



# THEMATIC UNIVERSITY-BUSINESS FORUM

**UNIVERSITIES AND BUSINESSES**  
Building Euroregional Ecosystems

18-19th October 2016  
Miramar Palace, San Sebastián - Spain

**Input Paper by  
Jaana Puukka**



# Contents

---

<b>INTRODUCTION .....</b>	<b>1</b>
<b>1.0 THE EUROREGION GOVERNANCE AND STRATEGIC DEVELOPMENT .....</b>	<b>3</b>
<b>2.0 THE BASQUE COUNTRY TERTIARY EDUCATION SYSTEM .....</b>	<b>6</b>
<b>3.0 THE BASQUE COUNTRY INNOVATION ECOSYSTEM.....</b>	<b>8</b>
<b>4.0 THE AQUITAINE HIGHER EDUCATION SYSTEM .....</b>	<b>10</b>
<b>5.0 THE AQUITAINE INNOVATION ECOSYSTEM.....</b>	<b>13</b>

# INTRODUCTION

The European Commission provides support to universities and businesses in strengthening the knowledge triangle (education-research-innovation) through many actions and initiatives. One of the long term initiative is the University-Business Forums (UBForum). Since 2008, 20 UBForums have been organised: 6 high-level UBForums in Brussels and 13 thematic events in the Member States, with the most recent one in Helsinki in June 2016.

UBForums facilitate the dissemination of good practice, encourage networking and mutual exchange of experience and provide an environment for the development of partnerships between higher education and business. The UBForum activities aim to:

- Encourage the transfer and sharing of knowledge;
- Create long-term partnerships and opportunities;
- Drive innovation, entrepreneurship and creativity.

UBForums have generated many new ideas, some of which have been translated into European policy tools. Notable examples include Knowledge Alliances under Erasmus+ and more recently HEInnovate, which is a self-assessment tool for higher education institutions to both measure and develop their innovative capabilities, and to learn from case studies and other training materials.

The upcoming thematic UBForum in October 2016 is unique in the sense that for the first time in the UBForum history, it will be hosted by a Euroregion which promotes common interests across the border and cooperates for the common good of the cross-border population.

The Euroregion Aquitaine-Euskadi brings together the combined strengths of the French region of Aquitaine and the Autonomous Community of the Basque Country/Euskadi on the Spanish side of the border. The conference will take place in San Sebastián/Donostia in the Basque Country, the European Capitol of Culture 2016, renowned for the world's highest number of Michelin star restaurants per capita. The co-organising partners are the European Commission Directorate General for Education and Culture and the Education, Language Policy and Culture Department of the Basque Government, in collaboration with:

- The European Grouping of Territorial Cooperation of the Euroregion Aquitaine-Euskadi;
- The three universities of the Basque Country: the University of the Basque Country - Euskal Herriko Unibertsitatea (UPV-EHU), University of Deusto and Mondragon University;
- Bordeaux University – the leading university in Aquitaine;
- Basque Business Federation – Confebask;
- The city of Donostia-San Sebastián and the Donostia-San Sebastián 2016 European Capital of Culture;
- Euskampus Fundazioa.

The focus of this UBForum is on trans-border university-business cooperation, cultural entrepreneurship, and the role of university-business cooperation in urban, territorial and regional development.

Specifically, it will examine the Euro-regional perspective of trans-border university-business cooperation, using joint strategies of border-regions' development. The 'Basque Country – Nouvelle Aquitaine Euro-region' provides tangible examples of responsible, durable and fruitful partnerships to promote knowledge

and innovation ecosystems involving universities, companies, public administration bodies, and society at large.

As the 2016 European Capital of Culture, Donostia-San Sebastián offers a unique opportunity and context to share knowledge and tackle creative and cultural entrepreneurship as well as university-business cooperation in a cultural and heritage context. At the same time, the Forum will also consider the Civic Business system developed in the Basque Country as a model that contributes special features to the debate in University-Business Cooperation and its impact in regional development.

## THE EUROREGION AQUITAINE-EUSKADI KEY FACTS<sup>1</sup>

**Location.** A cross-border region of 50,000 km<sup>2</sup> combining Aquitaine in Southwest of France and the Basque Country in Northern Spain.

**Governance and members.** The Euroregion Aquitaine-Euskadi EGCT was established as a 'European Grouping of Territorial Cooperation' in 2011. Its members are the Autonomous Community of the Basque Country and the Region of Aquitaine, which since early 2016 was merged to form 'Nouvelle Aquitaine', consisting of Aquitaine-Limousin-Poitou-Charentes. In March 2016, the Euroregion expanded again with the accession of the Autonomous Community of Navarra in northern Spain. The Euroregion has a presidency which rotates every two years between Aquitaine and the Basque Country. Its assembly with 20 members has an equal representation from both regions. A secretariat of six members is led by the Director.

**Population.** The 5.4 million population is spread across the Euroregion, with six out of ten people in Aquitaine. During the past decade, the population grew in Aquitaine (+10.5%) but is declining in the Basque Country. The Basque Country population is ageing at a high rate, and it has a smaller share of youth under 25 years (22%) than Aquitaine (+29%) or the EU average (27%). The Euroregion population, particularly the Basque population, benefits from a higher average life expectancy and a lower risk of poverty than Europeans on average.

**Employment and unemployment.** Under 67% in 2012, the Euroregion is behind the Europe 2020 employment target of 75% for 20 to 64 year olds (EU: 68.5%). The unemployment rate in the Basque Country was 15% but 10% in Aquitaine. Since 2009 the economic and financial crisis has destroyed jobs particularly for the youth in the Basque Country: the data from the second quarter of 2016 shows that 32% (14,800) of young people aged 16 to 24 were unemployed, compared 14% for the general population (8.6% for EU-28).<sup>2</sup>

**Highly skilled workforce.** The Euroregion has a highly skilled labour force: 28% of the population of 24-65 years and 32% of the employees have higher education degrees. The figures are particularly high for the Basque country (47% and 54%). The Basque Country which has the highest share of workforce with tertiary education among Spanish Autonomous Communities. Close to 50% of 30-34 year olds have attained higher education, significantly above the Europe 2020 targets (40%), the EU average (38%) and Spain (42%).

