



# Irizar

## PEOPLE & COACHES

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125 years  
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# Irizar

125  
since 1889

125  
since 1889

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## 125 years as stronger and younger than ever

The year 2014 will soon be over; the year in which Irizar has celebrated its first 125 years. We have been enjoying our anniversary with pride in a wonderful time of strength and growth.

Irizar started out in 1889 making carriage and stagecoach wheels, going on to later build coach bodies in the early 20s of the last century. After its first 74 years as a family business, owned by the family from whom it gets its name, it went on to become a cooperative in 1963 and has remained so to this day.

In the decade from 1995 to 2005 a process of internalisation took place, producing its best results in recent years due to its strategy of closeness to customers.

In 2009, a strategic revolution was accomplished that resulted in the group diversifying industrially, growing solidly during the crisis, strengthening the brand with its own products and multiplying its technology by creating their own R & D centre.

Stronger and younger than ever, today Irizar is a solid Group, geographically and industrially diversified and continually growing; a Group that is firmly committed to the brand, to technology and to sustainability, for its own products of both coaches and electric buses, as well as other products in the sectors in which it operates.

A Group with five coach plants spread throughout the world that also includes five other companies, fruits of their industrial diversification, and a Technology Centre that studies the long-term aspects of applied research and the development of in-house technological products and systems.

The current Irizar Group is the result of the experience of those 125 years; of the good done by many people, starting with its founder, who between them all created the foundation of what we are today. I would like to take the opportunity now to remember them all and thank them wholeheartedly for their contribution to our project.

2014 continues as a very strong year in terms of industrial activity for coaches, especially in the Ormaiztegui plant. Besides producing 1100 coaches, of which 50% are destined for European customers, we have produced the first series of the Irizar i3 Low Entry model, both left and right drive, and we have produced the first coaches for the United States.

And as a major milestone that will mark a before and after for the Group, we delivered the first electric town buses for the cities of San Sebastian and Barcelona.

Another aspect to be highlighted is the R & D activity. We are working on the most ambitious projects ever undertaken in the Group so far with results that will be visible over the next three years.

As always, I want to stress the importance of the cooperation of our customers and partners whom we thank, especially, for their trust in us.

**José Manuel Orcasitas**  
Irizar Group CEO



**125**  
years

***125 years  
We are celebrating!!***

At a time of great strength and strong growth, last July Irizar celebrated the commemoration of its 125<sup>th</sup> anniversary at its Ormaiztegi headquarters attended by over 700 people, among whom were the Regional President of the Basque Government, Mr. Iñigo Urkullu, the Gipuzkoa Councillor, Mr. Martin Garitano, various other officials, representatives of the Irizar family, customers, suppliers, local partners and the Irizar people themselves.



The event included speeches from Gorka Herranz, Chairman of the Cooperative, José Manuel Orcasitas, Managing Director of the Irizar Group, Mr. Martín Garitano and Mr. Iñigo Urkullu. This was followed by a retrospective of those 125 years with an emotive charge of historical symbolism.

In the words of José Manuel Orcasitas, *“the current Irizar Group is the result of a journey through 125 years of good done by many people, starting with its founder, they were creating the foundation of what we are today. It’s a time to remember and thank all of them, as well as all those who today make up Irizar, for their involvement and contribution. Thank you so much”.*





Later, a commemorative sculpture of this important milestone was unveiled and, to the surprise of all present, there was a parade of coaches built by Irizar throughout these years, accompanied by the voice of a soprano.

There was no shortage to the deserved tributes for those people who have been involved throughout its history, especially for the Irizar family, who attended the event in memory of its founder and entrepreneur.

Taking advantage of the attendance of the Basque institutions, the official opening of the new Irizar facilities was also celebrated, which include Creatio, the Irizar R & D centre.

The event ended with a huge release of balloons and a cocktail lunch, enlivened with several opera pieces and traditional dances.





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# Celebration in Mexico



**Irizar Mexico was the first to join in the party celebrating the 125 year history of Irizar**



Coinciding with the Expo Foro 2014, organised by the National Chamber of Passenger and Tourism Road Transport (CANAPAT), our Mexican customers and partners had the opportunity to celebrate the 125<sup>th</sup> anniversary with a professional dinner dedicated to them. The event was enlivened by various performances and with the appropriate toasts and wishes for a bright future.

Jose Manuel Orcasitas, Managing Director of the Irizar Group, gave the welcome address. *"We are so proud to share with you an important milestone for us, 125 years of Irizar history, at a time of great success for Irizar in Mexico. Our brand is a strong market leader that continues to grow and strengthen, and look to the future. I have to thank you all, on behalf of everyone in Irizar, for your support and confidence. Without you this would not have been possible"*.







## ***Double celebration for Irizar Southern Africa***

Irizar Southern Africa celebrated two important milestones, its 10 year anniversary and the 125 years of the Irizar Group, which it shared with its own employees as well as with its customers, and partners.

The venue chosen for the occasion was the 22nd floor of a modern office building overlooking the financial capital of Africa, Sandton.

Many customers, partners and suppliers attended this event to participate in the history, development, growth and diversification of the Irizar Group. The event was simple. A number of videos were shown and musical performances were enjoyed as the hosts and guests shared and toasted the present and future of their joint relationship.

Irizar Southern Africa began its activities in 2004 in Lyttelton, Pretoria. After 10 years of growth and constant research, Irizar SA has distributed more than 860 coaches in South Africa and neighbouring countries. Today, it has a staff of over 30 people and its performance remains strong.

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*Today, it has a staff of over 30 people and its performance remains strong.*





## ***Irizar integral coaches***

**Three years after its launch in Europe, the Irizar brand has started to become a benchmark in integral coaches.**

The engine used by the brand in Europe for its entire range is the PACCAR-DAF and it is with this that Irizar continues its growth strategy in Europe, based on the expansion of its sales and after-sales network.

In this context, besides Irizar UK and Irizar Autocars, to meet the needs of the French and UK markets and agreements signed with Waniki in Poland, DV BUS and COACH in Benelux and RINDELL in Finland, the brand continues its expansion through Germany and Sweden where, soon, three other distribution agreements will be signed.

The UK is the country where integral coach sales have grown the fastest. In fact, it is there where one of the first Euro VI units has just been delivered to The Kings Ferry, National Express Group company, a 14m Irizar i6 raised VIP with satellite antenna and PSP4 kitchen.

Poland has also shown faith in the high-end Irizar coaches and proof of this is the recent acquisition of three 15m Irizar i6 raised VIPs by our client, Albatros.

In parallel to the commercial agreements, the after-sales network continues to expand in Europe. Recently, rapid assistance vans have been incorporated into the network, both in the UK and on the continent, to attend to customer demands in situ.

We continue to redouble efforts to optimise products in key areas such as safety, consumption, reliability, and weight reduction.

With the Euro VI we have succeeded in optimising the overall weight and improved its distribution, maintaining the levels of the Euro 5 after compensating for the increases in weight of the power train assembly. These improvements have been validated in durability tests similar to those normally undertaken by the brand.



## A leap across to the United States market

After ascertaining the optimal levels of product quality in Europe, Irizar has developed an integral coach, tailor-made for the American operators.

Integral coaches are the option demanded by the operators in this market. We have decided to address this market with the Irizar i6 model in a 45 feet (13.7m) length, height 3.73m and width 2.60m. It has a front door, rear WC and USA specification seats.

The powertrain consists of the CUMMINS EPA15 ISX 13l engine with 400 hp and ALLISON automatic 6 speed B500 box.

After manufacture of the first prototype (now completed), validation with the first customers and conducting the durability tests, the first ten units will be delivered during the first half of next year, 2015.

The first productions will be carried out at the Ormaiztegi plant due to their knowledge of the technology but, in the medium term, after training the people qualified at the Irizar plant in Mexico, production will also be carried out at that plant.

Irizar is considering a distribution agreement for this market to provide a sales and after sales service at the highest level.





## ***By and for the customer***

**In July Irizar opened its new, modern facilities at its headquarters in Ormaiztegui (Spain) established by the customer and for the customer.**

The event that also offered the perfect setting for celebrating the 125 year history of Irizar, was attended by the President of the Basque Government, Mr. Iñigo Urkullu, and the Gipuzkoa Councillor, Mr. Martin Garitano, as well as other officials, customers, partners and people from Irizar.

The façade of the new building has been completely redesigned and rebuilt and the new reception area aims to welcome visitors and transport them into the world of Irizar, a solid and growing trademark, where technology and the future are of special importance.







*A new modern building has also been built for handover of the coaches to the customers, which this year, on a temporary basis, has become a historical museum of the most iconic Irizar coaches beginning with the first wooden coach.*



The building has been given a second floor of 1200 m<sup>2</sup> which houses a modern and innovative showroom, the Creatio R & D centre for the Group and a modern corporate area.

