



The Innovation Environment of the Region of Navarre

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1. Executive Summary

The purpose of this report is to show how the region of Navarre tackles innovation. The report presents, first at all, a quick overview of the region. Secondly, the innovation in the region is broken down according to 5 different groups: Public Institutions, University Spin-offs or Students who intend to start businesses, Business Development Institutions, R&D institutions and Enterprises. Finally, the paper reveals results of the survey carried out in those 5 groups.

The report draws attention to the great effort that Navarra is doing in order to develop innovative initiatives in the region through the 4 technological plans implemented from 2002 until the present day. Thanks to all those measures, Navarra is nowadays among the top 100 regions in the EU according to the index of the European Innovation Scoreboard and is among the top 3 in Spain.

According to the main results of the survey, these are the major conclusions:

- Public institutions: The outcomes capture the efforts of the Government of Navarre to improve the economy of Navarre in the area of innovation, supporting enterprises in every aspect, such as fund-raising, assistance and R&D consulting, new market areas and technology and knowledge transfer.
- University Spin-off enterprises cooperate with several institutions in the creation of a new product or innovation. On the whole, they do not belong to a network.
- Entrepreneurial University Students show great interest in online platforms, where they can find information for their business idea or even help for their innovative projects.
- Business development institutions: despite the small sample available, it can be observed that these institutes usually support other organizations to raise funds for making investments in innovation and help them to obtain partners and consultancy services.
- R&D institutes: no matter the number of employees of R&D institutes, they belong to a network. Although they use external IT tools supporting innovation creation and technology transfer, they hardly share any information through those external tools.

- Enterprises look for information to support innovation and technology transfer processes by using external resources. The kind of information they search for is quite basic, not too deep. The main reason for not using this information channel is that there is no internal need. Internet seems to be the main source of information. 66% of firms receive information from universities and higher education institutions in the region. Apparently, their level of satisfaction over the information they receive is quite satisfactory

It is recommended that although the crisis in Spain is also having major impacts in Navarra the Government of Navarre should not cut down the inputs of innovation and should continue to support the economic development of the region. Thus, Navarra could maintain its preferential position in the EU and Spain in the field of innovation and in terms of GDP.

2. Introducing Navarra

The Autonomous Region of Navarra is situated in the north of Spain at the western end of the Pyrenees, where it shares a border of 163 kilometres with France. It covers an area of 10,391 km² and is bordered on the east by Aragon (provinces of Huesca and Zaragoza), to the south by Aragon and La Rioja and to the northeast by the Autonomous Region of the Basque Country (provinces of Álava and Guipúzcoa).



Figure 1: Navarra in Spain. Extract: <http://sitna.navarra.es>



Figure 2: Navarra in Europe

In the 1960s, the economy of Navarra experienced a deep transformation from an agrarian structure towards industrial modernization, boosting economic growth for the decades that followed. Navarra's current modernization strategy aims to lead the regional structural transition from an industry-based economy to a knowledge-based economy. Navarra ranks 38 among the 271 European regions as regards per capita income. Navarra represents 1.36% of the Spanish population and contributes 1.68% to the GDP of Spain.

Surface area	10,391 sq. Km
Population	622,125
Active population	310,100
Working population	273,900
Unemployment rate	12.47%
GDP	19,472 million €

Figure 3: Navarra region – facts (Data Oct. 2011)

The current economic crisis has caused a recession of the economy and an increase in unemployment in Navarra. However, the rate of unemployment is still lower than that of the whole of Spain (21.7%).

The current population of Navarre amounts to 622,125 inhabitants. 2.3% of the population lives in agglomerations of more than 20,000 inhabitants, 39.2% in agglomerations of between 2,000 and 20,000 inhabitants and 18.5% in agglomerations of less than 2,000 inhabitants.

