

Acronym of the project	SUPER
Titre du projet en français	Idex Sorbonne Université
Project title in English	Idex Sorbonne University
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Institution leading the project (Project leader)	Name: Sorbonne Universités (Louis Vogel)
Capital grant requested M€	1.4 Billion €, i.e. 490 Millions € interests in 10 years

Structure of the IDEX partnership

Higher education and research institutions	Research institutes
Panthéon-Assas University	CNRS (National Centre for Scientific Research)
Paris-Sorbonne University	INSERM (National Health and Medical Research Institute)
Pierre et Marie Curie University	IRD (Research Institute for Development)
National Museum of National History	
INSEAD	
The Technology University of Compiègne	

“Twenty years from now you will be more disappointed by the things that you didn't do than by the ones you did do. So throw off the bowlines. Sail away from the safe harbor. Catch the trade winds in your sails. Explore. Dream. Discover.”

Mark Twain

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2. ADDITIONAL FILE: OPERATIONAL MEASURES

2.1. PERIMETER OF EXCELLENCE

The perimeter of excellence of Sorbonne University has been conceived as an **instrument of transformation and integration**. It is therefore **dynamic** and takes into account not only **qualitative** but also **strategic criteria**. It includes teams which fulfil the following criteria:

1. Proven quality in research or education (A or A+ grade);
2. Capacity to implement cross-boundary projects contributing to the emergence of the new university;
3. Contribution to reaching critical size in trans-disciplinary research topics.

The perimeter of excellence will therefore evolve so as to integrate new initiatives, which will emerge from calls for projects. It will enable the transformation of Sorbonne University from a sum of institutions into a world-class university.

This decision to focus on strategic criteria has important consequences for the IDEX, since it underlays not only the definition of our perimeter of excellence but also the allocation of resources to the different IDEX initiatives and our choice of operational measures or key actions. The decision was made following an in-depth analysis of the strengths and weaknesses of our component members: whereas they were without question world-class institutions, they were also characterised by long-standing and heterogeneous academic cultures.

Research

When the IDEX starts, the perimeter of excellence will only include projects that have been successful at the different *Investing for the Future* calls (namely the Labex and IHU). In December 2011, this represents a total of 1,600 academic staff. Depending on the results of the second wave of *Investing for the Future*, the number will increase by a maximum of 1,300 to reach 2,900 academic staff in the perimeter of excellence. The selection criteria, which define the perimeter of excellence, are perfectly illustrated by the fact that currently, whereas 80 per cent of our academic staff work in A or A+ laboratories, less than half of them will be included in the initial perimeter of excellence.

A three-step process of calls for projects (described in the section on Research) will enable new projects to obtain funding and be integrated into the perimeter of excellence so long as they satisfy criteria of (a) quality, (b) cross-boundary nature, (c) relevance, and (d) capacity to contribute to the emergence of a new field of excellence.

	TOTAL	Year 1	Year 4	Year 10
Academic staff	5,800	30 to 50% <i>depending on results of the 2nd wave of "IF"</i>	70%	100%

Education

At first, the perimeter of excellence will include:

- The *Sorbonne Doctoral College* with its PhD students and their supervisors.
- Specific master's courses which are ranked A or A+ (when a ranking exists) and which are fully integrated with IDEX research projects (including Labex).
- Bachelor's curricula integrated in the *Sorbonne Bachelor College* (including: double-major curricula, first year in residence and multi-disciplinary bachelor's in health, sciences, humanities and law).

The scope of the perimeter of excellence will progressively widen to include:

- New master's programmes, integrated with research projects that are themselves part of the perimeter of excellence.
- Bachelor's curricula that will be integrated as the Sorbonne Bachelor College broadens its scope.

	TOTAL	Year 1	Year 4	Year 10
Bachelor's	35,000	1%	30%	70%
Master's	23,000	30%	70%	100%
Doctorate	7,000	80%	100%	100%
Total	65,000	12,850	33,600	54,500

Strengths of the perimeter of excellence

The following elements are assets for the transformation into Sorbonne University:

- The perimeter of excellence is organised around a community of researchers, academic staff, and students, and not according to the previous institutional logic. It benefits from their different academic cultures and the complementarity of disciplinary fields (almost no overlaps).
- The perimeter of excellence is trans-disciplinary and enables the emergence of a critical mass of scholars from different fields around specific research topics (law and environment; heritage; digital sciences and humanities; etc.).
- The integration of the undergraduate cycle into a world-class university is tackled head-on: some bachelor's curricula are part of the perimeter of excellence from the start and will have a pull-effect on the whole of the undergraduate cycle. The existing first programmes are already extremely popular among students, with very large numbers of applicants for each of them.
- The perimeter of excellence integrates both professional education and training through research and relies on strong ties with the professional sector: amongst the best hospitals in Paris, as well as the network of professional schools in law and arts.
- The perimeter of excellence is dynamic and will have a pull-effect on the entire University (it will not lead to a double-track university).

Weaknesses of the perimeter of excellence

- Formal and natural sciences, engineering and medicine are largely predominant in the projects currently funded by the *Investing for the Future* calls. This could lead to a more difficult integration with other disciplinary fields.

- The ratio of teaching staff to undergraduate student numbers is low, and academic staff are neither trained nor given the time to ensure individualised student tutorship. Furthermore, the current structure of the undergraduate cycle will not be easy to transform in order to enable tailored curricula.
- The academic practices of the partners are often very different: hiring processes, publication practices, experience of grant research projects, etc.

Mitigating Factors

The above elements have been taken into account when designing our project, and they will be a major focus of attention of the Executive Committee and Board in each strategic action. To mitigate them, Sorbonne University intends:

- For research, to focus on integrating Arts and Humanities into new IDEX projects, and maximise the input from our schools of business, law and engineering.
- For education, to centre our efforts on the undergraduate cycle and be proactive in seeking innovative solutions, namely by involving outside actors.
- For the organisation, to ensure that the Quality Management Office defines a detailed list of best practices and measures their rate of uptake in each area on a yearly basis.

2.2. 4-YEAR TARGETS AND FORESEEABLE RISKS

QUALITY OF SCIENTIFIC AMBITION

– 4 years from now

Sorbonne University has implemented a common project-based research strategy, which is overseen by the Vice President for Research in coordination with the deans of research of each faculty and school. This strategy has reinforced our domains of excellence and enabled the identification of new trans-disciplinary research fields, in which a critical mass of scholars is now active.

Common platforms enable the diffusion of best practices throughout the University and a world-class data centre ensures that Sorbonne University is rapidly becoming a major knowledge hub. These have had a particularly important effect on the Faculty of Arts and Humanities. The emergence of a common research policy has reinforced the unity of the research community and their identification with Sorbonne University.

Key Actions

1. Common Signature. A common Sorbonne University signature of scientific publications has been approved and will be compulsory for all academic staff. It will be applied by the core founding partners from January 2012, and rapidly extended to the other partners.

2. Project-Based Approach. We will extend and systematise the project-based approach, which characterises *Investing for the Future* calls such as the Labex. This approach will be divided into three phases: (a) trans-disciplinary research seminars; (b) Convergence programmes for trans-disciplinary research; (c) cluster hiring to empower strategic domains. This process is designed to ensure the emergence of new research domains, with a critical mass of scholars. All selected projects will be expected to successfully apply for funding to national, European and international calls in order to proceed with the next phase. Projects involving international partners will be prioritised.

3 M€/y

3. Strategic focus. This approach will be combined with a strategic decision to focus on emerging pluridisciplinary fields and give priority to projects involving teams from different areas. Suggestions for the themes of the first call include: environment, law and social sciences; medicine and engineering; heritage, art and sciences; legal computing; artificial intelligence and literature. Projects will be expected to include teams or scholars working both in the main research faculties and the professional schools.

4. Common set of platform and resources. Finally, Sorbonne University will build a series of shared research tools, which will facilitate the work of researchers by providing support for data access, data diffusion, project writing and methodology.

3.7 M€/y

- Along the lines of the Harvard Data Centre, a Statistical Data Analysis Centre will be set up to provide data collection, archiving and statistical support services.
- Documentary resources will be pooled at the level of Sorbonne University.
- Common instruments will be provided to support research: platforms, infrastructures,

methodological support.

- A specific team in charge of helping researchers with grant applications will be extended to all disciplinary fields within Sorbonne University.

Foreseeable risks

- A research policy, almost entirely based on calls for projects, entails a risk of resource dispersal and therefore lack of significant impact. This risk will increase if the calls are designed to satisfy conflicting academic fields and are therefore not focused enough.
- Existing institutional platforms may resist merging into Sorbonne University platforms.
- The project framework may not allow certain projects the time to mature sufficiently for them to obtain results.
- Differences in focus and practices between academic fields may lead to lack of understanding between project partners.

Mitigating factors

The risk of resource dispersal and that of existing platforms resisting change are both related to governance. They will be mitigated by ensuring a strong research strategy at the University level and a stringent evaluation process based on the systematic use of outside evaluations.

The project-based approach has been designed to enable progress from an initial idea to a proof of concept, before applying to European grants and finally enabling cluster hiring of scholars.

The writing of this project has involved academic staff from all major academic fields of Sorbonne University. The reinforcement of Sorbonne University will benefit the whole community and will also help existing disciplinary areas of excellence to attract new talent and new funds.

EDUCATION: AMBITION AND INNOVATION

– 4 years from now

Sorbonne University has implemented a common education strategy, which is overseen by the Vice President for Education in coordination with the deans of education of each faculty and school. This policy combines the assets of the professional schools with those of the faculties.

Sorbonne Bachelor College proposes pluridisciplinary curricula, double degrees, individual tutorship and opportunities to study abroad to over half the undergraduate students. All master's programmes are integrated with cutting-edge research projects and involve students in this research. PhD students are part of the Sorbonne Doctoral College, which ensures personal and professional development, and provides institutional support for career development.

All students receive a Sorbonne University degree and benefit from a common campus life. An international alumni association regroups all former students.

Key Actions

1. Undergraduate Level. The French undergraduate cycle is often singled out because of its lack of differentiation, high drop-out rate (80% of first-year medical students at UPMC) and excessive specialisation. In order to improve quality and bring the undergraduate cycle up to international standards, Sorbonne University will:

4 M€/y

- Create the Sorbonne Bachelor College, a fully integrated double-major undergraduate cycle, built by progressively extending the seven existing double-major degrees to all undergraduate curricula. Undergraduate students of the Sorbonne Bachelor College will have access to individual tutorship and be encouraged to spend a year abroad.
- Create a multidisciplinary first-year programme, in residence, at the IRD campus in Bondy. This experience will be expanded.
- Develop an original programme for students interested in medical studies, which will enable them to enrol in a bachelor's programme in health sciences, law and humanities, before either passing a competitive medical school entrance exam at the end of the first year, or following other curricula at the Sorbonne Bachelor College.
- Set up professional degrees in order to provide students with a real-life experience of key concepts and issues and ensuring rapid employment (at 4 years, 30 professional bachelor's degrees).

2. Master's Level. Sorbonne University will:

1 M€/y

- Develop original master's programmes fully integrated in research projects, such as the Labex. A process of call for projects will enable to select the most innovative programmes.
- Create an International Law School, which will offer specific top-level, multidisciplinary legal courses for students and mid-career professionals. This kind of curricula, essential for people who intend to pursue careers as future chief financial officers, corporate executives, management board members, is currently lacking in France.
- Introduce a five-year Master of Engineering, modelled on leading international engineering degree courses, to offer a research-based training to future leaders in engineering.
- Set up specific master classes for the career development of healthcare professionals in partnership with AP-HP. They will address the changing skills required in paramedical professions as well as the emergence of new functions and job categories.
- Enable master's students to access specialised courses and programmes in fields such as business (INSEAD).

3. Doctorate Level. Through the Sorbonne Doctoral College, the University will ensure a supportive research environment, transparent admission procedures and high-quality supervision, and expose early-stage researchers to a wide range of opportunities for their individual professional development (including management, economics, entrepreneurship, etc.). Sorbonne University will also offer double-degree programmes (such as PhD-MBA, PhD-LLA), taking advantage namely of the presence of the INSEAD, as well as executive doctorates and part-time doctorates for secondary-school teachers, etc.

1 M€/y

4. Life-long Learning. In order to boost life-long learning, Sorbonne University will:

1 M€/y

- Develop life-long learning curricula for primary and secondary-school teachers, to address an issue often highlighted by teachers.

- Adapt regular curricula to encourage the integration of professionals.
- Implement tailor-made programmes for industry and professional sectors.

5. Learning Network. Sorbonne University will develop a common network of pedagogical resources, articulating the learning centres of its different locations into a resource network, providing up-to-date pedagogical tools. It will also support the development of distance learning and develop educative projects with strategic partners abroad.

6 M€/y

6. University Institute of Applied Studies. This institute will support all the professional training courses at Sorbonne University. It will provide students with opportunities to learn about key concepts and issues within their programme, through the use of scientific facilities and equipment. It will ultimately consist in four technology halls: energy and environment; environmental engineering and water management; biological engineering; and chemical engineering.

1 M€/y

7. Campus and Student Life. Campus life is key to developing a strong feeling of community and especially important to create an attractive environment for international students and staff.

12.5 M€/y

- Sorbonne University will take advantage of its location to build a unified urban campus.
- With the presence of the Museum national d'histoire naturelle (MNHN), Sorbonne University will benefit from unique facilities for diffusion of knowledge and an exceptional experience in participatory science.
- Health, sport and cultural infrastructures will be further developed and the resources of the partners will be pooled.
- Student life areas will be built, taking into account both the urgent need for accommodation and a desire frequently expressed by our communities for convivial spaces. Sorbonne University will namely create and manage an International Students Residence, which is fundamental in reaching international standards.
- Finally, the On-campus Student Jobs and Sorbonne Scholarship programmes will support part-time jobs for students on the premises and support best-performing students with grants.

Foreseeable risks

- Extending pilot projects and creating a pull-effect on a large scale will be difficult, due to the size of the undergraduate student body (35,000 students).
- Wide-ranging, open undergraduate curricula may lack cohesion and confuse students.
- Time for individual tutorship is currently very limited.
- Student accommodation and other initiatives will require large amounts of funding from sources outside the University and will impact on the success of IDEX actions.
- The close integration of master's programmes with research projects may need a change in culture for academic staff that is not currently required to interact with students.

Mitigating factors

We think that the risks inherent in attempting to reform the undergraduate cycle are worth assuming.

Success will require a very clear strategy and hands-on leadership. Sorbonne University will ensure that the curricula are clear and widely promoted. Incentives will be provided to teaching staff and graduate students in order to involve them in assisting undergraduate students to select the most appropriate curricula for their interests.

Formal proposals already exist to fund student accommodation, such as that made by the MACIF to invest in building student residences for Sorbonne University.

Non-teaching academic staff has already been heavily involved in preparing proposals for master's courses for the Labex call for projects and their interest in taking part in these has been outstanding.

ECONOMIC PARTNERSHIPS, KNOWLEDGE AND TECHNOLOGY TRANSFER

– 4 years from now

Sorbonne University has implemented a campus-wide knowledge and technology transfer strategy, which is overseen by the Vice President for Research in coordination with the heads of the relevant structures.

Knowledge and technology transfer works hand in hand with research throughout the campus. Projects have easy access to expertise, seed funding and patenting thanks to the SATT LUTECH, the Quadrivium seed fund, IEED, IRT, three Carnot Institutes and the partnership with the Franhofer Gesellschaft. These complement each other and have accelerated technology transfer, measured by the number of patents, start-ups and total money invested. Paris Parc and the Institute of Innovation at Compiègne have turned into major incubators.

Master's and doctoral students in all disciplinary fields have access to management classes taught by INSEAD faculty and are encouraged to develop collaborative research projects namely with specialists from other domains. A special effort has enabled the emergence of a knowledge and technology transfer policy adapted to the humanities and social sciences.

Key Actions

1. Knowledge and Technology Transfer Office. The office will prepare and manage contracts with industry. It will also coordinate all activities in the sector.

2. SATT LUTECH. The SATT will broaden the scope of knowledge and technology transfer enabled by research at Sorbonne University. It will increase the number of projects and provide them with support to help them mature from the technological, economic and legal points of view. LUTECH aims, within 10 years, to handle 180 declarations of invention,

patent 120 technologies and support 10 start-ups yearly. It will also handle all questions of intellectual property.

3. Quadrivium seed fund. Quadrivium aims to solve a major problem of new companies: the lack of available capital for start-ups. It will provide selected projects with seed money at a stage when the venture capital industry is reluctant to invest.

4. IEED and IRT. Sorbonne University is involved in two IEEDs and is a member of the IRT RAILENIUM. It will also benefit from the expertise of the UTC Institute of Technology for knowledge and technology transfer.

5. Paris Parc and Compiègne Innovation Centre. These innovation centres will provide 22,000 m² of facilities to experiment with new teaching practices and mature innovative projects requiring industrial collaboration.

