

**APPEL A PROJETS
IDEX
CALL FOR PROPOSALS
2010**

UNISTRA

**DOCUMENT B / SUBMISSION
FORM B**

Acronym of the project	UNISTRA
Titre du projet en français	Par delà les frontières, l'Université de Strasbourg
Project title in English	Beyond frontiers, the University of Strasbourg
Project manager	Name: Prof. Alain Beretz, President Address: 4, rue Blaise Pascal, CS 90032 F-67041 Strasbourg cedex
Institution leading the project (Project leader)	Name: University of Strasbourg
Capital grant requested	906.626.000 €

Structure of the IDEX partnership

Etablissements d'enseignement supérieur et de recherche	Organismes de recherche	Autres
University of Strasbourg	CNRS	
	INSERM	

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1. AMBITION AND STRATEGY OF THE PROJECT

Created by the successful merger of three universities in 2009, the University of Strasbourg has a truly pluridisciplinary identity. With some 2,400 permanent researchers and lecturers, it is one of the most outstanding research universities in France. It is anchored in a cross-border culture blending French and German influences. The university's ambition is to strengthen its position as a reference in innovative research and teaching in Europe. Its mission is to push back the frontiers of knowledge and contribute significantly to economic development and social progress.

1.1. THE UNIVERSITY OF STRASBOURG, A PLURIDISCIPLINARY RESEARCH UNIVERSITY OF EXCELLENCE

Founded in 1621, the University of Strasbourg has built upon a long humanist and scientific tradition. It reinforced its academic influence over the centuries and no less than 17 Nobel Prize winners have been part of its faculty. The 20th century was a time of strong development of its research infrastructures, particularly as it became one of the main implantations of the CNRS* outside the Paris area. Indeed, the CNRS and the INSERM* are partners in this "Initiative d'excellence" application, reflecting their strong relationship with the university.

With 2,400 full-time lecturers and researchers, the University of Strasbourg is, together with its partners, **the first French university in terms of its overall impact factor** (source : Thomson Reuters 2008) and the first university outside Paris in the 2010 Shanghai ranking. In natural sciences, the university has particularly excellent results, chiefly in chemistry, fundamental biology, engineering sciences and physics. The University of Strasbourg is a founding member of the League of European Research Universities (LERU) which gathers 22 leading universities that share the values of high-quality teaching within an environment of internationally competitive research.

The University of Strasbourg offers **academic programs in all scientific disciplines**, with a particular focus on pluridisciplinary approaches. Its attractiveness is attested by the fact that nearly 30% of our 42,000 students come from other regions (40% for masters and PhDs) and a further 20% come from abroad (up to 50% for PhDs). In addition, the University of Strasbourg ranks second nationally in lifelong learning.

Our university also has a strong commitment to technology and knowledge transfer. For instance, we are a founding member of the international cluster Biovalley, one of the most important clusters in biotechnologies and health services in Europe.

Our university is also distinctive through its shared history between French and German influences. This history naturally binds us to the Upper Rhine region, which concentrates a core academic potential in Europe; we have developed strong links with the universities of

* For all the acronyms, marked with a * symbol, see the glossary at the end of the document

Basel, Karlsruhe and Freiburg. The international dimension is in this respect an essential part of our culture and nearly a second nature.

In 2009, the University of Strasbourg made its mark on the French academic landscape with the merger of the three universities in Strasbourg, thereby becoming the largest French university. This successful merger has empowered our university with a robust governance culture to pursue its transformation and increase the quality of its missions. In this sense the University of Strasbourg is today the only one able to answer and meet the stringent governance criteria of the “Initiatives d’excellence” call for proposals. Through this unique accomplishment, the University of Strasbourg has also shown that its application for this competition is entirely legitimate and credible.

Ambitious by tradition, European by nature, international by design, the University of Strasbourg is convinced that the opportunity of the “Investissements d’avenir” will be a key asset for its long-term strategic development. By applying to the “Initiative d’excellence” call, it shows it is faithful to its history of excellence and responsibility.

1.2. OUR AMBITION: A LEADING UNIVERSITY IN EUROPE

Academic institutions are today confronted with the challenges of an ever accelerating internationalization process impacting all their activities. This results in increased mobility of staff and high potential students, influence of international rankings, concentration of grants on the best universities world wide and stronger demands from society.

These challenges are simultaneously tremendous opportunities. Indeed, globalization has stimulated a huge demand for knowledge: the leading firms and economies are those that have anticipated scientific, technological or sociological breakthroughs, using an edge in knowledge and research to devise new products and services to stay ahead in global competition. More than ever, the quality of training and research is decisive for economic development, prosperity and social progress.

What is at stake is not only our mission, but also our position in these rapid evolutions. Which role do we want to play in this new context? How can we make our teaching and research practices evolve to adjust to- and anticipate these evolutions? How can we harness the new opportunities of mobility of high potential talents and the rapid circulation of knowledge in today’s interconnected societies?

To these essential questions, our answer is twofold. On the one hand, the University of Strasbourg is striving to be a driving force behind these evolutions; we must acquire the means to reinforce our contribution to knowledge production and dissemination, against a background of a developing knowledge society. What we want is **to position our institution among the 20 leading European universities** in terms of research, teaching and knowledge transfer. On the other hand, we want **to strengthen our identity and especially our Franco-German culture**. Located on a historically tumultuous frontier, our university is deeply committed to the European project. That is why our project associates two German *Exzellenzinitiativen*: the Karlsruhe Institute of Technology and the University of Freiburg with which we have recently signed a strategic partnership.

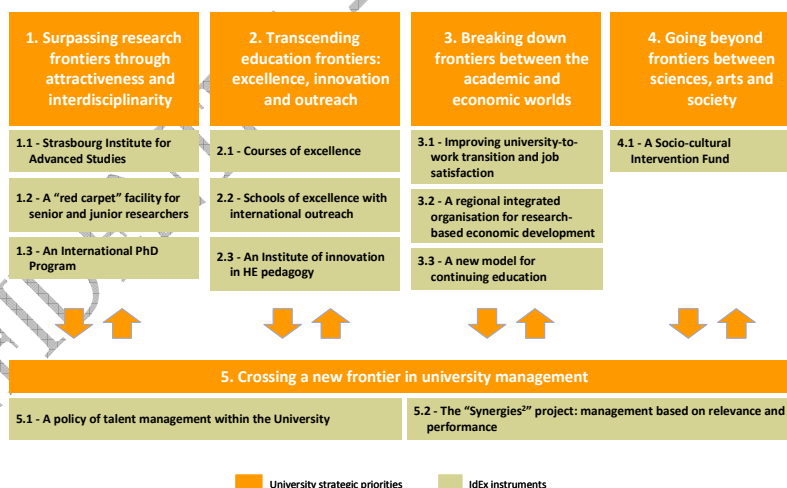
1.3. OUR PROJECT: “BEYOND FRONTIERS”

The University of Strasbourg has a history and an ambition of excellence. It is now time to reach another dimension. Thus we do not consider the “Initiative d’excellence” as a mere budgetary expedient. On the contrary, the university will use it to implement original instruments that will sustain and reinforce its ambition, through an innovative mode of funding characterised by its flexibility, reactivity, and capacity to accelerate transformation in all fields.

The applications of the university to the “Investissements d’avenir” calls (EquipEx, LabEx, IHU*, SATT* ...) rely on an overall multidisciplinary strategy involving research, education, technology transfer and international attractiveness. The “Initiative d’excellence” project is the keystone on which the answers to the different calls depend in order to produce a dynamic effect on its “Excellence Perimeter” and beyond, on the university as a whole.

The university has opted for an approach by “instruments” rather than presenting a juxtaposition of projects. Such structural instruments will allow for the continuing emergence of excellence, whereas a mere collection of projects produced from the outset would severely constrain the strategic leverage effects and run the risk of setting into stone scientific orientations which could become rapidly outdated.

These instruments have been structured around five strategic priorities devised to achieve our ambition of excellence in research and education, strengthen bridges between the academic and the socio-economic environments, and break new grounds in university management.



The project of the University of Strasbourg, located in a frontier-city and a European capital, rests on the ambition to go beyond the frontiers of science production, diffusion or transfer of knowledge.

Surpassing research frontiers through attractiveness and interdisciplinarity – The creation of an Institute of Advanced Studies will provide high level scholars with a working environment susceptible to broaden scientific perspectives and challenge disciplinary paradigms. With a “red carpet” instrument, our university will have the means to recruit at

the international level and as a result, to further strengthen our research capacities in the face of international competition. Our European PhD Program will transform our university into an attractive European pole for young academics with the highest potential.

Transcending education frontiers through excellence, innovation and outreach – The courses of excellence, in the form of double diplomas and/or French-German courses will strengthen our attractiveness among high potential and international students. On this basis, and supported by the experience of our internal “grandes écoles”, we will gradually set up internationally visible “Schools of excellence”, for instance in the fields of engineering, political or management studies. More generally, the University of Strasbourg will stimulate experimentation, develop and spread innovation through the creation of an Institute of innovation in Higher Education pedagogy. Its aim is to renew approaches and to disseminate innovative teaching and learning practices.