Navarra has around 28,000 university students distributed among the “Universidad Pública de Navarra” (Public University of Navarre or “UPNA”), the “Universidad de Navarra” (University of Navarre, privately-owned) and the “Universidad Nacional de Educación a Distancia” (National Open University or “UNED”). This high concentration of university graduates means that R&D personnel in Navarre (in full time equivalent) represents 20% of the region’s working population. Employment in high-tech manufacturing and high-tech service sectors represent 11.2% of regional employment, well above the Spanish average of high-tech employment (6.4% of national employment) and close to the European rate (13% of European employment).

The Constitutional Law for Reintegration and Improvement of the Regional Charter of Navarre of 1982 (“Ley Orgánica de Reintegración y Amejoramiento del Fuero de Navarra”) expressly states Navarre is empowered to maintain, establish and control its own tax system, provided that it is in compliance with international agreements and national tax policies.

3. Innovation Infrastructures of Navarre – General Overview

Regional efforts on R&D and innovation in Navarre have experienced a remarkable evolution in the last seven years. The regional R&D expenditure as percentage of GDP has increased from 0.9% in 2002 to 2.13% in 2009. This can be attributed to a strong policies supporting regional innovation. Such R&D effort is by far higher that the Spanish average rate of 1.38% and slightly higher than the EU27 rate of 2.01%.

It is noteworthy that, pursuant to the Barcelona European Council target of 3% GDP spent in R&D, where one third should be public expenditure and two thirds private expenditure, private R&D expenditure in Navarre amounts approximately to 68.84%, whereas 9.4% comes from public administrations and 21.67% from higher education institutions. 2.4% of the overall Spanish expenditure on R&D originates in Navarre.

Navarre is the second most innovative region in Spain and ranks 76 in Europe according to the European Innovation Scoreboard (2009). 93% of the ERDF programme is dedicated to the Innovation and Knowledge Society.

	2005	2006	2007	2008	2009
R&D Expenditure (Million €)	258	317	333	358	388
R&D Expenditure (% of GDP)	1.7%	1.92%	1.89%	1.92%	2.13%
Private R&D Expenditure (% of Total R&D Expenditure)	66%	67.8%	65.7%	69%	69%
R&D Staff (Full Time Dedication)	4,492	5,277	4,88	5,409	5,511

Figure 4: R&D Expenditure in the Region of Navarre

3.1. Innovation policies of the Government of Navarre

The economic independence of Navarre and the autonomy of its tax regime have allowed to allocate regional funds to finance the technological innovation programmes successively designed by the regional Department for Innovation of the Government of Navarre(regional equivalent to a national Ministry of Innovation).

The Government of Navarra made its first attempt at innovation through a Research Support Commission in 1977. Soon after, the first regulation on R&D and innovation aids was elaborated in 1982, being the basis for the innovation support programmes defined in the subsequent Technological Plans. Meanwhile, the European Business Innovation Centre of Navarra (CEIN) was established in 1991, sponsored by the Society for the Advancement of Navarra (SODENA), an instrument of the Autonomous Government of Navarra for local development, along with a group of private sector companies.

Regional innovation policies are designed and managed by the Department for Innovation of the Government of Navarra. Support is obtained from intermediate agents such as CEIN, the Innovation Park of Navarra (a scientific and technological park for the development of R&D activities within enterprises and institutions) and the Network of Technology Centres of Navarra (RETECNA,) a regional network formed by nine public and private R&D organizations which aim at enhancing synergies, the development of joint projects and interaction with other networks).