The showroom, created exclusively for customers, is both a living space for the brand and an ideal place to design an exclusive and personalised coach for each customer. It includes all the seat, upholstery and finishing options in both physical and virtual versions thus becoming the perfect place to see, touch and decide in the optimum and most relaxed manner, the perfect combination for both inside and outside the bus.

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During this event, the sculpture designed exclusively for Irizar by Javier Muro was unveiled and will remain as a symbol of the 125<sup>th</sup> commemorative anniversary. With its simple forms, the sculpture includes three curved elements that give a sensation of movement and of rhythm. This movement is reinforced by the slight tilt of the sculpture that brings an intuition of direction, of intent, always forward, looking to the future. The work is clean and precise in its design, emphasizing the idea of modernity and technology. All this with a slight suggestion of the characteristic rear-view mirror of the brand and a strong semicircular shape which provides a conceptual reference not only to the road, but to an enveloping and steady rhythm.





## ***Irizar i6, unstoppable***

**The Irizar i6 is unstoppable in all the markets where the corporation operates.**

### **Premium reference in Brazil**

The success of the Irizar i6 since it was launched to replace the Century in 2012 has boosted sales in Brazil and in the countries where Irizar sells vehicles made in its São Paulo plant.

In the domestic market, this model brought Irizar close to some of the leading operators, who noticed the vehicle stands out from those supplied by rivals.

### **More than 2,000 Irizar coaches in Chile**

In February, Irizar delivered the No. 2,000 unit in Chile, where its Irizar i6 has been a huge success. Actually, at Irizar they think they will exceed the 50% market share they hold at present in the Chilean mining industry.

According to Irizar Brazil's records, 30% of coaches made in Brazil go to Chile. In 2014 the firm hit a record having delivered as many as 2,000 vehicles so far. In relation to this it is worth noting that the powerful Andean country takes half the production of the group's Brazilian plant destined for export, 70% of total production.





The business relationship with Chile, which started in 1997, was fostered by our local representative's valuable work and the continuous presence of staff from the plant. Our main customers in Chile are tour operators and fleets covering traditional routes.

In the last seven years, a significant part of our sales have been made to commuter service operators in the mining sector.

Being one of the main concerns in mining operations, safety is the factor that has allowed us to become leaders in the Latin American market. In fact, our company develops the most advanced safety projects and solutions worldwide.

Currently, Irizar is working on improved passenger safety in cooperation with local authorities. It is trying to get permission and start delivering the 15m-long Irizar i6.

The idea is to focus mainly on passenger safety to compete with the double decker coaches, which are common in commuter transport.

Besides safety, some climatic, environmental and geographical features contribute to the operation being even more challenging. There are mountains up to 6,000m high in desert climate, dust, snow, wind and cold, which increase the demand for comfort and air conditioning systems that require firm commitment and joint work with transport operators to find solutions to ensure the best possible service in extreme conditions.

Irizar is a well-established brand in Chile. Our representative Brasil Buses has a great sales service and a widely recognised after-sales service for buses in Chile.

This means the Irizar i6 is currently synonymous with safety, reliability and profitability, standing out in the premium passenger transport segment. This model has helped IRIZAR reinforce its brand strategy through investments aimed at improving quality and productivity in all manufacturing plants.

## Also in our plant in Morocco

The plant in Morocco has lately added the Irizar i6 to its range of products. The decision to add this model to the Moroccan plant production in 2014 was based on a competitive advantage strategy.

Some local customers are interested in offering services better than those offered by their competitors in domestic or European routes getting to as far as Central Europe and international tourist routes as well.

This way, Irizar Morocco holds nearly 100% share in the luxury transport market.

Meeting the needs of Moroccan transport operators, the vehicle has enjoyed huge success since it was launched onto the market. Design, passenger safety and comfort, plus reliability and profitability for transport operators, earned customer satisfaction in Moroccan high-standard segments.

CTM, leading road transport operator in Morocco, carrying over 2.5 million passengers a year, was the first company to receive both standard and VIP units.



*the Irizar i6 is currently synonymous with safety, reliability and profitability, standing out in the premium passenger transport segment.*



## **Irizar Asia Pacific**

### **Establishment of Irizar in Australia**

These markets have enormous importance for the Irizar group, so much so that, seven years after the first Century model coach landed in Australia (2008) through the hands of its former distributor, Irizar is officially established in Australia under the name Irizar Asia Pacific.

The decision has involved both the introduction with its own sales network as well as the adoption of a sales and after sales service from a new facility that the group has purchased in that country.

From these headquarters Irizar will address the needs of customers throughout the area, especially Australia and New Zealand.

Although the coach market in Australia is a highly demanding and restrictive market with regard to both the quality and service demanded by customers, and the regulations that apply, Irizar's extensive experience and presence in more than ninety countries has allowed it to develop the products and services that best suit this market.

The specifications of these markets have some peculiarities such as the width of the vehicles being 2.50 metres and being right-hand drive.

Australia is a country of huge dimensions where the terrain and the weather are very diverse (from vast deserts to mountainous areas passing through large cities) and the coaches must provide

*The specifications of these markets have some peculiarities such as the width of the vehicles being 2.50 metres and being right-hand drive.*



good service to meet all those demands. These high level requirements of the Australian market makes it ideal for Irizar coaches which provide their valued characteristics of safety, reliability, comfort, service and profitability.

The first model of coach which broke into the Australia and New Zealand market in 2008, with an excellent reception from the customer, was the emblematic Irizar Century. Today it is the Irizar i6 model that is the benchmark in this market and whose growth leads us to believe that it will exceed by far the market share of the previous model.



## *Alconza, the latest company to join the Irizar Group*



Alconza is the latest company to join the Irizar Group in 2013. Its core business focuses on the manufacture of rotating electrical machinery and power generators of up to 40MVA, 250 tons in weight and 5 m diameter casings, bespoke and high voltage.

It uses its own technology and manufactures customised products tailored to the needs of the customer. It is currently operating in the areas of off-shore marine, hydraulic and industrial power generation for special use.

If previous years were years of consolidation in the off-shore marine sector, 2013 was a record turnover year for Alconza, mainly due to the manufacturing of engines and generators for that sector.

The expectations in this sector and the others in which Alconza operates are excellent for this year and next. It is for this reason, in order to face new challenges in the future, that it has begun the construction of a new building with more height than the current one and with the ability to manufacture larger diameter motors.