6. Industrial cooperation. Sorbonne University is currently a member of three Carnot Institutes (Curie Cancer; Institut du cerveau et de la moëlle épinière; Voir et Entendre), which will continue to develop R&D in their domains. We has also signed a strategic partnership with the Franhofer Gesellschaft, to create joint working groups and enable our laboratories to have access to the FhG business partner network. We will also further develop ongoing collaborations with prestigious partners such as Areva, BNP Paribas, Bouygues, Dassault, EADS, EDF, Essilor, Orange, Pierre Fabre, Renault, Saint-Gobain, Sanofi, Shell, Thales, Total, Valeo, and others. These collaborations will namely enable Sorbonne University to offer internships to students.

7. INSEAD management expertise. INSEAD, Sorbonne's Business School, will help develop management courses for students and academic staff of all disciplinary fields.

8. Digital life. In collaboration with Cap Digital, Sorbonne University will develop its involvement into the field of digital engineering, content, health and autonomy.

Foreseeable risks

- Overlaps may occur between the different initiatives.
- Most of these initiatives do not involve students.
- No transfer projects currently focus on the arts or humanities.
- Common practices regarding intellectual property may prove difficult to implement.

Mitigating factors

Sorbonne University has an exceptional network of technology transfer instruments. We will prioritise efficient coordination by the Vice President for Research assisted by the respective heads of these initiatives. We will namely try and integrate knowledge and technology transfer approaches to projects in the Arts and Humanities by strongly encouraging research projects to include this perspective in their applications.

INTERNATIONAL AND EUROPEAN POLICY

– 4 years from now

Situated at the heart of Paris and integrating the core of the historical buildings of the Sorbonne, Sorbonne University has helped re-establish the reputation of French universities on the international scene. International policy follows a clear strategy and is coordinated by the Vice President for International and European Strategy.

International students and academic staff have access to international standard facilities and the first results of Sorbonne University's focus on Campus Life are apparent.

Sorbonne University is an active member of the LERU and has considerably increased its presence within the European research network. The emerging network of Sorbonne University campuses is transforming the University into a truly global force, thanks to reinforced relations with key strategic partners.

The academic staff and student body are increasingly international due to the renewed attractiveness of the university.

Key Actions

1. Office for International Relations. A dedicated Office for International Relations will be set up at the heart of the campus. It will coordinate all international activities and particularly ensure:

- Services for international students and staff to deal with all issues encountered (including visas, housing, transport, campus life, etc.) and offer French classes.
- Information and support for Sorbonne University students on spending time abroad.
- International relations. Sorbonne University will incite and offer support to its community to answer international calls for projects and identify and develop joint projects with international partners.
- European grants. A specific service will incite and provide support to academic staff who wish to apply to European grants such as ERC.

2. Curricula in English. Sorbonne University will promote teaching in English, namely at the master's and PhD level, where whole-degree curricula will be taught in English.

3. Strategic Alliances. UPMC is currently one of the 21 members of the League of European Research Universities (LERU). Sorbonne University will apply to the LERU, in place of UPMC. In the coming years, we will evaluate the possibility of joining other carefully targeted leading university alliances, such as the International Alliance of Research Universities (IARU).

4. International Campuses. Sorbonne University has already started developing two campuses, with the strategic integration of the international research laboratory of CNRS/UPMC with INSEAD Business School and the opening of a Sorbonne Law School in

Singapore and similar initiatives in Abu Dhabi between Paris Sorbonne Abu Dhabi and INSEAD. We aim to open further centres in India, China and Brazil within the coming four years and have identified possible partners for these initiatives. For example, Sorbonne University has already developed an active collaboration with Renmin University in the area of humanities and social sciences, with the creation in October 2010 of the Franco-Chinese Institute, which delivers joint diplomas.

Foreseeable risks

- Multiplying dispersed partnerships with no strategic focus.
- Being overambitious in developing international campuses and failing to take into the considerable risks involved.
- Failing to attract international staff and students unwilling to learn French.

Mitigating factors

A clear strategic leadership should ensure that Sorbonne University's international policy is clear and consistent. The long experience of our academic staff and hundreds of existing agreements are a guarantee that cooperation will continue to be fostered by researcher-to-researcher dynamics.

The experience acquired namely by the INSEAD in Singapore and Paris-Sorbonne in Abu Dhabi, will help ensure that mistakes will be avoided.

Sorbonne University considers that a shift from French to English as the core teaching language is a prerequisite to ensure international attractiveness.

GOVERNANCE: AMBITION, IDENTITY, TRANSFORMATION AND STRUCTURE

– 4 years from now

Sorbonne University is a fully integrated university built around one community. It is organised in three faculties (Arts and Humanities; Science; Medicine) and three schools (Law; Business; Technology). A wide range of Institutes and Associate Partners complement the core of the University. The founding partners no longer exist as such.

A 16-member Board with a majority of external members oversees the University, approves its strategy and allocates funds upon the advice of the Strategy Committee and the Academic Senate.

Sorbonne University has a common strategy for research, knowledge and technology transfer and education. All members benefit from a new identity, that of Sorbonne University.

Key Actions

1. Core Structure. Sorbonne University is a fully unified university with a single community of academic staff, support staff and students. Sorbonne University is governed by one Board, which names one Executive Committee. The Board includes a maximum of 16 members, the majority of whom is external. It receives recommendations from the Strategy Committee and the Academic Senate. The Executive Committee is directed by the President, assisted by four Vice Presidents and one Executive Vice President. He/she receives a yearly quitus from the Board. All positions are full time and filled according to international standards. 2 M€/y

2. Legal Status. The legal status will be defined in negotiation with the French government, according to the legal instruments available at the time of creation of the unified University. It must enable Sorbonne University to function in the manner just described. In the transition phase, Sorbonne University will keep its status as a *Fondation de Coopération Scientifique* (FCS).

3. Transition Phase. During the transition phase, the Board of Sorbonne University has 22 members, and includes the Head of each of the founding institutions, although the majority of Board members are external to the founding members. To ensure a smooth transition, the founding members of Sorbonne University have selected a candidate for the position of President, who has prepared an Executive Committee, and is ready to submit it to the Board. The transition phase will end when the final legal status of Sorbonne University is approved by the French government and the founding members formally vote the creation of the single University. This is planned to take place in year 4. [*See Governance timeline*]

4. Monitoring. To monitor the progress of Sorbonne University, a common Quality Management Office will be set up. It will be in charge of defining and monitoring the relevant key performance indicators (KPIs). Its role is fundamental in the preparation of regular audits of the University, and in the perspective of the 4-year evaluation of the IDEX.

Foreseeable risks

- Internal opposition within the founding partners, linked namely to differences in culture or a will to maintain the existing structures.
- Balance between central governance and governance of the Schools of Sorbonne University.

Mitigating factors

The governing bodies of all founding members have publicly assumed a clear position and defend it. The current governance of the three core universities have all agreed that their main task over the next three years will be to set-up Sorbonne University as a single institution.

The structure of the University will ensure that INSEAD and the UTC Institute of Technology retain a large degree of autonomy on the model of American schools such as Wharton or Sloan School of Management, which are part of the University of Pennsylvania and MIT, respectively.

The timeline has been accelerated and various actions have already been implemented. It will be constantly updated and reviewed with the Board and Strategy Committee.

A governance in phase with its community

The issue of governance is key to the whole enterprise of Sorbonne University. At stake is the capacity to create *one* community, which will avoid conflict between different disciplinary fields or academic cultures, whilst preserving our diversity.

For this reason, we have designed the whole model of governance and IDEX actions as a means of finding the proper balance between: (a) incentives from the executive committee to actively foster change; (b) bottom-up projects enabling the appropriation of the IDEX project by the community of staff and students.

Sorbonne University will ensure that these two processes are seamlessly integrated by promoting strong interactions between the Executive Committee and the governing structures of the Faculties of Arts and Humanities, Medicine, Science, the Law School and, of the UTC Institute of Technology and INSEAD Business School.

These interactions will take place in particular in three areas: Education, Research and Services. An Committee for Education and a Committee for Research will meet on a weekly basis throughout the first four years in order to coordinate their actions. These committees will include the relevant Vice President and his team alongside the associated heads from each faculty/school. A similar process will be implemented for Services, with the Executive Vice President meeting the heads of Services (or equivalent) of each faculty/school on a weekly basis.

QUALITY OF THE RESOURCE ALLOCATION PROCESS

– 4 years from now

Sorbonne University functions on a principle of internal calls for projects, within a strategic framework of priorities defined by the President and the Executive Committee.

It has a policy of pooling and sharing of resources. It has designed common guidelines for hiring staff and negotiates packages to attract top-level researchers, professors and teams. These practices have extended beyond the perimeter of excellence and diffused throughout the University.

Key Actions

1. Principles. All funds are managed by the financial services of Sorbonne University. The budget of Sorbonne University is proposed by the President and voted by the Board.

2. IDEX Funds. Sorbonne University will ensure that the IDEX funds are spent on the perimeter of excellence. Operating costs aside, the procedure of resource allocation will mainly depend

on internal calls for projects. This process will obey a principle of subsidiarity, so as to ensure maximal efficiency, but the general rules for the main projects will always be the same: the Vice President in charge defines the main strategic orientations and launches the call for projects. The projects are evaluated by an external committee. The Vice President and the relevant Committee decide on the funding. With the help of the Quality Management Office, they set up milestones and proceed to a regular assessment of the progress of the project.

3. Labex Funds. Each Labex will manage its funds. Funds allocated by the Labex to educative projects and knowledge and technology transfer will require the specific approval of the relevant Vice President, in order to ensure overall coherence.

4. Hiring Processes. Sorbonne University will define common guidelines for all hiring. These will be defined based on the successful experience of some of its members in attracting top-level researchers and professors.

5. Quality Management Office. A Quality Management Office will be set up at the University level to follow relevant KPIs. Internal evaluation processes as well as external audits will be put in place, under the direct responsibility of the President and the Audit Committee.

Foreseeable risks

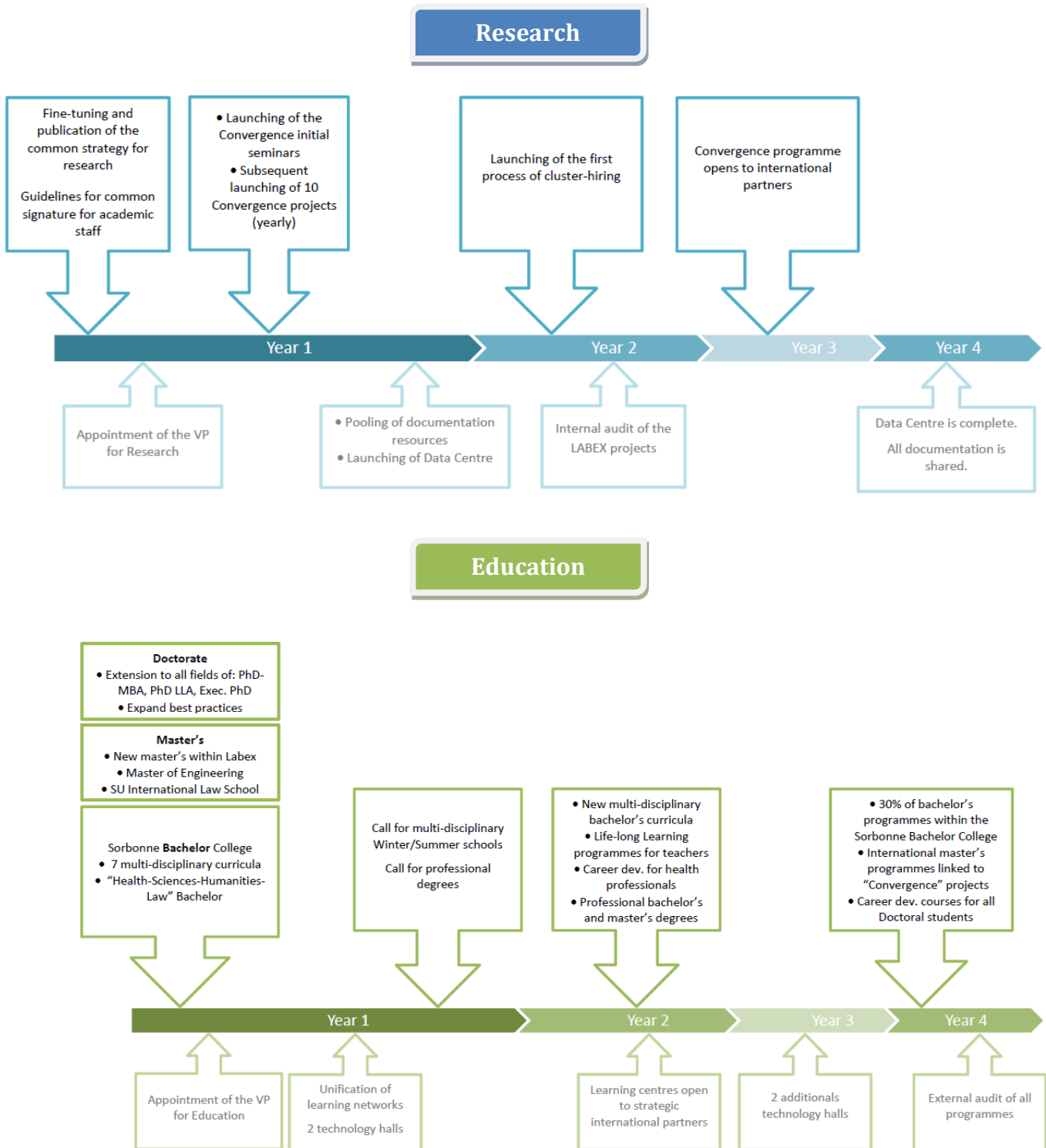
- The process of call for projects might not always be fully in line with the development of long-term strategies.
- The process could become time-consuming, namely if milestones and KPIs are seen as excessively detailed by researchers.
- Establishing common practices for hiring might be difficult considering the different existent practices within disciplinary fields.

Mitigating factors

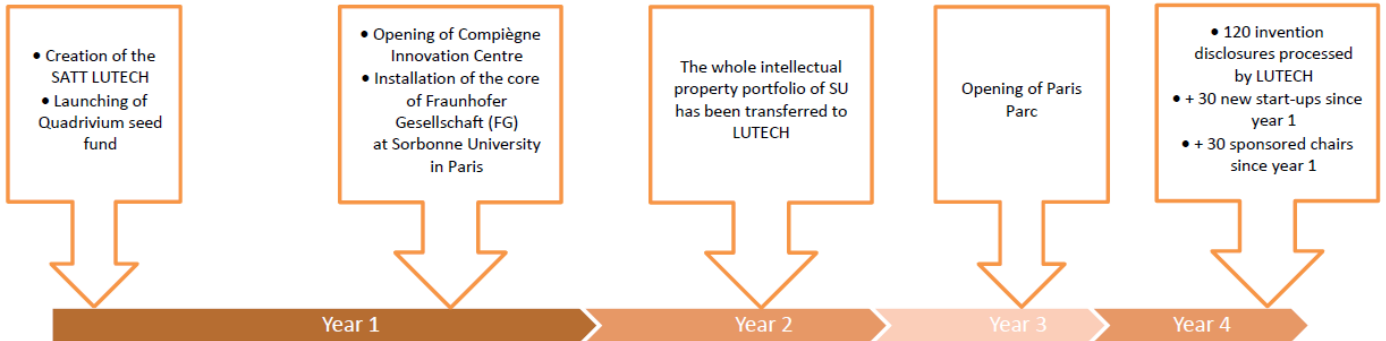
Sorbonne University has various founding members with excellent long-term expertise in this field, including UPMC/UTC (for project-based processes) and INSEAD. Their experience should help us establish a system, which guarantees a rigorous, yet flexible and efficient system of resource allocation.

2.3. OPERATIONAL MEASURES AND TIME-LINE

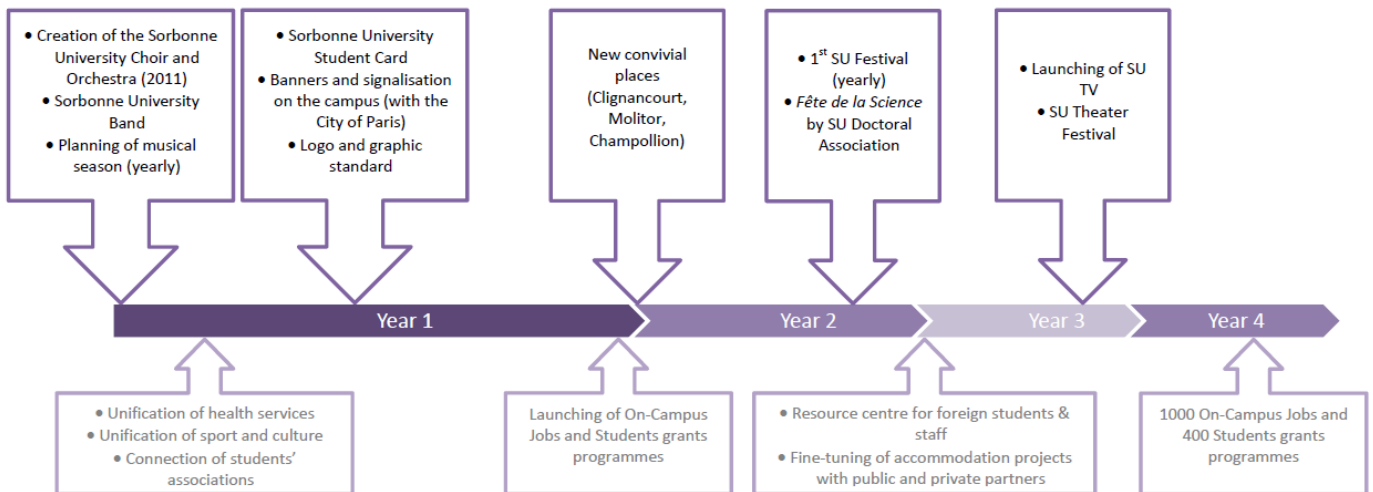
In the following roadmaps, the actions below the time-line concern administrative and legal structures; the actions above relate to the implementation of Sorbonne University’s Research, Education, Knowledge and technology transfer, Campus life and Governance.



