

# Invest in Bretagne



## Aeronautics

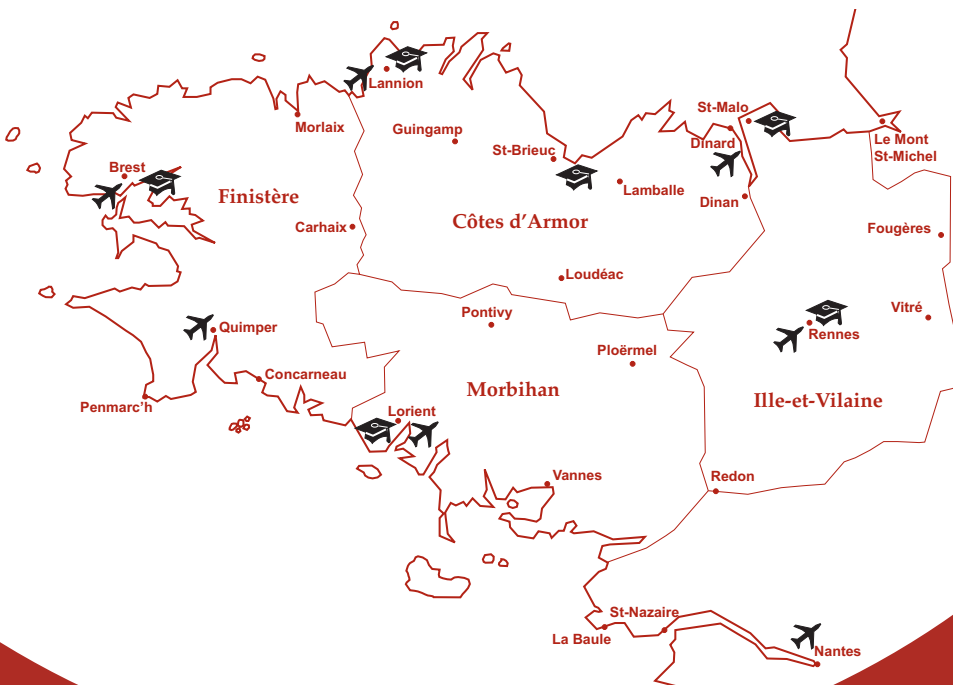
Civilian & military  
shipbuilding

Automobile

Nautical

Telecom

Eco-materials  
development



## Bretagne Composites facts & figures

- **1st** national position for small vessel construction using composite materials, over **150** throughout Bretagne
- Over **30** companies specialized in manufacturing and transformation of composites
- Over **200** companies involved in the composite industry in the region
- **7** higher education establishments dedicated to composites, training **hundreds** of graduates **each year**

Bretagne,  
Land of excellence & innovation in Composites



## R&D Centers & prestigious higher education establishments

- Ecole Navale, French Naval Academy
- ENSTA, National Graduate Engineering Institute, training both civilian and military students
- IFREMER, France Research Institute for Sea Development
- Louis de Broglie, Engineering School
- Lycée Jean Macé (Lanester),
- Lycée Marcelin Berthelot (Questembert)
- South Bretagne University (UBS) Labaoratory L2PIC
- Western Bretagne University (UBO)

## Technology Parks & Clusters

- Autéo, Association dedicate to Automobile Industry
- Bretagne Pole Naval, Bretagne Maritime Cluster
- Bretagne Valorisation, Technology Transfer Office dedicate to Innovation
- CRT Morlaix, Center of Technical Resources
- EMC<sup>2</sup>, Composites Industry Cluster • ID4Car, Premium Car Cluster
- IEF Aéro, Aerospace & Defence Cluster
- Plasti-Ouest, Western Plastic Industry Grouping
- Pole Mer, Sea Innovation & Business Cluster

## Events

- Safer Seas, international conferences, workshops, exhibitions about maritime security, 10>13 May 2011, Brest
- Itech'Mer, sea industries meeting-place, 27>29 October 2011, Lorient
- Sea Tech Week, international marine science and technology week (conferences, round tables, trade show, events, tours), 8>12 October 2012, Brest

## The Bretagne composites industry, 6 key sectors of activity

### • ENGINEERING AND DESIGN

**Companies:** Funbox, HDS, L'Industrielle du Ponant, Poly Ouest, Promarine, Rotteleur Composites, Solutions Plastiques Industrie (GMD)...

### • PATTERN MAKING AND PROTOTYPING

**Companies:** Actuaplast, Ampia, Atout Plastic, Marsaudon Composites, Multiplast, SMM...

### • CIVILIAN & MILITARY SHIPBUILDING

**Companies:** DCNS, STX Europe...

### • NAUTICAL

**Companies:** ACB, Bic, CDK Technologies, JPK, Kelt, Kerpont Plastique, KVK, Lorima, Marée Haute, Multiplast, Nautix, Plasmore, Plastimer...

### • MANUFACTURING

**Companies:** Barre Thomas, Celtys, Centigon, CGL Pack, Duval, Groupe Bolloré, Isoibox, Knauf, MPAP, Ouest-Composites, Plastic Omnium, Plastigray, Platinvest, PSA, Rototec, Satima, Seifel, Sotira, Thalès, Visteon...