The history of the Technological Plans of Navarra:

1. **The First Technological Plan** was established in 2000-2003 with a budget of EUR 120M. Its primary objective was increasing R&D activity in companies and extending this activity to companies without previous experience in this area, by gradually expanding the business culture for innovation. At the same time, it laid the grounds for a technological infrastructure that would be capable of providing services to companies in a variety of sectors. Under this first Technological Plan, new technological centres were created: the Technological Innovation Centre of the Automobile Industry of Navarra (CITEAN), the National Centre for Renewable Energies (CENER) and the Centre for Applied Medical Research (CIMA). Even a mixed public-private research centre was established: the Agrobiotechnology Institute (IdAB), bringing together the Government of Navarra, the Public University of Navarra and the Senior Scientific Research Council of Spain (CSIC).
2. **The Second Technological Plan** was implemented between 2004 and 2007 with a EUR 140.90M budget. It maintained the objective of making R&D activities even more widespread among companies in Navarra; it did however put the emphasis on consolidating the R&D activities of companies, creating favourable conditions for them to carry out more stable R&D plans and programmes and seeking to foster cooperation between partners within the Science-Technology-Enterprise system in Navarra. This Second Plan allowed to obtain value from

the technological infrastructures established in the First Plan and to bring the research conducted in the academia to the market.

3. **The Third Technological Plan** (2008-2011) with a budget of EUR 228.90M fostered R&D activities in companies without previous experience in this field. However, it also encouraged a more radical and intensive approach to R&D among experienced participants of the regional innovation plan, by promoting greater co-operation in R&D between the different partners, both at the regional and the national and international level. The injection of funds made until 2011 represented an increase of 62% compared to that of the Second Plan (2004-2007). The Third Plan focused on the following sectors: biotechnology (oriented towards health, food/agriculture and energy/environment), nanotechnologies, renewable energies, ICTs, automotive and other sectors that may come in the future. Through this Third Plan, the Government of Navarre sought to increase technological cooperation and internationalization, as well as participation in European projects.
4. **The Fourth Technological Plan** (2012-2015): with a budget of EUR 170.5M this edition of the plan put the focus on health, green and talent economy. Its aim is to improve business competitiveness, revitalize the acquisition and transformation of knowledge (Open Innovation) and to integrate the innovation generated in Navarre into the European space of research.

In May 2008 a process was launched for defining a new overall strategy plan for the economic development of Navarre in the next decades called the “**MODERNA**” Plan. The Plan introduced a wide regional bottom-up consultation approach through systematic workshops involving a large group of regional socioeconomic representatives, innovation stakeholders and led by the regional Government. MODERNA is a new Model for the Economic Development of Navarre, whose core objective is to undertake a new knowledge-based socioeconomic transformation of the region (the first significant socioeconomic transformation took place in the second part of last century), setting up objectives for the year 2030 that ensure a sustainable economic growth and improve the positioning of Navarre in a European and global context.

3.2. University Spin-offs and Students who intend to start businesses

From 2008 until 2012 the Public University of Navarre (UPNA) has run 16 spin-off projects, 8 of which have ultimately become actual enterprises. There are no data available about the other universities.

UPNA has its own Business Incubator, which operates through the Office for the Transfer of Research Results (“Oficina de Transferencia de Resultados de la Investigación” or OTRI). OTRI gives technical development support and helps new entrepreneurs to define their business ideas. Additionally, UPNA has a programme conducted together CEIN to enhance the innovative abilities of students.

3.3. Business Development Institutions

In Navarra, there are several institutions in charge of business development. The following list includes those focusing on innovation:

- SODENA, a publicly owned capital venture firm, was established in 1984 and is nowadays the main instrument of the Government of Navarra for the business development of the region. SODENA carries out its activities as a public limited company, whose principal shareholder (65.42% of shares) is the Government of Navarra. SODENA focuses its activities on equity investment in innovative business projects aimed at the creation of new companies, the expansion of existing ones, the internationalisation of businesses and attracting foreign business investments to Navarra.

- CEIN (European Business Innovation Centre of Navarra) is a regional publicly owned BIC (Business Innovation Centre), a member of the European Business Innovation Centres Network, that supports SMEs and entrepreneurs in Navarra and seeks to consolidate and diversify the region’s economic and industrial environment. Its aim is to identify, promote and develop new and innovative business projects and encourage innovation in companies based in the region as part the Regional Innovation Monitor project. It is oriented to encouraging entrepreneurship and disseminating an innovation culture among companies.