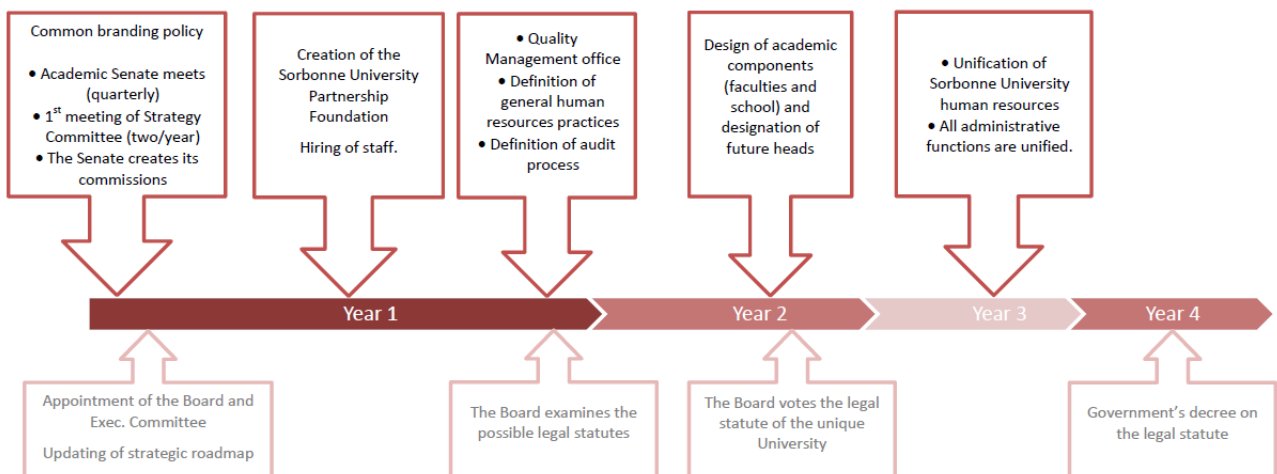
Knowledge and Technology Transfer



Campus Life



Governance



3. RESUMÉ OPÉRATIONNEL / EXECUTIVE SUMMARY

3.1. VERSION FRANÇAISE

Sorbonne Université réunit l'ensemble des composantes qui constituent une université multidisciplinaire de rang mondial. Elle dispose d'atouts reconnus par le jury : offre pédagogique innovante, qualité scientifique confirmée par le succès aux autres appels à projets des investissements d'avenir, regroupement d'institutions diverses et complémentaires, effort réel pour créer une vie de campus à Paris.

Les recommandations du jury nous ont permis de prendre la mesure des efforts qui restaient à accomplir pour préciser les conditions de mise en œuvre de l'ambition décrite, et la trajectoire de réalisation du projet. La gouvernance, le pilotage et les moyens ont été redéfinis pour doter les animateurs du projet IDEX des outils nécessaires à la transformation de Sorbonne Université et à son intégration en une université unique, selon un calendrier précis.

Ce que nous sommes aujourd'hui

Sorbonne Université est un des tout premiers pôles universitaires français d'envergure internationale. Sont accueillis sur un périmètre très concentré au centre de Paris 65 000 étudiants dont 13 000 étrangers, 23 000 étudiants en master et 7 000 en doctorat. Sorbonne Université réunit près de 5 000 chercheurs et enseignants-chercheurs rattachés à deux cents laboratoires et centres de recherche. Cette communauté compte près de 100 académiciens, plus de 100 IUF et 24 professeurs et chercheurs soutenus par l'*European Research Council* et 45 chaires cofinancées par les acteurs économiques. Elle est évaluée pour plus de 80 % de ses équipes aux niveaux A ou A + par l'AERES, et affiche selon ISI Web of Science plus de 36 000 articles produits, constituant ainsi un ensemble remarquable par sa qualité scientifique.

Le cœur de Sorbonne Université

Université Paris-Sorbonne, Université Panthéon-Assas, Université Pierre et Marie Curie, Muséum National d'Histoire Naturelle, INSEAD, Université de Technologie de Compiègne

Centre National de la Recherche Scientifique, Institut National de la Santé et de la Recherche Médicale, Institut de Recherche pour le Développement, Assistance Publique des Hôpitaux de Paris

Ses établissements fondateurs, leaders dans leur domaine, peuvent désormais s'appuyer sur un ensemble élargi d'écoles et d'instituts dans les domaines du droit, du management public et des arts. Sorbonne Université offre ainsi un vaste potentiel de synergies, dans tous les domaines de la connaissance humaine.

Le périmètre d'excellence retenu pour l'IDEX relève d'un choix particulièrement sélectif, puisqu'il représente pour la recherche 50 % des forces de Sorbonne Université, dans les domaines suivants : Droit, Economie et Gestion ; Lettres et Humanités ; Modélisation et Ingénierie ; Technologie ; Energie, Matière et Univers ; Terre Vivante, Biodiversité et Environnement ; Vie et Santé.

Le cœur de ce périmètre d'excellence est constitué des projets déjà sélectionnés au titre des investissements d'avenir : sept Labex, six Equipex, deux IHU, deux Instituts Carnot, un IRT, une SATT, un Fonds d'amorçage et deux IEED. Les équipes de Sorbonne Université participent directement à onze autres Labex sélectionnés. Les nouveaux projets déposés comprennent quinze Labex, douze Equipex et deux Idefi.

L'Idex étant conçu comme **un outil de transformation et d'intégration**, le périmètre d'excellence se développera par appels à projet internes.

Une université mondiale au cœur de Paris

Réunissant les meilleurs talents au sein des disciplines constitutives de son périmètre d'excellence, **Sorbonne Université entend compter parmi les toutes premières universités mondiales.**

Pour réaliser cette ambition, nous avons choisi de repenser le projet pour le construire autour de la communauté que constituera Sorbonne Université (enseignants, enseignants-chercheurs, chercheurs, étudiants, personnels). Ainsi, Sorbonne Université ne sera pas la juxtaposition des institutions académiques existant aujourd'hui, mais deviendra une université unique.

A l'image des meilleures universités mondiales, Sorbonne Université sera une université de tous les savoirs, couvrant tous les champs de la connaissance, pour répondre aux défis intellectuels et scientifiques et aux enjeux du 20^{ème} siècle.

Elle associera une formation disciplinaire robuste à une ouverture d'esprit permettant à nos diplômés d'appréhender le monde d'aujourd'hui.

Ancrée au cœur du Paris universitaire, autour d'un vrai campus intégré, elle interagira étroitement avec ses partenaires parisiens, mais aussi avec un réseau dense d'institutions académiques sur plusieurs continents.

Et elle s'appuiera sur la notoriété et l'attractivité d'un nom mondialement connu.

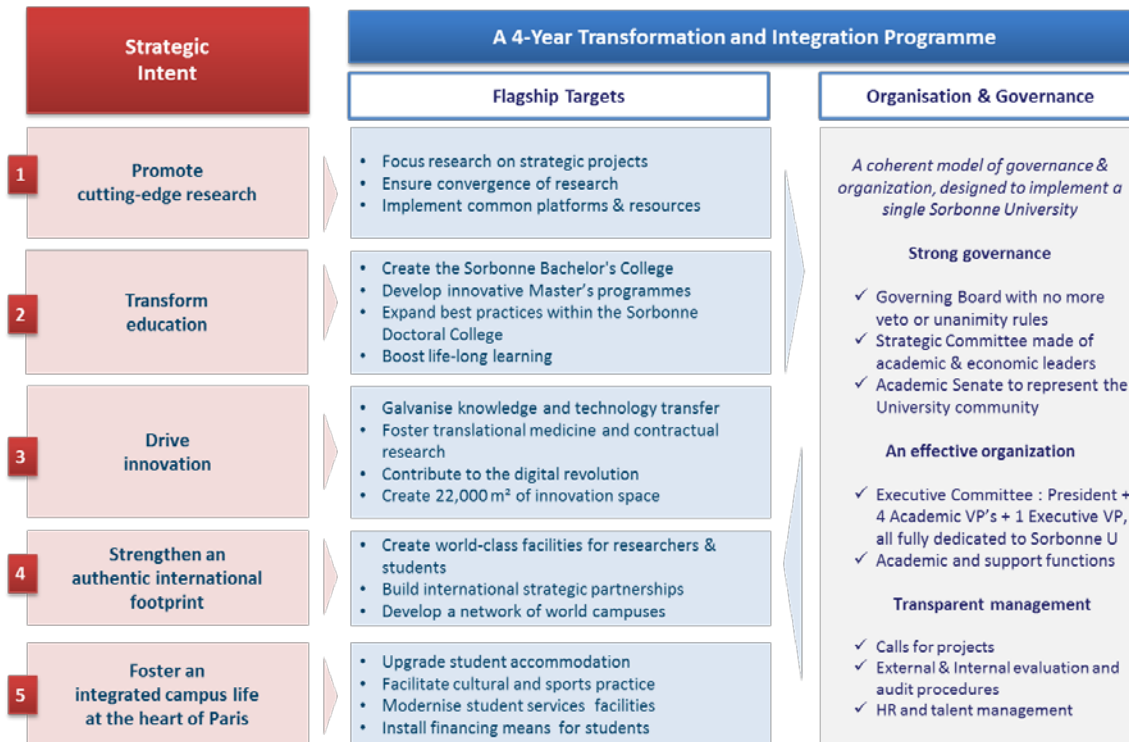
Acteur des débats de société et de la vie culturelle, elle sera un moteur du développement économique et du rayonnement international de son territoire. La constitution d'un véritable campus universitaire au centre géographique et intellectuel de Paris constitue un axe stratégique du projet, pour attirer les meilleurs étudiants, enseignants et chercheurs.

De la vision à la cible

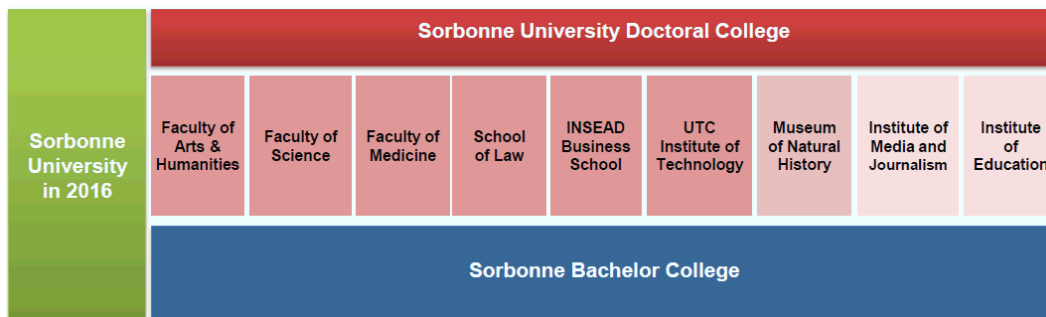
Pour se réaliser, la perspective dessinée – *devenir une université mondiale au cœur de Paris* – doit s'incarner dans un projet réellement transformant. La candidature de Sorbonne Université s'inscrit donc résolument dans une dynamique d'évolution avec l'ambition de faire advenir une véritable université unique.

Sorbonne Université bénéficie de caractéristiques distinctives : outre l'excellence dans chacune des disciplines couvertes, l'absence de recouvrement entre ses composantes constitutives facilitera l'intégration scientifique et la transformation des parcours de formation.

L'Idex sera l'outil qui permettra de réaliser l'ambition. Cinq objectifs stratégiques seront déployés au travers de projets phares retenus dans les différents domaines, la mise en œuvre reposant sur une gouvernance et une organisation qui ont été revues afin d'être mise au service de la vision cible.



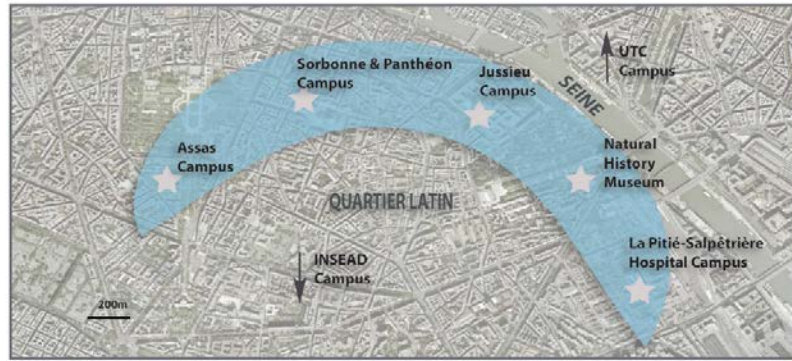
Pour marquer leur identité et signifier leur engagement, les partenaires du projet ont décidé de promouvoir dès 2012 la signature « Sorbonne Université », et de réunir dans une fondation partenariale commune leurs efforts de levée de fonds.



Mais il convient d'aller plus loin. Comme l'a souligné le jury, la dynamique de transformation nécessite un rythme plus soutenu : c'est pourquoi nous avons décidé d'avancer à l'horizon de quatre ans la cible initialement fixée à dix ans.

À cet horizon de quatre ans, Sorbonne Université sera constituée d'une part du *Collège de la Sorbonne*, véritable transformation pédagogique permettant de mettre en place des licences multidisciplinaires, d'autre part de *Facultés, Ecoles et Instituts* organisés selon les principaux domaines disciplinaires couverts, et enfin du *Collège doctoral de la Sorbonne*.

Trois à quatre ans seront nécessaires pour évaluer l'impact de la stratégie de recherche et d'éducation, et davantage pour la vie de campus. Entre l'année 4 et l'année 10, les programmes et processus seront précisés, améliorés ou transformés au fur et à mesure du déploiement complet des cycles de formation et de l'intégration des forces de recherche. Dans dix ans, Sorbonne Université sera de nouveau l'une des premières universités au monde.



La constitution d'un véritable campus universitaire au centre géographique et intellectuel de Paris constitue un axe stratégique du projet, pour attirer les meilleurs étudiants, enseignants, enseignants chercheurs et chercheurs.

Des capacités d'exécution renforcées

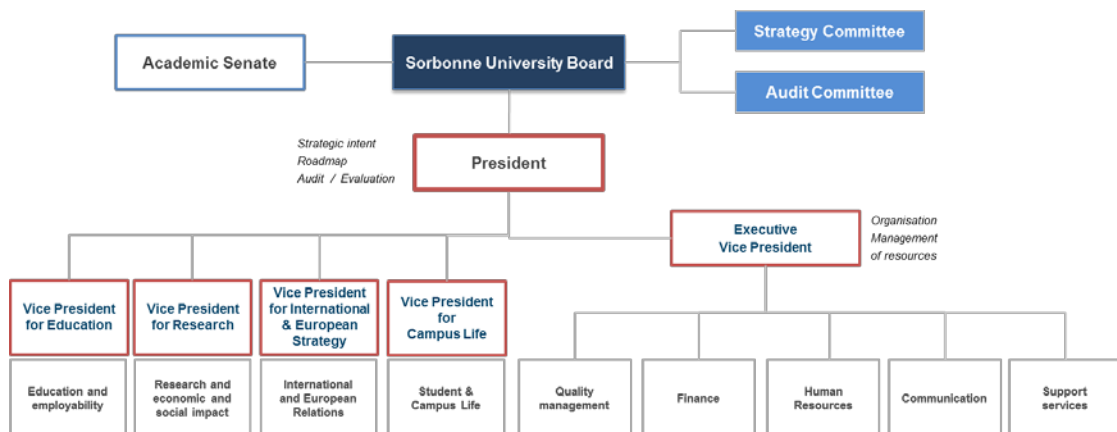
Mener cette transformation en quatre ans nécessite une capacité de gouvernance et de pilotage renforcée. En accord avec les recommandations du jury, ce nouveau projet présente les évolutions entérinées par les membres : refonte des instances de gouvernance et de gestion de l'Idex, trajectoire précise et crédible, mise en place d'une gestion des talents pour attirer les meilleurs candidats et créer un effet d'entraînement.