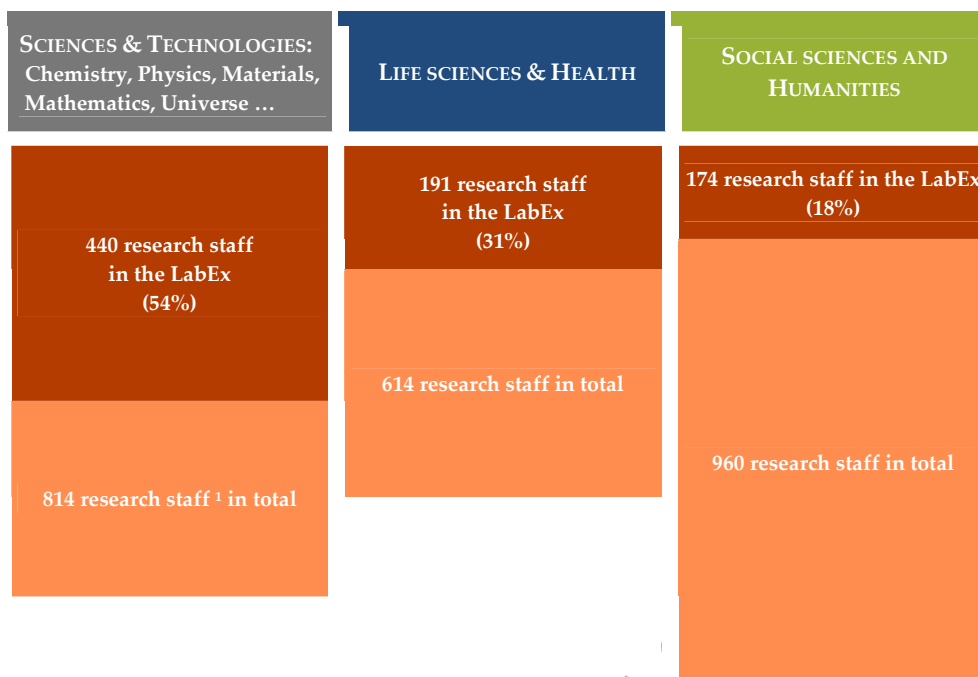
Breaking down frontiers between the academic and economic worlds – With the support of local authorities, our university will be the architect and the driving force in an integrated strategy of research-based economic development. The inclusion of all actors of the innovation chain within a common consortium will secure coherence and efficiency for the implementation of this strategy. In the field of training, the University of Strasbourg will strengthen the university-to-work transition by seeking to adapt its curriculum and practices, and reinforcing dialogue with employers. This commitment will also lead us to restructure our continuing education offer to make it more flexible, more modular, and harness the potentialities of new distance learning technologies.

Going beyond frontiers between sciences, arts and society – Thanks to the creation of a student arts festival, the organisation of master classes delivered by famous European artists or scientific conferences linked to European current affairs, the University of Strasbourg commits itself to creativity and dialogue with civil society both at a local and at an international level.

Crossing a new frontier in university management – The intensification of the competition between universities call us for an ambitious and rigorous policy for talent management. Our objective is not only to ensure the quality of recruitments but also to support the personal and professional development of our staff. The constraints on public finances also lead us to implement a “Synergies²” fund aimed at encouraging our departments to pool resources in order to implement innovative projects.

1.4. AN EFFORT FOCUSED ON A “PERIMETER OF EXCELLENCE”

The means of the “Initiative d’excellence” programme will be mainly focused on a perimeter of excellence that the University of Strasbourg has defined through the contours of its LabEx projects. This perimeter is both **highly selective** (comprising only one third of its lecturers and researchers) and **pluridisciplinary**, by including research teams in all the three main disciplinary sectors of the university. The internationally recognised scholars involved in these LabEx will actively contribute to the attractiveness of the university as a whole.



The topography of this perimeter delineates the priorities of our development strategy which are currently being defined in the framework of its 2013-2017 research and education strategy:

- **To reinforce our excellence in the fields where we have solid competitive advantages**, to cross new scientific frontiers in biology and health sciences, natural science and technology, social sciences and humanities;
- **To foster interdisciplinary approaches** between hard sciences, social sciences and humanities, particularly in relation to complex issues like sustainable development, healthcare or European integration.

The University of Strasbourg is also attentive to the importance of developing new domains of excellence in the future. In order to enhance emulation and pull effects, which guarantee our vitality, this perimeter of excellence will be submitted to a periodic reassessment. In addition, the instruments implemented within the framework of "Initiative d'excellence" programme will be opened to all research teams of the university and 30% of the sums will be allocated to teams that are not (yet) part of the perimeter of excellence but have clearly demonstrated their potential.

On the whole, three key elements need to be underlined:

- **The funding by researcher is 4 times higher inside the excellence perimeter than outside.** The university will indeed concentrate 70% of the funds on the excellence perimeter, while this perimeter represents only 1/3 of the total academic staff;

¹ Research staff numbers considered here are those of the permanent researchers and faculty members of the campus.

- **The bulk of the funds will be concentrated on research (40%) and education (31%).** Other priorities include relations with the economic sector (10%) and performance management within the university, talent management included (12.7%);
- **The university also aims to mobilise and generate significant external resources through the “initiative d'excellence”,** thanks its partnerships with both local authorities and private firms, and through a stronger involvement in public and private research contracts.

2. STRUCTURE AND CHARACTERIZATION OF THE EXCELLENCE INITIATIVE

2.1. PRESENTATION OF THE UNIVERSITY OF STRASBOURG

The origins of the University of Strasbourg reach back to the 16th century and it has steadily developed throughout its history all while cultivating a strong European, humanist and research-based identity. In the wake of 1968, the University of Strasbourg was divided into three different universities with complementary academic focuses, as many other universities in France. On January 1 2009, it was the first and, up to now, the only French university to have re-merged as a single, truly multidisciplinary university.

The University of Strasbourg dates back to the foundation of a protestant Gymnasium by Jacques Sturm in 1538. It was recognised as a full-fledged university in 1621 and gradually became a leading centre of European intellectual life, with prominent members and/or students such as Goethe and Metternich. It saw an exceptional development under the German Empire after 1871 with the building of several reference libraries, museums and institutes and has counted 17 Nobel Prize winners among its faculty. Its development has continued in the 20th century, most notably with a very strong implication of French national research organisations such as the CNRS and the INSERM.



Located within a bicultural geographic area, the University of Strasbourg is European by nature and international by design. With more than 42,000 students, it is furthermore the beating heart of Strasbourg, the hub of Alsace and a capital of the European Union. The city is indeed an international centre, with a strong diplomatic and media presence and outstanding transport infrastructures connecting to the whole of Europe. It is home to the European Parliament, the Council of Europe, the European Court of Human Rights and the European Science Foundation.

The University of Strasbourg can be defined by three main characteristics:

- A European university rooted in history;
- A multidisciplinary research-intensive university of excellence;
- Significant international attractiveness and cooperation.

2.1.1. EXCELLENCE IN RESEARCH

A MULTIDISCIPLINARY RESEARCH-INTENSIVE UNIVERSITY

The main strength of the University of Strasbourg stems from its active involvement in virtually every scientific discipline. Many of its research teams have a worldwide reputation in domains such as Life Sciences & Health, Chemistry, Physics, Materials & Nano-sciences, Earth and Universe Sciences, Mathematics, Engineering, but also Humanities and Social Sciences.

77 research units in all the disciplinary areas of Higher Education

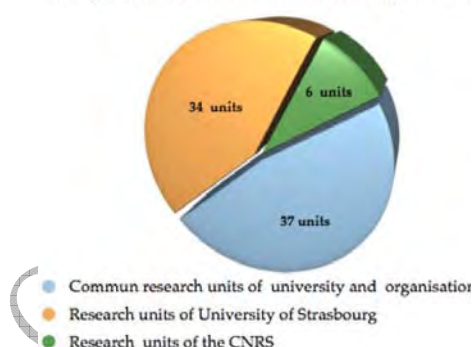


“Blue sky” research is a major asset for the university's development. Research activity at Strasbourg is structured around 77 “research units”², the driving force of the institution, with over 2,400 faculty members and “permanent researchers”³ and 2,000 support staff. More than 40 of its research units are associated with national research organisations such as the CNRS, the INSERM or the INRA*.

PhD programs are run by ten Doctoral Schools, each with their own academic area and maintain strong relations both to the research teams where PhD students work on a daily basis, and to the “European Doctoral College”, which is a host and support institution for the best international PhD students (see section 2.1.2. hereunder).

Partnerships with national research organisations – The excellence in research in many academic sectors has been made possible by strong partnerships with the national research organisations, in particular the CNRS and the INSERM:

Strong partnerships with national research organisation:



- **The second largest scientific involvement of the CNRS outside the Paris area:** concentrated in the 1950s and 1960s in physics and mathematics, the partnership now covers all major disciplines of the CNRS with more than 40 research units and 1,245 researchers and support personnel on CNRS payroll. The first convention of the CNRS and a French university was signed with the University of Strasbourg, testifying to the strength and confidence of this relationship.