**Low rates of early school leaving.** In 2012, the Euroregion early school leaving rate was at 10.3%, approaching the ET 2020 goal of 10% among 18-24 years old, and significantly better than the EU average of 12.8%. The Basque Country has already reached the target.

**Strong commitment to RDI.** The Euroregion's RDI expenditure was 1.8% of the GDP in 2012 (EU 2%), behind the Europe 2020 target of 3%, but the number of researchers is increasing particularly in the Basque Country where it doubled from 2000 to 2009 (10,518 in 2009 compared to 5,039 in 2000). In the Basque Country private firms concentrate 74% of the R&D workforce, compared to 58% in Aquitaine.

<sup>1</sup> Unless otherwise indicated, data in this section are based on the Stratégie de Développement Territorial Aquitaine-Euskadi 2014-2020. <http://www.aquitaine-euskadi.eu/> <http://www.aquitaine-euskadi.eu/strategie/plan-strategique-2014-2020/>

<sup>2</sup> En.eustat.eus; <http://archyworldys.com/the-unemployment-rate-fell-to-13-9-in-the-basque-country-in-the-second-quarter-of-2016/>

# 1.0 THE EUROREGION GOVERNANCE AND STRATEGIC DEVELOPMENT

The Euroregion Aquitaine-Euskadi (Akitania-Euskadi euroeskualdea) brings together the two regions of Aquitaine in the South West of France and the Basque Country in the North of Spain. The Euroregion stands out in the European landscape of regions thanks to its highly skilled population and advanced industry in sectors such as aerospace, advanced manufacturing, automobile industry, as well as gastronomy and tourism. There is also a well-developed support system for RDI, clusters and higher education institutions.

The cross-border collaboration between the region of Aquitaine and the Basque Country is managed by the Euroregion Aquitaine-Euskadi (EGTC) which was established in 2011. Its mission is to promote the social, economic and cultural development of its members, represent the Euroregion at the local, national and European levels and implement funded programmes. The EGTC has a financial autonomy and has since 2012 managed the joint regional funds. In addition, the EU cross-border, cross-national and interregional funds, and other EU and national funds are used to support the cross-border collaboration. Collaborative efforts focus on higher education and R&D, technological innovation, enterprise collaboration, tourism and cross-border logistics (e.g. Transfermuga<sup>3</sup>) as well as regional identity building through support for language learning, culture and a joint branding.

## AQUITAINE, THE BASQUE COUNTRY AND THE EUROREGION AQUITAINE-EUSKADI

**Aquitaine** is one of France's 22 old administrative regions comprising five departments in the south-east of France (Dordogne, Gironde, les Landes, Lot-et-Garonne and Pyrénées-Atlantiques). In January 2016, as a result of a major regional reform, which reduced the number of regions and delegated them new powers, Aquitaine was merged with the regions of Poitou-Charentes and Limousin to form 'Nouvelle-Aquitaine'. In the new regional governance system, Nouvelle-Aquitaine, like the rest of the 12 regions, was granted greater powers over economic development, innovation and internationalisation, vocational education and training, upper secondary education and the management of European cohesion funding. At the same time, higher education and innovation policies remain centrally steered and focus on excellence-based agglomeration and clusters.

The Autonomous Community of the Basque Country has since 1979 benefited from greater responsibilities and control of direct spending than autonomous communities in Spain in general, allowing it to steer the long term development of the Basque skills and RDI. Along with the region of Navarre, the historical Basque provinces – Alava, Biscaya and Gipuzkoa – are the only jurisdictions in Spain that have a fiscal autonomy and own tax system. Consequently, the Basque Country exercises broad competencies in science, technology and industry, education and research.

The formal cross-border collaboration between Aquitaine and the Basque Country goes back at least 30 years. In 1982, the EU support for the cross-border collaboration started through the POCTEFA cross-border operational programme for France, Andorra and Spain (Programme Opérationnel de Coopération Transfrontalière France-Andorre-Espagne). In 1989, Aquitaine and the Basque Country concluded a formal collaboration agreement. In 2009 joint funds 'Fonds commun Aquitaine-Euskadi' were launched. In 2011, the Euroregion Aquitaine-Euskadi was officially established as a European Grouping of Territorial Cooperation (EGTC) with financial autonomy. More recently a cross-border transport authority was established to facilitate the cross-border logistics and mobility. Local governments collaborate through Eurocité Basque Bayonne-Saint-Sebastien with 25 communes in France and 14 in the Basque Country, and the consortium Bidasoa-Txingudi, which joined the Eurocité in 2001.

<sup>3</sup> TRANSFERMUGA which improve logistics and mobility within the cross-border region, along the Bayonne-San Sebastian corridor. The collaboration has brought along a Cross-border Transport Authority, a permanent bus connection and the Transfermuga website with 4-lingual information (Basque, Spanish, French, English) on different transport options.

The Euroregion collaboration is steered with the help of the Development Strategy of Aquitaine-Euskadi 2014-2020<sup>4</sup> (Stratégie de Développement Territorial Aquitaine-Euskadi 2014-2020). The strategy focuses on four key priorities with over 40 collaborative activities:

- Euroregion Citizenship;
- Knowledge-based Economy, Innovation and Enterprise Competitiveness;
- Sustainable Region;
- Open Governance.

The Euroregion's six strategic specialisations have been identified drawing on the synergies of the smart specialisation strategies of the Basque Country and Aquitaine. They are:

- Aerospace and transport;
- Health and biohealth;
- Agriculture and agro-food industry;
- Sustainable wood construction;
- Renewable energies;
- Marine and littoral resources.

