



*From genes to ecosystems,
From the laboratory into the community,
From Western France towards Europe...*

Strategies, issues and advantages in sharing infrastructures – the experience of Biogenouest

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Biogenouest, the Western France life science and environment core facility network

- Directed by Michel Renard (Inra)
- Bretagne and Pays de la Loire administrative regions
- Labeled by the French ministry of research on January 1st, 2002
- Funded by the Bretagne and Pays de la Loire Regional councils, the French ministry of research and the European Union



What is Biogenouest?

■ Technological-driven network

❖ Coordination of **21** life science technological core facilities

- **11** core facilities with national recognition
- **5** core facilities are ISO 9001 certified

❖ Grouping the resources and skills around **6** technological areas: *Genomics, Proteomics, Functional exploration, Bioimaging, Structural and metabolomic analysis, and Bioinformatics*

■ Research-driven network

❖ **More than 50** public research units (over 2,000 people including 800 researchers and teaching researchers)

❖ Working in **4** scientific fields

- Marine Biology
- Agriculture / Food-processing
- Human Health
- Bioinformatics



Missions of Biogenouest

- To **pool** resources and skills, to **collectively** participate in the technological evolution
- To offer **training sessions**
- To support the setting-up and creation of new **biotechnology companies**
- To integrate different **networks** and take part in **European research programmes**
- To attract **graduate students** and **researchers** in Western France



Biogenouest organization

- Not a legal body but a scientific interest group that associates by agreement
 - ❖ 6 major national research bodies (Anses, CNRS, Ifremer, Inra, Inria, Inserm)
 - ❖ 5 main universities of Western France
 - ❖ University hospitals and higher education establishments (so-called « grandes écoles »)
- Existence of different committees to better coordinate the technical core facility network
 - ❖ Coordination team
 - ❖ Advisory and management committees
 - ❖ Consultative committees



Coordination team

Michel Renard - Director



Performs Biogenouest's **day-to-day operation** and public relations activities



- Véronique Blin - Quality assurance

- ❖ Quality management and certification

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- Marilène Vallois – Personal assistant

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Advisory and management committees

- The **Administrative council** defines Biogenouest's strategy. It carries out and approves the programme of activities
 - ❖ 2 meetings per year
- The **Management committee** implements decisions, monitors performance and coordinates the activity of the network and its various bodies
 - ❖ 2 meetings per month
- The **Scientific council** coordinates Biogenouest scientific activities. It makes a number of recommendations to the Administrative Council (scientific policy, long-term orientations, configuration of the resources and equipment)
 - ❖ A meeting every month



Consultative committees

- The **Education & training commission**'s goal is to promote dialogue between the Biogenouest members, in order to optimise its overall training mission and adapt course content to progress in science and technology
- The **Research exploitation commission**'s goal is to share good practice and develop exploitation projects using the full set of services and resources in the Biogenouest network
- The **Technological areas committee** promotes shared access to facilities and coordinates the activities of the various facilities (working practice, organizational procedures, quality management, access management, pricing policy etc.). It has an advisory role to the Management committee and the Scientific council



Technological core facilities

Definition

- A technological core facility (TCF) is a set of **equipment** and **associated expertise**, which operating capacity is available to public or private organizations, with a view to offering **access to high-level technologies** for R&D
 - ❖ A TCF is a research infrastructure that is **open** to a wide range of users
 - ❖ A TCF can be single-sited or multisite
- **Essential criteria**
 - ❖ Opening
 - ❖ Innovation (technological development)
 - ❖ Training





Biogenouest technological core facilities






Genomics

- Nantes genomics core facility * 
- Structural and functional genomics


Proteomics

- High-throughput protein identification and characterization * 
- Monoclonal antibodies (PADAM) 
- Molecular interactions proteins microarrays activities (IMPACT) 

Functional exploration

- **Viral and non-viral vectorisation**
 - Preclinical viral vectors production 
 - Synthetic vectors production (SynNanoVect) 
- **Transgenesis and animal models**
 - Xenopus transgenesis * 
 - Rat transgenesis 
- **Screening and functional analyses**
 - Cardiex 
 - Imaging – Cell biochips (ImPACcell)

Bioimaging

- Microscopy Rennes imaging center (MRic) 
- Functional imaging PRISM
- Histopathology (H²P²)
- MicroPICell
- Arronax Cyclotron

Structural and metabolomic analysis

- Biopolymers, structural biology (BIBS) * 
- Corsaire (Metabolomics cooperations in Western France)

Bioinformatics

- GenOuest * 
 - BiRD
 - ABiMS
- } ReNaBi Grand Ouest 



Technological core facilities

Purposes

- To purchase high-tech equipment and recruit highly skilled people
- To ensure technological watch and innovation
- To spread knowledge and know-how (e.g. workshops)
- To train students, researchers, etc.
- To provide assistance and advice
- To make more visible the technological offers for companies

Rules for an optimal use:

- ❖ Access for external teams guaranteed for 50% of the capacity of each technological core facility
- ❖ Manager and scientific committee
- ❖ Quality management
- ❖ Information management (website), etc.