- START UP CAPITAL (also publicly owned) is more oriented to finance new technology based firms or start-ups.

Apart from these public institutions, Navarra has more than 22 private institutions in charge of developing innovative initiatives.

3.4. R&D Institutes

According to Navarra Innova, the Innovation Portal of Navarra, these are the main R&D institutes in Navarra:

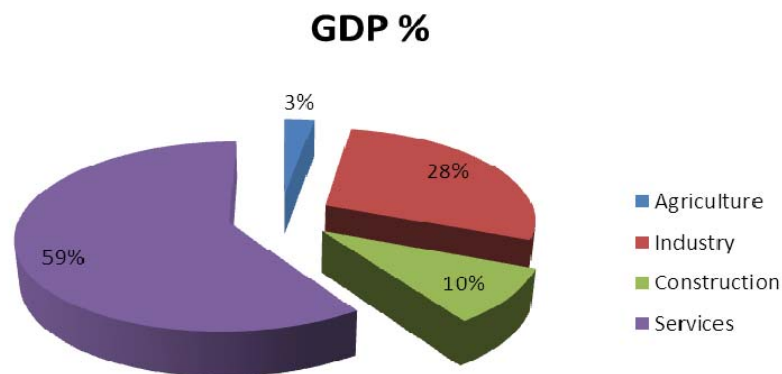
- CEMITEC: Multidisciplinary Technology Centre of Navarre (www.cemitec.com). Focused on electronics, fluid mechanics, thermal engineering, metallic materials and polymeric materials. (www.cemitec.com)
- CENER: National Reference Centre for Renewable Energies (www.cener.com). Focused on solar energy, wind energy, biomass energy, bioclimatic architecture, thermal solar energy. (www.cener.com)
- CITEAN: Technological Innovation Centre of the Automobile Industry of Navarre (www.citean.com): Focused on design engineering and virtual simulation, test laboratories, and equipment for R&D test tracks. (www.citean.com)
- FIDENA Principia Tech: Joint venture between the Government of Navarre (SODENA), Principia Tech (an American high-tech international spin-off from MIT) and the Public University of Navarre (UPNA). Nanotechnology centre focusing on related research areas and on supporting nanotechnology start-ups and spin-offs. (www.fidena.es)
- IDAB: Institute of Agrobiotechnology: Centre of the Public University of Navarre, the Senior Scientific Research Council of Spain and the Regional Government of Navarre. Focused on molecular biology, genetic engineering, immunology, biochemistry and metabolomics, it is the flagship institution on agrobiotechnology in Navarre. (www.agrobiotecnologia.es)
- AIN: Industrial Association of Navarre (www.ain.es): Focused on surfaces, materials, nanotechnologies and industrial process innovation. (www.ain.es)
- CIMA: Centre for Applied Medical Research (www.cima.es): Linked to University of Navarre, focuses on cardiovascular science, genic therapy and hepatology. (www.cima.es)
- CNTA: National Centre for Food Safety and Technology. (www.cnta.es).
- Instituto Lactológico de Lekunberri: Dairy Technology Centre. (www.illekunberri.com).
- Fundación L'Urederra: Focused on surfaces, materials and nanotechnologies. (www.lurederra.es)

3.5. Enterprises

Navarre registered the highest regional annual GDP growth (1.2%), while Spanish GDP decreased by 0.1% in 2010. However, all these increases were below the average European GDP growth (1.8%). In the case of Navarre, this growth was mainly due to the automotive sector and, to a lesser extent, to the metallurgy-related industry of the region.

Compared with the economic situation of Spain as a whole, all the above positive values from Navarre have been generated as a consequence of a larger industrial development (including the food-processing industry), and a substantial deployment of the services sector, together with a minor dependence from the building or agricultural sectors, unlike other regions in Spain.