Higher education and RDI play an important part in the Euroregion's Development Strategy. Part of this action is channelled through the cross-border Euroregional Campus of International Excellence (Euroregional Campus in what follows) which combines the strengths of the University of Bordeaux and the University of the Basque Country (UPV/EHU) to enhance cross-border mobility, joint education provision in fields of regional relevance (e.g. Oceanography), as well as R&D activities in shared areas of excellence. Higher education institutions play an important role in the six strategic specialisations of the Euroregion, for example in the health fields where the focus is on the "Chronicity Valley" also delivered through the Euroregional Campus. Other cross-border networks of higher education institutions networks include EAN and PYREN.

<sup>4</sup> Stratégie de Développement Territorial Aquitaine-Euskadi 2014-2020. <http://www.aquitaine-euskadi.eu/>  
<http://www.aquitaine-euskadi.eu/strategie/plan-strategique-2014-2020/>

## CROSS-BORDER HIGHER EDUCATION AND RDI INITIATIVES

**Euroregional Campus of International Excellence** builds on the expanding collaboration between the University of the Basque Country (UPV/EHU) and Bordeaux University. Since 2011, the excellence initiatives of the UPV/EHU (EUSKAMPUS) and Bordeaux University (IdEx) have pursued cross-border collaboration in education and research. A cross-border Euroregional Campus of International Excellence was launched in November 2014 to benefit not only 100,000 students and 18,000 researchers, but also local economies. The aim is to develop new joint academic programmes, increase cross-campus mobility, promote RDI and knowledge transfer in the shared areas of excellence and promote the campus worldwide.<sup>5</sup>

**Chronicity Valley** is a regional innovation programme which brings together health organisations, the academia, and firms to address the regional challenges of ageing and chronic illnesses through cross-border collaboration. The key partners are the University of Bordeaux and the Basque Foundation for Innovation and Research on Health (Bioef), with the participation of UPV/EHU.

**The Ocean Experience Platform** is a new university-led initiative which responds to the RDI and skills needs of the local water sports industry with 5,000 jobs and an annual turnover of 1.5 billion euros. The Platform brings together the University of Bordeaux, the University of the Basque Country, the EUSKAMPUS Foundation, public authorities and the EuroSIMA Cluster Association representing the interests of 180 firms, 122 brands and 58 service providers in surfing and water sports. The Platform offers co-creation spaces (Living Lab) linked to national enterprise initiatives (French Tech), a creativity facility and a start-up accelerator (CreaSport Incubator) as well as a Master's programme to address new skills needs, and prepare students for managerial jobs and self-employment<sup>6</sup> The programme combines work-based learning, courses delivered by professionals, internationalisation and mobility.

**AEN** – the university network Aquitaine-Euskadi-Navarre, established in 1994, brings together 20 higher education institutions and other HE-related organisations in Aquitaine (15 members), Basque Country (3 universities) and Navarra (2 universities). It develops a cross-border higher education and research area, by promoting mobility, double degrees, research and enterprise collaboration. The network shares good practice and strengthens a common regional identity.<sup>7</sup>

**PYREN** (Education, training, languages) is a partnership between the Campus Iberus (that brings together the University de Zaragoza, the Public University of Navarre, The University of La Rioja, and the University of Lleida) and University of Pau et des Pays de l'Adour to develop a cross-border euro-campus with multidisciplinary, trilingual higher education, including mobility, internships and career services. The students of 22 specialisations or study pathways have access to open education in fields complementary to their specialisations. They can study in the partner universities for 1-2 semesters or do an industry internship.

<sup>5</sup> <http://www.ehubaq.eu/about/about-ehubaq#sthash.so2lVaiz.vvi1RNGV.dpuf>

<sup>6</sup> [http://idex.u-bordeaux.fr/files/Master\\_Management\\_Action\\_sports\\_-\\_Sports\\_de\\_glisse\\_2016-2017\\_Info\\_candidats-es.pdf](http://idex.u-bordeaux.fr/files/Master_Management_Action_sports_-_Sports_de_glisse_2016-2017_Info_candidats-es.pdf)

<sup>7</sup> <http://www.aquitaine-euskadi-navarre.com/>

## 2.0 THE BASQUE COUNTRY TERTIARY EDUCATION SYSTEM

**The Basque Country has developed a dense and diverse network of education providers**, including a public university, which serves eight out of every ten students, three private universities and nearly a hundred vocational education and training centres. There are also five international schools and more than dozen official language schools. Bilbao is home to Digipen<sup>8</sup>, the Institute of Technology Europe Bilbao which offers training in game design, while the first Gastronomy University in the world, the Basque Culinary Center<sup>9</sup>, (a faculty of Mondragon University) is located in San Sebastián, collaborating with the top chefs.

**The Basque University System, steered by the Basque Government**, consists of three universities – the University of the Basque Country, the University of Deusto and Mondragon University – with a combined student enrolment of about 70,000 students (2013-2014 data). In addition, 44,000 students outside of the Basque Government System are studying in the San Sebastián campus of TECNUM - the private University of Navarra.

### The Basque University System

**The University of the Basque Country/Euskal Herriko Unibertsitatea (UPV/EHU)<sup>10</sup>** is a large public research-based multi-faculty university which caters to about 80% of the students in the Basque University System: it has 56,820 students, 5,507 academic and 1,895 administrative staff. UPV/EHU is based on a multi-campus model with regional campuses in Alava, Bizkaia and Gipuzkoa. The UPV/EHU's leading initiative is **Euskampus – the Campus of International Excellence programme**. UPV/EHU is also developing a world class cross-border **Euroregional campus with the University of Bordeaux**. The UPV/EHU is responsible for 65% of the research carried out in the Basque Country. UPV/EHU is included in the top 500 universities in the Shanghai ranking.