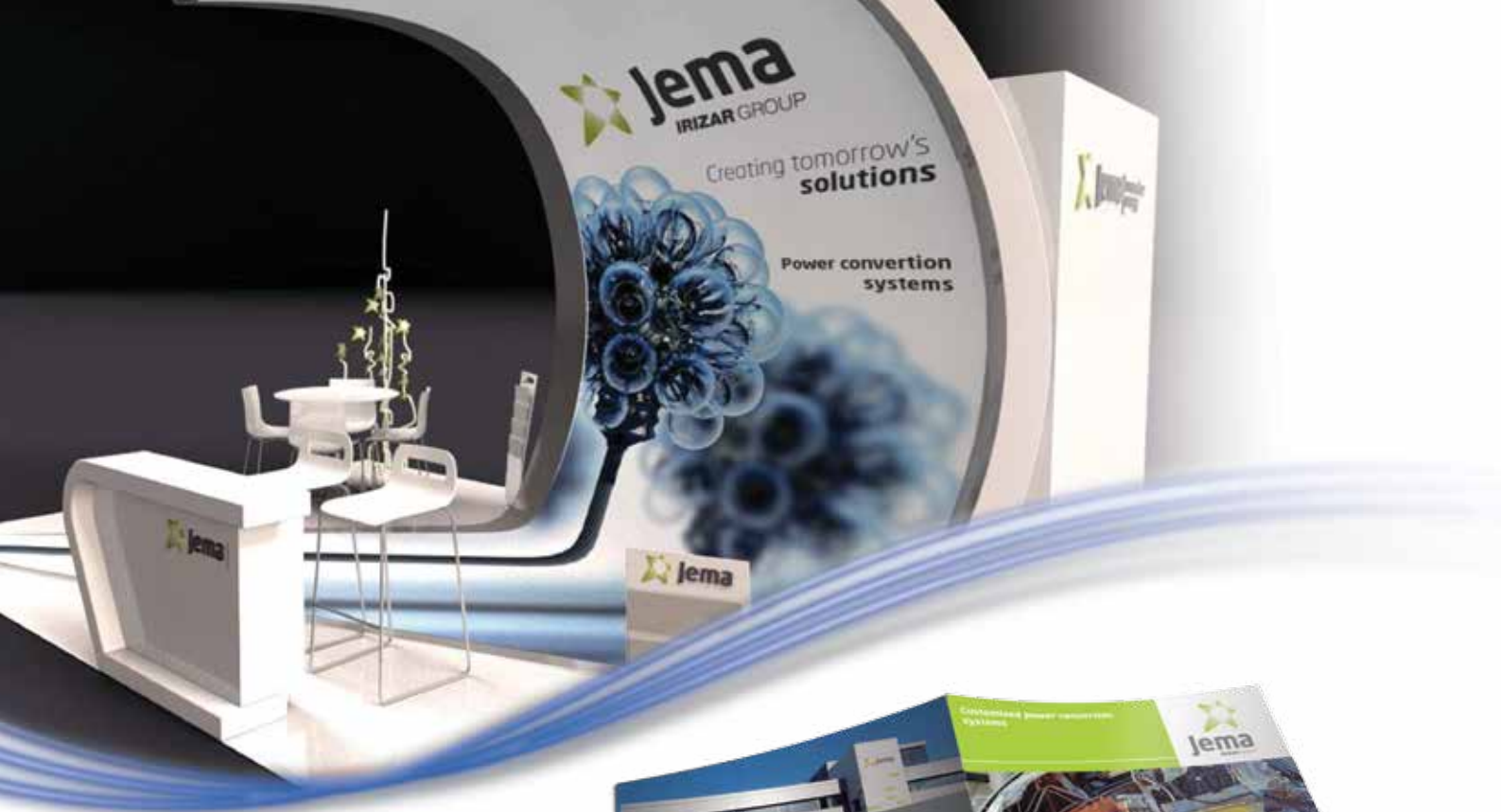
### **Marine & offshore sector:**

Whilst collaborating in the area of R & D prompted by its customer, Wärtsilä, for the development of a Medium Voltage inverter and marine application equipment, Alconza has provided tandem motors for the automatic and electronic testing centre newly opened and located in Stord (Norway) and has chosen to work closely with its client and with research centres and universities to explore and test components and elements of mechanical power transmission for marine propulsion seeking to achieve higher durability, quality and sustainability.

### **Hydraulic sector:**

The island of El Hierro brings together renewable energies and thanks to its new hydro-wind centre it is now the first island to provide 100% of its electricity from natural resources (water and air). The four generators for the plant were supplied by Central Alconza.

Four other major generators have been supplied by Alconza to the Renace II (Guatemala) Hydroelectric power plant. Given the nature and large size of the machine, Alconza broadens the range of solutions for larger machines.



## Jema in SOFT 2014 San Sebastián



In September 2014, the leading experts and researchers on nuclear fusion are meeting in San Sebastián for the international conference, **Symposium On Fusion Energy 2014**. The conference has taken place in the Kursaal and Jema has collaborated as the official sponsor of the event.

The Symposium on Fusion Technology is the most important event for exchanging information regarding design, construction and operation of fusion experiments. New technological developments will be presented for fusion machinery in current and future power plants. SOFT includes oral presentations and posters, as well as industrial and R&D exhibitions.

Approximately 800 participants have assisted from around the world, principal agents from the research laboratories and the industry of the sector. Thus, scientists, engineers, researchers, manufacturers and students have had the chance to exchange perspectives, visions and experiences and establish fruitful contacts.

Jema has been present in the industrial exhibition at stand 19-22 under the slogan **Creating tomorrow's solutions**, where it has displayed its latest developments in energy electronics for research laboratories.

# Jema Power Supply for the ISIS project

The British fusion laboratory, the Rutherford Appleton Laboratory, has assigned Jema the development of a new 400Kw 20KV/20A Power Supply. It is a new system that will be integrated within the international project ISIS.

*"Now we are starting to develop the first prototype which will be manufactured in the Jema facilities in Lasarte-Oria, Guipuzkoa, and will later be installed and tested in the Diddot laboratory, in the UK, in early 2015"* states Bas Eikelboom, commercial engineer of the Department of Advanced Power Supply Systems in Jema.

This first prototype is characterised by its complex design and bespoke manufacture for the British facilities. Later, the laboratory plans to include ten additional units of this Power Supply. This project offers Jema the chance to take part in the prestigious ISIS project.

## What is the ISIS project?



ISIS, in the Rutherford Appleton Laboratory (RAL), is the most productive pulsed neutron source in the world. ISIS produces beams of neutrons and muons which allow scientists to study the materials at atomic level using a series of instruments, often described as "super microscopes". The international scientific community carries out investigations regarding physics, chemistry, material science, geology, engineering and biology.

# ***The first phase of the implementation of the BEMCO project in Saudi Arabia ends successfully***



The technicians from Jema have successfully completed the first phase of the implementation of the systems for the BEMCO project. This project began in November 2012, when Saudi engineering awarded Jema the contract for the supply of electronic power equipment for the country's electricity company.

Jema has begun to install the UPS systems, Rectifiers and NiCd batteries in the PP10 plant. It is the biggest combined cycle plant in the world. This energy plant is located on the outskirts of the city of Riyadh.

The project of the power plant tackles the energy deficits that the country suffers during the summer months. Once it has been completed, it will increase the energy generation capacity of the central operational area of the Saudi Electricity Company (SEC) by 20%, thereby contributing to the improvement of the reliability of the service and electrical energy supply to its clients.

The PP10 entails the recent expansion of the SEC facilities in Riyadh, which currently has a capacity of 10,000 megawatts.





## ***New orders to Datik***

**Datik to supply more than 250 MagicEye-Driver fatigue warning systems in Vizcaya and Ireland.**

After the MagicEye-Driver fatigue warning system was launched by Datik in 2103, the company installed more than 250 units in only six months. Most of these units were supplied to Bizkaibus buses, which reflects the public transport operator's strong bid on safety.

The industrialisation phase has been successful after the three years spent by Datik to develop the technological and electronic solution for detecting drivers' micro-sleeps at the wheel.

In 2011, Datik started research on a solution to prevent road accidents caused by drivers experiencing micro-sleeps. The company had developed a range of MagicEye safety products previously. In 2013, two solutions were launched that marked a significant leap forward in terms of road safety: MagicEye-Involuntary lane change warning and MagicEye-Safe distance warning.

The system has been given praise worldwide, and so the company expects to get a considerable number of orders soon. The new coaches being made for Ireland-based bus and coach operator Bus Éireann will feature the new MagicEye system.



## ***Irizar strengthens leading position in UK market***

Irizar is strengthening its leading position in the UK, with a market share of over 20% for the third year in a row.

With a range of DAF-powered integral coaches, alongside Scania chassis options Irizar has perfectly adapted to the British market, developing solutions to meet local needs and offering excellent after-sales service.





## ***Bus Eireann: “Like the car. Only better”***

**With this provocative marketing campaign, the Irish company, Bus Eireann, launches its Expressway service which, by early 2015 will be enhanced by 20 new Irizar i6 14.37 with Scania Euro 6 undercarriages.**

Once again this Irish public operator has chosen Irizar to renew its fleet with these new coaches and they have opted for them to be equipped with every comfort for both passengers and drivers, as well as the latest security related technology.

These coaches are provided with seats that are specifically designed for Bus Eireann, with extra padding, leather of the highest quality, cutting edge design and maximum comfort. Passengers will also enjoy on-board wi-fi, bathroom and usb sockets or chargers in all seats. The coach, with imitation wood flooring, features disabled access systems and on-line information concerning timetables and punctuality.

Also, these coaches will be kitted-out with a surveillance system with 12 cameras, breathalyser, tunnel height alarm and electronic diesel fill up system. All these features, together with the new and attractive exterior paint design for this Expressway service, will not leave anyone indifferent.

Complementing these 20 coaches for its Expressway Service, Bus Eireann has also ordered 20 Irizar Century 12.4m with Scania Euro 6 4x2 320 KEB undercarriages for its Commuter service line which, when added to the Century coaches acquired in recent years, now exceeds 200 units.





## ***Low Entry Irizar i3 very well received***

**The Irizar i3 has been getting an excellent reception from the European markets. The strongest orders have been for operators in Spain but it is also having a great reception in other markets such as the UK.**

**The Irizar i3 is positioned in the Low Entry segment to cover a niche where Irizar did not previously have a product suited to the needs of customers.**

**The main improvements it offers customers are its accessibility and its ability to adapt to the configuration they require.**

### **The Irizar i3 for Bizkaibus**

The operator, Bizkaibus, has trusted Irizar to meet all its business needs for this year and the next two years with the Irizar i4 and Irizar i3 LE models.

The Regional Council of Biscay, through its Bizkaibus service, has awarded the carrying of Biscay passengers for the coming years to various transport operators. The selected companies, Pesa, Alsa and CAV-Encartaciones have trusted in Irizar for the bodywork of the 45 vehicles that make up this order.

The Irizar i3 LE model units are 12.75 m and 15 m in length and the i4 model units are 10.80 m, 13 m and 15 metres long. The bodies of these units have been assembled on to Scania, Volvo and Mercedes undercarriages.

Taking into account the requirements, the vehicles have been equipped with the latest safety devices from the Irizar Group, such as detection of driver fatigue (DFW), frontal collision radar and lane departure control (LDW). All of them have been designed and supplied by the Datik company.