² In the French Higher Education and Research system, a “research unit” is a large laboratory or an institute, often pluridisciplinary, where many principal investigators and support staff are gathered typically around a given theme. The research units can be funded jointly by the university and a national research organisation, or be funded only by the university, in which case it is comprised of university faculty and support staff

³ “Permanent researchers” are typically scientists on the payroll of a national research organisation. When located on a campus, they participate in the campus life in the same way as university faculty except that they are not required to teach. Many teach and hold responsibilities such as participating in university councils, directing research units, etc.

In the field of Social Sciences & Humanities, the CNRS is partnered with the university in the “Maison Interuniversitaire des Sciences de l’Homme – Alsace” (MISHA)*, a host and support structure concentrating in particular on studies in Ancient history and European studies. In Chemistry and other related fields such as Physics, Material Sciences, and Life Sciences, the CNRS has co-founded with the university a “Réseau Thématique de Recherche Avancée” (RTRA)*, the only excellence research center of this type awarded in chemistry by the French ministry of Higher Education and Research.

- **A strong partnership with the INSERM**, with 10 research units associated primarily with the university hospital and the Faculty of Medicine. Among them, one should note the presence of prestigious research institutes in Molecular and Cellular Biology, in Virology or in Neurosciences.

The University of Strasbourg has also shown in the recent years **a strong capacity to raise research funding** from public and private sources:

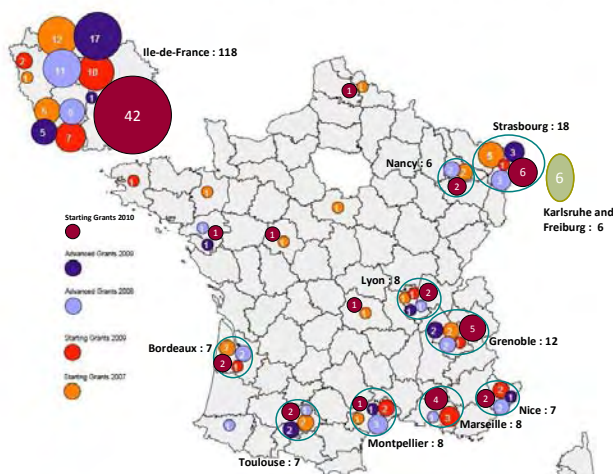
- A total of 21.6 M€ in research funding from public institutions in 2009 (regional, national and European sources);
- A major involvement in European Framework Programs, with 14.14 M€ in the FP6 and 61.31 M€ in the FP7 (including integrated projects and cooperation projects).

EXCELLENCE IN RESEARCH AT THE INTERNATIONAL LEVEL

The University of Strasbourg is one of the leading French research-intensive universities as shown in international rankings, but also through bibliometric indicators (when relevant) or when looking at national and European academic distinctions:

- **First French university outside the Paris area in the Shanghai University Ranking 2010** as well in the ranking of the Taiwan assessment agency; first French university in Chemistry (worldwide rank 14, the only French university in the top 100); first French university outside Paris area in Mathematics (worldwide rank 77-100);
- **Second French institution (and first university) outside the Paris area in the QS World University Ranking 2010**, it also ranks in the worldwide top 200 in Natural Sciences, Arts & Humanities, Life Sciences & Medicine;
- **First institution in France for the impact factor of its scientific publications** (Thomson Reuters bibliometric indices, 2008), as processed by the French Observatory for Science and Technology (OST). Outstanding disciplines in this respect are Chemistry, Material Sciences, Fundamental Biology, Engineering Sciences (first national rank) and Physics (second national rank);
- **4th French institution in the number of CNRS Medals** (all disciplines) **and members of the “Institut Universitaire de France” (IUF)***, with half of them from Social Sciences and Humanities;
- **One active Nobel Prize winner**, Prof. Jean-Marie Lehn (Chemistry, 1987), 14 members of the French Academy of Sciences and 5 professors of the “Collège de France”;

- **2nd French institution for the number of European Research Council (ERC) grants** with 18 advanced and starting grants (as of 2010), as shown on the map below:



EUROPEAN RESEARCH COUNCIL GRANTS 2008-2010

The most recent assessments of the AERES*, the National Agency for Research and Higher Education Evaluation, in 2008 have highlighted a globally positive assessment of research at the University of Strasbourg with almost 50% of the research units ranked A or A+ (on an A+ to C scale). At an individual level, the assessments of AERES confirm a very positive ratio of the activity of research staff, with 70% lecturers and researchers identified as “actively publishing”, 2/3 of which are members of A and A+ research units (or about 1,200 active researchers in A or A+ research units).

EXCELLENCE IN THREE ACADEMIC DOMAINS

Excellence in research at the University of Strasbourg is present in all the three academic sectors distinguished below, with the strongest position in the fields of Sciences & Technologies, and Life Sciences & Health.

Sciences & Technologies - A brief overview

Sciences & Technologies hold a premium position within the university with several key disciplines. This domain encompasses 20 research units, among which 16 have been rated A or A+ by the AERES. 10 faculty members belong currently to the IUF.

This field is especially recognised in Chemistry with Prof. Jean-Marie Lehn, Nobel Prize, and the founder of the ISIS* Institute. Chemistry in Strasbourg is the only French Excellence Institute (RTRA) in this discipline and is ranked the 14th worldwide in the Shanghai University ranking (it is the only French university in the top 100).

Physics (2nd national Impact Factor), Engineering Sciences (1st national Impact Factor) and Mathematics (1st university outside Paris area in the top 100) are the other leading disciplines. Finally the interdisciplinary domain on Materials and Nano-sciences, combining Chemistry and Physics is particularly dynamic in Strasbourg.

SCIENCES & TECHNOLOGIES (2008)	SPECIALISATION INDEX			SCIENTIFIC PRODUCTION (WORLD PART - ‰)			IMPACT FACTOR		
	UNISTRA	FRANCE	NATIONAL RANK	UNISTRA	FRANCE	NATIONAL RANK	UNISTRA	FRANCE	NATIONAL RANK
Chemistry	1,72	0,99	1 st	2,06	38,6	3 rd	1,66	1,12	1 st
Engineering Sciences	0,46	0,99	22 nd	0,80	41,4	11 th	1,46	1,07	1 st
Physics	0,91	1,13	12 th	1,43	47,5	7 th	2,52	1,10	2 nd

Life sciences & Health - A brief overview

Life Sciences & Health is a key scientific domain in Strasbourg with a significant number of internationally recognised researchers. 24 research units are present in this field, with 16 rated A or A+ by the AERES. The international recognition of Strasbourg in this domain derives mainly from the work of prestigious institutes such as the IGBMC*, the IBMC* and the IBMP* as well as internationally renowned senior researchers.

The University of Strasbourg is especially recognised in Fundamental Biology, including genetics and molecular biology, and Applied Biology, including vegetal biology, with the best impact factor in France and the second national rank for the number of its IUF members. Moreover, the University of Strasbourg is strongly involved in the Alsace BioValley competitiveness cluster, which is one of the top French clusters in the health sector.

LIFE SCIENCES & HEALTH (2008)	SPECIALISATION INDEX			SCIENTIFIC PRODUCTION (WORLD PART - ‰)			IMPACT FACTOR		
	UNISTRA	FRANCE	NATIONAL RANK	UNISTRA	FRANCE	NATIONAL RANK	UNISTRA	FRANCE	NATIONAL RANK
Fundamental Biology	1,51	0,92	2 nd	1,81	46,8	5 th	1,26	0,99	1 st
Applied biology & Ecology	0,36	0,77	18 th	0,91	32,2	15 th	2,10	1,28	1 st

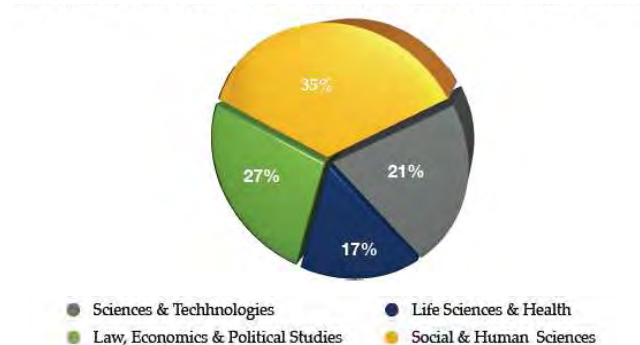
Social sciences and Humanities - A brief overview

Economics & Political Studies, Law, Social and Human Sciences encompass 33 research units. With 13 rated A or A+ by AERES, they appear as the 9th AA+ researcher community in France in Economics and Political Studies and as the 16th AA+ researcher's community in France in the other disciplines, with well recognised specialties in History, Germanic and European Studies, Arts, Languages and Literatures, Religious sciences. Research units in Law, Economics and European Studies have received five "Jean Monnet Chairs" from the European Union since 2004.

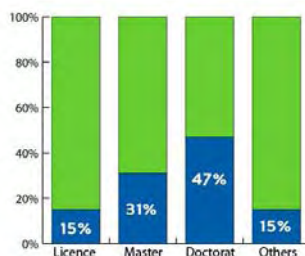
2.1.2. A LEADING TEACHING INSTITUTION IN FRANCE AT THE FRONTIER OF KNOWLEDGE

The biggest university in France: 42,260 students are enrolled at the University of Strasbourg (as of Fall 2010), including 56% undergraduate students and 44% graduate and

PhD students. These are distributed in the different academic sectors as shown in the graph below:



Academic courses attractive both in France and internationally – The degrees offered by the University of Strasbourg enjoy a significant attractiveness, with 30% of the student body coming from other French regions. Our university is also a leading French university in terms of its proportion of foreign students, with **20% of our students coming from all around the world**. Strasbourg is the first university in France in terms of the proportion of foreign PhD students. In attracting such students and program participants, the University of Strasbourg introduces an important element of diversity with 150 different nationalities present on our campus, thereby reinforcing the circulation of knowledge and learning through discussion and teamwork.