**The University of Deusto / Deustuko Unibertsitatea<sup>11</sup>** is a private non-profit university with 8,200 students, 629 academic staff and 550 administrative staff spread across 6 faculties in the two campuses of Bilbao and San Sebastián. Deusto was established by Jesuits in 1886 and maintains a strong commitment to social responsibility both locally and globally. It offers degree programmes in Law, Business, Humanities, Engineering, Languages and Communication, Psychology and Education, International Relations, Theology, Social Work and Tourism.

**Mondragon University / Mondragon Unibertsitatea<sup>12</sup>** is a private non-elitist industry-facing university and a co-operative member of the Mondragon Corporation with 4,080 students and 445 staff. Its four faculties (and a polytechnic school) are distributed in 8 campuses in Gipuzkoa and Bizkaia. Mondragon offers undergraduate degree programmes in Engineering, Business, Education, Humanities and Gastronomic Sciences (Basque Culinary Center). Mondragon has a focus on demand-led education including dual studies, learning by doing and soft skills development. It has a unique cooperative governance system and structured industry collaboration model.

<sup>8</sup> <https://www.digipen.es/>

<sup>9</sup> <http://www.bculinary.com/es/home>

<sup>10</sup> <https://www.ehu.eus/es>

<sup>11</sup> <http://www.deusto.es>

<sup>12</sup> <http://www.mondragon.edu/en>

**The Basque Government steers the Basque University system through multi-annual University Plans**, launched in 2002-2003.<sup>13</sup> The University Plans provide a shared vision of the Basque University System agreed with the three universities in terms of the strategic direction, lines of action and quantitative targets. The current University Plan for 2015-2018<sup>14</sup> is aligned with a number of other Basque strategies in science technology and innovation, internationalisation, labour market, environment etc. In line with the Basque Science, Technology and Innovation Plan 2020, the aim is to increase university-industry collaboration to support regional smart specialisations. The university plan also supports the Aquitaina-Euskadi Strategic Plan through the strategic alliance between the UPV/EHU and Bordeaux University, notably the cross-border Euroregional Campus..

**The internationally recognised Basque Vocational Education and Training System – which includes Higher VET – plays a key role in the Basque economy’s competitiveness.** 65% of jobs in Basque companies – 70% in industry – require a vocational training certificate. The Basque VET System involves about 100 public and private centres which are training about 30,000 students. VET centres offer formal and specialized VET to both workers and unemployed as well as services to SMEs.<sup>15</sup> Vocational training offers around 150 training cycles adapted to the different professional requirements. **The Basque Government steers the development of the VET sector with the help of multiannual VET Plans.** The current IV VET Plan for 2015–2020 provides for the strategic transformation of the VET system to ensure that it meet the demands of the future. Key elements of the new VET model were developed with public and private stakeholders:

#### **Key elements of the Basque VET model<sup>16</sup>**

- An integrated training model for students, the working population and the unemployed;
- Focus on RDI, continuous improvement and teacher training. Innovation in new methodologies, such as Collaborative Challenge-based Learning, and learning environments as well SME innovation support based on TKgune project.<sup>17</sup> Innovation support is provided by the Innovation Centre for Vocational Training Tknika;
- Focus on active entrepreneurship and creativity to transfer the entrepreneurial culture to students and VET centres. The Basque Institute for Applied Creativity in VET (IdeaTk) introduces methods in creative thinking in teacher training;
- Specialised Network Nodes of VET centres for different industry sectors to provide immediate response to meet the business needs;
- A reformed Dual VET model (based on 4-year experimentation);
- The Basque Framework for Qualifications and Professional Specialisations that ensures a rapid response to the needs of firms and people for higher-level training and specialisations.

<sup>13</sup> The University Plans were launched in 2000-2003 covering first the UPV-EHU, and later extended to the University of Deusto (2005) and Mondragon (2007)

<sup>14</sup> Gobierno Vasco (2014). Plan Universitario 2015-2018. [http://www.hezkuntza.ejgv.euskadi.eus/r43-573/es/contenidos/informacion/dia3/es\\_2024/adjuntos/plan\\_uni\\_2015\\_2018\\_c.pdf](http://www.hezkuntza.ejgv.euskadi.eus/r43-573/es/contenidos/informacion/dia3/es_2024/adjuntos/plan_uni_2015_2018_c.pdf)

<sup>15</sup> <http://www.tknika.eus/liferay/documents/17114/1465069/TKgune-Programme-Case-Study.pdf/00a4efcb-7be4-4e09-a5d8-084f8276e683>

<sup>16</sup> Gobierno Vasco (2016). FP Euskadi Lanbide Heziketa New. No 2. 2016. <http://fpeuskadinews.com/en/index.html>

<sup>17</sup> <http://www.tknika.eus/liferay/documents/17114/1465069/TKgune-Programme-Case-Study.pdf/00a4efcb-7be4-4e09-a5d8-084f8276e683>

## 3.0 THE BASQUE COUNTRY INNOVATION ECOSYSTEM

**The Basque Country has a strong regional innovation system which has provided a model for European regional innovation initiatives and the idea of smart specialisation.**<sup>18</sup> Since its establishment in 1979<sup>19</sup>, the autonomous Basque government has strengthened the manufacturing base in medium-technology goods through support for innovation and cluster development. The innovation system has successfully supported the Basque economy which grew steadily from the 1990s to 2008, with emphasis on the development of a network of technology centres that work closely with local firms and clusters.