Datik has also installed an Ecoassist system that helps fuel economy and reduces CO<sup>2</sup> emissions.

Hispacold has supplied the indoor air purification systems for the eCo3 coaches.

The buses are also equipped with tire pressure monitoring or fire systems.

They offer all necessary measures to facilitate the access and accommodation of people with reduced mobility or disabilities, such as automatic ramps, audible and visual notices of bus stops, reserved spaces for people with reduced mobility, guides to help the access of blind people to these spaces, gaps for people with wheelchairs, Braille buttons, both indoor and outdoor cameras, etc.

Furthermore, it has standardised the interior image of the vehicles and they are all now equipped with Irizar i4 seats.

## **Irizar i3 in the United Kingdom**

Menzies have put their trust in the Irizar i3 LE model to transfer their clients from the VIP parking to the terminals at Heathrow Airport. They have purchased six 10.95 metre coaches with Scania K230UB 4x2 undercarriages.

Very well received in the UK, the Irizar i3 Low Entry model completes the Irizar coach range that has been so successful in this country, reaffirming the consolidation as market leaders in the coach industry in the last 3 years.

With its very attractive design, in line with the rest of the Irizar family, and with all the available advances in technology and safety as well as a wide range of options to suit the needs of different operators at a competitive price, the i3 model is available in various lengths ranging from 11 to 15 metres and with multiple possibilities for door arrangements, disabled access, air conditioning, etc.

The Irizar i3 LE will be at the Birmingham Show from 4 to 6 November, Scania GB will show a 12 metre Irizar i3 with Scania Euro 6 K230UB 4x2 undercarriage.

This product opens new doors for Irizar in the United Kingdom and Ireland.

## **ARRIVA DeBlas: Community of Madrid**

ARRIVA DeBlas has once again placed their trust in Irizar, renewing their fleet with 16 units of Irizar i3 15 metre models on Volvo undercarriages which will be delivered at the end of the year.

In 2013 ARRIVA DeBlas incorporated 20 Irizar i4 models of 15 metre to its fleet. At that time, the decision to purchase the Irizar i4 model was motivated by the need to make a qualitative and aesthetic leap in vehicles of certain medium-haul lines covered by the customer and thereby increase the number of users of these lines.

Again this model change is caused by the constant search for improvements in service, the reason why the chosen vehicles were the Low Entry ones which substantially improve the accessibility for passengers in lines with a strong urban character while maintaining standards of quality and comfort, both for Irizar and for ARRIVA DeBlas.

ARRIVA DeBlas, provides service on the N-V corridor, part of the Madrid Transport Consortium, and offers 25 different intercity routes with 190 buses from several terminuses, among which are included, Alcorcón, San José de Valderas, Móstoles, Fuenlabrada, Navalcarnero, Madrid-Norte, and Villaviciosa de Odón.





***The great challenge has been achieved: The 100% electric urban bus from the Irizar Group is now a reality***

Irizar fulfils the great challenge of putting into circulation the three units of the 100% electric bus, two in the city of Barcelona and the first in the city of San Sebastian. In doing so it becomes the first European bus and coach manufacturer to put into circulation the two zero emission urban electric buses in the city of Barcelona within the European ZeEUS project.



In addition to Irizar, the other companies of the Group have joined their efforts to promote the Irizar i2e. Hispacold, manufacturer of acclimatisation equipment; Jema, specialised in electronics; Datik, technological company developing intelligent transport solutions; Masats, manufacturer of accessibility systems, and CREATIO, R&D centre of the Group.

## **Innovation in sustainability**

The i2e is the fruit of the strategic commitment for innovation in sustainable mobility of the group and has arrived with the intention of being positioned as leader in urban mobility with this firm commitment of contributing to sustainability and environmental improvement in cities.

The Irizar i2e is already available for the clients and it is now a reference for sustainability and eco efficiency aimed at urban mobility, responding to current and future city transport needs.

Since 60% of the population in the European Union live in cities, the elimination of contamination is one of the great challenges facing urban centres. Circulation of fuel vehicles is the cause of 40% of the emissions of CO<sub>2</sub> and of 70% of other contaminants. Each electric bus will reduce the annual emissions of CO<sub>2</sub> by 88 tons and it saves 33,000 litres of fuel.

There are increasing levels of acoustic contamination, and today, more than ever, we need efficient means of transportation that are ecological, silent, environmentally friendly, and help improve the quality of life of people in cities.

The Group understands that the no-contamination decision of cities cannot be reversed, which is why four years ago it decided to enter the world of urban buses directly with zero-emission electric buses. For this reason, and because it does not contribute to acoustic contamination, we are certain that the Irizar i2e is the ideal transportation alternative for cities and their residents.

Another feature is the recyclability of its components. It has been developed according to the principles of ecodesign, applying environmental criteria to the design of the bus. Its batteries are also 99% recyclable.

In July Irizar delivered the first unit to the city of San Sebastian taking a new step in the development of its trade strategy, presenting its clients with the new 100% electric urban bus.

The first bus in Barcelona started operating during August with the aim of analysing the influence of the air conditioning system on the vehicle's autonomy during a month with high temperatures.

The second bus was submitted in October and the presentation of both of them took place on 14<sup>th</sup> October in Barcelona.

## **Proprietor technology - European Know How**

The Irizar i2e is the first urban bus fully developed with our own technology. It is the result of the continuous work of the Group companies together with the technological centres of the Basque Technology Network.

## **Long range**

The Irizar i2e has been designed to offer autonomy between 200 and 250 km with a single charge at the end of the day. Just five hours of charging guarantees between 14 and 16 hours of driving in dense urban and interurban working conditions, with an average speed of 17 km/h.



The data recorded in the case of the first bus delivered in July to San Sebastian and the first to Barcelona in August guarantee these ranges:

- **San Sebastian.** At an average commercial speed of 17 km/h, it guarantees a range of 250 km, with the same level of comfort in non-extreme climates, in other words 16 hours of operation.
- **Barcelona.** At an average commercial speed of 10 and 11 km/h, it guarantees a range of 160-180 km, with the same level of comfort in non-extreme climates, in other words 16 hours of operation.

In order to optimise energy consumption, it incorporates pioneer technologies created by Irizar. Eco Assist is a system that helps the driver in real time and contributes to optimising the vehicle energy consumption and increasing its range.

## Irizar safety and reliability

The Irizar i2e has been designed to meet the most demanding active and passive safety requirements. It is the first electric bus on the market that complies with the R.66 rollover safety norm. Its rigid and robust structure has been designed to withstand side or front collisions.

The bus is as robust and reliable as the rest of coaches with the Irizar brand. It has undergone tough accelerated fatigue and reliability tests in one of the most prestigious applied automotive research institutes with excellent results. In addition to introducing the most advanced technologies in design, materials, components, and production processes, the bus has maximum quality finishes.





## Optimal profitability

The Irizar i2e offers maximum profitability due to its electrical consumption by incorporating the most innovative energy technologies. With a nominal power of 230 kW, the onboard energy in the vehicle is 376 kWh, providing a range between 200 and 250 km depending on the driving cycle and weather conditions.

The energy storage management system, developed by Jema Energy, manages the relation between battery and super condensers to maintain the charge status of both components within an optimal range as well as extending the useful life of the components, resulting in improved operational costs.

The Irizar i2e batteries are 99% recyclable. This is a tested and reliable technology.

Furthermore, the design of the bus has taken into account the weight distribution and maximum accessibility to the components for easy maintenance.

The battery charger has a combo2 type cable and allows fully charging the batteries in 5 hours.

## *ZeEUS project*

The launching of these two buses is framed within the ZeEUS project (Zero Emission Urban Bus System), financed by the European Union and coordinated by the International Association for Public Transport (UITP), consisting of a series of intensive tests with latest generation electric or pluggable hybrid buses that will take place in eight different cities, to give a decisive impulse to research and innovation in clean technologies applicable to urban transport.

Barcelona Metropolitan Transport (TMB) will lead the test in association with two bus manufacturers, which include Irizar, and with the collaboration of Endesa, Enide, the Polytechnic University of Catalonia, Idiada, and GMV. London, Glasgow, Stockholm, Munster, Pilsen, Bonn, and Cagliari in Italy, are the other cities where the experimental tests will be carried out.

This initiative is very important for Irizar since, in addition to being one of the most important programmes undertaken in Europe, it will be an ideal showcase for introducing the Group's technology. It will also allow Irizar to evaluate its product in operation and optimise its performance.

# First impressions on the Irizar i2e electric bus

**Francisco González Balmas**

*Chief technical officer of the Bus Network Transports Metropolitans de Barcelona (TMB)*



*Barcelona is one of the European cities that has been selected to test various zero emission technologies under the ZeEUS project. Why Barcelona?*

The ZeEUS Project is a UITP initiative, taking up the call by the EU regarding the demonstration of electric buses or hybrid Plug-ins.