La gouvernance est adaptée au niveau d'ambition du projet :

- Sorbonne Université et l'Idex ont désormais la même gouvernance, les deux niveaux de gouvernance existant antérieurement ayant été fusionnés ;
- le *Conseil d'administration* est l'organe unique de pilotage et d'administration de l'Université ; les règles de veto et d'unanimité présentes antérieurement sont supprimées ; composé de membres fondateurs de l'Université et d'une majorité de représentants des organismes de recherche, de personnalités extérieures, de membres associés et d'acteurs locaux, le Conseil d'administration définit les orientations stratégiques et les principes d'allocation des fonds de l'Idex ;
- un *Sénat Académique* constitué des enseignants, enseignants-chercheurs, chercheurs, personnels et étudiants est force de proposition et représente la collégialité des communautés composant Sorbonne Université ;
- le *Comité stratégique* est composé de quinze personnalités de renom international issues des mondes académique et économique.

Les capacités d'exécution sont renforcées :

- le président de Sorbonne Université est nommé par le Conseil d'administration pour quatre ans, sa présidence étant exclusive de toute autre responsabilité opérationnelle ; il est doté de compétences exécutives ;
- il est assisté d'un comité exécutif composé de trois Vice-Présidents pour la sphère académique (recherche, formation, et international & Europe), d'un Vice-Président pour la vie de campus, afin de signifier l'importance stratégique de cet objectif et d'un Directeur Général pour l'animation des services et la coordination des actions ;
- les membres de ce comité exécutif seront recrutés selon les meilleures pratiques internationales en vigueur au sein du monde académique ; pour lancer opérationnellement le projet, une première équipe a été constituée, et sera proposée au Conseil d'administration ;
- les services sont organisés en départements (recherche et développement économique, formation et insertion professionnelle, stratégie internationale et européenne), et directions fonctionnelles.



L'**allocation des ressources financières** au sein de l'Idex (hors Labex et Idefi) sera effectuée par le moyen d'appels à projets internes, dont les principes auront été validés par le Conseil d'administration après avis du Comité Stratégique et du Sénat Académique ; les décisions d'allocations seront prises sur avis de comités d'experts indépendants. Un dispositif **d'évaluation interne et d'audit externe** garantira la transparence des choix effectués et la traçabilité des financements de l'Idex.

La **politique de gestion des talents** garantit l'autonomie et la spécificité de l'Idex dans le recrutement, la promotion et la rémunération des talents. Les postes ouverts sont mutualisés au niveau de Sorbonne Université et soumis à un processus de recrutement commun faisant l'objet d'un appel à candidatures international et mobilisant des experts indépendants.

Demain est déjà là

Sur le plan stratégique, **une feuille de route précise et crédible** est établie, qui définit tous les jalons clés du projet à un an, quatre ans, et dix ans.

Sorbonne Université a déjà commencé à mettre en œuvre les éléments clés de son ambition :

- le Conseil d'Administration du 27 octobre 2011 a modifié la gouvernance : élargissement de sa composition, suppression des règles d'unanimité et de veto, renforcement des compétences du Conseil d'Administration et du Président ;
- les trois universités fondatrices ont approuvé le projet et les modifications de gouvernance qu'il implique ; le Sénat académique a été réuni le 29 novembre 2011 et a adopté le projet proposé ;
- l'INSEAD et l'UTC ont présenté leur candidature pour devenir membres fondateurs d'ici fin 2011 ;
- la signature unique Sorbonne Université sera utilisée dans les publications scientifiques, les diplômes et la communication dès janvier 2012 ;
- le collège doctoral a été créé en 2011 ;
- les doubles licences et les licences pluridisciplinaires, mises en place en 2011-2012, symbolisent la naissance du Collège de la Sorbonne ;
- l'Ecole Internationale de Droit à Singapour sera ouverte en 2012, et la convention de création d'un Campus à Abu Dhabi a été signée en 2011.

Ces actions s'inscrivent dans la feuille de route stratégique de l'Idex élaborée pour transformer Sorbonne Université à l'horizon de quatre ans. Sorbonne Université change de dimension et apporte les preuves tangibles de son ambition : **demain est déjà là.**

3.2. ENGLISH VERSION

The Sorbonne is a perfect example of the challenges facing French Higher Education and Research: internationally, it is the best known French university, yet, paradoxically, it has not existed as such for over 40 years. It is thus symbolic of the current divisions between specialised *universités*, *grandes écoles* and research organisations.

A solution to this structural problem cannot be piecemeal. It implies integrating disciplinary fields, research and education, public and private spheres, local and global outlooks. It must be based around our communities, around the academic staff and students.

This is why we are so excited by the opportunity offered by the IDEX call for projects: it has forced us to tackle our problems head-on, to confront questions of content, governance and resource allocation. It will enable our transformation, building on our existing strengths in order to become a comprehensive, world-class university at the heart of Paris, combining excellence in research and education, with a focus on knowledge and technology transfer, and top-level professional curricula. This is the aim of Sorbonne University.

The Starting Point

Sorbonne University is one of the world's leading universities with a critical mass of scholars in fields as varied as Law, Economics and Management, Literature and Humanities, Modelling and Engineering, Technology, Energy, Matter and the Universe, Living Earth, Biodiversity and the Environment, Life and Health.

Sorbonne University welcomes 65,000 students, including 13,000 foreigners, 23,000 master's students and 7,000 doctoral candidates, at the very heart of Paris. The University has 5,000 academic staff, including nearly 100 French Academicians, from 200 laboratories and research centres, more than 80 per cent of which are evaluated A or A + by the AERES (French evaluation agency for research and higher education). 36,000 articles published by the academic staff of Sorbonne University are currently indexed by ISI Web of Science and our institutions host 45 industrial chairs, sponsored by the private sector.

The Heart of Sorbonne University

Université Paris-Sorbonne, Université Panthéon-Assas, Université Pierre et Marie Curie, Muséum National d'Histoire Naturelle, INSEAD Business School, Université de Technologie de Compiègne

CNRS (National Centre of Scientific Research), INSERM (National Institute of Health and Medical Research), IRD (Institute of Research for Development), AP-HP (Public Hospital System Paris)

The founding members of Sorbonne University are constantly ranked in the top three in France in their respective domains. And they are now further reinforced by associate members, from fields such as law, public management and the arts and humanities.

The IDEX project builds upon our success at other calls of the *Investing for the Future*. Sorbonne University has obtained 7 Labex, 6 Equipex, 2 IHU, 2 Carnot, 1 IRT, 1 SATT, 1 seed fund, 2 IEED and is also a member of 11 other selected Labex. We expect this number to increase once the final round of calls is completed since a further 15 Labex, 12 Equipex and 2 Idefi have been submitted.

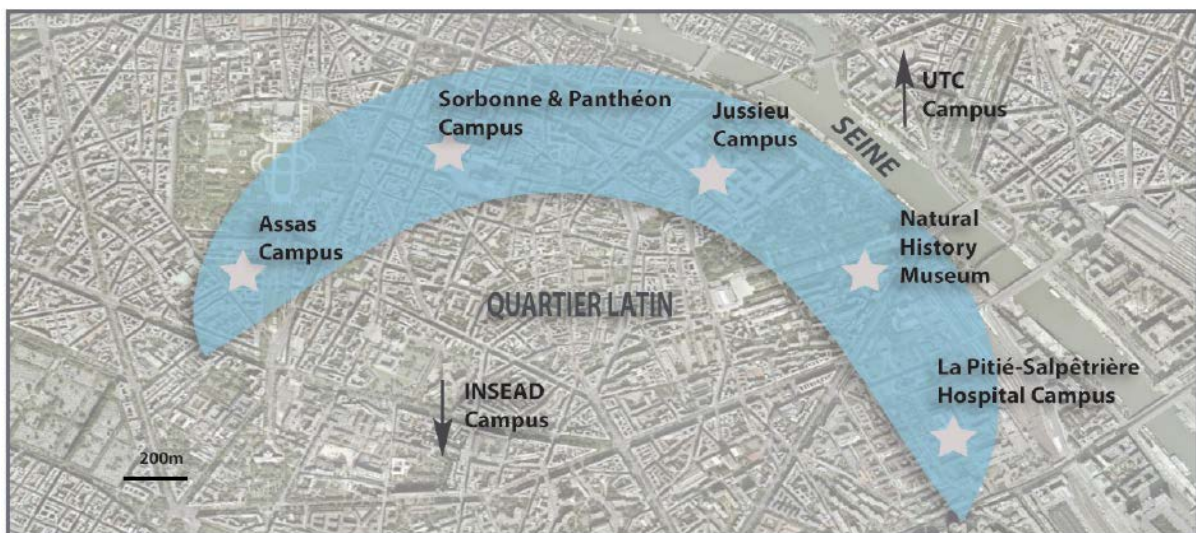
These results are encouraging, but we are well aware that their sum does not make a unified university, and that is why the IDEX is fundamental.

A World-Class University at the Heart of Paris

The project is built around the community of Sorbonne University, around the researchers, professors and students who will ensure our success, rather than being based on the existing institutions, which will disappear as such.

With the objective of maximising the IDEX effect, we have designed our perimeter of excellence as **an instrument of transformation and integration**. Its definition is particularly stringent since, to be part of it, a research or educative project must not only be presented by teams ranked A or A+ but they must furthermore demonstrate how it will help develop Sorbonne University. At year one, it will include 50 per cent of the academic community of the University and a small percentage of the student body.

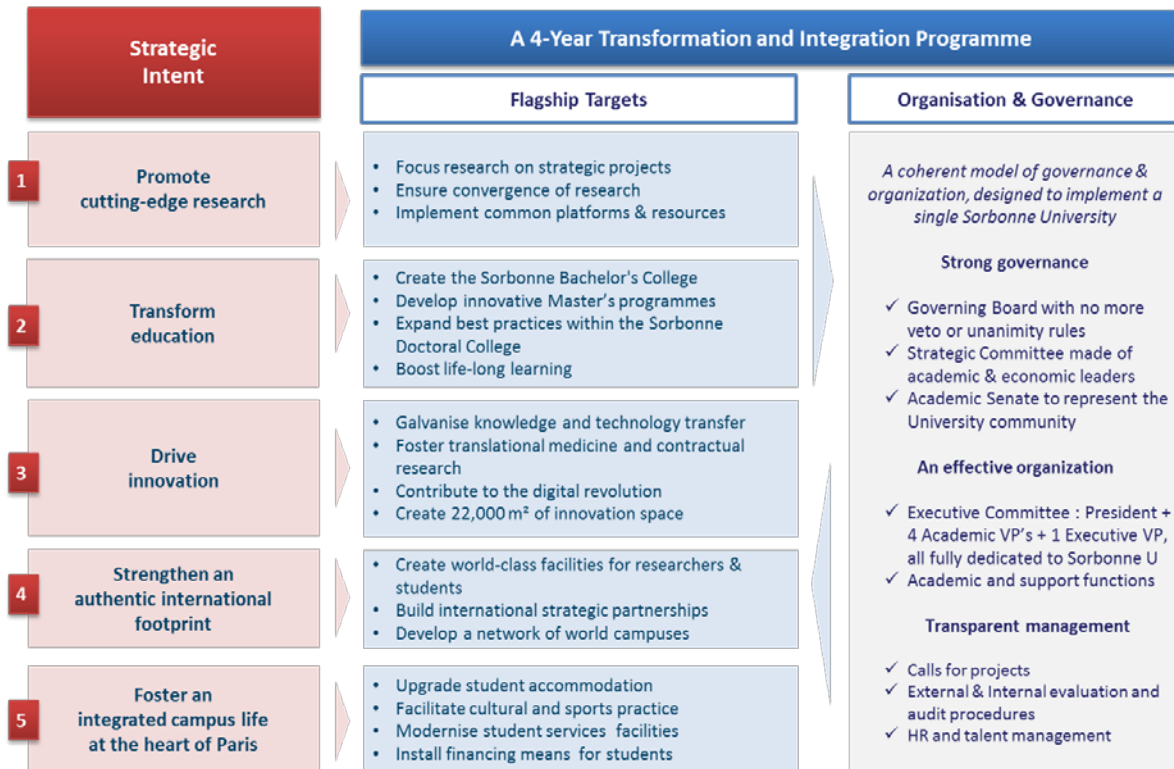
One of the results of thinking as a community, rather than as members of existing institutions, is that we have accelerated the timeline and developed much more ambitious targets to ensure its success. We will maximise our assets: a geographical proximity of the main existing campuses, a shared world-class status in our respective domains, complete complementarity (almost no overlaps) in education or research, but a different portfolio of expertise in domains, which will be pooled and shared across Sorbonne University as a whole.



Our commitment to a unified university is symbolised by our decision to use the name “Sorbonne University” in all our institutional communication and by the creation of a common partnership foundation for our fund-raising activities.

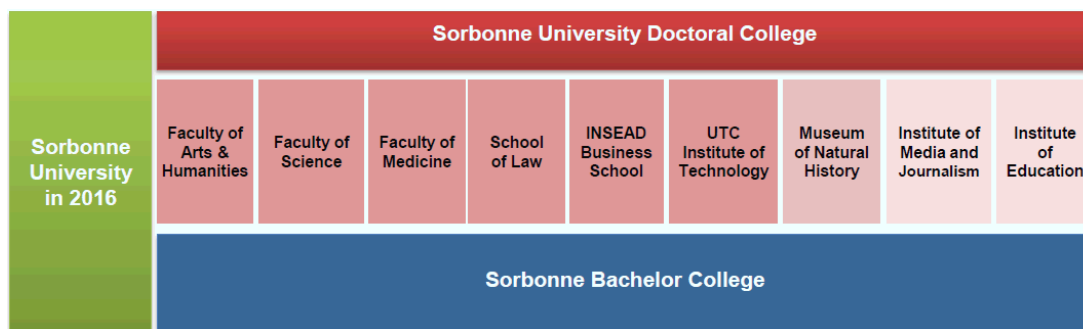
A Clear Strategy

Regrouping three universities, two schools and one national institution requires real transformation on a number of levels. This is why the Sorbonne University IDEX has been designed—and reinforced—as an instrument of change. We have identified five strategic objectives, embodied in flagship targets to actively advance our transformation. A revised governance and organisation will support these actions and ensure that the focus is maintained on our vision.



The process of creating Sorbonne University and the consequent integration of the core founding partners will require a strong momentum. For this reason, the founding partners have agreed to accelerate the unification process, which will now be complete within four years.

Following this four-year process, Sorbonne University will be made up of three main elements: the Sorbonne Bachelor College; the Sorbonne Doctoral College; and at the heart of the university three faculties, three schools and one world-class museum. The structure will be completed by specialised institutes.



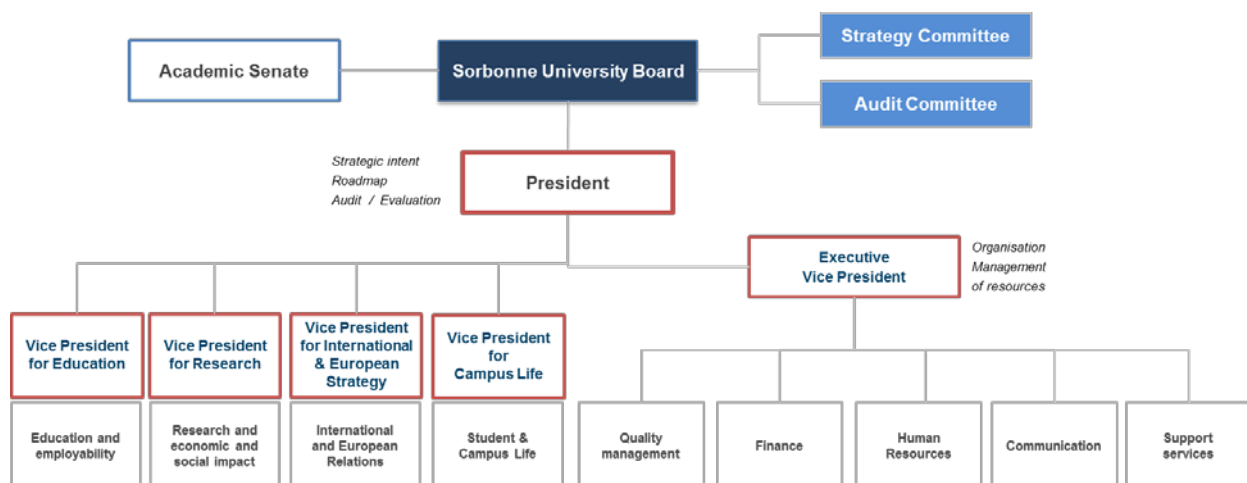
A minimum timespan of three to four years is required before the first graduates of Sorbonne University are out in the workforce and we can evaluate structural actions in fields such as research and education (longer for alumni and campus life). The four to ten year period will therefore be key to fine-tune, improve or transform programmes and processes. In ten years' time, Sorbonne University will once again be one of the world's leading universities.

Strong Governance

Transforming Sorbonne University within four years requires not only a clear strategy but also reinforced governance and steering capabilities. This is why, in line with the jury's recommendations, we have overhauled Sorbonne University's governance, developed a detailed roadmap and reinforced common policies such as talent management and recruitment processes.