PERCENTAGE OF FOREIGN STUDENTS BY DEGREE



GEOGRAPHIC ORIGINS OF FOREIGN STUDENTS

These ratios show that the higher the degree, the higher the attractiveness, with around 40% of students from France (outside Alsace) and more than 32% from abroad in Master and PhD taken together. It is worth noting that there is **a higher proportion of graduate students in Strasbourg than in the average French university** (38% in Master and 6% in PhD programs).

A major centre for PhD studies in France – With ten Doctoral Schools and about 2,600 PhD students (47% are foreign), PhD programs are a priority for the University of Strasbourg. Admittance to a Doctoral School is highly competitive. The University currently spends around 12 M€ a year to support PhD students, with approximately 150 PhD grants per year, while 350 other PhD students have external grants or support. In other words, the vast majority of PhD students in the experimental sciences are paid either by the university or from external grants.

In addition to several joint PhD programs, the “European Doctoral College” is a key actor in promoting the international visibility of PhD programs of the university. It is an interdisciplinary host structure managed jointly by the Doctoral Schools. It hosts about 100 PhD students from all disciplines and provides them with low-price accommodation on the campus, favouring sociability and academic exchanges, access to dedicated courses and several financial advantages (especially for travel costs). Admittance is competitive and all applicants must be registered for a PhD both in Strasbourg and in a foreign university, through the “cotutelle” scheme.

A strong multidisciplinary offer – Beyond disciplinary courses in its fields of excellence, the University of Strasbourg offers specific multidisciplinary curricula in its departments and in several schools or intitutes such as:

- **Institute of Political Studies** - Founded in 1945, the Institute of Political Studies (IEP or Sciences Po Strasbourg) is the oldest IEP outside Paris. It trains a thousand students (following a five-year program) from all around the world in political science, economics, law, history and international relations.
- **Centre for Intellectual Property Studies** - The International Centre for Intellectual Property Studies (CEIPI) was founded in 1963. Since its creation, the CEIPI has been committed to training intellectual property specialists: engineers, holders of scientific degrees, legal scholars or practitioners, for a wide range of professions in the IP field, especially French or European patent attorneys.
- **Strasbourg School of Management** - The EM Strasbourg is the only management school within a university in France. It trains students to become trilingual managers to develop quality entrepreneurial skills and spirit and thereby contributes to business development.

An education strategy for the university – As a newly merged university, the University of Strasbourg has launched a wide ranging reflection to elaborate a new teaching strategy for the period 2013-2017. The curriculum blueprint was adopted by the Administration Council of the university in December 2010. It is based on a large consultation, has taken into account the last AERES assessments of 2008, as well as the results of internal programs “Success for Bachelor students” and “Study support workshops”.

The curriculum blueprint for 2013-2017 is built around the following objectives:

- Setting up accelerated courses for the brightest students at both Bachelors and Masters levels;
- Creating interdisciplinary and multidisciplinary programs with a major/minor degree structure at Bachelors and Master levels;
- Reinforcing the articulation between course contents and the research activities as was advised by the 2008 AERES assessment;
- Better adapting our curriculum to the requirements of the workplace of tomorrow and to student demand;

- Developing the international dimension of the curriculum by proposing more lectures and seminars taught in foreign languages;
- Fostering a sharing of courses between different Masters programs in order to reinforce pluridisciplinarity and gain leeway to create new innovative courses;
- Relying heavily on innovative pedagogic methods and digital tools;
- Developing the relations and exchanges with alumni in order to facilitate the orientation of new students and the access to the workplace, as well as reinforce the international attractiveness of the university.

The “Excellence Initiative” represents a key instrument and a catalyst to facilitate and accelerate the implementation of this ambitious curriculum blueprint.

2.1.3. A RECOGNISED COMPETENCE IN TECHNOLOGY AND KNOWLEDGE TRANSFER

The University of Strasbourg has a strong commitment to strengthen its relationships with its partners in the business world, with the aim of contributing to the economy through co-development and exploitation of research results.

Its Technology Transfer Office founded the **Conectus Alsace** network, incorporating all regional public technology transfer services (including the universities of Strasbourg and Haute Alsace, the CNRS, the INSERM and the Strasbourg University Hospital). It is one of the first such structures developed in a French university. It strives to promote and develop applied research and to facilitate partnerships with economic and institutional actors. Alsace is one of 6 regions in France (out of 22) in which public R&D represents more than 40% of total R&D spending. Thanks to this structure, the quality of its research activities and the strength of its relations to the private sector, the university secured 14.4 M€ in private contracts in 2009 (research contracts, innovation support, royalties on patents ...).

The high level of integration of the innovation ecosystem makes Alsace a benchmark in France in this vital area. This is due to a remarkable collaboration involving:

- the Conectus Alsace network, sponsoring a “proof of concept” fund (over 4M€), unique in France. In the framework of the “Investissements d’avenir”, this network prefigures the SATT dedicated to accelerating technology transfer in Alsace;
- a strong partnership between the University of Strasbourg and the INSERM, the only one of its kind in France, in which the university TTO office manages all private research contracts for the INSERM;
- a network of “competitiveness clusters” such as **Alsace Biovalley**, a world-class cluster on biotechnologies and medicine, which associates businesses, technology transfer centres and research institutes;
- the development of **SEMIA**, an outstanding regional start-up incubator service.

This local policy was confirmed one year ago by the Regional authorities, who elaborated a “Regional Innovation Strategy” to further economic development in three key areas:

- “green” economy (environmental challenges, new energies, green chemistry ...);
- quality of life and healthcare issues (biodiversity, agriculture, new medical devices, therapeutic innovations ...);
- humanism and social development (cultural industries and creativity, social innovations ...).

The City of Strasbourg has also defined an ambitious economic strategy “Strasbourg Eco 2020”, which seeks to stimulate investments in innovative medical devices, cultural and creative industries, mobility and sustainable development.

Because the domains identified by local and regional authorities largely correspond to the areas of excellence of the University of Strasbourg, the “Initiative d’excellence” project can provide tools to reinforce these partnerships which will be vital to meeting the challenges of the 21st century.

2.1.4. ACADEMIC FACILITIES, SOCIAL AND CULTURAL LIFE ON THE CAMPUS

Information system (IS) and language facilities – The university campus is already well equipped with computer rooms, Wifi access and multimedia terminals as well as wide-ranging electronic resources available for students and staff through their personal “digital workplace”, with access to e-mail, online learning tools, virtual library, campus news and administrative services. The University of Strasbourg has been the first French university to develop an IS master plan, adopted in January 2010, to develop digital infrastructures for all members of the university community.

The University of Strasbourg, offers language courses in 25 languages and training in French for foreign students, and provides further support through “Language Resource Centres”. Our university certificates accreditations for languages skills, which enhance the students’ mastery of many languages and facilitate multilingualism.

Libraries – The library network of the university consists of 31 libraries, with almost two million volumes and more than 27,000 periodicals and data bases covering all disciplines. Moreover the National University Library in Strasbourg (BNU), the second largest in France, is associated with the university and contains more than three million volumes, covering in particular Social Sciences, Humanities and Law. The BNU is particularly renowned at the international level for its collections on Antiquity, Germanic languages and culture, and Religious studies.

Social & cultural life – Cultural life is animated by a cultural service of the university which organises and sponsors many events throughout the year. Culture on campus benefits from a university orchestra, a university theatre troop, a WebTV channel and associative activities (chorus, film club, multiple sports clubs ...) as well as optional art courses (poetry, photography ...). The university supports student associations, encouraging them to enrich life both on the campus and in the local community. Specific procedures and facilities are in place to welcome and integrate foreign students and a House for international students is planned in the framework of the “Opération Campus” of the university (see below).

Cultural life also derives substantial benefits from the location of the main campus in the city centre. In order to facilitate student access to cultural events in the city (concerts, exhibitions, theatre performances, master classes ...), the University of Strasbourg has developed partnerships with cultural institutions, such as the Opéra du Rhin, the Théâtre National de Strasbourg and the Fonds régional d'art contemporain. An innovative student "Culture Card" offers discount access to a large number of cultural events such as concerts or movies and free admission to several museums.

The University of Strasbourg has itself one of the most prestigious ensembles of academic collections in Europe: a botanical garden, an astronomical observatory, scientific museums and collections in mineralogy, zoology, seismology or plaster casts which are accessible to the general public. The popularization of scientific and technical culture is another priority for the university: a space dedicated to scientific exhibitions has been set up and open societal debates are regularly organised through the initiatives "Savoir(s) en commun", "Théâtre des Sciences" and "Jardin des Sciences".