The Basque Country's **status as a strong innovator among the group of innovation followers** has been recently confirmed by the 2016 Regional Innovation Scorebook, despite the decline in performance (-6%) since 2014. The relative strengths of the Basque Country, compared to EU-28 include highly educated workforce, innovative SMEs which collaborate with each other, and employment in knowledge-intensive industries. It also has high scores for exports of medium and high tech products.<sup>20</sup>

**The Basque Science, Technology and Innovation Council coordinates the strategic development of the innovation ecosystem.** The composition of the Council, which is chaired by the President of the Basque government, was extended in 2014: now in addition to the representatives of Basque Government and the three provincial councils, the members include also universities, technology corporations, companies, and key agencies (Ikerbasque, Innobasque and Jakiunde). The Council is the supreme body for providing coordination and strategic direction to the Basque Science, Technology and Innovation System. It is responsible for the approval of the multiannual plans for science, technology and innovation (PCTi). The previous plan for 2015 and particularly the current plan for 2020 (PCTi Euskadi 2020) represent **a shift of focus from incremental innovation within the medium technology industries, towards more radical innovation in new industries and smart specialisation.**

**PCTi Euskadi 2020 - the Science, Technology and Innovation Plan for 2020**<sup>21</sup> will grow the public-private investment in RDI by 44% to €11.1m: one third of this investment will come from public sources, mainly Basque Government, and over 60% from private sources.<sup>22</sup> Through smart specialisation the plan will match the market pull and technology push by bringing together research oriented towards the demand of the market and society and research driven by advances in science and technology. The plan highlights the **Basque 'smart' specialisations – advanced manufacturing; energy, biosciences and health – as well as four areas of opportunity** – agro-food, regional planning and urban regeneration, ecosystems, and cultural and creative industries. With an increasing focus on results, the strategy aims to steer the STI effort to address the social challenges of the Basque Country, strengthen industrial

<sup>18</sup> Puukka J. D. Charles, J. Gines Morá and M.H. Nazare (2013), Higher Education in Regional and City Development: The Basque Country, Spain 2013, OECD. <http://dx.doi.org/10.1787/9789264200180-en>

<sup>19</sup> Since the 1979 Spanish devolution, the central government in Madrid retains some oversight of research policy and provides funding for competitive grants and national research centres under the Spanish National Research Council (CSIC). The autonomous communities have the responsibility for block funding of universities (this does not explicitly cover research), for providing additional funds for research grants and a wide range of innovation programmes and agencies. Provinces and municipalities may support innovation, but without funding university core programmes. Funding is also available from the EU Horizon 2020 and Cohesion Funding.

<sup>20</sup> Regional innovation scoreboard for Spain is available at: [https://ec.europa.eu/growth/industry/innovation/facts-figures/regional\\_en](https://ec.europa.eu/growth/industry/innovation/facts-figures/regional_en)

<sup>21</sup> [https://www.irekia.euskadi.eus/uploads/attachments/6312/PCTI\\_Euskadi\\_2020\\_en.pdf?1429183477](https://www.irekia.euskadi.eus/uploads/attachments/6312/PCTI_Euskadi_2020_en.pdf?1429183477)

<sup>22</sup> <https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/policy-document/science-technology-and-innovation-plan-pcti-euskadi-2020>

leadership through public-private partnerships, raise the levels of excellence, and ensure the development of necessary human capital. Technological infrastructure at the service of companies include universities, hospitals, world-class research centres, cooperative research centres and technology centres.

**The Basque STI System consists of 3 subsystems with 120 accredited agents:**

- The scientific subsystem, consisting of the Research Structures of the Universities and the Basic and Excellence Research Centres (BERCs);
- The technology and innovation subsystem, consisting of Technology Centres, Cooperative Research Centres (CRCs or CICs), R&D business units and supply and demand Intermediary Agents;
- The health subsystem, consisting of the Institutes of Health Research (IHS) and Health R&D Organizations.

Self-standing agencies that support the STI ecosystem include **Innobasque** that brings together public and private stakeholders to promote innovation and innovation culture, **Ikerbasque**, the Basque Foundation for Science that focuses on international talent attraction and retention, and **SPRI**, a Basque business development agency, with works to attract inward investments to the Basque Country.

The Basque Country has two important Technology Platforms, IK4 Research Alliance and the Tecnia Corporation, which employ 2,800 people worldwide in RDI functions.<sup>23</sup> **The Basque Technology Parks** in Álava, Bizkaia and Gipuzkoa are home to research centres, technology centres, innovation promoters and cutting edge organisations. They host nearly 430 companies, providing about 16,000 jobs and have a turnover of over €4 billion. Almost 5 000 people are engaged in RDI. Activities associated with the Technology Parks account for 5.5% of GDP, 5.4% of employment and 5.8% of corporate tax revenue.

The Basque Country has also developed a coordinated interagency plan for the **Basque Entrepreneurship System**. It works for the revival of the Basque entrepreneurial mindset, increases the idea take up and new initiatives that reach the market, promotes the startup growth and supports intrapreneurship. **BIC Business and Innovation Centres** are startup creation hubs which promote the creation and incubation of new innovative and technology-based enterprises. Since their establishment they have supported the creation of 2,000 businesses, which have generated 10,500 jobs, and tutored more than 4,000 entrepreneurs.<sup>24</sup> New initiatives include “StartUP! Basque Industry 4.0” (BIND4.0), a public-private accelerator which collaborates with major firms to attract the best industry startups to the Basque Country. With major companies located in the Basque country, the initiative supports the growth, acceleration and market placement of these recently-created companies.<sup>25</sup>

<sup>23</sup> TECNALIA – The Tecnia Corporation is made up of Tecnia Research & Innovation and the Azti and Neiker technology centres. Tecnia Research & Innovation has over 1,400 employees from 30 nationalities, 21 offices worldwide and 4,000 international clients. IK4 Research Alliance is a private and independent alliance of technology centres, which employs over 1,300 professionals.