### • MATERIAL PROVIDERS AND PROCESSES

**Companies:** Coriolis Composites, Technitoile...

## Success story

“We were rapidly persuaded that Bretagne was a perfect place to set up our project of design and manufacturing of blades for our offshore floating windmills. Indeed the Breton companies have developed an incomparable expertise especially in shipbuilding. We were first impressed by Lorima, whose know-how in



shipbuilding and carbon or composite mast manufacturing for transoceanic crossings suited particularly our project. Then we met the Bretagne Western University that has developed a great expertise notably in aeronautics. This lab worked with HDS, an engineering office that among others conceives boats for the Americas's cup. Other technologies developed in Bretagne in terms of process automation (Coriolis), production line manufacturing (Breton car industry) or development of renewable composites (Southern Bretagne University) convinced us that all the required know-how in composites were present in Bretagne and clearly motivated our establishment in the region.



## R&D: eco-materials



### *Bretagne Maritime Cluster*

#### **CONVENAV**

The CONVENAV project targets reducing the environmental impact of ships through the development of innovative tools. These new tools will be able to evaluate and reduce environmental impacts from conception, through exploitation, maintenance including the phases of modification and dismantling with a control of each of these phases. The tools are to be used by the Architects, Shipbuilders, Navigators, Suppliers and classification organisations to facilitate eco-regulations and eco-certifications.

#### **NAVECOMAT**

Plastics and composite materials used in shipbuilding raise a real environmental problem when it comes to dismantling the ship (waste disposal, emission of toxic substances...).

The NavEcoMat project offers an alternative solution: the conception of a high-performance bio-composite material made of a vegetable fibre backing and a biodegradable matrix. It foresees in a second step the realization of a prototype boat, which will not only focus on developing an eco-conception methodology (resistance, performances...) but also to enable eco-assessments during the ship life cycle, from the construction to demolition.

*For further information, please visit:  
[www.pole-mer-bretagne.com](http://www.pole-mer-bretagne.com)*



### ***idforCAR Cluster***

### *Mainspring of ideas for specific vehicles*

#### **CELASTOFIB**

The utilisation of plant fibres in thermoplastic/elastomer composite products can give excellent acoustic properties to automotive parts. This project aims at developing such materials, as well as adapting manufacturing methods based on dual injection molding. Various industrial partners and universities contribute to this project.

#### **LICORVE**

In order to meet demanding customer requirements, efforts have to be made to design the rear part of future vehicles. Composite materials can be developed and efficiently utilised to improve mechanical and acoustic properties, whilst reducing costs and the environmental impact.

*For further information, please visit:  
[www.id4car.org](http://www.id4car.org)*



# Tax Credit for Research and Development

The Finance Law of 2011 updates the tax credit for R&D in France

Applications can be made simply by completing a straightforward form to be submitted at the same time as the corporate tax return.

## The amount of tax credit given to the company is equal to:

- 40% of R&D expenses the 1st year
- 35% of R&D expenses the 2nd year
- 30% of R&D expenses the 3rd year and for all of the following years
- These rates apply to the first 100 M€ of R&D expenses, over and above this amount the tax credit is equal to 5%

## The R&D expenses

All R&D expenses are taken into account:

- Staff costs (gross wages and social contributions) for researchers, engineers and technicians working directly on research
- Patent filing and maintenance costs
- Amortization of patents acquired for research purposes
- 50% of standardization costs
- Spending on patent defence and technology watch done within the European Union.

# Bretagne International

Bretagne International is a non-profit association of private companies located in Western France. We have been commissioned by the Regional Government of Bretagne to assist Breton companies in their international development, to identify and support foreign companies planning to expand their business into Europe/France through presence in Bretagne.

We provide free confidential assistance through the different stages of your project to expand your business.

## Data collection

- Market validation
- Supplier, partner and customer identification
- Availability and skills of workforce
- Financial incentives
- Cost assessments (salaries, taxes...)
- Labour laws

## Business meetings

Based on your requirements and your project, we tap into our long experience with Breton companies, our excellent knowledge of the regional know-how and the region's economic environment. We will work with you to set up a series of meetings with key business leaders in the region.

## Site proposals

With the support of **Bretagne Développement Innovation**, we can submit to you a selection of sites according to your needs (greenfield, industrial buildings, offices...).

## Assistance before, during and after your installation

We help you with all your administrative formalities:

- Law firm, accounting firm, bank and insurance recommendations
- Capital raising orientation
- Creation of your local structure
- Staff recruitment
- Arrival of your expatriates and their families...

## Bretagne International

16 C, rue Jouanet - CS 20834  
35708 RENNES cedex 7 - FRANCE

Tel.: +33 (0)2 99 25 04 04

Fax: +33 (0)2 99 25 04 00

fdi@bretagne-international.com

www.bretagne-international.com

## Meet us at:

- **JEC Composites Show**, March, Paris, France,
- **CFK Valley**, June, Stade, Germany
- **Composite Europe**, September, Stuttgart, Germany
- **Fakuma**, October, Friedrichshafen, Germany

In cooperation  
with