In answer to this call, UITP conducted an internal selection process among the member cities which had shown interest, and assessed the balanced distribution between countries and technologies presented. One of the selection criteria was the volume of buses to be tested and as Barcelona presented 4 buses it was chosen ahead of other smaller demonstrations. Another reason was the firm commitment Barcelona has shown to electric bus technology - it already has a fleet of 132 hybrid buses.

*Will this make it into a green city in the future? What are the objectives pursued and the steps being taken in this regard?*

The mere fact of trying out electric buses does not make a city green but it is, however, a tool within a more comprehensive plan. The city of Barcelona is aiming to be a Smart-City, and this involves support for various projects ranging from electric vehicles in general, the trend towards energy self-sufficiency, information technology, the promotion of public transport and this being non-motorised, etc.

Hence, the plan to Hybridise the bus fleet, as indicated above, which currently has 132 vehicles. The ZeEUS project for the demonstration of electric buses will have 4 units in operation before the summer of 2015, all of which adds to the creation of a network of charging points for electric vehicles, which now has 250 points for slow charging, and another 20 fast charging points are in the process of roll-out.

*How many passengers per year use public transport?*

In the metropolitan area of Barcelona around 900 million trips per year are made by public transport, of which TMB transports 370 M. on the Metro network, and 180 M. on the city buses.

*Do you believe that the guidelines they are offering in this regard are sufficient?*

The balance between private and public transport is extremely sensitive and has a high political impact. The best way to tilt the balance towards public transport is to offer a good service which is comfortable, fast and frequent, combined with specific measures that restrict the use of private vehicles in urban centres.

*Do you believe that public transport can play a leading role in caring for the environment?*

Of course, and, given that transport often represents up to 40% of the pollution in an urban area, public transport can play a leading role in two ways.

Firstly, by diverting passengers from private vehicles to public transport, which is much more efficient in terms of the amount of emissions per passenger kilometre travelled. Any increase of the modal distribution in favour of public transport means a reduction in contamination, also due to the reduction in congestion.

And secondly, by each city's commitment to have a public transport fleet which is clean and environmentally sustainable. This brings us to the traction technologies such as natural gas, hybrids and, for city centres, electric vehicles as the ultimate paradigm.

*They have just put two Irizar, hundred percent electric buses into circulation. Are they special configuration buses? What features do they include?*

The bus itself is virtually identical to the TMB specifications for their city buses. It is a 12 m bus, Integrated Single Deck with three double access doors and equipped with a disability ramp and air conditioning.

The difference lies precisely in the fact that it is 100% electric. This eliminates the combustion engine and replaces it with an electric motor of sufficient power coupled to the transmission





and the incorporation of energy storage in the form of batteries to ensure adequate autonomy.

***At an operational and technological level?***

The operational level is the most influential in defining the bus and, in particular, the battery.

Operationally, it is clear that the bus must be able to travel on all the TMB routes, including those with steep hills, even when the vehicle is fully loaded.

With respect to autonomy, the TMB service is especially tough, driving round a city with very dense traffic. The speed at which TMB operates is only 12 km/hr, due to the frequent stops.

Under these conditions, the bus must be able to operate for 16 hours without the need to recharge and with the air conditioning running during the summer months.

These requirements mean that the amount of energy needed on the bus is in excess of 320 kW.h

***Is Irizar meeting these demands? What do you consider to be the most important characteristics or values that Irizar has contributed to this project?***

The first impressions are excellent. As expected, and given that Irizar is a European coach builder with extensive experience in configuration, technical characteristics, and vehicle aesthetics, they are very good, everything expected in a modern European city bus.

Irizar has contributed its extensive experience in the world of design, calculation and construction of vehicles and coach and bus bodies, along with European standards in technology and style.

***Can you let us know the first results of this testing?***

The first results obtained with the first bus are confirming the expected benefits.

So far the vehicle has not been run for a full shift, the goal being 16 hours, but instead the operating hours have been focused during the middle of the day, to verify the functionality and the consumption of the air conditioning.

From late October the characterisation tests will be completed and the bus will then run for the full 16-hour shift on the regular passenger line.

***How do you see the future of urban transport in European cities?***

European cities with their major problems of pollution and traffic congestion don't have any other options other than collective public transport and, within this option, it is clear that there will be more and more pressure for this public transport to be operated with the 0 emissions philosophy.

In this scenario, developments such as we are seeing with IRIZAR have a hugely important role to play. City transport using buses tends to use Hybrid buses generally speaking for peripheral and suburban services, and pure electric buses for services that are run for the city centres.

Within this philosophy, and as mentioned at the outset, TMB is making a firm commitment to the progressive electrification of its fleet, having 132 Hybrid buses already, having had an electric bus made in China on trial for over a year, and currently launching the ZeEUS project with 4 pure Electric buses, which are sure to be only the prelude to a greater electrification of the entire fleet.

***Is there anything else you would like to add?***

During these times of technological development in its emerging stages, the type of collaboration that we are developing with IRIZAR within the ZeEUS Project is of paramount importance. A large manufacturer of buses and a large urban fleet operator join forces to achieve a final product that is capable of meeting the needs of many other cities with similar characteristics to those of Barcelona.



## **Gerardo Lertxundi** *Manager of Donosti Bus*

*What steps are being taken by DBus in the last few years to reduce the emissions of its vehicles?*

In that line, the first step has been to constantly renew the fleet to have buses that meet the highest environmental standards and therefore Dbus has been among the first to incorporate Euro V, EEV and recently Euro VI vehicles. Another step in reducing emissions has been the incorporation of hybrid buses which is why three years ago the first 12 metre hybrid bus was introduced, which since then has served in various lines of the city, and recently an order of 12 metre buses has been awarded, all hybrids.

## **Irizar has achieved the great challenge of putting three units of the electric city bus running.**

*Does this make San Sebastian a green city for the future? What is the aim and what steps are being taken in this direction? Do you believe that public transport can play a leading role in caring for the environment?*

Dbus, as a company which provides public transport services, has a total commitment to the environment. We should proceed on the basis that the main contribution to the environment is to achieve an extended use of collective public transport. The mass use of the bus in our city means a huge drop in the contaminating emissions that would be produced if the same journey was made in private vehicles. But the next, necessary, step is to contribute to the buses being increasingly environmentally friendly.

*Do you believe that the guidelines they are offering in this regard are sufficient?*

We believe that the reduction of emissions as a result of the Euro VI regulations and the hybrid buses are a good step toward the final goal which is the elimination of contaminating emissions in our cities. And this goal could be achieved, without a doubt, with buses which are 100% electric. Therefore we have taken part enthusiastically from the start in Irizar's electric bus project.

*They have just put an Irizar, hundred percent electric bus into circulation. Is it a special configuration bus? What features does it include?*

The Zero emissions 12 m Irizar bus is already a reality as it has been circulating along the Dbus lines in San Sebastian since July. The electric bus operates every day on different lines. This way we can achieve several objectives. On the one hand it has maximum visibility among the citizens as it circulates through all areas and neighbourhoods of the city. On the other hand we can analyse its performance, and that of the batteries, in different journeys, more or less urban, more or less dense, more or less steep, etc. To this end, we have defined a monitoring programme to be carried out so we can subsequently carry out an extensive analysis of the data obtained. The drivers have undergone some training so they can use the electric bus more efficiently and the Dbus drivers can drive any of our buses equally well, whether they are of traditional technology, hybrids or the new electric bus.

*Is Irizar meeting these demands? What do you consider to be the most important characteristics or values that Irizar has contributed to this project? Can you let us know the first results of this testing?*

The experience of the electric buses in San Sebastian has been excellent in all aspects. From the driving perspective, the drivers are satisfied with the bus and in all events, suggestions for improvement are being gathered and implemented by the Irizar technician. From the maintenance perspective, the bus is proving to be very reliable and, along with the drivers, the Dbus mechanics are contributing improvements that are being incorporated in the bus for optimal maintenance conditions and maximum reliability. Another fundamental aspect is the battery life and while the bus has been operating, the autonomy values recorded have been higher than those foreseen initially. Lastly, it is worth noting the high rating the citizens are giving the bus, both for design as well as comfort and noise levels and especially for its high environmental value. In Dbus we have received numerous congratulations for the new electric bus.