The main characteristics of the governance of Sorbonne University are:

- A single governance structure, which fully integrates the governance of the IDEX into Sorbonne University.
- A *Board*, which is solely responsible for the management and administration of the University.
- The *Board* includes delegates from Sorbonne University alongside a majority of external experts, local actors and delegates from research organisations and associate institutions. It will define the strategic directions and principles of IDEX fund allocation.
- All previous rules of veto and unanimity have been removed.
- An *Academic Senate* with delegates from the academic and non-academic staff and students of Sorbonne University.
- A *Strategy Committee* composed of fifteen internationally renowned experts from academic, cultural and economic spheres.



Our implementation capabilities have been reinforced:

- The President of Sorbonne University is appointed by the Board for four years. He/she has executive powers and will be exclusively dedicated to Sorbonne University.
- He/she is assisted by an Executive Committee of four Vice Presidents (who direct the four departments of Research, Education, International and European Strategy, and Campus Life) and the Executive Vice President, responsible for operational services.
- All members of the Executive Committee will be recruited in accordance with best international practice in the academic world. For the operational launch of the project, a first team has already been formed and will be proposed to the Board.

The **allocation of financial resources** within the Idex (excluding Labex and Idefi) will be conducted by means of calls for projects, validated by the Board after consultation with the Strategy Committee and the Academic Senate. All decisions will follow the recommendations of independent expert committees. A system of **internal evaluation and external audit** will ensure full transparency and traceability of Idex funds.

Procedures of recruitment, promotion and remuneration of talent are guaranteed by a rigorous **policy of talent management**. All appointments will be made at the Sorbonne University level and subject to a stringent international recruitment process.

The Future Starts Now

Sorbonne University has strong governance and a clear strategy. In order to ensure its successful implementation, we have established a detailed roadmap, which includes all key milestones. Since June 2011, we have moved forwards faster than any of us expected and have begun to implement key actions:

- On the 27th of October 2011, the Board of Directors modified the University governance, with the expansion of its membership, the elimination of rules of unanimity and veto, and the strengthening of the Board and President's executive roles.
- Each of the three founding universities has approved these changes of governance and the Academic Senate of Sorbonne University adopted the project as it was proposed on the 29th of November 2011.
- The INSEAD Business School and the UTC Institute of Technology have formally applied to become founding members.
- All academic staff will use Sorbonne University as their institutional affiliation for scientific publications from January 2012.
- The Sorbonne University brand will be systematically used for institutional communications by founding members from January 2012.
- Students already following the first seven double-major degrees will receive Sorbonne University degrees when they graduate.
- Doctoral students who are part of the Sorbonne Doctoral College will receive Sorbonne University degrees when they defend their thesis.
- The Sorbonne University International Law School will be ready to open in Singapore in 2012 and an agreement has been signed to establish a campus in Abu Dhabi.

These are not only the first concrete steps of our roadmap, they are also the demonstration of our commitment and the proof of our conviction: **for Sorbonne University, the future starts now.**

4. “DELTA DOCUMENT”: ANSWERS TO THE QUESTIONS AND RECOMMENDATIONS OF THE JURY

The jury concluded that the Sorbonne University project submitted as part of the IDEX1 selection phase "brings together university institutions with a strong potential for scientific excellence, confirmed by its successful bid in other calls for projects within the Investing for the Future programme. However, a coherent, cohesive implementation strategy and timetable is required in order to establish the University as a world-class integrated university."

This document outlines the main changes, which we have made to our project as a result of the jury's observations and recommendations. It focuses on the areas in which the project was evaluated B or C: governance credibility and efficiency, governance ambition, identity, transformation and structure; quality of the roadmap, planning and associated milestones, procedures and management, resource allocation system, human resource policy, international and European policy.

Governance – Cf. section 5.4

Idex1 final grade	Jury Observations	Recommendations
<ul style="list-style-type: none"> - Governance credibility and efficiency: C - Governance: ambition, identity, transformation and structure: C 	<ul style="list-style-type: none"> - The proposed form of governance has several flaws (Foundation for Scientific Co-operation and Sorbonne University) - Precisely how the IDEX project will drive transformation is not clear. 	<ul style="list-style-type: none"> - Establish a clear governance structure in line with other world-class universities (including in particular internal and external members) - Confirm the vision of, and commitment to a unified Sorbonne University

Our model of Governance has been radically revised since the IDEX1 project. The new structure has been carefully benchmarked and will enable not only the administration of the IDEX funds but, more importantly, the transition from a sum of independent institutions to a fully unified University and the long-term governance of this University.

The changes, which have been made are well illustrated by comparing the relevant governance schemas proposed in the IDEX1 project with the schema, which has now been approved.

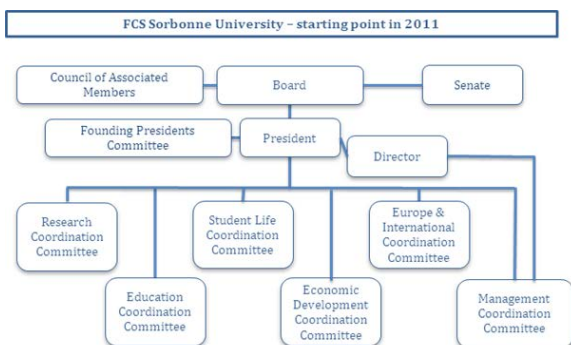


Figure 1. Former project: Sorbonne University governance in 2011

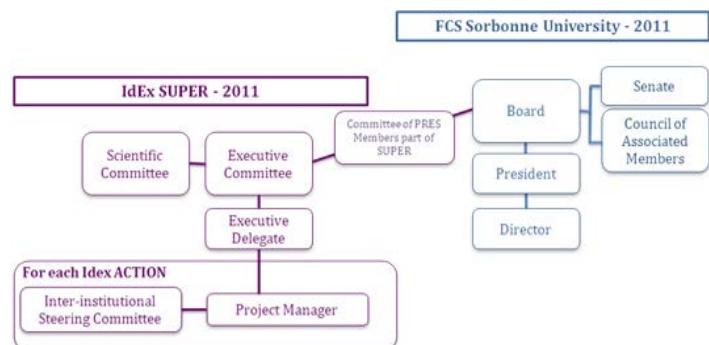


Figure 2. Former project: SUPER governance

In the IDEX1 candidacy, Sorbonne University and the IDEX had separate governance structures. Furthermore, the President of Sorbonne University was overseen by a Committee formed by the Presidents of the founding members.

The initial 10-year target was to create a “federated organisation”. This could have jeopardized the building of Sorbonne University.

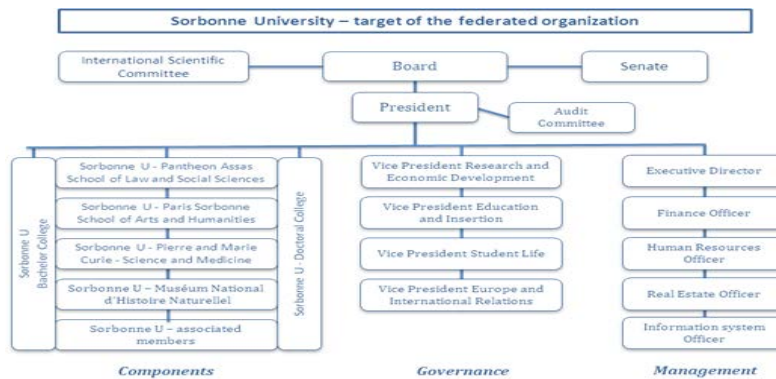


Figure 3. Former project: the target at ten years

In the best-case scenario, this model of governance would have resulted in a university comparable to the University of Wales or the University of California in which the founding members continue to exert all key functions of governance (just as Aberystwyth or Berkeley do).

Our current proposal completely transforms the balance of powers between Sorbonne University and the members. It is now in line with our vision of a unified university and the jury’s recommendations to establish “a clear governance structure befitting a world-class university and confirming its members' vision and commitment”.

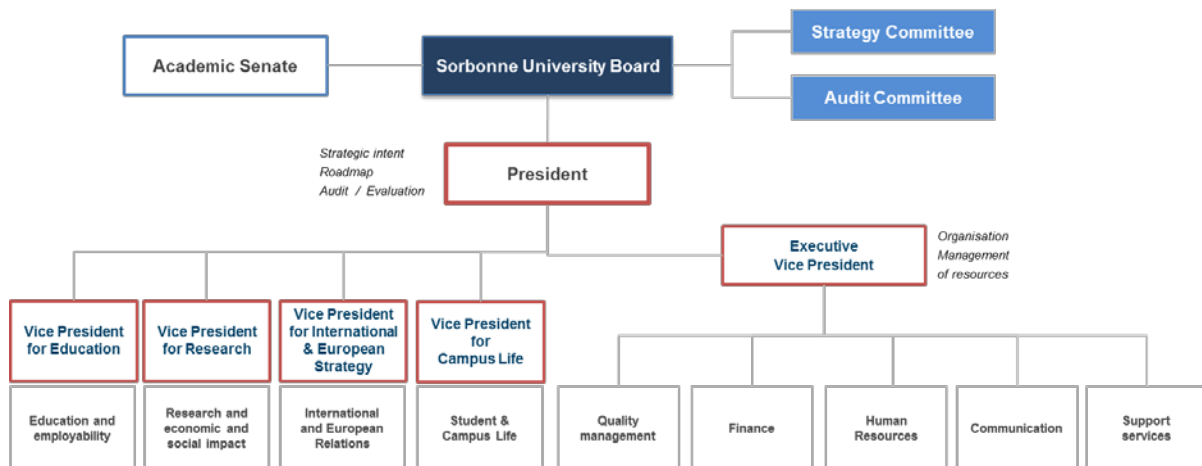


Figure 4. New project governance and organisation

Sorbonne University will be structured around three faculties (Arts and Humanities, Science, Medicine), three schools (Law, Business, Technology) and one world-class museum. The founding institutions will no longer exist as such.

Sorbonne University will have sole responsibility for the IDEX, which is conceived as a key tool of transformation and integration.

These revisions have been reviewed and approved by the Board of Sorbonne University and by the Presidents of the founding members.

New founding members

Sorbonne University integrated on the 9th of December 2011, the INSEAD graduate business school and UTC - the Compiègne University of Technology as new founding members: these institutions are established as "schools" within Sorbonne University and are now allocated a seat on the Board. This means that there are now four founding members, all of which have the same status.

Clearly defined governing bodies in phase with industry and civil society

The revised governance model clearly defines the role and missions assigned to governing bodies in order to strengthen their capacity to implement initiatives. They will be more open and responsive in their management of the IDEX initiatives and involve external stakeholders to a much greater extent.

- *Sorbonne University Board*
 - The Board now includes a majority of external members alongside delegates of the University. These external members include important figures from industry and civil society, as well as two delegates from local authorities, three delegates from research organisations and a delegate from the Paris public hospital authority (AP-HP).
 - To ensure a fair representation of the different stakeholders, all veto powers have been removed and unanimity rule have been replaced by majority rule.
- *Academic Senate:* to bring Sorbonne University in line with other world-class universities, the representation from different communities (students, academic staff, staff) has been increased at the Academic Senate. The role of the Academic Senate has also been boosted and its elected president will have a consultative voice at the Board.
- *Strategy Committee:* a Strategy Committee has been set up to advise the Board on strategic and scientific priorities. The Strategy Committee is composed of 15 external members, chosen amongst the leading French and international scientific, cultural and industrial communities and appointed by the Board of Sorbonne University.

Greater executive powers for more responsiveness

The executive powers have been reinforced: the President is appointed for four years and is now assisted by an Executive Committee, which includes an Executive Vice President and four Vice Presidents: for Research, Education, International and European Relations, and Campus Life. This newly strengthened executive function is tasked with:

- Spearheading the ambitions of the new unified University.
- Establishing a roadmap and resource planning as part of a comprehensive strategy.
- Defining and implementing functional policies to set up a performing administration. In particular a single human resources and talent management policy will enable cluster hiring throughout Sorbonne University and offer candidates attractive terms of employment within the University's perimeter of excellence.

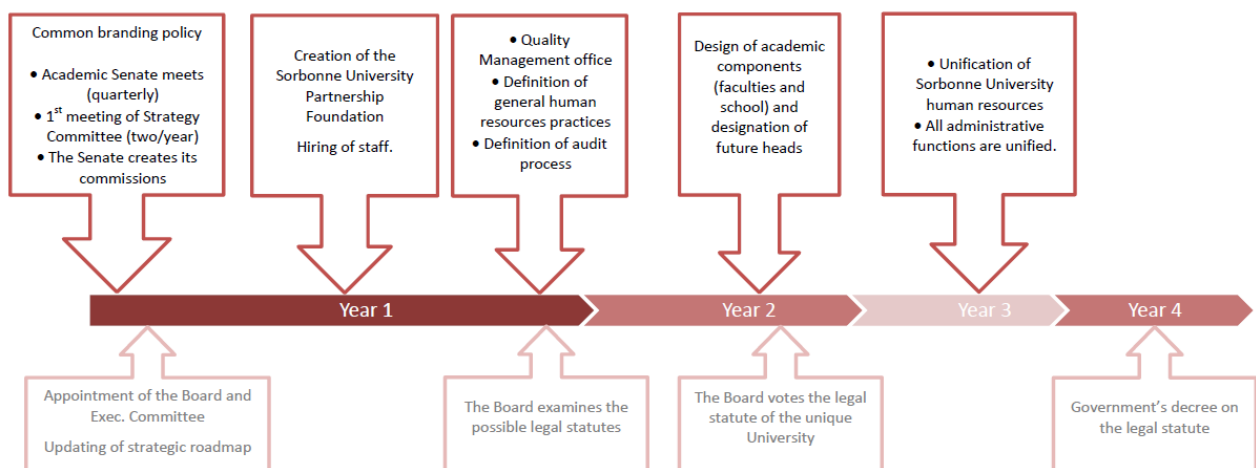
Management – Cf. section 5.4

I dex1 final grade	Jury Observations	Recommendations
<ul style="list-style-type: none"> - <i>Quality of the roadmap, planning and associated milestones: C</i> - <i>Procedures and management: B</i> 	<ul style="list-style-type: none"> - <i>The planned course of action for establishing a unified Sorbonne University is not convincing enough</i> - <i>The roadmap lacks focus and ambition and appears to reflect a lack of commitment for achieving a 'unified world-class' university.</i> - <i>Several milestones seem to focus on unifying and sharing services rather than actual governance.</i> - <i>The proposed timeframe (10 years) is far too long.</i> 	<ul style="list-style-type: none"> - <i>Submit a more proactive, focused roadmap with four-year milestones regarding governance.</i>

In phase with this radical evolution of the governance model of Sorbonne University, the roadmap has been substantially revised.

Clear decisions have been taken regarding the transition phase leading to the new University.

- During the transition phase, the delegates of Sorbonne University to the Board will include the Heads of each founding member. No founding member will have more than one representative.
- All institutions whose communities will be integrated into the schools and faculties of Sorbonne University are now considered to be founding members and are allocated a seat on the Board. This means that both the Compiègne University of Technology (UTC) and the INSEAD graduate business school are now members of the board.
- The founding members of Sorbonne University have selected a candidate to the position of President. The President has prepared an Executive Committee and is ready to submit its composition to the Board for approval.
- The transition phase will end when the final legal status of Sorbonne University is approved by the Government and the founding members formally vote the creation of the single university. This is planned to take place in year 3.



The roadmap for governance has been revised to show the legal steps of the transition but also the step by step implementation of the structures, hence the proposed governance roadmap.

The actions represented below the timeline describe the legal steps that will be taken, with the examination of the possible legal statute and the vote on the statute (depending of course on possible changes in French legislation). The schedule proposed is realistic, since it takes into

account both the period of negotiation with the government and the time needed for the government to publish a decree.

The actions represented above the timeline describe the operational means, enabling the implementation of an efficient governance: (a) which will actively promote its brand and actively launch its strategy with regular meetings of the Strategy Committee and Academic Senate; (b) which will create, during the first year, all the relevant management and services structures; (c) which will finalise during the second year its structure in Schools and Faculties; (d) so as to ensure, during year 3, the unification of the different administrative functions and human resources of Sorbonne University.

As a consequence, general management processes have also been revised and fine-tuned.

The new IDEX proposal includes a completely reviewed strategic roadmap, which sets out a **four-year timeframe for all initiatives and projects**: governance, research, education, technology transfer, student life and functional issues. This strategic roadmap details, for example, the use of the Sorbonne University brand, Sorbonne University diplomas, and the implementation of a single University-wide strategy for education and research. The Executive Committee will be responsible for further refining this roadmap and namely for proposing a set of key milestones in each of the different areas.

A **dashboard of operational indicators** will allow us to monitor each initiative's progress. Tailored to the needs of the Executive Committee, these tools will enable us to track and report on progress of the University project's strategic agenda.

Sorbonne University will also put in place **specific financial processes and operational guidelines** to structure and monitor the different initiatives involved in the project.

