major festivals) and nature. Upon spending one month in Melbourne, you will never want to leave.





## 7 Perth

The most important city on the western coast, it is not as renowned as Sydney or Melbourne. However, Perth is slowly gaining followers. If you have enough time to explore its green areas, beaches and urban culture, which is much more relaxed than that of its famous counterparts, you will find that it is a city with a lot to offer. It is also surrounded by countless vineyards and small cities full of charm.

*Melbourne is the perfect city. It stretches across the estuary of the Yarra River, and it is one of the Australian cities with the highest quality of life*





## 8 *Sydney and Byron Bay*

Sydney is the oldest city in Australia, and also the most visited. It is famous for its beaches, surfing, good restaurants and hedonistic culture, simply because it can. Good weather and the sea take care of the rest. Visitors and residents compete with each other to praise Sydney's excellence, which is easy to understand.

The Sydney Opera House is one of the city's main points of interest. Aside from an excellent musical programme, it is a world-renowned building-icon.

Byron Bay is a small and inviting beach town that is dynamic, laid-back and alternative. It may seem very touristy, but Byron Bay is perfect thanks to its long stretches of beach and its gorgeous and undeveloped city centre. It offers surf and an alternative lifestyle that is organic and new age. And all of this is very close to Sydney.



## 9 Tasmania

Tasmanian residents, with a good dose of humour, refer to the island of Australia as “the northern island”, as if the two pieces of land were nearly of the same size. In fact, the island of Tasmania is tiny when compared to its sister, but it is just as interesting. Lakes, waterfalls, rivers and mountains fall within Tasmania’s offering, along with its capital, Hobart, an attractive city with a lively atmosphere.

*The Sydney Opera House is one of the city’s main points of interest. Aside from an excellent musical programme, it is a world-renowned building-icon.*





## **10** *Uluru (also known as Ayer Rock) or the heart of the world*

Uluru is perhaps Australia's most well-known image, aside from kangaroos. It is one of the largest monoliths in the world and stands 348 m high, has a total circumference of 9 km, and stretches 2.5 km underground.

Uluru is a sacred place for Australian Aborigines and it was named a UNESCO World Heritage Site in 1987.

This giant rock appears in most photos with its characteristic reddish colour when the sun sets, and it is the nation's unofficial natural monument. Reaching it is an adventure since it is south of the Northern Territory, right in the middle of Australia. However, the trip is worthwhile, and from there it is also possible to visit Kata Tjuta, another impressive rock formation.

*Uluru is a sacred place for Australian Aborigines and it was named a UNESCO World Heritage Site in 1987.*



## **Serene maturity: 1990 - 2000 (I)**

**From the verge of bankruptcy to national and international acclaim in less than a decade.**

**The “secret”: hard work, faith responsibility and commitment to a job well done, coupled with a management model in which people - internal and external - are both the under-lying basis and the ultimate objective.**

Awards as prestigious as the European 2000 Award for Business Excellence, conferred by the EFQM and considered the “Nobel prize for industry”, 3,000 people all working “towards a common goal” and satisfied customers in 65 countries on four continents are the real indicators of Irizar’s current situation. The rest are mere words.

While the first objective set by the new management team under the coordination of Koldo Saratxaga dealt with the company’s internal organisation and aimed to eliminate tensions and motivate the workforce in order to create a common project, the second goal was market diversification and continuous product improvement.

The idea was to commercialise a single product – the luxury coach – on many different markets. As a result, the Century became the co-operative’s star product and the repository of all its hopes and expectations. There was no doubt about the model’s competitiveness, so all efforts focused on improving this unique and exclusive product. The goal was, once again, quality: both inside and outside the company. As Salvador Alapont, director of Masats, remembers: *“For years, Irizar’s product had had problems with quality and it was vital for them to improve this area. The arrival of Koldo was the trigger that set off this change, and since he assumed the post of manager, the product has improved*

*immensely. The company's customers are aware of this and are grateful for it."*

During this transitional period, Irizar's mission became that of transforming the company into a project that would generate both wealth and employment, a project based on people, capable of satisfying customers within an atmosphere in which both members of the co-operative and external collaborators would feel fulfilled, professionally and personally.

In order to achieve this, the transformation focused on three essential factors: consensus, responsibility and freedom; tools (multidisciplinary self-managed groups) and a leadership shared by all.

### **A firm commitment to people**

Open and efficient communications and active participation were, and continue to be, the pillars on which Irizar's internal organisation rests. This is what is today known as "increasing knowledge on the basis of shared experience", i.e. each individual is the person that he/she carries out, and is therefore the most able to correct mistakes and make contributions. As Saratxaga affirms, "the best source of innovation is a person who thinks, not a person who simply carries out a task".

Decisions were made by self-managed groups, created with the aim of teaching people to combine their efforts. Once these decisions were made, they were not put into practice without first having been approved by the people and teams they were expected to affect. Management was completely open. *"Thanks to this new philosophy we have learned how to work as a team, with everyone moving in the same direction. This is very important. The ultimate aim is customer satisfaction. We feel we are trusted and valued as individuals, but on the other hand, the responsibility for our work falls on our own shoulders. We are responsible for both our mistakes and our successes. Of course, it took us a little while to understand and apply this philosophy - it is a process we have assimilated gradually over a period of time"*, says José María Iurruta, a member of Irizar's After Sales Service team who has been with the company for over 41 years, during which time he has experienced many different management models.