<sup>24</sup> <http://www.spri.eus/en/entrepreneurship/start-up-creation-hubs-in-the-basque-country>

<sup>25</sup> Companies involved include ABB, CAF, CIE Automotive, Danobatgroup, Euskaltel, Iberdrola, ITP, Mercedes-Benz, Michelin, Microsoft, Repsol-Petronor and Siemens . See more: <http://www.spri.eus/en/news-spri/news/new-international-programme-to-attract-the-best-industry-4-0-startups-to-the-basque-country>

## 4.0 THE AQUITAINE HIGHER EDUCATION SYSTEM

The French region of Aquitaine enrolls over 115,000 higher education students (2013-2014 data<sup>26</sup>). The growing system consists of three universities – the University of Bordeaux, the University Bordeaux Montaigne and the UPPA (Université de Pau et des pays de l'Adour) and their six institutes of technology – as well as eight engineering schools, four schools of commerce and management, three centres of technological and industrial training, two arts schools, three 'grandes écoles', and Sciences po Bordeaux and UBA (*Institut de journalisme de Bordeaux-Aquitaine*).

Bordeaux, the leading city of Aquitaine, is a major concentration of higher education with main university campuses. In 2014, Bordeaux was ranked Top 5 in the list of the "Best French cities for University Study".

### 4.1 Agglomeration of higher education and knowledge organisations

In France, higher education is steered by the national government although decentralisation has allocated greater powers at the institutional and regional levels. **The national higher education policy has since 1990s promoted agglomeration of higher education and knowledge organisations** to increase international competitiveness and a more coherent higher education and research system. While the major focus has been on the capitol region of Ile-de-France, the policy has also brought along significant changes in regions such as Aquitaine, and notably its leading city Bordeaux.

In Bordeaux, the agglomeration of knowledge organisations began in 1997 when the **Bordeaux university cluster 'Pole universitaire de Bordeaux'** was established. Ten years later in 2007, the **University of Bordeaux Research and Higher Education - Bordeaux PRES** was created comprising four Bordeaux-based universities and later five, when the 'institute polytechnique de Bordeaux' joined the ranks in 2009.<sup>27</sup> The Law on HE and Research of 2013 revised the PRES system introducing the so called ComUEs (communautés d'universités et établissements). In early 2015, the Bordeaux PRES was reorganised into **the Aquitaine ComUE** (la communauté d'universités et établissements d'Aquitaine) bringing together the founding HEIs from Bordeaux and Pau: the University of Bordeaux, University Bordeaux Montaigne, University of Pau and des Pays de l'Adour, Bordeaux INP, Sciences Po Bordeaux, Bordeaux Sciences Agro.

In 2016, after the creation of Nouvelle-Aquitaine, also La Rochelle University, 180 km north of Bordeaux, joined the Aquitaine ComUE.<sup>28</sup> In addition to these HEIs, ComUE partners include the university hospital and other health organisations, the regional rectors' conference and specialised higher education institutions.<sup>29</sup> The Aquitaine ComUE implements the common areas of work of its members around their

<sup>26</sup> [http://ec.europa.eu/eurostat/estat-navtree-portlet-](http://ec.europa.eu/eurostat/estat-navtree-portlet-prod/BulkDownloadListing?sort=1&downfile=data%2Feduc_uae_enrt06.tsv.gz)

[prod/BulkDownloadListing?sort=1&downfile=data%2Feduc\\_uae\\_enrt06.tsv.gz](http://ec.europa.eu/eurostat/estat-navtree-portlet-prod/BulkDownloadListing?sort=1&downfile=data%2Feduc_uae_enrt06.tsv.gz)

<sup>27</sup> The founding members of PRES were: l'école nationale supérieure d'électronique, informatique et radiocommunications de Bordeaux, l'école nationale supérieure de chimie et de physique de Bordeaux, l'institut d'études politiques de Bordeaux et l'école nationale d'ingénieurs des travaux agricoles de Bordeaux)

<sup>28</sup> Poitiers and Limoges, which are also placed in Nouvelle Aquitaine have so far not followed the suit but have stayed in the old ComUE.

<sup>29</sup> Full list of partners: Bordeaux university hospital centre, Institut Bergonié (Centre régional de lutte contre le cancer), Rectors' conference of Bordeaux Aquitaine (CROUS of Bordeaux Aquitaine), National scientific research centre (Centre national de la recherche scientifique), École nationale supérieure d'architecture et de paysage de Bordeaux, KEDGE Business School, École supérieure des technologies industrielles avancées (ESTIA), École

main missions, for example the digital strategy and implements a project for the improvement of the quality of student life.

In 2010, the French government launched the **'Investments for the Future' scheme** (Plan Investissements d'Avenir -PIA) to finance major transformative projects to shape the future of France. A ten-year budget of €22 billion was earmarked for higher education and research identified as key priorities. These investments target e.g. the creation of more than ten world-class clusters of excellence in higher education and research, including the **University of Bordeaux Initiative of Excellence (IdEx Bordeaux)**<sup>30</sup>

## **4.2 Clusters of excellence in training (Pôles d'excellence de formation)**<sup>31</sup>

The decentralisation of powers in France has enhanced the role of the French regions in vocational and professional education. The Region of Aquitaine has launched new engineering schools and, as elsewhere in France, progress has been made in the offer of apprenticeships for the youth (16 to 25 years). In 2013, Aquitaine's offer covered: 380 trainings, 55 training centres for trainees. More than 19,000 trainees employed in firms in key regional industry sector.<sup>32</sup> The region offers support for both trainees and for small firms (less than 10 staff) who take these trainees.

Aquitaine has also developed two clusters of excellence in training – one in leather products (Cuir and Lux) and another in aerospace. These clusters with secondary and higher education institutions offer general, technological and professional training and implement the regional council's strategy to address the needs of the enterprises for skilled workforce and to support, maintain, adapt and raise the level of competences of job seekers and employees in the region. The Aerocampus Aquitaine is a state of the art 26 hectare campus with 150 staff in the refurbished Latresne airport which has been transformed from a military airport into a world class training centre to meet the needs of the global and regional aerospace cluster. It is the only campus in Europe to offer aerospace training spanning from the school leaving certificate (bac pro) to higher education engineering degrees. The campus relies on the joint mobilisation of the state, region, enterprises, industrial groups, relevant associations etc. Since its launch in 2011, Aerocampus Aquitaine has grown the student numbers from 85 to 260 in 2015 with guaranteed jobs for graduates. The operational budget of €4 million including €2.5 million from the Region of Aquitaine. Recently a new branch Aerocampus Auvergne has been launched in Aulnat.

nationale de la magistrature, École nationale supérieure d'arts et métiers - centre de Bordeaux (ENSAM), École des beaux-arts de Bordeaux.