Graph 1 shows the major role of the industry and services sectors in the economy of Navarre.



Graph 1: GDP % of regional enterprises by sectors

4. Sources of Innovation in Navarre – Main results

Figure 5 displays the sample used in the survey.

Navarra	Survey
Innovative Entreprises	73
R&D Institutions	3
Business Development Inst.	3
Spin-offs	9
Students	12
Public Institutions	2
Total Survey	102

Figure 5: Sample of the survey

4.1. Public institutions.

Two questionnaires were elaborated by the Innovation and Knowledge Transfer Service of the Department for Innovation of the Government of Navarre. The region of Navarre supports companies in their technology and knowledge transfer processes, in the organization of international trade missions, in raising funds for the implementation of investments in innovation, and provides assistance in the search of partners for R&D purposes as well as consultancy services for finding new market areas.

The Innovation and Knowledge Transfer Service has its own IT solution to support the transfer of technology and the creation of innovation.

4.2. University Spin-offs and Students who intend to start businesses

4.2.1. Spin-offs.

8 spin-offs have responded to the questionnaires. Their main NACE code is M71.2. Technical testing and analysis (75%). The main sources of innovation are their employees (100%) and then conferences and scientific publications, each with 63%.

They cooperate with universities and other companies (100%) and then with R&D institutions (63%). The main scope of cooperation is participation in R&D work committees (75%) and half of them rent mobile measurements instruments. Those who search information in Internet databases look primarily for new technological solutions.

The main and impressive finding is that only 38% of them are members of a network. Therefore, becoming a member of an Open Innovation Platform (ORP) could open a market niche for this group.

In the next 2 years, spin-offs want to invest money in trademarks (75%), staff training (75%), hiring of highly skilled employees and purchase of machinery and equipment (63% each one).

On the whole, spin-off enterprises are mostly concerned about their employees, about how they manage their business and about not belonging to a network.

Main results can be seen in Figure 6.

University Spin-offs	9 surveys	
Use of internet databases & technology transfer portals as sources of innovation	33%	
Cooperation with institutions in the creation of a new product / innovation	100%	
-R&D Institutions	55%	
-Universities	89%	
-Other companies or institutions	89%	
-Business support organizations	33%	
Member of a network	33%	
Which kind of network	<u>total</u>	<u>out of 33%</u>
-Cluster	11%	33%
-Technology Platform	11%	33%
-Advanced Technologies Center	11%	33%
-Sectorial Consortium	11%	33%

Figure 6: Main results for University Spin-offs

4.2.2. Students.

12 students who are currently pursuing innovation programmes have been interviewed for the survey. Their main motive for starting their own business activity is a their own professional development (100%), the second motive is becoming economically independent (58%) and finally, only 25% want economically exploit their invention through patents or licenses.

The main sources of information are Internet databases and technology transfer portals (67%) and the second and third sources are university students (58%) and potential co-owners or co-workers. Business partners as well as R&D institutions and conferences (42%) and scientific publications (only 17%) are further sources used.

92% wants to cooperate in the creation of a new product or innovation with universities and 83% with R&D institutions and Business support organizations. The scope of cooperation is mostly focused on creating innovative solutions for other companies (67%) and the second one, work committees on R&D (42%).

From all the students who search information in databases, the scope of their search covers new technology solutions (100%). The main information searched for was name of the intellectual property and patents.

75% of the students desire to become a member of a network and all of them are willing to be a part of an advanced technology centre. Finally, in the first 2 years they would like to invest money in trademarks (67%), in machinery and equipment (58%) and the hiring of highly skilled employees (50%).

On the whole, entrepreneur university students are highly interested in online platforms where they can find information for their creations or find support for their innovative projects.

Main results can be seen in Figure 7.