*How do you see the future of urban transport in European cities?*

Every city has its own characteristics regarding geography, size, history, investments, habits,... This is why there is not just one model of public transport for all. But it is clear that the cities what to be friendly for their citizens and visitors, friendly to the environment and if they want to be efficient in relation to mobility, they must have clean means of transport as a priority and their own lanes. And the Zero emission electric buses will, without a doubt, play a fundamental role in the majority of our cities in the near future. The electric buses can add an important advantage regarding the flexibility that the buses have in comparison with other means of collective transport and the advantage of not needing large infrastructures, adding the most important value, which is that of Zero emissions in the city. One of the fundamental aspects in the future of the electric buses will be the evolution of the charging systems. The electric bus we currently have has batteries and accumulators which, for a 12 metre solution is a good solution due to the absence of a need for infrastructures in the street and the flexibility it offers in operation. We know that Irizar is working on other solutions which allow the buses to charge while operating when they pause at bus stops. A priori we think that these solutions will make more sense in 18 metre buses due to their greater charging needs. In any case, it is obvious that an important part of the future development of electric buses will be conditioned by the technological advances regarding charge and energy storage.



## ***Irizar international exhibitions***



*This year Irizar is taking part in 10 trade fairs throughout the world with the aim of establishing the brand internationally and creating new opportunities.*

*Russia, Mexico, Australia, France, Poland, Italy, Spain, UK, Brazil and Ireland have been the stages where Irizar has initially presented their latest developments and future strategic lines to continue strengthening their presence and competitiveness as an international company. It is also worth mentioning that they have launched this important tour to celebrate their 125<sup>th</sup> anniversary with their customers around the world.*

The first event of this year was the **Expo forum** held from 5 to 7 March in Santa Fe, Mexico, demonstrating once again Irizar's firm commitment to the Mexican market.



*FIAA, en Madrid*

**Expo Bus**, held in Kolomna, Russia from 23 to 25 April, was the show where Irizar first collaborated with Scania. Their presence opened the doors to the Russian market and gave them a chance to display all their company policies based on customer-oriented focus and the development of the latest technologies offering greatest efficiency and reliability together with the best service.



Australia was the stage where the newly created Irizar Asia Pacific presented all their product and service innovations within the framework of **QBIC Conference** held from 28 September to 1 October.

**Journées Agir**, which took place from 1 to 3 October in Saint-Brieuc, France, became the ideal showcase to display the benefits of the brand new Irizar i2e zero-emission electric bus.

**Transexpo** from 8 to 10 October in Kielce, Poland. Irizar, together with their distributor in Poland, Wanicky Co, attended the Transexpo exhibition for the third time in a row. The visitors, in addition to the range of Irizar integrated coaches, were also able to experience the greatest icons of the Irizar brand.

**TTI Rimini**, from 9 to 11 October in Rimini, Italy. Irizar participated in the Bus & Tourism which took place in Rimini in October. In over 1,000 square metres, the brand displayed their complete range and service capacity, once again demonstrating their strength and leadership.



**FIAA**, from 28 to 31 October in Madrid, Spain. Irizar attends this year's FIAA displaying its strong commitment to technology, innovation and diversification. The stand of more than 2,000 square metres will be the perfect setting to officially present to the market the new Irizar i2e zero-emission electric bus and celebrate its 125<sup>th</sup> anniversary. Visitors will experience close up the evolution from the traditional to the most advanced technologies that will set future trends.

**Euro Bus Expo** from 4 to 6 November, Birmingham, UK. The Euro Bus Expo show is the most important trade fair for the industry in the UK. Irizar, a leading brand in this market, will demonstrate its technological capabilities at the last exhibition of the year.

**FetransRio** from 5 to 7 November, Riocentro, Rio de Janeiro, Brazil.

It has become the country's biggest event of the bus and coach industry. Irizar Brazil will present its range of products and will set the stage on which to celebrate the 125<sup>th</sup> anniversary with its customers in Brazil and South America.

**Coach and Bus Show** from 15 to 18 November, Dublin, Ireland. It will be the last show that will be added to the rest to meet the planned objective.





## ***An Irizar for Al Jazira Sporting Club***

The Sports Club, Al Jazira, in Abu Dhabi has purchased a 14m long Irizar pb on a Scania undercarriage to start the new season. With a 2+1 seating distribution, rear lounge, electrical connection in all seats and a wi-fi network, the bus is equipped with all amenities to transport the players and managers of this football team.

The first team is delighted to start the new season with this coach, decorated, in the tradition of the Emirate, in black and red with the Al Jazira logo. The luxury interior stands out with its combination of leather and quality materials, also in the black and red colours, making this coach a source of pride for the team. It is the first of its kind among the football clubs of the United Arab Emirates.

Al Jazira Club is a multi-sports club whose main activity is football. It was founded in 1974 and the team plays in the First Division in the United Arab Emirates. They are the pride of Abu Dhabi and were winners of the 2010/11 UAE Pro-league and two-time winner of the President's Cup.





# Another Irizar pb for Inter Milan

On 8 July at the Inter di Milano sports centre, "Angelo Moratti", the trainer of the first team, Walter Mazzarri, officially received the coach which will be used to transport the Nerazzurri.

The formal ceremony took place a few days before, in the delivery area of Irizar headquarters in Ormaiztegui and was attended by Alessandro Oldrini, owner of Air Pullman; Alberto Celario, representative of Inter di Milano; Antonio Scarano, representative of Iveco Italia; and Irizar managers, Gotzon Gómez and Igor.

Inter's new coach is an Irizar pb 14.37, on an Iveco Euro 5 450HP Eurorider undercarriage.

It is equipped with: WC; 38 Irizar TOP COVER PB seats with leather leg rests, leather armrests, double stitched, individual Bosch audio system, usb socket on each seat, adjustable seats, equipped with table, magazine rack and 4 position footrest, luxury padded headrests with the Inter logo; imitation wood floor; folding cushion for injured players in reserve behind the central door; special tables in reserve behind the driver and a track to support a computer with computer type cable or 2 gaming tables with black screen printed Inter logo.

The two installed kitchens are equipped with stainless steel sink, ice machine, ice crusher, waste bin, 2 microwaves, Lavazza coffee machine, kettle for tea, blender, electric sockets, drawers...

It is also fitted with an additional Frenzel fridge between seats, Bosch Professional Line audio system and 5 monitors: an Actia 19" LCD monitor, another Actia 19" LCD monitor on the rear kitchen wall over the WC, two Bosch folding 19" LCD monitors placed in the centre of the ceiling looking in both directions of travel and a final Actia 15" LCD monitor located on the rear sunshade in the opposite direction of travel.

The final touches to this Irizar pb include Wi-Fi, clothes rack in the central luggage compartment for hanging jackets, RaySat satellite dish, GPS, Xenon headlights and extra tinted windows.





## ***Irizar Group social projects growing throughout the world***

**Each one of the Irizar Group companies supports their immediate social environment through culture, sport, etc.**

**Irizar is immersed in a large number of social projects internationally.**

**It contributes more than two million Euros each year to support its social environment in solidarity and humanitarian activities with a clear involvement by its people or through NGOs, demonstrating the social responsibility of the company.**

**A review of some of the projects in which Irizar actively participates transports us to various diverse scenarios such as Mexico, South Africa and Tanzania.**

### **Social Projects in Mexico**

In Mexico, there are five projects with an active Irizar presence:

- **“Bridge to Community Health”**, a project aimed at the fitting out of a pilot plant with the equipment needed for the training and incubation of community groups to assist in the development, innovation, preparation and continuous improvement of food products such as amaranth and organic eggs.
- **“Mexico ChildFund”**, which contributes to the generation of infrastructure and training for indigenous women making handicrafts, promoting the creation of sources of self-employment.
- **“Farm Foundation of the Maya World”**, which aims to equip, train and prepare for the production of melipona honey as well as a woven hammock workshop.
- **“El Marqués Town DIF”**, where financial support and ‘in kind’ donations for socially susceptible populations are offered, such as wheelchairs, toys, furniture, truck, food, blankets.
- **“Nurture a child”**, has the aim of contributing to child development in rural populations in Mexico through social, economic and environmental activities.

### In South Africa

In South Africa, Irizar collaborates in projects supplying food to centres for elderly people. In addition to the distribution of food by people from Irizar, they also deliver cleaning materials as well as some items for basic needs.

Also this year, school supplies have been donated to the Dove's Nest Foster Home to ensure that the children from that orphanage have the materials and books needed to ensure their education.

### In Tanzania

In Tanzania the participation by Irizar takes place through the Doctors of the World organisation that uses its efforts to improve the services received by patients in health centres, especially women and children under five and also works directly with communities on issues such as family planning, HIV prevention and human rights, especially concerning women (domestic violence, forced marriages, etc.).





***The true essence  
of Andalusia.  
The Andalusian  
legacy***

*The jewels of Al Andalus: Cordoba,  
Granada and Seville*

*The paths of the Andalusian legacy,  
pathways that make history and  
relive our Andalusian past. A spiritual  
adventure, a fascinating tour of  
excitement through our past.*



## The route of the Caliphate: from Cordoba to Granada

Declared a Cultural Route by the European Council, the Route of the Caliphate is a tourist route that forms part of the Al-Andalus legacy.