<sup>30</sup> [idex.u-bordeaux.fr](http://idex.u-bordeaux.fr)

<sup>31</sup> <http://www.aquitaine.fr/actions/formation-jeunesse/poles-d-excellence-de-formation>

<sup>32</sup> <http://www.aquitaine.fr/actions/formation-jeunesse/apprentissage>

## **The key universities in Aquitaine**

**The University of Bordeaux**<sup>33</sup> is a multi-field research-based institution which brings together 53,000 students and 5,000 academic staff for study and research in 7 educational entities (4 colleges, 2 institutes and 1 school), 70 research laboratories and 18 international joint research laboratories. Re-established on the basis of a merger of the former Bordeaux-I, Bordeaux-II and Bordeaux-IV universities, Bordeaux University is among the top 200 universities in the Shanghai ranking for 2016.<sup>34</sup> In 2011, the Bordeaux Initiative of Excellence **IdEx Bordeaux**<sup>35</sup> was launched in collaboration with other knowledge organisations, the Regional Government and the Urban Community of Bordeaux with the aim to transform the university into a world class research university by 2020. The innovative research, education and knowledge transfer programmes are financed with the income from the €700 million endowment granted to IdEx Bordeaux as well as matched funding. IdEx Bordeaux makes a strong contribution to the RDI ecosystem by bringing together key research players in cutting-edge scientific fields: neuroscience, health technologies, public health, future materials, environment & climate, archaeology, optics-photonics-laser and ICT. The centres of excellence are backed by innovative educational programmes. The university also coordinates other projects under the 'Investments for the Future' scheme concerning higher education and research in the Bordeaux area.<sup>36</sup>

**The University Bordeaux Montaigne**<sup>37</sup> (former Bordeaux-III) brings together 15,000 students and 1,300 academic and administrative for study and research in the arts, languages, literature and human and social sciences. Bordeaux's humanist university has an exploratory, multi-lingual and civic-minded vocation. It offers 138 nationally recognised diplomas across the three university faculties or UFRs – Humanities, Languages and Civilisations, and Territorial and Communication Sciences – and two university institutes: the Bordeaux Montaigne University Institute of Technology, (IUT), and the Bordeaux Aquitaine Institute of Journalism (IJBA), situated in the Bordeaux Sainte-Croix neighbourhood. The university offers teaching in English and Spanish at the Agen University Centre (Centre Universitaire d'Agen). The university is also associated with the teacher training college for the Aquitaine region (ESPE d'Aquitaine). The large campus is based in the Bordeaux suburbia across the communes of Talence, Pessac and Gradignan.

**The UPPA (Université de Pau et des pays de l'Adour)**<sup>38</sup> is a multidisciplinary institution with 11 000 students. Ranked 12th out of 80 universities for student support and success in their degree courses, UPPA offers initial or continuing education, work/study programmes or apprenticeships, and Bachelor's, Master's and vocational degrees and Doctorates through five Teaching and Research units and two Doctoral schools. UPPA also includes two University Institutes of Technology, an IAE University School of Management, two engineering schools, a continuing education department and an apprenticeship training centre. UPPA holds close links with local stakeholders, multinational companies, SMEs/SMLs and local authorities, making it a major player in the economic development of southern Aquitaine. Located close to the Spanish border on five UPPA is well placed to develop cross-border cooperation with Spain, e.g. through the PYREN Project: IDEFI (Initiative for excellence in innovative training) funded by "Investment for the Future" scheme, covering scholarships, internships in companies and double degrees.

<sup>33</sup> [www.u-bordeaux.com](http://www.u-bordeaux.com)

<sup>34</sup> <http://www.shanghairanking.com/World-University-Rankings/University-of-Bordeaux.html>

<sup>35</sup> Founding members are the University of Bordeaux, CNRS, Inserm, Sciences Po Bordeaux, Bordeaux INP, Bordeaux Sciences Agro, Bordeaux Montaigne University. Partners: Bordeaux University Hospital, Inra, Inria, Irstea, CEA, Ifremer, Aquitaine Regional Government, Urban Community of Bordeaux.

<sup>36</sup> Clusters of Excellence (LabEx), Facilities of Excellence (EquipEx), University Hospital Institute (IHU) and Technology Transfer Office (SATT)

<sup>37</sup> <http://www.u-bordeaux-montaigne.fr> ; <http://www.u-bordeaux-montaigne.fr/en/university/discover-bordeaux-montaigne.html>

<sup>38</sup> <http://www.univ-pau.fr/fr/index.html>

## 5.0 THE AQUITAINE INNOVATION ECOSYSTEM

Apart from Ile-de-France, Aquitaine is the Number One among the French regions in terms of regional budget allocation to RDI.<sup>39</sup> During the period 2007-2013, Aquitaine invested 74% of the ERDF funds into knowledge and innovation economy. The regional innovation ecosystem is based on the development of value chains and scientific clusters of excellence (pôles scientifiques d'excellence). The regional strategy supports innovation by clustering and coordinating the public and private actors and encouraging them to insert innovation at all levels of economy and education. The regional government provides support for industrial activities and has developed a strong offer of technological training by establishing new engineering schools, in addition to other VET-related offers. The regional policy also supports knowledge transfer, collaborative projects and modernisation of the production tools and new technologies for firms to access the global markets, as well as new modes of social enterprise and production and environmental sustainability.<sup>40</sup>