2.1.5. STRATEGIC ASSETS OF THE UNIVERSITY AS THE PROJECT LEADER

A REAL STRATEGIC CAPACITY AS A SINGLE UNIVERSITY

A single governance structure since 2009 – Because the "Initiative d'excellence" targets not institutions but regional sites, a merger or federation of universities can constitute an objective in itself for other candidates. The University of Strasbourg has already attained this objective, and our proposal builds upon several years of long-term strategic reflection dating back to the preparation for the 2009 fusion. The current proposal is therefore built into a long term evolving learning process, and is not an *ad hoc* project seeking to satisfy (at short notice) the requirements and specifications of the "Initiative d'excellence". Thanks to this merger and its access to autonomy in 2009, the university disposes a unique coherence and reactivity to develop and implement its strategic vision. It has already adopted in December 2010 a curriculum blueprint for 2013-2017 and is currently working intensively on its long term strategic plan for research. The experience of the merger has also demonstrated the capacity of mobilisation and transformation of the university on a large scale, involving all members of our academic community and this lends further credibility to its project.

The University of Strasbourg is the project leader of this "Initiative d'excellence" in the name of all its partners on site in Strasbourg. The actual governing bodies of the university will in this respect be responsible for its implementation and success (see section 4). It is, in this respect, the only university in France able to answer this call for projects without first undertaking a major overhaul of its governing bodies. But, considering the specific requirements and challenges implied by this project, three original operational structures will be involved in the management of the "Initiative d'excellence" (see section 4):

- The collegiums⁴, which will play a role in the definition of the long term scientific priorities under the responsibility of the Scientific Council;
- The Strategic Orientation Committee, which will be in charge of the strategic supervision of the Initiative;
- The Foundation of the university, established in 2009, which will be responsible for the management of the "Initiative d'excellence" funds and will coordinate the related fundraising activities.

The Foundation of the University of Strasbourg is a subsidiary of the university whose goal is to promote development by raising funds and managing endowments. It launched its first campaign in 2009 with the objective of raising 20 M€ by the end of 2014. By November 2010, 35% of this target has already been reached. The first donations obtained from individuals and companies have funded post-doctoral grants, need-based scholarships and the endowment of two chairs: one in Supramolecular Chemistry and the other in Creativity Management. Its board of directors is composed of representatives of the founding members, staff representatives, and external qualified personalities.

The progressive implementation of a management policy based on relevance and performance – In 2009, the creation of the university established an integrated management policy defined at the university level but also declined at the level of departments. The funding policy is in large part based on the achievements and the innovative projects of the departments, and how they contribute to the university strategy as a whole. Based on a stringent evaluation process covering education, research, finance, HR, real estate, health and safety rules, an annual review process strengthens the relationship between the university central services and the departments and also allows for an evaluation of policy over time.

The positive context of the "Opération Campus" – In 2008, the University of Strasbourg was one of the first universities in France to be selected for the competitive "Opération Campus" programme launched by the French ministry of Research and Higher Education. This programme will fund major building projects such as a Learning Centre, a Faculty Club, a House for International Students, a House of Arts and Sciences and several renovation projects. It will end by 2020 and benefit from a 375 M€ endowment from the government and 300 M€ from local authorities. Through this programme, many of the projects of the Initiative will therefore be housed in state-of-the-art facilities.

EUROPEAN BY NATURE, INTERNATIONAL BY DESIGN

The University of Strasbourg is a member of the European University Association (EUA), the pan-European platform for universities and Higher Education policies. It has significant

⁴ Nine collegiums were set up during the merger, each encompassing the departments within their disciplinary area. They have no management responsibilities but they play a major role in fostering cooperation in teaching and providing a platform for exchange of information and devising of new curricula. In the domain of research, they assess and rank research projects submitted by departments and research units for internal funding. As such, they prepare the decisions of the Scientific Council on the allocation of internal research funds.

international assets that demonstrate the attractiveness of its education and research activities and the strength of its international cooperation as one of Europe's leading research universities. For instance, 12% of its lecturers and researchers are foreign nationals (ranking 2nd among French universities), and they often hold important responsibilities within the university (heads of research teams or degree programs...). Furthermore, 50% of research publications involve international collaborations.

A founding member of the LERU and EUCOR international networks

- The **LERU** (League of European Research Universities) associates 22 leading research-intensive universities, among which Universities of Oxford and Cambridge, Imperial College London, Universiteit Leiden, Universitat de Barcelona, Ludwig-Maximilians-Universität München, etc. They all share a focus on research and high-quality education;
- **EUCOR** (Confédération Européenne des Universités du Rhin Supérieur) is a French-German-Swiss network created in 1989 associating the universities of Basel, Freiburg, Karlsruhe, Strasbourg and Haute-Alsace (100,000 students, 8,000 PhD students, 11,000 teaching and research staff) offering 16 bi- or tri-national degrees at Bachelors and Master levels. On its twentieth anniversary in 2009, a joint declaration was adopted to encourage student mobility, the implementation of the Bologna process in the Upper Rhine region, the promotion of transnational PhD programs, cooperation in research and joint representation on the international scene.

Strong partnerships with two German universities of the *Exzellenzinitiative*

Among the 9 German universities distinguished by the *Exzellenzinitiative*, two are situated within one hour of the University of Strasbourg, thus constituting a “golden triangle” of academic excellence:

- Partnerships with the **Albert-Ludwigs-Universität Freiburg** covers research and teaching activities, with a specific focus on joint PhD programs especially in Biology and Soft Matter Science. Co-supervised PhD students are also underway in Chemistry, Life sciences and Medicine, Mathematics, Antiquity sciences, German studies and Law. In September 2010, the two universities signed a Letter of Intent to engage a new kind of partnership characterised by a more comprehensive approach, covering a wide spectrum of cooperation, a contribution to the respective status of excellence of both universities and its impetus to the development of science in the Upper Rhine region. Our LabEx* projects propose to reinforce these activities through new joint research projects and Masters and PhD programs.
- Strong partnerships with the **Karlsruhe Institute of Technology** exist in Economics, Mathematics, Theoretical mechanics and Earth sciences, Chemistry and Nano-sciences, for example. Two LabEx projects include KIT research teams as full-fledged partners, one on Materials and Nano-sciences and the other on the economic challenges of sustainability and creativity.

These international partnerships will be essential in the framework of the “Initiative d’excellence” project of the University of Strasbourg, as developed in section 3 below.

2.2. APPLICATION TO THE ACTIONS OF THE PROGRAMME "INVESTISSEMENTS D’AVENIR"

The applications of the University of Strasbourg to the “Investissements d’avenir” calls for projects, together with its partners (National research organisations, Strasbourg University Hospital, the National University Library in Strasbourg, competitiveness clusters ...), rely on an overall multidisciplinary strategy involving research, education, technology transfer and international attractiveness. The “Initiative d’excellence” project is the keystone on which the answers to the different calls depend in order to produce a dynamic effect on its “Excellence Perimeter” and beyond, on the university as a whole.

2.2.1. APPLICATIONS TO THE LABEX, EQUIPEx AND INFRASTRUCTURES CALLS

The thirteen LabEx projects presented in the “Investissements d’avenir” programme have been conceived as the core driving force for the university research strategy. Within the three academic domains, they associate most of the best research teams around cutting-edge research projects while also including ambitious teaching and technology transfer programs. They are furthermore supported by the projects submitted by the university in answer to the other calls of the “Investissements d’avenir”, such as EquipEx and National infrastructures.

Sciences & Technologies - Overview on the “Investissements d’avenir” projects

Major	LabEx	Manager
Chemistry	CSC: Chemistry of Complex Systems	Jean-Marie Lehn
Materials	N3Lab: From Individual nano-objects to nano-structured materials and devices	Marc Drillon
Transversal	ISNG: New Generation of Scientific Instrumentation	Christelle Roy
Mathematics	IRMIA: Mathematics, Interactions and Applications	Thomas Delzant
Earth sciences	G-eau-thermie: Geothermal exploitation of aquifers	Jean Schmittbuhl

These five LabEx projects associate 14 of the best research units and the most advanced projects of the university within this domain. They also include a strong educational dimension, as with for instance the LabEx in Mathematics. This project proposes high-level graduate courses: Master classes are key features in the proposal and come from intensive

collaborations with the Universities of Basel and Karlsruhe, in order to reinforce existing links between researchers and graduate students in the Upper Rhine region.

They are reinforced by **four EquipEx** projects (CRIC, UNION, 4GCG, iStep-FEGER) and **six participations in national platforms** (EQUIP@MESO, ROBOTEX, RESIF-CORE, FIT, EFG, MIND).

Life Sciences & Health - Overview on the "Investissements d'avenir" projects

Major	LabEx	Manager
Biology	INRT: Integrative Biology - Nuclear dynamics, Regenerative and Translational medicine	Olivier Pourquié
Medicine	Medalis: Drug Discovery Center	Sylviane Muller
Genetics	NetRNA: Networks of Regulatory RNAs across kingdoms and dynamical responses to biotic and abiotic stresses	Eric Westhof
Medicine	HepGen: Functional genomics of Viral Hepatitis and liver disease	Thomas Baumert

These LabEx projects gather 11 research units and are reinforced by **seven EquipEx** projects (SysBioDis, CARMEN, METRICETI, TechMed, METACIB, Insectarium, CIRADT), **three infrastructure** projects (PHENOMIN, FRISBI, FR-OPENSREEN) and **two participations in other national platforms** (INDIGEN, proFI).