Entrepreneurial University Students		12 surveys	
Use of internet databases & technology transfer portals as sources of innovation		67%	
Cooperation with institutions in the creation of a new product / innovation		92%	
-R&D Institutions		83%	
-Universities		92%	
-Other companies or institutions		8%	
-Business support organizations		83%	
Member of a network		75%	
Which kind of network		<u>total</u>	<u>out of 75%</u>
-Cluster		8%	11%
-Technology Platform		50%	67%
-Advanced Technologies Center		67%	89%
-Strategic Cooperation in the field of innovation		42%	55%
-Joint Venture		17%	22%
-Sectorial Consortium		8%	11%

Figure 7: Main results for Entrepreneurial University Students

4.3. Business Development Institutions.

The sample is quite small, with only 3 answered questionnaires. All the business development organizations surveyed support organizations in their innovation creation and technology transfer processes to raise funds for making investments in innovation, whilst assisting them in their search for R&D partners and consultancy services when finding new market areas.

Just one of them gives support for the organization of international trade missions and provides IT tools for electronic management enterprises. The same institution has its own IT tool to support the transfer of technology and the creation of innovation.

2 out of 3 are members of a network such as a cluster, a cooperation venture in the field of development and innovation commercialization and a sectorial consortium. The one, which owns an IT tools belongs as well to a technology platform.

To sum up, there is no conclusive information about business development institutions. It can be observed that these institutes usually support other organizations to raise funds for making investments in innovation and help them to find partners and consultancy services.

Main results can be seen in Figure 8.

Business Support Organizations <i>(small sample, not significant value)</i>	3 surveys	
Own IT Solutions:	33%	
- Autonomous database to support the transfer of Technology		
Member of a network	67%	
Which kind of network	<u>total</u>	<u>out of 67%</u>
-Cluster	67%	100%
-Technology Platform	33%	50%
-Strategic Cooperation in the field of innovation	67%	100%
-Joint Venture	33%	50%
-Sectorial Consortium	67%	100%

Figure 8: Main results for Business Support Organizations

4.4. R&D Institutions.

4 R&D institutes have been interviewed, 2 of which have more than 100 employees. On the whole, they own 17 intellectual property rights. From 2008 to 2011, they sold 11 intellectual properties. 99% of them signed agreements with enterprises for expertise and consultancy services were provided by the 3 largest R&D institutes.

The main sources of innovation in research units are employees, conferences and scientific papers (100%), followed by enterprises, other R&D institutions and Internet databases and innovation portals (75%). Finally, students seem to be the last source (50%).

3 out of 4 R&D institutes have their own database, but all of them use external IT tools supporting innovation creation and technology transfer, such as public databases (CORDIS or UNIDO). 75% also use regional technology transfer portals – owned by business support organizations or by the Government of Navarre and industrial portals, such as energy cluster portals.

All the interviewees have sent their institution's contact information to external tools supporting technology transfer and 3 of them the name and a short description of intellectual property. Only 1 of the 2 SMEs has sent the contact information of intellectual property creators.

They belong to a network or technology platform, 2 of them have joined a cluster or advanced technology centres. The biggest R&D institute is also a member of

a network for strategic cooperation purposes in the field of development and commercialization of innovation.

On the whole, regardless of the number of employees, R&D institutes belong to a network. Although they use external IT tools supporting innovation creation and technology transfer, they hardly share any information through those external tools.

Main results can be seen in Figure 9.

R&D Institutions <i>(small sample, not significant value)</i>	4 surveys
Use of internet databases & technology transfer portals as sources of innovation	67%
Internal Resources for technology transfer support:	
- Autonomous database	75%
- Technology transfer portal	25%
Utilizan recursos TIC (on-line) externos para la innovación y la T.T.	100%
Member of a network	100%
Which kind of network	
-Cluster	50%
-Technology Platform	100%
-Advanced Technologies Center	50%
-Strategic Cooperation in the field of innovation	25%

Figure 9: Main results for R&D Institutions

4.5. Enterprises.

The sample of the survey consists of enterprises that had in the past a relationship with the university in R&D or that had taken part in European R&D Projects or that had received funds for R&D from the Government of Navarre or from the Centre for Industrial Technological Development (CDTI).