For information to flow freely and constantly with the aim of creating an internally and externally transparent company, a decision was made to hold three assemblies per year. During these assemblies the progress of the project would be shared and everyone, without exception, would be given the opportunity to contribute their experience with the aim of improving development or contesting a decision *"Everyone has a right to voice their opinion and be listened to with respect and attention"*.

*Open and efficient communications and active participation were, and continue to be, the pillars on which Irizar's internal organisation rests*



The words spoken by José María Arizmendiarieta in response to Irizar's decision to become a co-operative were once again put into practice: *"If you do your job well, you will prosper; if not, you yourselves will suffer the consequences"*. Workers were given their freedom, but with that freedom came responsibility. From this moment on, it was up to each individual to guarantee the efficient completion of his/her tasks.

Within a society ruled by comparison and gratuitous judgments, Irizar offers an oasis where, against the popular tide, individuals are valued for themselves rather than the role they perform. It is the flagship of a new business culture which, in the opinion of Rafael Ormazabal, a retired member of Irizar, *"in order to become universal, in order to be exported to other companies, only needs the presence of true businessmen and leaders who are capable of stimulating their workforce"*.



## From control to responsibility

During the Assembly held in October 1994 to review and approve the new Strategic Thoughts, a future objective was established which aimed to double production through a 40% increase in the workforce. In order to achieve this objective, Reengineering was adopted as the new management model. This model, explains Juan Jesús Anduaga, president of the co-operative and head of coordinating human relations, *“consists of the radical review and designing of processes (in our case, the process in question covered the entire procedure from receipt of the order by Customer Relations right up to delivery of the finished coach), in order to implement spectacular improvements in key aspects such as quality, service, costs and innovation”*.

In order for any improvements to be effective and the objective established during the Assembly to be met, the collaboration of everyone at Irizar was required. *“I should, in fact, stress that the level of collaboration was excellent and the experience extremely enriching”* continues Juan Jesús Anduaga. *“Little by little, those of us at Irizar assimilated this change in philosophy and today, no one doubts that we made the right decision”*.

Currently, thanks to the process review and change in layout of the production plant, Irizar can manufacture an Irizar Century coach in just 14 days (as opposed to 38 days, almost triple, in 1992). *“Everyday one phase must be completed, and this requires an extremely high level of definition. In order for a coach to pass on to the next phase, the previous phase must have been properly completed. This methodology has also enabled the introduction of a flexible timetable for everyone. Each team must carry out one phase per day. When they have finished, they can go home. Each individual is responsible for ensuring the quality of his or her work”* says Juan Antonio Urteaga, head of coordinating customer relations on the domestic market. In addition to reducing production time, this method has also enabled a 300% increase in the number of people working at the Ormaiztegui plant,

*The strategic objective of the efforts invested in the review of production processes and internal organisation was none other than customer satisfaction*

multiplying the added value per job by a factor of 4 and tripling the number of sales per person.

The system by which people work as a part of a self-managed team encourages innovation. One of the tools on which the management of this collaboration relies is the form colloquially known as “the green sheet”. This form gives workers the opportunity to suggest changes and improvements. *“Since the green form was introduced, things have improved even more. We take charge of them ourselves, because we are the ones who best know our job and are best able to suggest how to improve quality, costs, service and efficiency, etc. We write down what we think is wrong and suggest an alternative. The forms are then sent to be analysed and, if the changes are viable, they are implemented. We contribute everything we can”*, explains Ekain Sukia; to which Joseba Aguirrezabal adds: *“By 1999, the objective was for each person to make two suggestions per year – more than 1,200 in total. We exceeded this number by far”*. Both Ekain and Joseba joined the co-operative in 1994 and have never experienced any other management model in Irizar. In their opinion, the system of taking everyone into consideration when introducing an innovation is simply a normal way of working.

The strategic objective of the efforts invested in the review of production processes and internal organisation was none other than customer satisfaction and added value. Irizar has demonstrated that achieving this aim does not require middle managers with a control-oriented job. *“There are no clocking in*





or out times and the word control is taboo". The organisational system is truly horizontal. Control has given way to responsible initiative: "When I tell my friends how we work at Irizar, they do not believe me. They do not understand how things can possibly get done without managers. In the majority of companies you do what your boss tells you, nothing else. Here, we ourselves are responsible for our work. If we do not do something right the first tie, it is up to us to rectify it. This responsibility is accompanied by a high degree of independence. We are all responsible for solving our own problems, but on the other hand, we have completely free access to all the other teams. Whether it be in Production, Supplies, Technological Services, etc., the doors are always open", says Joseba Aguirrezabal proudly.

*Here, we ourselves are responsible for our work. If we do not do something right the first tie, it is up to us to rectify it.*

The new Reengineering system adopted in Irizar spread also to the company's external collaborators (suppliers, etc.): "Many things had changed" says Itziar Cenoz, from the Export Market Customer Relations Department: "For us, it is normal for a supplier to take the product directly to the person who requested it, and for a worker to order material directly from the supplier as and when he/she needs it. We cut out the middleman. I think we are a little ahead of our time in this respect, because we have already solved questions that have not even been raised yet in most companies".



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