Thousands of visitors make the journey along the Route of Caliphate between these two magical cities, passing by castles and through walled towns dating from the times of Al Andalus. The mimes acted out the leading role in the struggle between Muslims and Christians when this region formed the border of the two civilisations, from the XI century onwards.

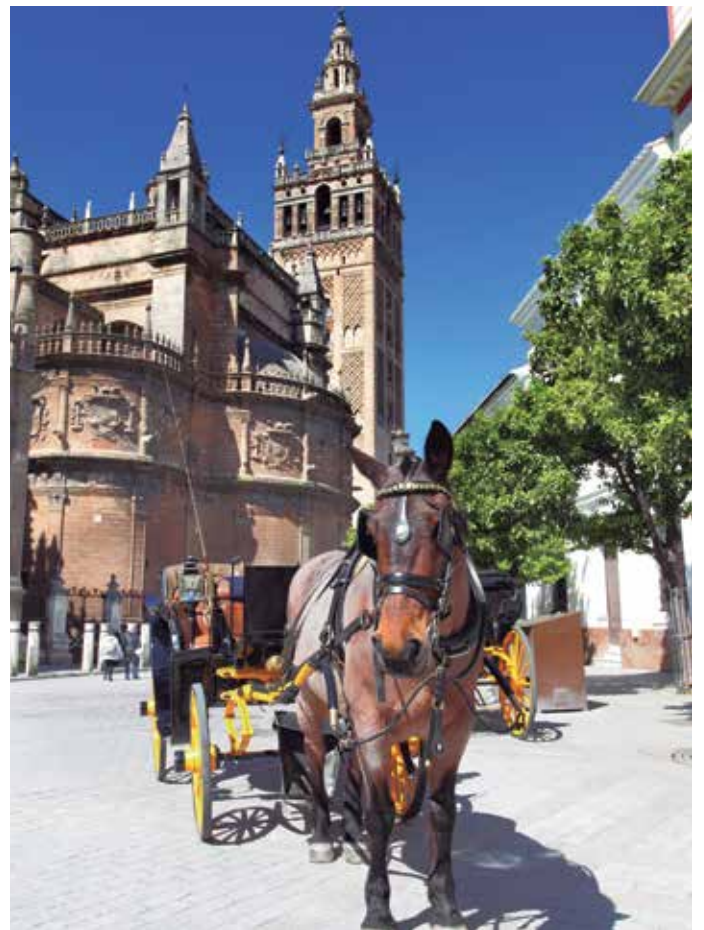
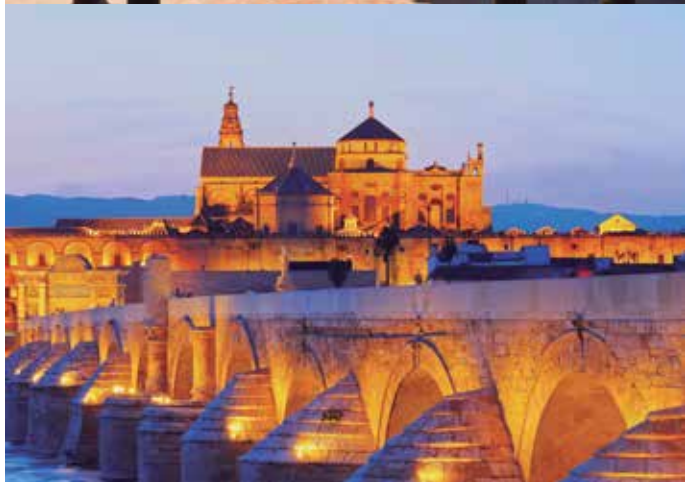
The Route of the Caliphate used to be one of the busiest in the Iberian Peninsula during the Middle Ages. Its towns and fortresses situated on the slopes of the mountains offer, not only a history lesson, but also a delight for the senses. Wonderful landscapes, delicious cuisine and cultural riches waiting to be discovered along this majestic route so full of history.

*The Alhambra in Granada, with its spectacular Gardens of the Generalife, was the residential palace of the Nazari dynasty. The Alhambra was the last bastion of a civilisation which left us magnificent palaces, gardens, baths and fountains. The last stronghold of the Moorish empire until 1492 and one of the most prominent buildings of Andalusia.*

It connects the Nazari and Caliphate capitals of al-Andalus and follows the path that linked Cordoba and Granada in the XII century. It is a chain which joins together citadels, Christian castles and part Arab part Christian fortresses, erected on the highest of the hills.

You can also admire the beautiful and rugged landscapes of the Sierras Subbéticas Cordobesas Natural Park, tough, wild slopes alongside meadows and riverbanks with peaceful trails, following ancient paths that lead to the most remote corners.

This route is a real spiritual adventure: from Cordoba to Granada, two stages of history, two unforgettable moments, two golden eras. Between these two poles pivots the fabulous cultural, religious, political and social heritage which marked the Muslims stay in the Peninsula. Cordoba, the high point, the blinding light that made other cities of the West seem pale. Granada, the refined mannerisms of an entire civilisation held in check.





And in between, the castles, the cities that at first were posts or milestones for trading, and then later were camps and bases for besieging Granada. This route is not only a history lesson. It is also an aesthetic pleasure, a delight for the senses. Not only the visual aspects: the enlightened palate will also find products and flavours with ancient echoes. Those same lost echoes also seem to throb in many of the festivals and traditions of these communities. A route which will ultimately, without a doubt, make us a little wiser.

The route of the Caliphate passes through the towns of Granada, Alfacar, Alcalá la Real, Priego de Córdoba, Rute, Almedinilla, Carcabuey, Cabra, Lucena, Montilla, Alcaudete, Luque, Zuheros, Baena, Espejo and Cordoba.

### **From Seville to Granada: The route of Washington Irving**

And what is there to say about Seville: the elegance of the Andalusian capital spreads along the banks of the Guadalquivir. To stroll through the quiet streets, closed to traffic, is a treat for the senses. The colourful bars in the Triana district are famous for their fried fish and fine Manzanilla wines.

The route of Washington Irving is designed as a vital artery linking Seville and Granada, two essential cities of the Spanish-Muslim civilisation.

*Cordoba: Cordoba Mosque, the largest Islamic monument in Western Europe dating from the IX century and the second largest mosque in the world.*





The route revives the path which was followed on horseback in 1829 by the American romantic writer whose name has been given to the route, captivated by the exotic splendour and rich abundance of the "Arab" vestiges of Andalusia.

A historical path which, in the Middle Ages, served as an important trade route between the Moorish kingdom of Granada and the Christian dominions.

Seville is the first step of the route. Its circle of walls, the Reales Alcázares, La Giralda, La Torre del Oro... turn it into a privileged setting for the memories of al-Andalus.

From Seville, the route winds through the countryside and reaches Alcalá de Guadaíra, which continues under cover of a sturdy Andalusian fortress. From here, it climbs up to the monumental Carmona, an artistic ensemble of surprising solidity, then approaching Marchena and Écija, filled with towers, churches and palaces overflowing with works of art. The prodigious richness of the monumental Seville countryside extends into the ducal town of Osuna and the neighbouring Estepa.

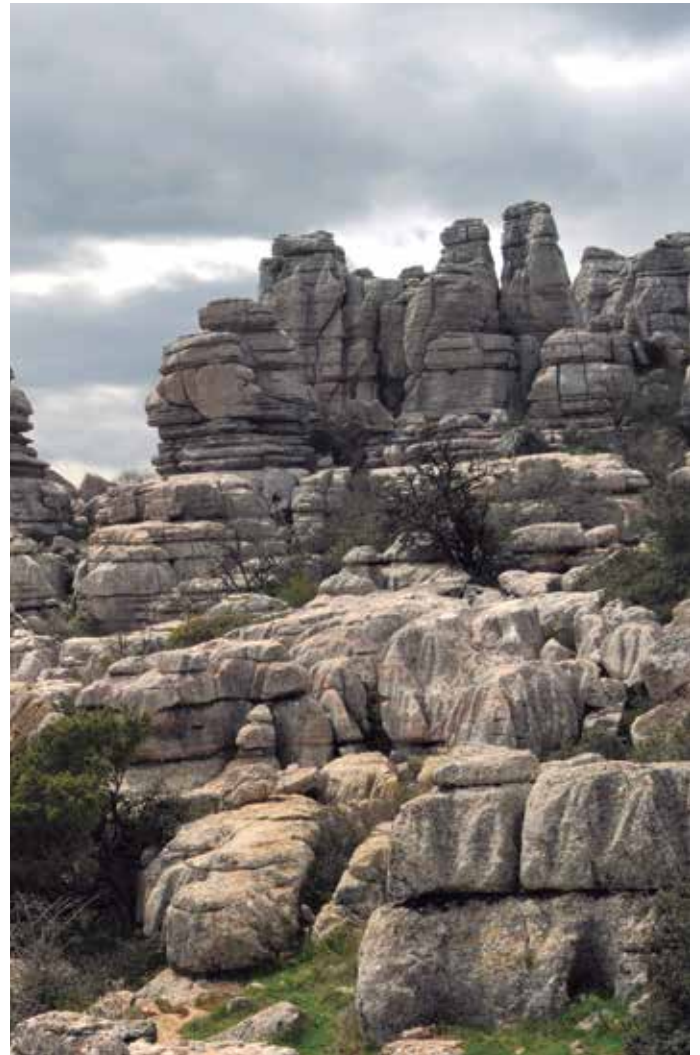
After La Roda de Andalucía, it crosses the border to Malaga land, where we can admire the salt lake of Fuente de Piedra. Humilladero and Mollina, wine and antique areas accompany the pathway until Antequera, the geographic crux of the region, embellished by a citadel, more refined Baroque palaces and temples and the fantastic rock formations of El Torcal. Further on, Archidona, guarding the entry in to the province of Granada.