The fieldwork was carried out in February 2012 and the final sample included 73 firms.

81% of the firms use external resources to support innovation and technology transfer processes. Business support organization in the region of Navarre is with 29%, the most used source and then online databases (18%) and industrial portals for technology transfer (15%).

The scope of the information sought by the company in those sources was basic information, such as the title or name of the intellectual property or patent or trade mark and contact data (27%). Then, information on costs related to the sale of intellectual property (14%).

Only 19% of the interviewees do not use external resources and the main reason for this is that there is no internal need. Main results can be seen in Figure 10.

Enterprises	73 surveys
External resources to support innovation and technology transfer processes:	81%
-Online database	18%
-Business support organizations in the region	29%
-Organizations of enterprise promotion in the region	3%
-Industrial portals for technology transfer	15%
-Others (external institutions)	33%
Scope of information sought by the company:	81%
-Title/name of intellectual property/patent/trade mark	27%
-Short description of the protected property	8%
-Full description of the protected property	4%
-Contact data	27%
-Information on intermediate cost related to sale of intellectual property	14%
-Others (new products, research,...)	67%
Reason for not using external resources	19%
-Lack of knowledge about such solutions	1%
-No internal need	15%
-High cost	1%

Figure 10: Main results for Enterprises A.

Internet is the main source of information for technology trends (73%), new product services (69%) and universities and R&D (45%). Secondly, the presence in events and trade fairs has a real impact in technology trends and new product services (37% and 36%). Thirdly, print media and trade journals are used as sources of information for new products and services (32%).

25% of the firms do not receive any information about the activities of universities and other higher education institutions in their region. Among those who received information, 42% of them get information once or twice a year. Main results can be seen in Figure 11.

Enterprises	73 surveys		
	Technology trends	New Products services	Universities & R&D
Sources of information:			
-Print media, trade journals		32%	15%
-Internet	73%	69%	45%
-Technology platform	18%	8%	1%
-University knowledge map	6%	1%	6%
-Newsletter, brochure	19%	21%	7%
-Research reports	10%	4%	
-Annuals reports	3%	1%	3%
-Presence on events and trade fairs	37%	36%	3%
-Consulting organizations	10%	11%	3%
-Innovation exhibition, competition	25%	25%	1%
-Business partners	16%	22%	8%
-Concurrence	4%	4%	
Information on the activities of universities:			
-Weekly		4%	
-Montly		18%	
-Every six months		21%	
-Annually		21%	
-No information		34%	

Figure 11: Main results for Enterprises B.

Finally, half of the firms have no information to assess the level of satisfaction regarding the usefulness of information that companies get from the region's universities and other higher education institutions.

Those who can assess the level of satisfaction, on the whole, have a more positive impression of the information they get. Contact persons and professional competence of university researchers are the most valued pieces of information by firms. All the results can be seen in Figure 12.

Enterprises	73 surveys		
High level of satisfaction of the information from the region's universities:	+	-	No info
-University research	38%	21%	41%
-Professional competence of university researchers	41%	10%	49%
-R&D equipment and labs	38%	18%	44%
-R&D services provided by universities	33%	15%	52%
-R&D results achieved in universities	32%	16%	52%
-R&D activities	26%	22%	52%
-Contact person in charge	55%	2%	43%
-Universities' technology transfer offices (TTOs)	29%	8%	63%

Figure 12: Main results for Enterprises C.

To sum up, enterprises look for information to support innovation and technology transfer processes by using external resources. The kind of information they search is quite basic, not too deep. The main reason for not using this channel of information is because there is no internal need.

Internet seems to be the main source of information. 66% of the firms receive information from the universities or higher education institutions in the region. Apparently, the level of satisfaction over the information they receive is quite satisfactory.