Research teams in Health and in Engineering from the university, the national research organisations, the Strasbourg University Hospital and the IRCAD* are associated in the IHU project on **Image Guided Minimally Invasive Hybrid Surgery**. Moreover, University of Strasbourg is strongly involved in the Alsace BioValley cluster, which will be a candidate to a future call to develop industrial platforms.

Here again, each LabEx has elaborated an innovative teaching dimension strongly linked to the research project. For instance, the LabEx project proposed by the IGBMC implicates its staff in a range of education and training activities, from teaching high-school pupils, to training students and postdoctoral fellows, to international advanced training for experienced research staff.

Social sciences and Humanities - Overview on the “Investissements d’avenir” projects

Major	LabEx	Manager
Economics	CSG: Creativity, Sustainability, Growth	Robin Cowan
Political Science, Law, and History	3ES: Strasbourg School of European Studies	Didier Georgakakis
Religious Sciences	RESO: Religions and Society: texts, norms and practices	Francis Messner
Arts	GREAM: Experimental Research Group on the Creative Musical Act	Pierre Michel

These LabEx projects gather 11 research units. In the field of economics, the laboratory BETA proposed a structured research and training programme on creativity and sustainability in collaboration with KIT (Karlsruhe) and HEC Montréal, and with a large interdisciplinary approach, including engineering, law and arts, around economics and management as the core disciplines. In addition, two “University degrees” in continuing education are delivered on Engineering of Innovative Projects and Intellectual Property Rights and Strategy. Strasbourg is one of the major places in Europe in this topic.

In the field of European studies, an interdisciplinary LabEx includes a resource portal putting documentary and databases at the disposition of the scientific community, policy makers and the general public. Thematic workshops associating senior researchers and PhD students are part of the innovative teaching through research plan. Research will also find its way into continuing education of top French and European civil servants through the association of the Ecole Nationale d’Administration which is a partner of this LabEx.

Finally the LabEx project in Religious sciences proposes the creation of an ambitious Graduate program in “Religious Law and Religious studies”, with a particular focus on Law and Islamic studies, in order to offer a comprehensive range of courses.

All these projects are strongly interdisciplinary, have potential synergies between them and present opportunities build bridges with LabEx in natural sciences, in particular the LabEx project on creativity and sustainable development and the LabEx on European studies, given that industrial norms and regulations have an impact on applied research. **Three EquipEx** projects (CHARMED, RE3, ALFO) reinforce research infrastructures in this area.

2.2.2. THE SATT PROJECT

The Alsace SATT project will build on the experience and assets of the integrated Conectus Alsace structure to merge all services working in the field of technology and research transfer in the region, and to serve as the central instrument for research-based economic development.

Its fundamental missions will be to create value for its shareholders (the two Alsatian universities, others Higher Education institutions and the national research organisations) and to participate actively in economic development by supporting start-ups and job creation. It will integrate the local technology transfer offices and set up strong partnerships with the regional incubator, the competitiveness clusters, and the technology transfer centres.

The SATT project will be closely articulated with the national research and technology transfer strategies and the “Regional Innovation Strategy” adopted in December 2009.

2.2.3. THE IHU PROJECT

The IHU Strasbourg will lead the next revolution of medical procedures to Image-Guided Minimally Invasive Hybrid Surgery (MIX-Surg). It will combine minimally invasive techniques to create optimal hybrid approaches for improved patient care. The IHU will then enhance hybrid approaches through cutting-edge research, develop the next generation of medical devices and train the physicians of the future. After proof of concept in abdominal diseases, the IHU will expand its scope in other medical disciplines. To achieve this goal the IHU will:

- build on a track record of revolutionizing surgery. IRCAD, leader of the project, is recognized worldwide as a preeminent center for laparoscopic surgical training; it also produces innovative research in minimally invasive surgery with a track record of multidisciplinary teams transferring technology through public-private collaboration. The University and Hospital of Strasbourg and National research organisations (CNRS, INRIA and INSERM) are associated with the project;
- construct a new infrastructure for patient care, research and technology transfer;
- attract renowned physicians and industry leaders;
- expand an ambitious translational R&D program: The IHU will bring together R&D labs with leaders in science, engineering and clinical practice. The focus of R&D will be on patient-specific computer assisted surgery, targeted therapies, robotics, and hybrid medical device;
- create a new training paradigm: Indeed, the evolution of surgery requires a paradigm shift in the training of physicians, engineers, and other healthcare workers;
- Invest in the local and national economy: the project is a part of the ambitious TechMed Campus program supported by the City of Strasbourg.

The investment in the IHU Strasbourg is expected to improve the practice of medicine, serve as a platform for healthcare innovation and technology transfer, and establish the presence of France in the international medical devices industry.

2.3. EXCELLENCE PERIMETER, ENVIRONMENT, PROSPECTS AND ADDED VALUE

The University of Strasbourg will focus its resources on an “Excellence Perimeter”, which will include research teams with international recognition in their field. It has decided not to

define this “Excellence Perimeter” in disciplinary terms, because excellence is nearly by definition distributed across many different disciplines in a university whose identity is multidisciplinary and research driven. In addition, it is through interdisciplinary approaches and in a dynamic dialogue between disciplines that the frontiers of knowledge are pushed back in the most innovative ways.

The “Initiative d’excellence” project has been furthermore elaborated through a set of strategic instruments (see below section 3) aiming both at strengthening excellence within its perimeter and to promote fields that could generate a dynamic of excellence in the future. This justifies an approach allowing for an evolution of the “Excellence Perimeter” based on a continual process of high quality evaluation.

2.3.1. EXCELLENCE INDICATORS AND EXCELLENCE PERIMETER IN 2010

Excellence defined in terms of research teams and not disciplines – Excellence in research is indeed present at the University of Strasbourg in all the three academic sectors defined above, as shown, among other indicators, by the evaluations by the AERES. Therefore, if the “Excellence Perimeter” must be selective so as to guarantee a maximum impact of the “Initiative d’excellence” and the best use of available resources, it can not be restricted to a few disciplines and must on the contrary be cross-cutting.

In this context, the “Excellence Perimeter” will include research teams whose expertise has been recognised at the international and national levels with currently-accepted indicators for research, education and technology transfer. These encompass:

- research production indicators: H-index, Impact factor, number of citations, number of peer-reviewed publications in major journals, of communications and chapters;
- academic recognitions and awards;
- attractiveness of degree courses;
- number of patents, spin-offs and licenses.

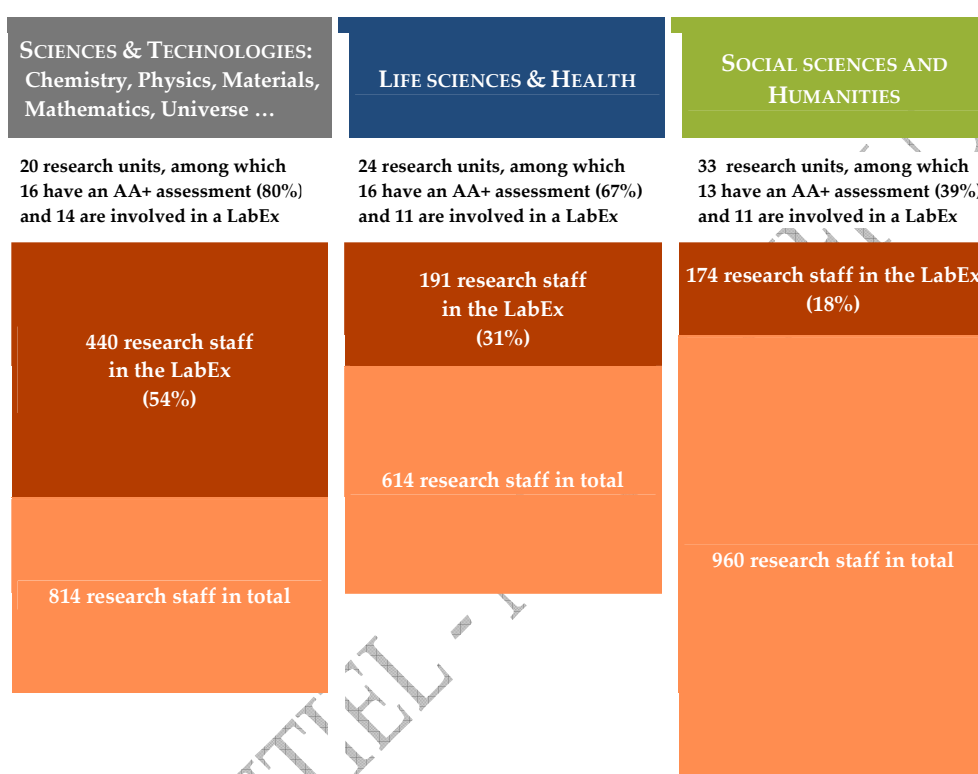
An initial perimeter defined in strong relation to the LabEx projects of the university – The precise set of indicators will be progressively defined and refined, so as to ensure their capacity to accurately reflect performance, while respecting specificities in each discipline. The initial “Excellence Perimeter” will be defined in relation to the research teams involved in the LabEx projects submitted by the University.