- The financial aspects and tools involved in the project (*i.e.*, multi-year funding schedules for the full perimeter of excellence, preparation and supervision of budgets voted by the Board, cash flow, etc.) will be handled by financial experts.
- Operational monitoring of efforts pursued by each department involved will measure performance and promote best practices.

For all financial and management processes, the appropriate management resources will be deployed to support the teams involved and report to stakeholders on overall progress as well as progress on individual projects.

Control, assessment and audit measures have been systematically integrated into the management system so as to support decision-making by the executive team, whilst "normative" performance indicators (use of financial resources, etc.) will focus on maintaining overall financial stability. These tools include:

- An Audit Committee, composed of independent experts and reporting to the Board, tasked in particular with issuing responses and recommendations regarding annual financial accounts and resource allocation.
- An external audit of all financial, accounting, quality control, reporting and performance aspects conducted two years after receipt of funding. This will provide a mid-term review, prior to the final audit at the end of the four-year period.
- An appraisal unit to carry out occasional reviews on request from governance bodies.

Resources – Cf. sections 5.4, 5.5 & 5.6

Idex1 final grade
<ul style="list-style-type: none"> - Resource allocation system: B - HR policy: B

The new perspective of the IDEX includes a consultation on the way Sorbonne University will conduct the project by 2016. To improve the mobilisation of resources we have focused on two major issues: human resources policy and resources allocation procedures.

Human resources policy

The revised Human Resources policy will increase Sorbonne University's capacity to attract French and international faculty and further develop its human resources through a talent management policy. This policy will be progressively rolled out over a period of four years and will be embodied in a careers and human resources department.

To make the University more attractive throughout its perimeter of excellence, new methods of recognition and remuneration have been devised and integrated in a new system of talent and career management, which will be clear and discernible both internationally and within the communities:

- From 2012, the Sorbonne University bodies will be wardens of the recruitment process within the perimeter of excellence. Recruitment will be pooled and subjected to dedicated contractual arrangements initiating the policy of talent management. These best practices will initially be complementary to current recruiting practices; however they are expected to become the preferred practice by 2016.

Recruitment process principles

Open positions are at the Sorbonne University level and subject to a common policy. Positions will be validated by the Board after consultation with the Academic Senate. Recruitment of personnel within the IDEX projects will follow the Sorbonne University HR policy. After hiring, human resources are managed at different levels according to the staff category and the type of contract, in application of the principle of subsidiarity. All staff hired for an IDEX project will also be expected to apply for other sources of funding, such as European ERC Starting or Advanced Grants.

For Research positions, the Research Committee (composed of VP for research and his/her team alongside the research heads from each faculty / school) will have the following responsibilities:

- Define the description of the position and publish the international call for candidates.
- Appoint the talent and search committee, made up of independent experts in a related field to evaluate the applications and interview selected candidates.
- Review the candidates and the search committee's recommendations for each position. If the call for applications is unsuccessful, the post will not be opened.

Within this recruitment process, the final hiring process will depend on the seniority of the position:

- *Sorbonne University senior chairs*: the Vice President for Research will negotiate the package with the successful candidate, and this offer will be submitted to the Sorbonne University Board.
- *Sorbonne University junior chairs*: the Vice President for Research will negotiate the offer with the candidate.
- *Sorbonne University starting chairs*: the Sorbonne University Research Department will propose a standard package contract.

- In 2013, a human resources competence will be established covering the perimeter of excellence and under the responsibility of the Executive Vice President. Beyond the new remuneration arrangements and contracts in this perimeter of excellence, it will, in coordination with relevant stakeholders, create policies for career development and talent management for academic staff.
- Integration of the human resources function is planned before 2016 in order to harmonise—beyond the common policies and perimeter of excellence—human resources management practices at the various campuses and schools.

This emphasis on talent and career management will help to ensure the autonomy and specificity of the recruitment process and management of resources within the perimeter of excellence, while at the same time fostering emulation beyond it.

Resource allocation procedures

The goal of the IDEX project is to transform Sorbonne University and make it an international benchmark. The perimeter of excellence is dynamic and aims to mobilise members and partners around the different types of initiatives: candidate projects under the *Investing for the Future* programme; trans-disciplinary research and education initiatives; as well as projects that aim to align services and infrastructure with international standards or to exceed those standards.

Consequently, unlike in the IDEX1, all projects are now managed by Sorbonne University and not by the separate institutions. Sorbonne University has defined a specific allocation procedure for each category of project:

- Projects selected under the *Investing for the Future* programme (Labex, IDEFI, IHU, SATT, etc.) will be funded and evaluated via the Sorbonne University governance and organisation structure. Under the Executive Committee, the Sorbonne University administration will be responsible for project funding. Audit procedures and evaluation tools will be used to report on process quality, progress made and results achieved.
- The same resource allocation procedures will be applied to projects selected by internal IDEX calls for projects
- Projects related to services and infrastructure will be submitted to Sorbonne University's governing bodies and will involve the various stakeholders concerned (the French government via the Campus Plan, local authorities and other partners, etc.)

Research - Cf. section 5.3.1

Idex1 final grade

- *Scientific power and intensity of the area: A*
- *Scientific ambition: A*

Sorbonne University is founded on the combination of distinctive expertise: the complete complementarity of the members strengthens the multidisciplinary vision underpinning the University's research strategy. In addition to initiatives already in place, Sorbonne University is seeking to push the limits of the disciplines it covers and foster paradigm shifts.

The IDEX project draws in particular on the Labex in order to engage in transformative actions. In addition to applications under the *Investing for the Future* programme, the development of interdisciplinary research projects supports members' determination to promote an approach to research which is resolutely focused on solving complex issues, as illustrated by the Convergence programme and cluster hiring.

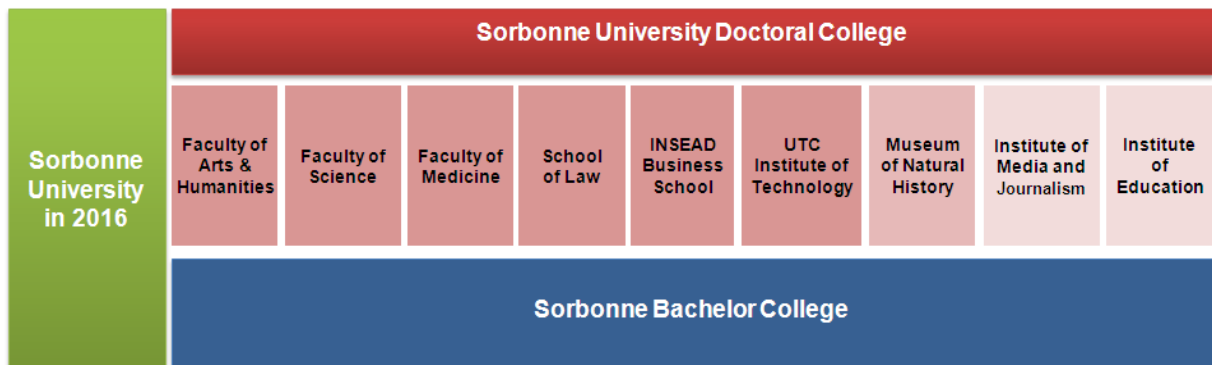
Since the IDEX1, new projects have been developed within the excellence perimeter and submitted in recent *Investing for the Future* calls for proposals. The Labex not selected at the first call for project were resubmitted only after fully taking into account the Labex1 jury's critics.

More importantly, the Research Policy has been carefully aligned with the strategic objective of creating a single University with an integrated community. The schedule of actions intended to foster multidisciplinary (Convergence programmes, cluster hiring) has been refined and milestones identified, as has been the planning for the pooling and sharing of support platforms (data centre, documentation, office for contract research, etc.).

Education - Cf. section 5.3.2

Idex1 final grade
- <i>Attractivity and coherence of the teaching offer: A</i>
- <i>Teaching: ambition and innovation: A</i>

Sorbonne University now has a common educational framework. The IDEX education roadmap has been designed to ensure that all courses are operational within four years. Numerous initiatives in line with this perspective have already been launched, reflecting the commitment of members and the potential for synergies between them.



Development of the Sorbonne Bachelor College

To speed up the development of the Sorbonne Bachelor College, numerous educational projects are in preparation in order to offer new programmes from the start of the 2012 academic year, in line with Sorbonne University's education ambitions.

→				
2011	2012	2013	2014	2015
Double undergraduate courses	Units now offered at other faculties	Units with credits added to the main course studied by students	Launch of a multidisciplinary undergraduate programme	A Sorbonne University multidisciplinary undergraduate degree

In addition to the double-major undergraduate curricula initiated in 2010, the introduction of units also helps prepare for the launch of the multidisciplinary undergraduate degree system by enabling students at one school/faculty to complete part of their studies at another school/faculty.

New projects at master's and doctorate levels ahead of the 2016 target

The Sorbonne Doctoral College was created in 2011. It will open its classes, career development initiatives, and specific programmes (PhD-MBA, PhD-LLA, etc.) to all PhD candidates from 2012.

The Master of Engineering started in September 2011 and the International School of Business Law will be inaugurated in January 2012 at the Paris and Singapore campuses and will give access to a joint programme in law and management, delivered by the Law School and the INSEAD business school.

Several new initiatives have been developed, such as a joint master's on the theme of sustainable development (described in a draft agreement between Panthéon-Assas and MNHN), which will be launched in Sorbonne University in 2012.

As part of plans to introduce a “short-dissertation” PhD structure, the *École Nationale de Droit* (National Law School) and CNSMDP plan to implement experience-based doctorates in the fields of law and music respectively, on the model of the medical doctorate.

In addition, two Idefi projects will be submitted in December 2011, based on collaboration and joint teaching at Sorbonne University establishments.

Setting up of the Learning Network

A dedicated digital Learning Network is currently being set up within Sorbonne University. Roll-out of the Learning Network began in 2011 on one campus and will be extended in March 2012. Located across several Sorbonne University campuses, the Centre will offer user-friendly workspaces and meeting areas, while also enabling everyone within the Sorbonne University community remote access to documentation and multimedia resources.

Knowledge and Technology Transfer - Cf. section 5.3.3.

Index1 final grade

- *Economic partnerships, result exploitation and technology transfer: A*

Sorbonne University has strengthened its ambitions of Knowledge and Technology Transfer thanks to the implementation of an ambitious overall strategy, which will make the most of the large number of structures that now exist thanks to our success at the *investing for the future* calls for projects.

Since June 2011:

- The Lutech SATT has been selected by the jury and its president has been appointed.
- The Quadrivium seed fund will finalise its investor round by February 2012.
- The contract with the BIG architectural firm has been signed for Paris Parc.
- Sorbonne University and the *Pôle de compétitivité* Cap Digital are actively promoting a project on Numeric Life.

International and European policy - Cf. section 5.3.4.

Idex1 final grade

- *International and European policy: **B***

Following the jury's recommendation, Sorbonne University has redefined its international policy and centred it on creating a strategic network.

Home to many prestigious partnerships, Sorbonne University is developing a policy of close partnerships to extend its influence through high-level collaboration. Seven strategic partnerships have been identified (namely in China, India and Brazil) and will be developed at Sorbonne University. These partnerships will in certain cases lead to the development of true Sorbonne Campuses by building on our existing experience in Abu Dhabi and Singapore. The Sorbonne University campus in Singapore will thus become a reality in January 2012 with the opening of the International School of Law at a site where INSEAD, UPMC (IT laboratory) and Paris Sorbonne (office) are already present. A Sorbonne University campus in Abu Dhabi will be established by 2016. In the medium term, Sorbonne University aims to establish a strong, strategic worldwide network of campuses and centres.

Alongside strategic partnerships, all new research and education projects will by default foster the international dimensions. This is clearly the case for research, which depends naturally on "bottom-bottom" relations between researchers of different countries. But this will also be the case in education, where Sorbonne University will:

- Ensure the hosting of foreign staff and students (with support from the office of international affairs for administrative issues, housing, etc.).
- Make a specific effort to provide housing of international students
- Establish its new master's programmes in English.
- Equip French students with languages skills (Learning Network enabling independent language learning).

The Vice President for international policy will oversee and pilot all these initiatives. In addition, he will contribute to the development strategy for the international educational programmes.

5. DETAILED DESCRIPTION OF THE PROJECT

5.1. AMBITION AND STRATEGY OF THE PROJECT

5.1.1 Recreating Sorbonne University

The Sorbonne is a perfect example of the challenges facing French Higher Education and Research: internationally, it is the best known French university, yet it has not existed as such for over 40 years. This paradox is the result of a decision to divide Paris University into 13 independent universities after 1968, which resulted in the reification of disciplinary divisions by creating separate universities out of previous faculties (Paris IV: Paris Sorbonne University, Paris 2: Panthéon-Assas University and Paris 6: Pierre and Marie Curie University (UPMC) were core faculties of the old Sorbonne).

This fact is in many ways symptomatic of a more general French trend, which has led to the increasing isolation of the core components of French Higher Education and Research. An important part of the research capacities of the country are thus separated from education because many of the best French scholars are employed by research institutes such as the CNRS, INSERM or INRIA and are not required to teach. Whilst in Higher Education, the existence of a dual system with *Grandes Écoles* and *Universités*, has resulted in many of the best students being encouraged to join *Grandes Écoles* (which are selective and largely vocational).

This policy has had a number of successes (French institutions have produced their fair share of scholars and corporate leaders). However, it is increasingly ill suited to a world in which the information revolution and the emerging knowledge economy have led to a clear shift: both innovation and leadership increasingly emerge at the interfaces between disciplinary fields, approaches and cultures.

The founding members of Sorbonne University are well aware of this situation and have worked to improve it by fostering pluri-disciplinary projects, promoting inter-institutional initiatives and developing innovative educative programmes.

However, a solution to this structural problem cannot be piecemeal. It implies integrating disciplinary fields, research and education, public and private spheres, and local and global outlooks. It must be based around our communities, around the academic staff and students.

This is why we are so excited by the opportunity offered by the IDEX call for projects: it has forced us to tackle our problems head-on, to confront questions of content, governance and resource allocation. It will enable our transformation, building on our existing strengths in order to become a comprehensive, world-class university at the heart of Paris, combining excellence in research and education, with a focus on knowledge and technology transfer, and top-level professional curricula. This is the aim of Sorbonne University.

5.1.2 The challenges of Sorbonne University

During the first IDEX submission, our project was hailed for its scientific quality and potential, yet was not selected because the governance was too weak, the structural transformation too timid, and the rhythm of implementation too slow. The current proposal proposes a far more coherent model of governance and a new structural organisation of the core elements of Sorbonne University.

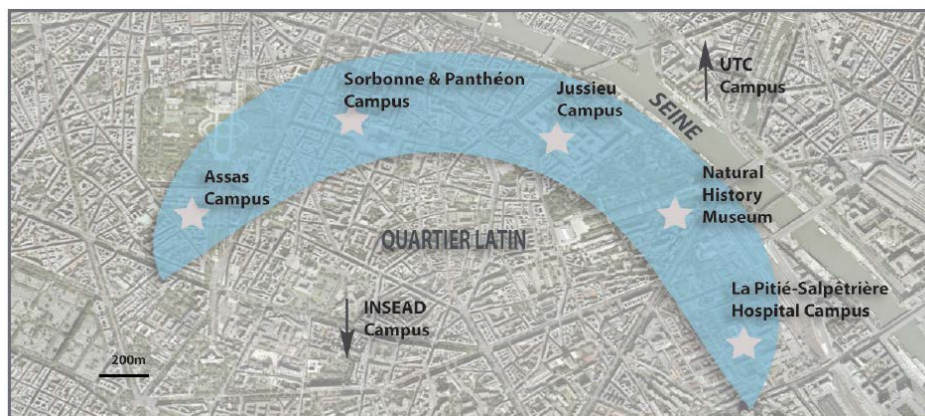
Since July 2011, we have rethought each of our proposals around the idea “One community, one university”. If Sorbonne University makes sense, it is because it creates a coherent community of students and staff; it is not an opportunistic association of existing institutions. Since the existing institutions will disappear as such, it makes no sense to structure the university around them.

For example, in the IDEX1 project, Paris 2 would have become the Faculty of Law and Social Science of Sorbonne University, but it would have de-facto remained a traditional French faculty of law. Now, Sorbonne University will have a School of Law, which aims to be one of the top Law Schools worldwide. This School of Law will, of course, include many of the existing members of Paris 2 but it will also include scholars from other institutions whereas specialists of Social Science currently working at Paris 2 will be integrated within the faculty of Arts and Humanities of Sorbonne University. The same model will apply throughout the University, with, namely, the creation of Faculties of Medicine and Science.

Our commitment to a unified university is symbolised by our decision to use the name “Sorbonne University” in all our institutional communication and by the creation of a common partnership foundation for our fund-raising activities.

We have thus reviewed all our projects to ensure that they are built around the existing and future community of Sorbonne University, and in particular the researchers, professors and students who will ensure our success. One of the results of thinking as a community, rather than as members of existing institutions, is that we have accelerated the timeline and developed much more ambitious targets to ensure its success.