Embedded in the mountains Loja is found, flanked by the highlands of Moraleda de Zafayona and Alhama de Granada. On the other side of Loja are the villages of the last Narazari frontier: Montefrío and Íllora.

In the midst of forests and crops Fuente Vaqueros, Chauchina and Santa Fe appear, symbolic of the achievements of the Catholic Monarchs and a prelude to the end of the route, Granada, romantic myth of Muslim Spain.

This entire route, in its progression from Seville toward Granada, is marked by important historic milestones occurring in the landscapes and cities that mark the way. The changing landscape





makes us believe that we are passing through different terrains: From rugged mountains, to plains where we sense the unchanging horizon has borne witness to the history of this land. The journey covers Lower and Upper Andalusia; two plains, the Campiña and the Vega, and numerous districts that border the last provincial boundaries.

During this route, travellers can enjoy the fantastic views of the Guadalquivir Valley. In a way, it could also be said that the valley itself displays the years of history of the Hispanic-Muslim culture that reigned so many years ago.

The path of Washington Irving basically extends until Antequera making some incursions as already mentioned such as Carmona as well as Marchena, Écija, Osuna and Estepa, and then later deviating toward Montefrío and Íllora. Once reaching la Roda de Andalucía, which borders Malaga, you can admire the saltwater lake of Fuente de Piedra. Later, Humilladero and Mollina accompany the route to the mentioned Antequera, a place embellished by a citadel, temples and more refined Baroque palaces. All this without counting the amazing rock formations of the Torcal. Further on, Archidona guards the entry in to the province of Granada.





From the early nineteenth century this romantic route has attracted a multitude of artists, writers, and all sorts of curious travellers. You can also enjoy the wonderful weather, the rich natural life and the marvellous towns and villages.

Finally, at the end of this journey, you can stop along the way to see las cuevas del Sacromonte and the Albaicín district, one of the most important icons of Granada after the Alhambra. Speaking of this great monument to which Washington Irving dedicated his book "Tales of the Alhambra", it is advisable to book the entrance tickets in advance.

Enjoy your journey and live in the Andalusian ambiance named after the American writer due to his devotion to the environment and historical culture that encompass the beautiful landscapes.



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

***From the abyss of bankruptcy to national and international recognition, in less than a decade.***

### **Export or die**

Until 1990, the Irizar product, as well as in Spain, was also sold in France, Greece and Israel; but even so the firm could not maintain a healthy bottom line due to its excessive dependence on the domestic market - in which there had been a decline in registrations for two years - and the little weight given to exports.

If the commitment to a flexible and participatory internal organisation had been a brave and risky decision, the decision to open up markets in countries where the competition was larger and more serious, was no less so. When Uri Mansoor listened that in 1992 that Irizar wanted to target the German, Dutch, Belgian and French markets he couldn't help thinking: *"How are they going to sell there, knowing their situation? ..."* *"Time has shown"* - explains the Israeli importer proudly - *"that with the philosophy with which they proceeded and with their enormous self-confidence, they have managed to achieve all their objectives"*.

The United Kingdom was the first to open its doors to the Century in this new phase. By then, Irizar had already adopted the slogan *"Yes, markets; no, products"*. Scania, knowledgeable about their product and their new policy of openness to international markets, got in touch with the Basque cooperative: *"We needed a coach builder"* recalls Ian Hall, commercial director of Scania UK *"to cover our undercarriages. We needed a different, innovative coach builder"*. At that time, Irizar had taken export on board as a strategy... We started work on designing a product that would suit the needs of the UK market, and the Century was very attractive; it was different and revolutionary in design terms and especially in terms of paint finish. In addition, the price was very interesting, and it could hold the necessary equipment... In the United Kingdom, it took the industry by storm: We achieved high linearity in the product ... those who bought a Century in 93, still did so in 2000, and this is very important".

Despite the uncertainty of whether the innovative model would suit the British sobriety, in October 1993 it was introduced at the Birmingham Fair. *"The Century was very modern in design, and it was a risky bet, because in the UK they are very traditional... but in the first fair that it was presented, it was a complete success. Its merit was in the product, but also in the professionalism of the Scania team"*. The unexpected victory was beyond just an increase in sales (which sky-rocketed), culminating in 1994 in the award for the Coach of the Year in Britain, supplanting the body building company which had won this award for the previous nine years.

Penetration of these markets was not easy but, little by little, the Irizar coach was conquering the most demanding and fought over international roads. Today *"all the major transport companies in the UK have the Century"* adds Ian Hall.



*The United Kingdom was the first to open its doors to the Century in this new phase. By then, Irizar had already adopted the slogan "Yes, markets; no, products".*

*"The secret to keeping this model on the market for a decade - explains Peio Urteaga, Product Innovation Coordinator - lies in the high basic values which the product has provided from its outset, both in style and in functional aspects, providing competitive advantages with respect to safety, comfort and economy. To highlight one such feature - he qualifies - the aerodynamic design provided a fuel savings of between 12 and 15%. Subsequently, the innovativeness of Irizar has allowed the product to be adapted to the needs of customers in over 65 countries as well as carrying out technical and aesthetic improvements necessary to keep it at the top level: in 1992, the first restyling was undertaken, when the dashboard and the passenger floor area was redesigned; in 1994, the solution to the Roll-over Regulation was included in compliance with Reg. 66, in the superstructure of the Century, almost two years in advance of the entry into force of this regulation, and in 1997 the second restyling was undertaken, redesigning the front and exterior rear, the luggage carrier and the dynamic system, changing the vehicle from 2.50 m to 2.55 m wide. We were also pioneers in this change".*

In the 70s, Irizar put into circulation the first air-conditioned coach, and in the nineties they introduced climate control, a system that allows the driver to be free of the task of controlling the temperature inside the vehicle, as it adjusts automatically.

But these adaptations and improvements have not been due to chance but to the efforts, dedication and confidence of the people of Irizar in their project and in their product...

Confidence and a thorough study of the requirements, tastes and preferences of each of the target markets: *"We have learned to listen to the customer to know what they want from us"*, says Peio Urteaga. This research makes it possible to offer a flexible, tailored and comprehensive product: *"Today we offer 400 possible variants; our objective is to maximize this range"*, says Juan Antonio Urteaga. To achieve this, there is a team that is dedicated to analysing and examining these variants. They constantly adapt elements of the vehicle, with the aim that each time the customer returns to Irizar, they encounter something new that better satisfies their expectations.

*"The Century was very modern in design, and it was a risky bet, because in the UK they are very traditional... but in the first fair that it was presented, it was a complete success. Its merit was in the product, but also in the professionalism of the Scania team".*





The beauty and versatility of the Century have also not gone unnoticed by the world of art, music and sport. The Spanish basketball team, the United Kingdom football team, Liverpool, the Champions of the Italian football League, Manchester United, Aston Villa, Milan, Stuttgart, the champions of ice hockey in France, the Royal Society, Barcelona, Real Madrid, Tau-Baskonia, Athletic de Bilbao, Atlético de Madrid, Alavés, Osasuna, Sevilla, the Euskaltel-Euskadi cycling team, etc. all use coaches specifically designed by Irizar to meet their needs: less seats than the norm, lounge, massage room, kitchen, bathroom and even bedrooms... great features that require detailed work which the Gipuzkoa cooperative knows how to take care of. Also the Warsaw Opera, the Euskadi Symphony Orchestra and celebrities such as Tina Turner and the Rolling Stones use Century - with sophisticated audio and satellite systems - to get around.

Delivery of a job well done, seasoned with a management model in which people form the basis has enabled the Century product to achieve what it has achieved - without falling into hyperbole or conceit - that the body builder sector has century-ised.

*In the 70s, Irizar put into circulation the first air-conditioned coach, and in the nineties they introduced climate control, a system that allows the driver to be free of the task of controlling the temperature inside the vehicle, as it adjusts automatically.*

125



years

*Every age brings forth  
its own classics*

MODELO  
PONY



# Irizar

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