The applications to the LabEx call involve 33.5% of the global research staff on the campus (805 out of 2,400 permanent research staff)⁵. They involve 36 research units (out of 77) and associate 22% of all PhD students. It must be noted that this perimeter is more restrictive than the A or A+ research units designated by the AERES in 2008 (covering 50% of the permanent research staff of the university). These research units constitute not only the core of excellence in their domains, but they are also leaders of the most cutting edge projects in

⁵ This is a mean ratio for the whole set of LabEx. Most of them, such as the one in Chemistry, are more selective by choosing only A or A+ teams inside the research units, whatever their overall ranking.

research and curriculum in the university. Their distribution across the three academic sectors also reinforces their ability to engender positive pull effects throughout the whole university.

The global contours of the initial perimeter will not be significantly modified by the result of the LabEx selection process, but the reports of the international jury will be closely studied so as to finalise the initial perimeter and take into account specific remarks and assessments.



OVERVIEW OF THE "EXCELLENCE PERIMETER"

2.3.2. DYNAMICS FOR EXCELLENCE

Excellence as an evolving reality within the university – While present excellence is a key asset for the university, it should be seen as a perpetual challenge rather than a given set in stone. The history of the university bears witness to the fundamental evolutions of excellence, for example with the re-emergence of Chemistry in the 1960s to the highest international level. The university must strategically be prepared not only to reinforce existing fields of excellence but also to support emerging teams and promising young researchers to reach their potential of excellence.

Indeed, there is no clear and definitive dividing line between "excellent" and "not excellent" research teams. A more refined perspective is necessary to grasp the internal and interdisciplinary dynamics of research. Different situations must be distinguished in this respect, such as:

- Excellent research teams which as a whole represent a significant critical mass in their domain, and which should be supported to remain at the highest international level;
- Excellent research teams which do not have yet the critical mass to gain international visibility and in which additional means could produce a breakthrough to internationally recognised excellence;
- Excellent emerging research teams (or individuals) should be encouraged and supported to develop their potential, particularly in new research fields at the intersection of existing disciplines or research fields.

In this respect, excellence in research is dynamic with both qualitative and quantitative dimensions. Each situation has to be analysed in its specificity with respect to its current achievements and future potential.

The University of Strasbourg, with its **Strategic Orientation Committee** will address these challenges in the framework of the preparation of its research and education strategies 2013-2017, which have begun in 2010. The curriculum blueprint was adopted in December 2010 (see section 2.2 above). The Research strategy is currently being elaborated by the Scientific Council of the university in coordination with the collegiums. It strives to precisely identify future challenges, particularly in terms of rejuvenation of research staff in strategic fields, and to organise a consultation on the future of disciplines present in Strasbourg, whether they be excellent, emergent or in need of revamping. Such a prospective reflection has already been launched in Physics; it is foreseen to expand to other disciplines and academic sectors, most notably on the basis of the work done in the scope of the LabEx projects.

The “Initiative d’excellence” project is conceived as a key tool to foster excellence in all its diverse dimensions through:

- a restrictive definition of the “Excellence Perimeter”, with at least 70% of funding allocated to teams within it, so as to ensure that resources go to the most innovative and dynamic research teams, thereby maximizing the impact of the “Initiative d’excellence” funding;
- a set of instruments open to all university staff, so as not to be cut off from innovative projects which do not fall into the existing international “Excellence Perimeter”, in order to adjust to emerging research dynamics, particularly concerning promising young scholars who will carry the innovative projects of tomorrow. Financial means will be allocated upon internal calls for proposals opened to all research teams, funded by the remaining 30%;
- a legitimate, strong and reactive governance able to define strategic priorities, focus the bulk of the funding on the identified perimeter and also support emerging clusters of excellence. Applications will be reviewed by external and independent academic experts and final decision will be taken by the legitimate bodies of the university;
- an evolving “Excellence Perimeter”, with the possibility of eviction and integration of research teams throughout time. The “Excellence Perimeter” will be revisited every two years by the Scientific Council of the university, relying on the advice of the

collegiums and external academic expertise. It is expected that this evolutive dynamic will generate positive effects throughout the institution, by maintaining motivation of teams and developing multidisciplinary collaboration.

Furthermore, the University of Strasbourg will pay specific attention to the teaching impact of its "Initiative d'excellence" instruments, with the following four objectives in mind:

- the national and international attractiveness of its courses;
- the reinforcement of links between teaching and research;
- the development of new curricula and teaching innovations that promote multidisciplinary and individual projects;
- the improved employability of undergraduate and graduate students.

3. PROJECT AND PROSPECTS

3.1. BEYOND FRONTIERS ALONG FIVE STRATEGIC PRIORITIES

Through the "Initiative d'excellence" framework, the University of Strasbourg has the ambition to strengthen its position as an **attractive research-intensive university at the international level**, being both a reference in Europe in research and higher education and a main **actor of Franco-German cooperation** through close partnerships with neighbouring universities in the Upper Rhine region.

In order to achieve this ambition, the university will strive to transcend frontiers along **five strategic priorities**:

- **Surpassing research frontiers through attractiveness and interdisciplinarity** to develop excellence in research at the international level,
- **Transcending education frontiers through excellence, innovation and outreach**, to increase the attractiveness of curricula at national and international levels,
- **Breaking down frontiers between the academic and economic worlds** to position the university as a key socio-economic actor,
- **Going beyond frontiers between sciences, arts and society** to increase the socio-cultural outreach of the university,
- **Crossing a new frontier in university management**, by relying on the foundation of the university in 2009 to help implement a strategic project for the future.

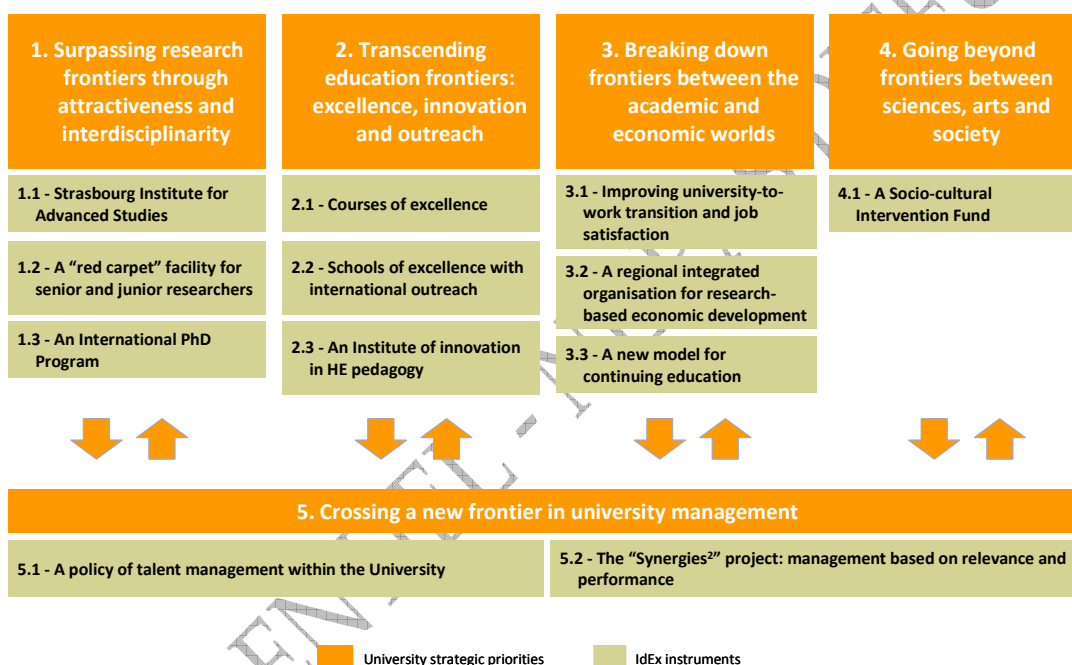
These priorities meet the challenges that the University of Strasbourg as a whole has to address in the next ten years. They are meant to exercise a strategic leverage effect on the "Excellence Perimeter" and a pull effect on the entire university by stimulating a strong dynamic of change through incentives and emulation. However, the governance set-up for the "Initiative d'excellence" will guarantee that the majority of funds will be concentrated on the "Excellence Perimeter", so as to ensure maximum leverage.

Each of these priorities has been specified in a set of **instruments** designed as a coherent and mutually reinforcing whole. These instruments will provide space for the continuing

emergence of projects, whereas a collection of projects designed from the outset would severely constrain the “Initiative d’excellence” strategic leverage. More precisely, such an approach secures three strategic issues of the framework as a whole:

- **Sustainability:** instruments remain relevant throughout time whereas projects would need revision and renewal well within the next decade;
- **Emulation:** instruments are focused on excellence but formally opened to all, thereby stimulating efforts and emulation across the university;
- **Responsiveness:** instruments allow for swift adaptation should exceptional needs or new structuring ideas arise, whereas a collection of projects would impede reactivity.

The table below presents the list of instruments related to the strategic priorities set up by the university in the “Initiative d’excellence” framework.



These instruments will be managed by regular internal calls for projects. The design of these calls will be kept transparent (the criteria of selection being public) and simple (no need for extensive hundred page submission forms ...).