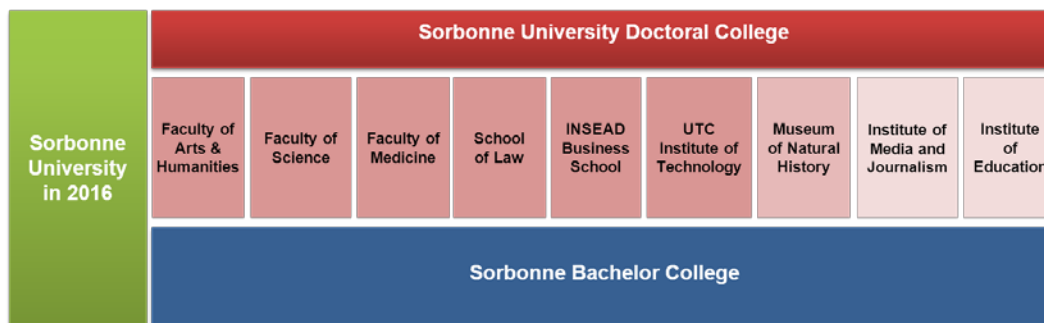
We are convinced that these targets and this timeline actually increase the likelihood of success because of our assets: a geographical proximity of the main existing campuses, a shared world-class status in our respective domains, complete complementarity (almost no overlaps) in education or research, but a different portfolio of expertise in domains, which will be pooled and shared across Sorbonne University as a whole.



5.1.3 A Clear Structure

Sorbonne University will have 6 faculties/schools, which correspond to a re-arrangement of the existing departments of the partners into more coherent entities.

- ▶ Faculty of Arts and Humanities
- ▶ Faculty of Science
- ▶ Faculty of Medicine
- ▶ School of Law
- ▶ INSEAD Business School
- ▶ UTC Institute of Technology



Like in most international universities, the specific degree of independence of each school will vary, with the three faculties being fully integrated into the university whereas the INSEAD Business School will retain a large degree of autonomy, comparable to that enjoyed by the Sloan School within MIT or Wharton within Pennsylvania University.

These 6 faculties/schools will be complemented by one world-class museum and a number of institutes, each of which will be attached either to a faculty/school or directly to the university.

Finally, Sorbonne University will develop its two existing international campuses in Singapore and Abu Dhabi as an integral part of the University.

5.1.4 Five strategic priorities

The IDEX will enable the transformation and integration of the founding partners into Sorbonne University by focusing on five strategic objectives:

- Promote cutting-edge research
- Transform Education
- Drive Innovation
- Strengthen an International Footprint
- Foster an integrated Campus Life

These objectives are embodied in flagship targets and supported by a strong governance, which will ensure that the focus is maintained on our vision.

5.2. STRUCTURE AND CHARACTERISATION OF THE INITIATIVE OF EXCELLENCE

5.2.1 Presentation of Sorbonne University

Academic excellence in diverse and complementary fields

	Sorbonne University Rankings	
	International	National
Social Sciences & Management	64*	4*
Arts & Humanities	17*	1*
Engineering & Technology	130** ; 52-75***	4** ; 1***
Life Sciences & Medicine	79** ; 76-100***	1** ; 1**
Natural Sciences	31** ; 21***	2** ; 2***
Business studies	11*****	1*****
Law	N/A	1****

* QS ranking, University Paris-Sorbonne (Paris IV)
 ** QS ranking, University Pierre et Marie Curie – UPMC (Paris VI)
 *** ARWU ranking (Shanghai), UPMC (Paris VI)
 **** SMBG ranking
 ***** FT Ranking, INSEAD Business School

Sorbonne University – a foundation for scientific cooperation (FCS) – is one of the top French university centres with international scope.

Sorbonne University welcomes 65,000 students, including 13,000 foreigners, 23,000 master's students and 7,000 doctoral candidates, at the very heart of Paris. The University has 5,000 academic staff, including nearly 100 French Academicians, from 200 laboratories and research centres, more than 80 per cent of which are evaluated A or A + by the AERES (French evaluation agency for research and higher education). 36,000 articles published by the academic staff of Sorbonne University are currently indexed by ISI Web of Science and our institutions host 45 industrial chairs, sponsored by the private sector.

Members and associate partners of Sorbonne University

Sorbonne University is further reinforced by a network of associate members, from fields such as law, public management and the arts and humanities, which together offer even greater potential for synergies in all areas of knowledge.

Sorbonne University members						
Founding members	Université Paris Sorbonne	Université Panthéon Assas	Université Pierre et Marie Curie	Muséum National d'Histoire Naturelle	INSEAD Business School	Compiègne University of Technology
	Research Institutes	National Centre for Scientific Research (CNRS) National Health and Medical Research Institute (INSERM) Research Institute for Development (IRD)				
Associate members	Health	Assistance Publique des Hôpitaux de Paris				
	Law	The National School of Magistrates (ENM) The School for Training to the Bar (EFB) The Centre for Professional Training for the Legal Profession (CFPNP) The School for Officers of the National Gendarmerie (EOGN) The National Police Higher Education School (ENSP) The Schools of Saint Cyr Coëtquidan				
	Humanities	Pôle Supérieur d'Enseignement Artistique Paris Boulogne-Billancourt The Centre for National Monuments (CMN) The National Archives				

5.2.2 Application to the actions of the programme « Investissements d'avenir »

Selected Laboratories of excellence

Project acronym	Field	Project manager	Project leader	Consortium / implicated partnership
RESMED	SHS	J.-Cl. Cheynet	(UPS)	UPS/CNRS (UMR 8167, UMR 8061, MR 8546, EA 4087)
CARMIN	SIMI	C. Villani	(UPMC)	UPMC/CNRS (UMS 839 IHP); CIRM, CIMPA, FRIF, IHES
MS2T	SIMI	A. Charara	(UTC)	UTC/CNRS (UMR6599, 6600, 6253 et Collegium UTC)
ILP	SIMI	L. Vigroux	(UPMC)	UPMC/CNRS (UMR 7095, 7585, 7589, UMS 839); UPMC/CNRS /OBSPM (UMR 8112); C.deFr.
MATISSE	SIMI	F. Babonneau	(UPMC)	UPMC/CNRS (UMR 7197, 7588, 7193, 7600, 8640, 7618 UPR15); UPMC/CNRS/ENSCP/C.deFr (UMR 7574); UPMC/CNRS/ENSCP (UMR 7195); UPMC/CNRS/UPD/IRD (UMR 7590); UPMC/CNRS/ESPCI (UMR 8213); MNHN/CNRS (UMR 7202, USR3224); ENS/CNRS (UMR8538); MCC/CNRS (LRMH, C2RMF); IFP
MiCHEM	SIMI	C. Aubert	(UPMC)	UPMC/CNRS (UMR 7201, 7070, 7075, 7092, 7614, 7616, 7203, 7610, UPR 15); UPMC/CNRS/ESPCI (UMR7195); UPMC/CNRS/OBSPM/UCP (UMR 8112); ENSCP/CNRS (UMR 7223, 7575, 8151); UPD/CNRS (UMR7591); UPS/CNRS (UMR 8167); MCC/CNRS (C2RMF)
BCDiv	SVSE	J.-D. Vigne	(MNHN)	MNHN/CNRS (UMR 7209, 7194, 7179, FRE 3206, UMS 2700); MNHN/UPMC/CNRS (UMR 7204, 7207); MNHN/UPMC/CNRS/IRD (UMR 7208, 7138); MNHN/CNRS/UPD (UMR 7206); MNHN/CNRS/EPHE (UMR 7205)

Other selected Laboratories of excellence, in which at least one of Sorbonne University's founding partners is involved

Acronym	Field	Project manager	Project leader	Consortium/ implicated partnership
SMP	SIMI	J.-Y. Chemin	FSMP	UPMC, UPD, ENS, UP13
L-IPSL	SVSE	H. Le Treut	CNRS	CNRS /UPMC, /UVSQ, /CEA, ... UMR 7092, 7617, 8190, 8539, 7583
LIFESENSES	SVSE	J. Sahel	RTRS	Inserm, CNRS, Institut Pasteur, CHNO (CIC 503, UMRS 587)
AMIES	SIMI	O. Pironneau	CNRS-UPMC-UJF	UPMC (UMR7598, LJLL)
ENS-ICFP	SIMI	W. Krauth	PSL / ENS	
ESEP	SIMI	P. Drossard	PSL/Observat	UPMC: IAP, LESIA, LATMOS, LMD, IMCCE
FIRST-FT	SIMI	N. Dimarcq	PSL/CNRS/Observ	UPMC: SYRTE

IPGG	SIMI	Patrick Tabeling	FPGG	UPMC: PECSA, LPS, LKB, PASTEUR
WIFI	SIMI	M. Fink	Institut Langevin	
REVIVE	SVSE	Philippe Avner	Institut Pasteur	UPMC: D. Sassoon et F. Relaix
PATRIMA	SVSE	F. Germinet	Cergy Pontoise	Cergy-Pontoise, MNHN, ...

Other Laboratories of excellence presented in the Idex project, submitted to the second Labex call

Acronym	Field	Project manager	Project leader	Consortium/ implicated partnership
EURODROIT	SHS	G. Leyte	(UPA)	UPA, UPS
APSYS	SHS	D. Sandron	(UPS)	UPS/CNRS (UMR8150,CREOPS;MCC,DGP INHA); UPMC (UMR7618 et 7590)
EHNE	SHS	E. Bussière	(UPS)	UPS/CNRS (UMR 8138, UMR 8596, UMR 8599, EA 3550, EA 4081); ENChartres (EA 3624); U. Nantes (CRHIA)
OBVIL	SHS	D. Alexandre	(UPS)	UPS/CNRS (EA4503, UMR8599, EA 4510, EA2578); UPMC (UMR7606)
CalSimLab	SIMI	P. Frey	(UPMC)	UPMC/CNRS (LCT, LGM, LPTMC, LIP6, LJLL, D'ALEMBERT, LOMIC, ISTEP)
MIP	SIMI	S. Zaleski	(UPMC)	UPMC/CNRS (UMR 7190, 7623); UPMC/ENS/UP-7/CNRS (UMR8550); UP-7/CNRS (UMR7075); ENSAM/CNRS (UMR 8006); ENSAM (EA92); CNAM (EA3196)
SMART	SIMI	R. Chatila	(UPMC)	UPMC/CNRS (UMR 7228, 7606, 7598);UMRS678; I. Telecom/CNRS (UMR5141); UPMC (EA238); UPMC/CNRS/Ircam (UMR 9912)
Plas@Par	SIMI	Ch. Stehlé	(UPMC)	UPMC/CNRS (UMR 7588, 7614); UPMC/CNRS/OBSPM (UMR 8112); UPMC/CNRS/E. Polytechnique/ UPSud (UMR 7648); UPMC/CNRS/E. Polytechnique (UMR 7605); ONERA (DPM)
ODYSSEE	SVSE	L. Abbadie	(UPMC)	UPMC/CNRS (UMR 7093, 7144, 7139, 7621, FRE 3350); UPMC/CNRS/IRD/ENS/UPEC (UMR 7618); UPMC/CNRS/MNHN (UMR 7159, 7208); UPMC/CNRS/ENS (UMR 7625); UPMC/CNRS/EPHE (UMR 7619); /UPS/CNRS (UMR 8150, 8185)
Devo-Net	SVSE	E. Houliston	(UPMC)	UPMC/CNRS/Inserm (UMR 7009, 7622, 7139, 7150, 7138, 7221, FRE 3355); UPS (EA 3559), Watchfrog
GEMS	SVSE	F. Cambien	(UPMC)	UPMC/Inserm (UMRS 937, 956, 945, 872, 939, 787, 872, UMR 7211, EA 1541, FRE 3214, IFR 14)
BioPsy	SVSE	J.-A. Girault	(UPMC)	UPMC/Inserm/CNRS/UPEC (UMRS 839, UMRS955, UMRS 952, UMR7102, UMR-S975); I. Pasteur (URA2182)
BioTHIC	SVSE	B. Autran	(UPMC)	UPMC/Inserm (UMRS 945, UMRS 943, UMR 959/7211)

TRANSIMMUNOM	SVSE	D. Klatzmann	(UPMC)	UMR7211, UR4, UMRS933 + LTK, Prediguard, Pharnext
VIVA	SVSE	Th. Voit	(UPMC)	UPMC/CNRS/Inserm/AIM (UM 76); UPMC (UR4), UPMC/CNRS/Inserm (UMR 7622, 7224); UPMC/Inserm (UMRS 702, 787); UPMC/CNRS (UMR 7102)

Training projects to be submitted to the Idefi call for proposals

Acronym	Project manager	Project leader	Consortium/implicated partnership
PROLEX	L. Vogel	UPA	UPA
C'PLUS	P. Porcheron	Sorbonne University	UPS/UPMC/INSEAD/UPA/MNHN

Selected Investissements d'avenir projects related to the perimeter of Excellence (apart from Labex)

Call for proposal	Project acronym	Project manager	Project leader	Consortium/implicated partnership
Equipex	FIT	S. Fdida	UPMC	UPMC/CNRS (LIP6); INRIA; UdeS (LSIIT); Inst. Telecom
Equipex	IAOOS	Ch. Provost	UPMC	UPMC/CNRS (LOCEAN, LATMOS); ULille1 (UMS ICARE); CNRS/INSU (UPS865); IPEV INSU
Equipex	Equip@Meso	C. Rivière	GENCI	UPMC, PSL, UdeS, CEA/DSM, UA-M1, URCA, UCB, UPS, UJF, CRIHAN
Equipex	Robotex	M. de Mathelin	CNRS/INSIS	UPMC, UCP, BFCU, GIP SA-lab, Heudiasyc (UTC), IRCCyN, INRIA Rennes, UM/ISIM, CNRS/LAAS, UBP/LASMEA, UM2/LIRMM, UdeS/LSIIT, Inst. Pprime, UJF/TIMC
Equipex	NAOS	J.-F. Le Traon	Ifremer	UPMC, CNRS, UEB/UBO, NKE, CLS, SHOM
Equipex	FIGURES	P. Devauchelle	CHU AMIENS	CHU Amiens / IFF, PLUGMED, MSC, SCANNING, Université de technologie de Compiègne (UTC), CEA, Université de Picardie Jules Verne (UPJV)
Bioressources	IDEALG	P. Potin	UEB	CNRS/UPMC (UMR7139, 7144), FRE2424, Ifremer, AMURE/UBO, CEVA, LBCM/UBS, U3B, CNRS/IRISA...

Infrastructure nationale	EMBRC France	B. Kloareg	UPMC	UPMC/CNRS
Cohortes	Radico	S. Amselem	Inserm	Inserm, UPMC, Paris-Descartes, Aix Marseille2
Cohortes	Psy-COH	M. Leboyer	UPEC	UPEC, UPMC, FondaMental
IHU	A-ICM	B. Fontaine	UPMC	UPMC, Inserm, CNRS, ICM, APHP
IHU	ICAN	K. Clément	UPMC	UPMC, Inserm, APHP
NanoBio	nUCA	N. Taulier	CNRS	UPMC/CNRS UMR 7823 et 8550, UAPV – UMR 5247, UPSud
SATT	LUTECH	L. Buisson	UPMC	UPMC, CNRS, UPA, UPS, INSEAD, UTC, PSL, Institut Curie...
Fonds d'amorçage	Quadrivium	N. Crespelle	UPMC	UPMC, CNRS, UPA, UPS, UTC, INSEDA, Institut Curie, ...
Carnot	Voir et Entendre	J. Sahel	RTRS	RTRS, UPMC, Pasteur, 15-20
Carnot	ICM	B. Fontaine	UPMC	UPMC, Inserm, CNRS, ICM, APHP
IEED	GreenStars	Ph. Lenée	INRA	INRA, UPMC/LOV, UPM2...
IEED	Pivert	J.-F. Rous	Sofiprotéol, pôle IAR, Rhodia, PCAS, SNC Lavalin, Maguin, UTC, UPJV, UTT	UPJV, UTC, UTT, USTL, Cemagref, IFP Energies Nouvelles, ...
IRT	Railenium	Y. Ravalard	PRES Lille Nord de France	UTC, Ecole Centrale de Lille, Ecole des Mines de Douai, IFSTTAR, Université d'Artois, UTC, ...

Investissements d'avenir projects related to the perimeter of excellence (apart from Labex and Idefi) submitted or likely to be submitted.