Valorisation and technology transfer

- Biogenouest relies on existing organizations and has set up a **committee (Research exploitation commission)** to share good practices
 - ❖ Research bodies and university technology transfer offices
 - ❖ Incubators and science parks
 - ❖ Innovation and technology transfer organizations
- Objectives
 - ❖ To help academic laboratories and researchers respond to **entrepreneurial opportunities**
 - ❖ To promote **knowledge transfer** and **technology transfer** in **biotechnology**
 - ❖ To facilitate the **emergence of biotech start-ups** from the technological core facilities and research units

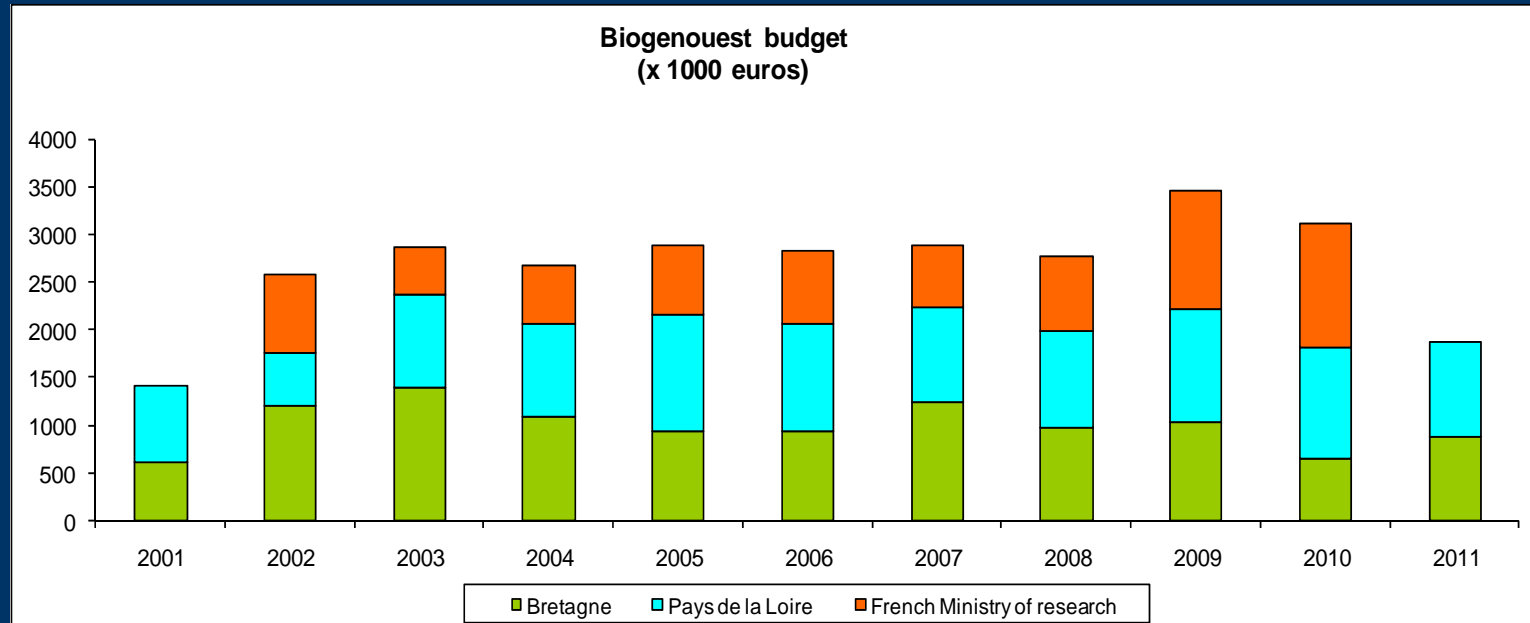


Scientific actions

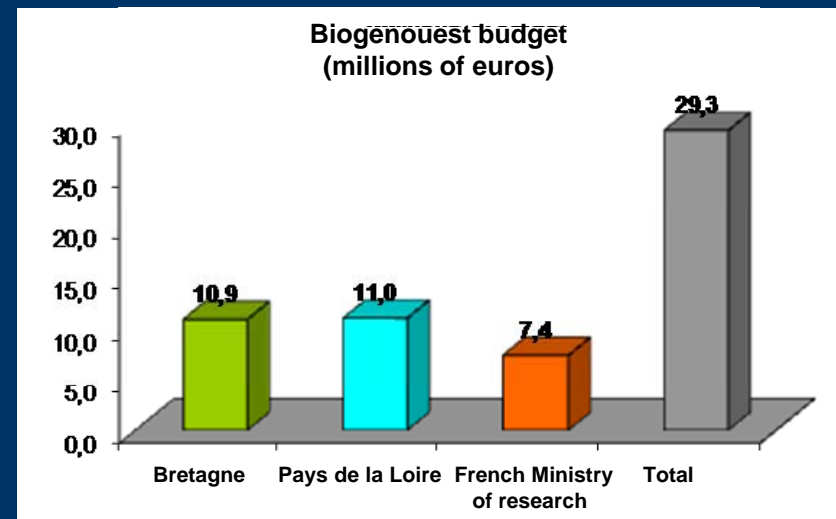
- Support for **unifying themes** and **transdisciplinary** approaches around technological core facilities
- **Technological workshops**
- Scientific **conferences** every month
- **Gen2Bio**, the **annual Biotech congress** organized by Biogenouest
 - ❖ For innovating biotech companies, labs or research centers, clusters, researchers, engineers and students...
 - ❖ Series of research- and company-dedicated conferences and technological workshops, a commercial exhibition
 - ❖ Gen2Bio 2012: Thursday 29 March in Lorient (Bretagne)
 - ❖ **www.gen2bio.org**



Biogenouest budget



- Since its creation, Biogenouest has been receiving a significant financial support from both Regional councils: about 1 M€ per year per region



The keys to Biogenouest success

- Good inter-regional coordination with strong support from both Regional councils
- Scientific fields focused on strong local economic sectors: Marine biology – Agriculture/Food-processing – Human health
- Willingness to share and contribute to scientific excellence
- Well organized network to coordinate multi-site technological core facilities: existence of committees and coordination team



Biogenouest exploits complementarities within a network culture

In 2012 Biogenouest will celebrate its 10th anniversary!





Thank you for your attention!

More information at www.biogenouest.org