The university’s particular focus on **Franco-German cooperation** has been streamlined through most of the instruments, as for instance with:

- the Strasbourg Institute of Advanced Studies, which foresees strong collaborations with its counterpart at the University of Freiburg in Germany;
- the Red Carpet facility, with chairs and post-doc fellowships meant to attract a significant number of researchers from Germany;
- the Degrees or Schools of excellence, which will aim in particular at attracting the best students from France and Germany with a bilingual background such as AbiBac students (the Franco-German A Levels);

- the socio-economic instruments, which will pay specific attention to German firms and German economy as a whole;
- the Sociocultural Intervention Fund, which will favour, among others, cooperations within the Upper Rhine region.

3.2. STRATEGIC PRIORITY N°1 - SURPASSING RESEARCH FRONTIERS THROUGH ATTRACTIVENESS AND INTERDISCIPLINARITY

Key objectives

- To reinforce the scientific presence of the university at the international level;
- To develop attractiveness for high potential junior talents in order to prepare the replacement of leading scholars as they retire;
- To foster cross-disciplinary research and PhD programs.

Main challenges

- To offer competitive salaries and working conditions and environments;
- To retain excellent researchers in the long term;
- To provide the conditions for the emergence of new fields of excellence within the multidisciplinary scope of the university;
- To foster interdisciplinary research without losing sight of the disciplinary structures of international scientific excellence.

Instruments

1. The "Strasbourg Institute for Advanced Studies" (SIAS)
2. The "red carpet" facility for Junior and Senior researchers
3. An International PhD Program of excellence

3.2.1. THE "STRASBOURG INSTITUTE FOR ADVANCED STUDIES" (SIAS)

Concept and purpose - The Institute for Advanced Studies of the University of Strasbourg will strive to encourage and support research in science and humanities at the highest level. Like the Institutes for Advanced Studies present in some foreign universities, our IAS will be a place of intellectual innovation by bringing together local and foreign scholars from diverse disciplines, so as to foster interactions among researchers and with the wider community of the university. It will seek to remove boundaries between scientific disciplines and thereby strive to encourage interdisciplinary research and help new multidisciplinary questions to emerge by relying on the disciplinary strengths within the university. The SIAS will fund interdisciplinary research projects involving highly innovative researchers from both the University of Strasbourg and foreign universities. Its members will conduct their research independently within a community of scientific excellence.

In this respect, the SIAS will aim in particular at:

- enhancing the attractiveness of the University of Strasbourg as a whole;

- incubating groundbreaking research at the intersection of disciplines, possibly leading to the creation of new research teams within the university;
- facilitating the renewal of major talents on campus.

The institution will have a transforming impact on the research strategy of the University of Strasbourg as a whole and act as a catalyst accelerating new research orientations. Far from being an “ivory tower” within the university, it will be a privileged space for research providing opportunities to meet and to work together, share experiences and new ideas. Indeed it is expected that individual projects and interactions among researchers should lead to the building of learning communities and research clusters.

Chairs and Fellows - The aim for the IAS will be to fund up to 30 scholars at any given time:

- Of these about a dozen will be permanent Chair positions from the university and will initially consist of members selected by the University Presidency among its very top scholars in all fields. The Chair holders will be internationally recognised and thereby give the SIAS the necessary visibility to attract other researchers. They will have reduced teaching and administrative duties in order to focus on their research project. Moreover, post-doctoral fellowships are envisaged which will be closely associated with the research projects of the chairs;
- The rest will be fellowships attributed to junior and senior researchers. Fellows will be appointed for a fixed duration to undertake a specific project. They will typically be persons from outside Strasbourg, but not exclusively, who wish to carry out research on campus to benefit from the interaction with scholars on campus and/or use the available facilities (library, collections, instruments, etc). The duration of the fellowships will vary from a few months to 36 months, depending on the nature of the project.

In order to ensure the attractiveness of the SIAS, we will provide the Fellows with the working conditions and the academic environment necessary for the successful completion of their project:

- Specific funds for the organisation of seminars, invitations, travel and publications;
- The necessary space and administrative support to allow them to focus on research, with hosting capacity (offices, spaces for collective work, social functions, laboratory space) provided by the existing institutions such as the European Doctoral College, the MISHA and the various science institutes on the campus;
- A stimulating multidisciplinary environment, with the best researchers in Strasbourg to learn with and to learn from.

The SIAS is expected to contribute to the university as a whole, and not remain isolated. In this respect, it will encourage its Fellows to cooperate actively with other departments, researchers, and groups within the University of Strasbourg. Each Fellow will present his or her research in the framework of the SIAS interdisciplinary seminars, which will be held monthly. The Fellows will also be expected to provide a final written report on their activities at the end of their fellowship.

Governance - The SIAS will be governed by an “Assembly” composed of the permanent Chair holders. The international visibility of the members of the Assembly will be a key tool for the attractiveness and success of the SIAS. The Assembly will then make propositions for filling chair positions as they become available through funding or retirement. The President of the University of Strasbourg will make the actual appointments based solely on the propositions of the Assembly.

The Assembly will also include the Vice-President for Research of the university as a permanent member to ensure that the SIAS will be well integrated into the research strategy of the university and its Scientific Council.

The selection of Fellows by the Assembly will be based on the highest international standards, with a peer review process and ad-hoc committees when necessary. All fellowships will be selected through international calls for projects, including a pre-selection, an invitation of the pre-selected researchers to present their research in a seminar in Strasbourg, and a final decision reached by the Assembly of the SIAS with the help of an international advisory board.

A close partnership with FRIAS (University of Freiburg, Germany) - A close partnership with the FRIAS has been jointly decided in September 2010, as part of a wider and ambitious agreement between the two universities. The ultimate goal of the partnership is to develop a common umbrella “brand” between the two institutions and elaborate a shared scientific strategy (in whole or in part), in order to optimise visibility and attractivity. The implementation of the partnership will be progressive following the establishment of the IAS of Strasbourg: joint seminars and summer schools, joint calls for projects appointing joint fellows and, possibly, joints academies. The Assembly will invite representatives of FRIAS to its meetings to discuss common strategy.

Other partnerships - The SIAS will develop special partnerships with the LabEx and other research and education entities within the University of Strasbourg. It will also be actively involved in different networks such as the “Réseau français des IAS” (RFIEA), the UBIAS (university-based IAS) and the EURIAS networks.

3.2.2. A “RED CARPET” FACILITY FOR JUNIOR AND SENIOR RESEARCHERS

Concept and purpose - The reinforcement and emergence of excellence in research at the University of Strasbourg requires both attracting junior talents and replacing senior scholars as they retire, by offering “welcoming packages” in a context of strong international competition. The so-called “red carpet” facility will be composed of chairs and post-doc fellowships meant to enable the university to offer internationally competitive salaries and thereby address one of the biggest obstacles to the international competitiveness of French universities. In order to be able not only to attract, but also to retain excellent researchers, specific and complementary tools are foreseen in the instrument “A policy of talent management within the university” (see section 3.6.1).

Chairs - The chairs will be conceived as packages including salary, research funding, post-doc and/or PhD fellowships. The Chairs will be set up on a case by case basis, but two main populations are targeted:

- Junior Chairs, reserved for young promising scientists and conceived as a tenure track process;
- Senior Chairs, targeted towards established scholars, represent a responsive installation tool aiming towards integration into the permanent university staff.

Approximately two chairs will be awarded each year, one junior and one senior. This system complements an existing one, the "Gutenberg Chairs", funded by the regional executive. The university commits itself to the creation of "industrial chairs of excellence", funded in whole or in part by private sector partners. This will require an important effort in fundraising, in which the university Foundation will be the driving force (it has already acquired valuable experience in this field with a chair in Supramolecular chemistry).

Post-doc fellowships - The University of Strasbourg has a strategic interest in attracting high potential young researchers for post-doc positions after completion of their PhD. The mobility of researchers is arguably at its highest at this career stage; it is therefore crucial for the university to be competitive and attract the best researchers in their respective fields of excellence.

Post-doc positions are usually rather poorly funded in France, and insufficient in number despite the efforts of national research organisations or the ANR*. However, the University of Strasbourg has awarded 14 such fellowships in 2009 for an annual budget of 500 k€. 20 such two to three year post-doc positions are planned in this instrument for talented young researchers with a PhD coming from another university with particular emphasis on foreign post-docs.

Mentoring - The university further commits itself to set up a mentoring process to accompany all researchers recruited through the "red carpet" facility in order to ensure their smooth and rapid integration in the university and the rapid development of their full research potential.

Selection process - The aim is to focus this funding capacity on the most promising research areas within the university, especially but not exclusively within its "Excellence Perimeter". The Steering Committee of the "Investissements d'avenir" in Strasbourg will guarantee that funds will be primarily concentrated on the "Excellence Perimeter".

The selection of disciplines and themes for the calls for projects to be advertised by the university will be managed in a process similar to that of the present allocation of research funding within the university: 1. The Vice-President for Research issues an internal call to which all researchers can apply. 2. The applications are then submitted to the collegiums for advice and classification. 3. The ultimate decision is made by the Scientific Council of the university on the basis of a proposal submitted by the Steering Committee. This process guarantees a fair access to the competition within the university, openness to innovation in new emergent fields, the allocation of the main bulk of funds to research units within the