5. Good Practice – UNIVALUE G9/ACTION



The Group 9 (G9) of Universities (original name: “Grupo 9 de Universidades”) is constituted by the following universities: Universidad de Cantabria, Universidad de Castilla-La Mancha, Universidad de Extremadura, Universitat de les Illes Balears, Universidad de La Rioja, Universidad de Oviedo, Universidad del País Vasco, Universidad Pública de Navarra and Universidad de Zaragoza.

G-9 is a non-profit organization supporting the collaboration between universities within the group, in areas such as research and teaching activities as well as management and services. The group’s primary objectives are: Promoting Excellence in Research, Encouraging the Transfer of Results and Raising Awareness on Open Innovation. G-9 focuses on Research, Development and Innovation to find applications for everyday products to the benefit of society.



Universities know well how difficult it is to bring the results of university research to the socioeconomic fabric; they are also aware of the huge investments that need to be made to operate as an individual institution. These are the reasons why they decided to establish **UNIVALUE VALORIZACIÓN S.L.** – to facilitate the

appraisal and valorisation by the market of results from Patents and Technologies through Technological and Knowledge Transfer.

Intense competitiveness drives the University to demonstrate Technology Transfer from the academia to society. These are standard principles of viability any multinational enterprise in the international market needs to uphold through sustainable projects. Current demands have encouraged “Grupo 9 de Universidades” to apply these criteria to facilitate coordination and synergies through UNIVALUE VALORIZACION, S.L. UNIVALUE was established as a Technology Transfer Office (TTO), matching the demands of the market and universities. The logo integrates all the universities within G-9, as it represents their innovative spirit and their Integral Innovation.

Its business areas include a large number of innovative activities such as: Agroindustry, Biotechnology, Chemistry, Civil Engineering, Electrical Engineering, Entertainment, Arts & Education, Environment, Health Care & Welfare, Health & Safety, ICTs Technologies, Legal Sector, Managing Technologies, Materials, Mechanical Engineering, Metallurgy, Music, Physics, Renewable Energies, Robotics and Sports.

All in all, UNIVALUE is a good example of how universities can collaborate and work together on a win-win basis, creating a cluster to foster innovation. Current efforts are set to find the best innovation transfer process.

6. Conclusions

Navarre is a region in the north of Spain, which has invested since 2002 more than EUR 660.3M in innovation and knowledge transfer. All these investments have had a great impact in the economy and development in the region and therefore, Navarre is nowadays among the top 100 regions in the EU according to the index of the European Innovation Scoreboard and among the top 3 in Spain.

The main results of the survey conducted in the Region of Navarre are the following:

- Public institutions: The outcomes capture the efforts of the Government of Navarre to improve the economy of Navarre in the area of innovation supporting enterprises in every aspect, such as fund-raising, assistance and R&D consulting, new market areas and technology and knowledge transfer. The Innovation and Knowledge Transfer Service of the Department has its own IT solution to support the transfer of technology and the creation of innovation.

- University Spin-off enterprises cooperate with several institutions in the creation of a new product or innovation. They are mostly concerned about their employees, about how they manage their business and about not belonging to a network.

- Entrepreneurial University Students show great interest in online platforms, where they can find information for their creations or even find support for their innovative projects.

- Business Development Institutions: due to the small sample, there is no conclusive information. It can be observed that these institutes usually support other organizations to raise funds for making investments in innovation and help them to find partners and consultancy services.

- R&D Institutes: regardless of the number of employees, R&D institutes belong to a network. Although they use external IT tools supporting innovation creation and technology transfer, they hardly share any information through those external tools.

- Enterprises look for information to support innovation and technology transfer processes by using external resources. The kind of information they search is quite basic, not too deep. The main reason for not using this channel of information is because there is no internal need. Internet seems to be the main source of information. 66% of the firms receive information from the universities or higher

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education institutions in the region. Apparently, the level of satisfaction over the information they receive is quite satisfactory

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