According to the Regional Innovation Scoreboard 2016 which is based on data prior to the regional reform, France's South Western Region (Sud-Est Region) covering Aquitaine, Midi-Pyrénées and Limousin, is a strong innovator, despite a 4% decline from 2014. Its relative strengths compared to the EU28 lie in the higher education attainment level as well as business and public sector R&D expenditure. The relative strengths in the regional innovation system also include exports of medium and high tech products.<sup>41</sup>

The regional development strategy has for over 15 years targeted innovation and transformation of traditional sectors, intermediary and emerging sector to address the global and local challenges such as ageing and energy transition.<sup>42</sup> Aquitaine's industry sectors fall into three categories:<sup>43</sup>

- Consolidated sectors: Aerospace and defence, agrofood, wine, wood, construction;
- Intermediary sectors: Health and digital industry;
- Emerging sectors or sectors in transformation: Water and winter sports, aqua & hydrotherapy, renewable energies.

<sup>39</sup> <http://www.enseignementsup-recherche.gouv.fr/reperes/public/chiffres/france/reg.htm>, Rubrique : les budgets de RT des collectivités territoriales, onglet RTREG3

<sup>40</sup> <http://www.aquitaine.fr/actions/innovation-et-emploi>

<sup>41</sup> [https://ec.europa.eu/growth/industry/innovation/facts-figures/regional\\_en](https://ec.europa.eu/growth/industry/innovation/facts-figures/regional_en) ; <http://ec.europa.eu/DocsRoom/documents/17892>

<sup>42</sup> <http://www.aquitaine.fr/actions/innovation-et-emploi>

<sup>43</sup> Region Aquitaine (201?) L'AVENIR S'ÉCRIT EN AQT. Strategie de specialisation intelligente en Aquitaine.

<http://www.aquitaine-developpement-innovation.com/media/18002/2014-10-23-Strategie-de-Specialisation-Intelligente-en-AquitaineLIGHT.pdf> Available at <http://www.aquitaine-developpement-innovation.com/ressources-documentaires-1.html#.V7sfgl9OJTw>

The Aquitaine smart specialisation strategy process has identified 11 key themes for specialisation: <sup>44</sup>

- Chemistry as a source of new materials;
- Plant-based industry (biomass et bioraffineries);
- Laser systems, photonics and imaging, or from light to the object;
- Precision farming and eco-efficient agrifood;
- Sustainable wood-based eco-construction;
- Geosciences, metrology / monitoring for sustainable management of natural resources, or Preserving natural resources through technologies;
- embedded software and connected objects, or when intelligence enters the objects;
- Intelligent delivery of assets for the well-being and health or Less administration, better care;
- Pathway of integrated care and technical assistance to the patient, or life farther ahead;
- Systems and data for clean and smart mobility, or movement Invigorate;
- Competitive factory centred around the human factor or Rethinking the factory.

The key development agency is **Aquitaine Développement Innovation** which leads the region's economic development by connecting innovation and industrial development, in close partnership with clusters.<sup>45</sup> It was established in 2016, on the basis of a merger of two agencies with ten years of experience: 2ADI with the mission to support structuring industries and SMI performance, and to attract foreign investors was merged with Innovalis which focused on business innovation, start-ups and European projects.

The region of Aquitaine has a strong focus of cluster development which has been supported by central government policies. Aquitaine has close to 40 (37) clusters industries, five of them acknowledged as Poles of Competitiveness:<sup>46</sup>

- Aerospace in collaboration with Midi-Pyrénées (now included in the new larger region Occitanie);
- Agrofood;
- Route des Lasers – Photonics;
- PolAvenia- Geosciences for energy and environment;
- Wood and forestry products and materials.

The Regional government through **Aquitaine Développement Innovation**, supports the Interclustering in order to share expertise and facilitate “cross-fertilization” between the clusters. The most successful cluster which has been acknowledge as a ‘global cluster’ by the French state is focused on aerospace.

<sup>44</sup> Region Aquitaine (201?) L'AVENIR S'ÉCRIT EN AQT. Strategie de specialisation intelligente en Aquitaine. <http://www.aquitaine-developpement-innovation.com/media/18002/2014-10-23-Strategie-de-Specialisation-Intelligente-en-AquitaineLIGHT.pdf> Available at <http://www.aquitaine-developpement-innovation.com/ressources-documentaires-1.html#.V7sfgl9OJTw>

<sup>45</sup> <http://www.aquitaine-developpement-innovation.com/home.html>

<sup>46</sup> <http://www.aquitaine-developpement-innovation.com/poles-et-clusters-aquitains-2014.html#.V8XIUY9OJQM>

### **Poles of competitiveness**

Poles of competitiveness (“pôles de compétitivité”) are a French industrial policy tool, which since 2004 have developed place-based clusters of firms, higher education institutions and research organisations to economic growth and job creation. Over 70 state-acknowledged clusters were created by end 2014. In the current third phase (2013-2018) the policy has a shared governance between the state and the regions, and a strong goal to create concrete innovations. Over 50% of the state investment (€1.5 billion for 2004-2008) was concentrated in seven global clusters including the Aerospace Valley in the South Western France.

### **Aerospace Valley**

Created in 2005, with 860 members from both industry and academia, Aerospace Valley is the most significant innovation “pôle de compétitivité” in France in the field of aeronautics, space and embedded systems. The cluster covers the two geographically adjacent regions of South-West France, i.e. Aquitaine and Midi-Pyrénées. With 124,000 employees in industry, Aerospace Valley represents one third of the French aerospace workforce. The 8,500 researchers and scientists in the Aerospace Valley territory, represent 45% of the R&D staff employed in the aerospace sector in France. Up to October 2015, Aerospace Valley has obtained funding for 450 R&D projects with an accumulated value of €1.1 billion. Aerospace Valley aims to create 35,000-40,000 new jobs by 2025. [www.aerospace-valley.com](http://www.aerospace-valley.com)