

## THE HIRIKO CONSORTIUM FOR VEHICLE MANUFACTURING

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HIRIKO DRIVING MOBILITY is a consortium based on inter-firm cooperation for manufacturing the HIRIKO, the first electric vehicle that is 100% fully electronic, made in Spain. This project was submitted on January 24, 2010 by European Commission President Jose Durao Barroso as a model of sustainable mobility and has been promoted as an example of social innovation. The consortium is sponsored by AFYPAIDA (the Society for the Encouragement and Promotion of Industrial and Automotive Sports) and was created in 2008 with the objective of developing the automotive industry, for DENOKINN (Basque Center for Innovation and Entrepreneurship) which identifies the business opportunities in emerging market niches and new business initiatives, and MIT MEDIA LAB, a laboratory owned by the Massachusetts Institute of Technology (MIT). HIRIKO MOBILITY DRIVING has emerged from this support and based on inter-firm cooperation. It proposes a solution to sustainable urban mobility by making HIRIKO the first 100% electric vehicle manufactured in Spain.

HIRIKO MOBILITY DRIVING is structured around the headquarters and production plant located in Vitoria-Gasteiz, where it located its R & D, engineering, manufacturing and production. Joining those functions will be commercial services and sales. The central plant is served by the co-producers, and HIRIKO strategic partners.

HIRIKO MOBILITY DRIVING will incorporate complementing strategic alliances and outsourcing into its key internal business activities. HIRIKO has the backing of three stakeholder groups: Investor Group, Promoter Group (Afypaida) and Industrial Group (co-manufacturers and suppliers).

HIRIKO is a strategic project for the social environment that will generate benefits beyond the purely business. It is an economically sustainable project that drives other industries such as energy, batteries, software and telecommunications systems and mobility. HIRIKO provides a positive image of the country and European region in which it sits. This example serves as a model of industrial innovation, constantly regenerating and visionary.

### The product

The prototype of this two-seater has a lithium-ion battery with range of 120 km. and reaches a top speed of 90 km / hour. The batteries can be charged in 12 minutes. The vehicle access is performed by the front.

The HIRIKO Fold model has a number of aspects distinctive competitive incorporating the latest technological innovation in mobility and navigation. It folds for parking by reducing its length from 2.6 m to 2.0 m and this allows a better use of parking space. It can move in all directions, thanks to its patented Robot-Wheels. The driving system has "drive by wire" and a touch screen built into the steering wheel, plus a Tablet PC integrated into the dashboard interface for Smartphone. HIRIKO has an intelligent urban navigation system: specific interactive software with information about the city, charging points, parking spots, etc. It incorporates specific elements in its design, including maximum security and traction.

The price of the vehicle will be about € 12,500 and the investment is 170 million Euros in ten years. This will encourage job creation and productive activity in the Basque Country, requiring expert automotive

engineers. The consortium is also working on new models, such as a pickup truck and a car-sharing four-seat. The production and distribution of Hiriko is based on an innovative model because it requires no assembly system. Different manufacturers participating in the consortium build every module (robot wheels, chassis and bodywork, interior, electronic and so on). These will be assembled in approved distribution centers, which will be franchises, all over the world.

### **Firms in the consortium**

The consortium consists of the following companies:

**GUARDIAN:** a business that manufactures the windows of the vehicle. It is a global leader based in Detroit, but with global reach. It has several location in Spain, but the glass is to be manufactured in Llodio.

**Maser-MIC:** a company located in the region of Deba (Gipuzkoa) dedicated to the manufacture of electronics and mechatronics for the automotive industry. It was created in 2000 and specializes in the latest techniques for the transport sector.

**FORGING PRODUCTS:** this company will be responsible for manufacturing the aluminum chassis of the vehicle. It is engaged in the manufacture of forgings by hot stamping and is a specialist in the automotive sector. It will also perform the logistics of storage, distribution and delivery and it is located in Amorebieta and Legazpi.

**TMA:** this company will develop the structure of the vehicle and the front door.

**SAPA Placencia:** this company will manufacture the "drive by wire" system -which replaces the electrical and water connections: pressing a single button is enough to speed up or slow down- and steering wheel haptic -vibration alerts by the direction in which direct the steering wheel- It is a company dedicated to commercial, industrial and research material related to war, a leader in defense systems, and it is located in Andoain.

**BRW - BASQUE ROBOT WHEELS:** this company has developed the robot-vehicle wheels, which rotate on its axis. It is a new company (2011) and is a pioneer in the development and manufacturing of robotic wheels for electric vehicles and other new generation requiring new engines and steering systems intelligent all.

### **The Consortium**

The consortium Hiriko is an example of business cooperation in which, based on a strategic perspective, leverages the asymmetries and complementary resources of each company, each dedicated to a different product. It also reduces risk and uncertainty, given the highly uncertain nature of technology projects with large investments and complementary technologies. It may also eventually influence the evolution of the automobile industry not only for product innovation (electric vehicles) but also how to market through franchises and do it with kits. From the organizational point of view, each company that joins together contributes its know-how, especially in the areas of high technology and benchmarking. All companies will have a reason for learning, especially in vehicle assembly through franchising. In addition, there are political factors to its creation through the government support vessel of DENOKINN to promote development and job creation in the region.

image by William Lark Jr. Smartcities MIT



Source: [www.hiriko.com](http://www.hiriko.com)

## References

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