Call	Project acronym	Project manager	Project leader	Consortium/partnership involved
Bioressources	OCEANOMICS	C. de Varga	CNRS	CNRS/UPMC (UMR7144, 7159 et 7093, USR3151, FRE2424), CNRS UPR2589, CEA/DSV/IG, CNRS/ENS (UMR8197), EMBL, CNRS/IRD/Ifremer/UBO (UMR6523), CEA/UJF (UMR5168)

Démonstrateur	LSM	M. Fink	Inst. Langevin	Institut Langevin et Institut de la Vision (UM80)
Bioinformatique	MAPPING	A. Carbone	UPMC	UPMC/CNRS (UMR7238) ; UCB/CNRS (UMR 5086) ; CNRS UPR9080
Bioinformatique	MAIMONIDE	Y. Maday	UPMC	UPMC/CNRS (IJLL, UMR7622), UPSud/CNRS (UMR8081) ; UCB/CNRS (UMR 5558) ; UJF (FRE) ; Inserm (U927, U642, UMRS776) ; CNRS (UPR1142) ; Bioclinome
NanoBio	NANOBAC	E. Alphantery	UPMC	UPMC/CNRS (UMR7590) + Nanobactérie
Infrastr. Biosanté	E-RECOLLNAT	M. Guiraud	MNHN	UM2, Telabotanica, Agorologie, CNAM, IRD, INRA, Univ. Bourgogne, PRES Clermont
Equipex2	Appeslab	J. Jupille	UPMC	Tutelles : CNRS; ENSCP; SPECS (entreprise)
Equipex2	Super-SIMPA	P. Indelicato	UPMC	UPMC/CNRS (UMR8552 – LKB; LERMA, LULI, SYRTE, LCPMR); UCBL (LASIM); UPS (LCAR); Pantechnik, Amplitude technologies
Equipex2	EMParis+	N. Menguy	UPMC	UPMC/CNRS (IMPMC, LM2N, LRS, LCMCP, PECSA, INSP, LPEM, BioEMCO, ISteP, LCPMR); MNHN (LMCM); ENSCP (LPCS); ENS (LG-ENS)
Equipex2	PRIMESENS	J. Sahel	UPMC	UPMC/CNRS/Inserm (UM80 – IdV); MIRCEN-CEA, CHNO
Equipex2	QuantumSpec	D. Roditchev	UPMC	UPMC/CNRS (INSP, IMPMC); ESPCI/CNRS (LPEM), UJF/INPG/CEA
Equipex2	AquaFutura	B. Tassin	Paris-Est / ENPC	UPMC/CNRS SiSYPHE, BioEMCO, PECSA, IMPMC, ISteP
Equipex2	ZA2020	Y. Lagadeuc	CNRS	UPMC/CNRS (UMR7619), CNRS (INS1650, UPR1934) UJF/CNRS (UMR5553), CNRS/INPL (UMR7569), CNRS/UCIB (UMR5023), CNRS/UStrsbg (ERL7230)
Equipex2	BaDhoBio	C. Callou	MNHN	MNHN, UPMC, CNRS
Equipex 2	BioExplore	V. Bels	MNHN	MNHN, CNRS, INSERM, Animalliance
Equipex2	NormaCell	C. Le Gallais	UTC	UTC/BMBI, INERIS, CHU Amiens, PARIS Anticorps
Equipex2	NavCenter	J.M. Roelandt	UTC	UTC/ ROBERVAL, CETMEF, VNF, Compiègne
Equipex2	GOPS	B. Pelletier	IRD	GIS GOPS: IRD, CNRS, EPHE, IAC, Ifremer, ILM, UNC, UPF, UPMC, IPGP

5.2.3 Excellence perimeter, environment, prospects and added value

Sorbonne University's perimeter of excellence has been conceived as an instrument of transformation and integration, and has been defined according to particularly stringent selection criteria:

- Proven quality in research or education (A or A+ grade);
- Capacity to implement cross-boundary projects contributing to the emergence of the new university;
- Contribution to reaching critical size in trans-disciplinary research topics.

The perimeter of excellence will integrate new initiatives, which will emerge from calls for projects. It is thus dynamic and takes into account qualitative, quantitative and strategic criteria. It will enable the transformation of Sorbonne University from a sum of institutions into a world-class university.

Research

When the IDEX starts, the perimeter of excellence will only include projects that have been successful at the different *Investing for the Future* calls (namely the Labex and IHU). In December 2011, this represents a total of 1,600 academic staff. Depending on the results of the second wave of *Investing for the Future*, the number will increase by a maximum of 1,300 to reach 2,900 academic staff in the perimeter of excellence. The stringent conditions, which define the perimeter of excellence, are perfectly illustrated by the fact that currently, whereas 80 per cent of our academic staff work in A or A+ laboratories, less than half of them will be included in the initial perimeter of excellence.

A three-step process of calls for projects (described in the section on research) will enable new projects to obtain funding and be integrated the perimeter of excellence so long as they satisfy criteria of (a) quality, (b) cross-boundary nature, (c) relevance, and (d) capacity to contribute to the emergence of a new field of excellence.

This will enable the perimeter of excellence to reach 60 per cent by year 4, with the aim of reaching 100 per cent by year 10.

Education

When the IDEX starts, the perimeter of excellence will include:

- The *Sorbonne Doctoral College* with its PhD students and their supervisors.
- Specific master's courses which are ranked A or A+ (when a ranking exists) and which are fully integrated with IDEX research projects (including Labex).
- Bachelor's curricula integrated in the *Sorbonne Bachelor College* (including: double-major curricula, first year in residence and multi-disciplinary bachelor's in health, sciences, humanities and law)

The scope of the perimeter of excellence will progressively widen to include:

- All PhD students and their supervisors.
- New master's programmes, integrated with research projects that are themselves part of the perimeter of excellence.
- Bachelor's curricula that will be integrated as the *Sorbonne Bachelor College* broadens its scope.

	TOTAL	Year 1	Year 4	Year 10
Bachelor	35,000	1%	30%	70%
Master	23,000	30%	70%	100%
Doctorate	7,000	80%	100%	100%
Total	65,000	12,850	33,600	56,500

5.3. PROJECT AND PROSPECTS

This chapter forms the core of the project: it describes the strategic aims of each action and its concrete implementation and includes milestones at both 4 and 10 years, as well as a summary of the resources allocated. The sum of these actions will enable the transformation of the partner institutions into a world-class University. The feasibility of the project as a whole is well demonstrated by the fact that many of the projects described are already underway.

5.3.1 Promote cutting-edge research

Sorbonne University’s common research strategy aims to facilitate the emergence of a research powerhouse by extending existing excellence in specific disciplinary fields and the good practices of founding institutions. We will, in particular, implement a systematic project-based research approach at the Sorbonne University level and actively encourage pluridisciplinary research on global issues.

This choice of policies is, of course, aimed at reinforcing the quality of research of Sorbonne University. However, in line with our definition of the perimeter of excellence, these policies have also been designed as transformative and integrating tools. The project-based approach will ensure the bottom-up implication of all academic staff, both in the definition of new research fields and in the proposal of specific projects. The proactive policy of supporting pluridisciplinary projects will lead to the multiplication and reinforcement of projects, which not only cross disciplinary boundaries but also involve scholars from different founding institutions.

Our research policy will thus help a common academic culture emerge within Sorbonne University and contribute to breaking-down barriers between pre-existing communities.

To support this approach, the University will also pool its efforts and built a series of shared research tools, which will facilitate work of researchers by providing support for data access, data diffusion, project writing and methodology.

Assets

Sorbonne University is already a well-established research centre with 36,369 articles indexed by ISI Web of Science in 2010.

The community is composed of:

- ▶ 4,900 researchers and faculty professor-researchers
- ▶ 3,810 members of support staff
- ▶ 200 laboratories and research centres—including 120 that are affiliated with research organisations (the CNRS, Inserm, IRD and INRA).

It includes:

- ▶ 92 active academicians, including one member of the *Académie Française*, 10 members of the Academy of Moral and Political Sciences, 14 members and 4 specialists of the Academy of Inscriptions and Literature, 40 members and 4 specialists of the Academy of Science, 16 members of the Academy of Medicine and 3 members of the Academy of Technology
- ▶ 104 members of the Institute for French Universities (IUF) of whom 56 are senior members and 48 are junior members
- ▶ 24 ERC Grant holders

The French Evaluation Agency for Research and Higher Education (AERES) evaluated over 80 per cent of Sorbonne University teams A or A+ in 2008-2009. 65 teams are rated A+, 56 are rated A, 18 are rated B and 2 are rated C.

This AERES evaluation of the quality of the research at Sorbonne University is confirmed by the success of its research teams in ANR and European Union calls-for-proposals. Sorbonne University teams have been awarded a yearly average of over 35 million euros at ANR competitive calls (not including the amounts awarded to teams hosted by other establishments such as the CNRS, Inserm, ENS, Paris Observatory, or others) and teams of the UPMC alone coordinate 15% of ANR projects.

Furthermore, a study undertaken by TechKnowMetrix in March 2009 demonstrates the exceptional position occupied by the Sorbonne University in European Framework Programme (FP) programmes, since the UPMC alone has taken part in 12% of the projects of the 6th and 7th FP.

Key actions

Strategic intent	Flagship targets	Actions
<p>1 Promote cutting-edge research</p>	<p>1A Focus research on strategic projects</p>	<ul style="list-style-type: none"> • R1: Selected Laboratories of excellence
	<p>1B Ensure convergence of research</p>	<ul style="list-style-type: none"> • R2: Convergence programmes • R3: Cluster hiring • R4: Data and statistical analysis centre • R5: Methodology support
	<p>1C Implement common platforms & resources</p>	<ul style="list-style-type: none"> • R6: Document resources • R7: A unique back-office for the management of external research funding and public contracts

New projects developed within the excellence perimeter since IDEX1

In line with Sorbonne University's key objective to promote inter-disciplinary research and reinforce excellence in target fields, 33 new projects were submitted to the second round of the *Investing for the Future* calls for proposals:

- ▶ **15 Labex:** EURODROIT, APSYS, EHNE, OBVIL, CalSimLab, MIP, SMART, Plas@Par, ODYSEE, Devo-Net, GEMS, BioPsy, BioTHIC, TRANSIMMUNOM, VIVA
- ▶ **12 Equipex:** Appeslab, Super-SIMPA, EMParis+, PRIMESENSES, QuantumSpec, AquaFutura, ZA2020, BaDhoBio, BioExplore, NormaCell, NavCenter, GOPS
- ▶ 1 "infrastructure nationale en Biosanté": E-RECOLLNAT
- ▶ 2 "Bioinformatics" projects: MAPPING, MAIMONIDE
- ▶ 1 Bioresources project: OCEANOMICS
- ▶ 1 Demonstrator project: LSM
- ▶ 1 NanoBio project: NANOBAC

1A. Focus research on strategic projects

Against a backdrop of increased globalisation and fierce international competition facing all quality-focused research programmes, the groundwork for the IDEX has given Sorbonne University the opportunity to move our projects forward and to define priority strategic axes by drawing on the recognised excellence of the teams involved and the existing critical mass.

The projects selected in the framework of the *Investing for the Future* calls demonstrate Sorbonne University's capability of breaking down conceptual and methodological barriers as well as boundaries between disciplinary fields. They also explicitly renew the challenges facing us, especially regarding complex, global aspects, which require a bold cross-disciplinary approach.

✓ Action R1: Selected Laboratories of excellence

The Labexs selected in Sorbonne University's perimeter of excellence fall into 3 major scientific areas, proving our institutions' shared excellence in a wide range of fields:

- ▶ Humanities and Social Sciences (1)
- ▶ Information, Material and Engineering Sciences (12)
- ▶ Medicine, Ecosystem and Life Sciences (5)

A range of selected projects that combine actions allowing to break down conceptual and methodological barriers between disciplines are presented below.

In the field of Humanities and Social Sciences

- ▶ **RESMED** - Religion and societies in the Mediterranean world seeks to build on humanities explanatory value to help understand the links between religions and societies in the Mediterranean world.

In the field of Information, Material and Engineering Sciences

- ▶ **CARMIN**. The Labex CARMIN, co-ordinated by the Henri Poincaré Institute and within which the UPMC is associated with the Universities of Aix-Marseille and Nice, will

promote the attractiveness of French reception centres for international mathematics meetings.

- ▶ **MS2T.** This Labex aims to surmount scientific hurdles more quickly by encouraging the development of an international scientific community.
- ▶ **SMP** - The Labex *Sciences mathématiques de Paris*, brings together members of this thematic advanced-research network and will contribute to develop mathematical research in Paris, including when it interacts with other disciplines. This LABEX, as well as CARMIN, has a strong international dimension, in particular towards major developing countries, of which India and Brazil are of particular importance.
- ▶ **ILP** – *Lagrange Institute of Paris*, seeks to bring together expertise on theoretical and particle physics, astrophysics and cosmology from teams recognised as being at the international forefront.

The Lagrange Institute of Paris Laboratory of excellence



The ILP will prepare ten-year projects that, on the ground or in space, will relate to research into energy and black matter (for example, the EUCLID cosmological probe (ESA) or a large observatory project on very high energy gamma astronomy (CTA)).

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Use of the Planck satellite observations to constrain theories of inflation ▪ Within the framework of string theory, establish the generic signatures related to the study of cosmic microwave background (CMB) and the structure of the universe on a large scale ▪ <i>Combining the dual approach of astrophysics and particle physics to go beyond the standard model</i> ▪ Combine the complementary skills of the ILP units to develop computer simulations, data processing and statistical analysis ▪ <i>Interdisciplinary doctoral courses and schools</i> 	<ul style="list-style-type: none"> ▪ Preparation of a new, next-generation instrumental project to measure the polarisation in the CMB ▪ Preparation of missions dedicated to dark energy ▪ Make improvements in the LHC programme and Auger and HESS observatories ▪ Prepare the mission devoted to very high energies ▪ Development of new digital tools for the analysis of heavy simulations (voluminous simulations) ▪ Creating a second-year international master's programme dedicated to "The Physics of the Universe"

- ▶ **MATISSE.** The Labex *Materials, Interfaces, Surface, and Environment* brings together cutting-edge teams in the chemistry of materials, physics of materials and mineralogy to encourage the multidisciplinary study of natural and synthetic materials in their environment, and for the environment.
- ▶ **MiChem.** The project entitled *Multi-scale Integrative Chemistry: from the unique molecule to nano-edifices* brings together teams from molecular chemistry, physical chemistry and theoretical chemistry to encourage synergy and to open up new, integrated approaches to the study, observation, modelling and prediction of object reactivity on the molecular and sub-nanometric scale, and under varied and possibly extreme conditions.

In the field of Medicine, Ecosystem and Life Sciences

- ▶ **BCDiv.** The Labex *Biological and cultural biodiversity* brings together all the MNHN laboratories working on biological or anthropological biodiversity. Highly complementary to the research proposed by **two other Labexs, ODYSSEE** and **DEVO-Net**, the BCDiv will offer a unique interdisciplinary approach to diversity, based on biological as well as on social and historical sciences. The BCDiv is connected to the Equipex project that will

be resubmitted: "Promoting 300 years of natural history collections: a digital platform for the environment and society" (**E-RECOLLNAT**) and new projects: BaDoBio and BioExplore.

- ▶ **L-IPSL.** This Labex aims at new breakthroughs by moving from a global approach to the dynamics of climate and the atmosphere and interactions between the climate and the ocean to a more regional approach and ten-year predictions. The L-IPSL will make use of the **NAOS** Equipex which strengthens the French contribution to Argo, the world-wide network to monitor the oceans in real time and *in situ*.
- ▶ **LIFESENCES.** The Institute of Vision and its Lifesenses Labex closely interweaves fundamental, clinical, technological and applied research, public-private partnerships and industrial development, training, and governance. Linked with teams on auditory deficiencies from the Institut Pasteur, and to cutting-edge engineering teams (LESIA, ISIR), this Labex is also supported by the **Carnot Institute "See and Hear"**. **PRIMESENSES**, a platform for characterising sensory conditions and deficiencies, will be resubmitted at the Equipex second call.

IHU projects

- ▶ **A-ICM.** The *Paris translational institute of neurosciences* covers major neurological pathologies. From fundamental research to clinical work, this project includes a strong development dimension, which will particularly enable companies and private partners to be involved on site, through the **ICM Carnot Institute**.
- ▶ **ICAN.** The *Institute on Cardiometabolism and Nutrition* aims to combine skills in order to define a new generation of global risk factors for cardio-vascular and metabolic dimensions that are found to be closely associated with most of these pathologies. As the source of promising therapeutic advances, this project brings together three complementary partners:
 - Clinical cardiology and metabolism teams from Pitié-Salpêtrière
 - Research teams working on these themes on-site and within the Cordeliers and Saint-Antoine centres
 - INSEAD researchers on the themes of "marketing, nutrition and obesity".

1B. Support convergence of research

Most of the Labex projects, which we have just described are pluridisciplinary and involve various of the founding members of Sorbonne University. Together they integrate almost one third of our researchers (before the results of the second round). Based on a bottom-up approach, which is the best guarantee of relevance and ultimately success, the Sorbonne University Labex projects thus constitute a coherent programme that fosters synergies and encourages emulation within and between research communities.

The IDEX will enable us to systematise this practice by implementing a general mechanism of calls for project. This will specifically target trans-institutional projects, thus fostering pluridisciplinary research and reinforcing the unity of the research community. By definition, the strategic axes of research are open. However, we expect them to be influenced by the first results of the Labex projects. The first internal calls for projects will focus on trans-disciplinary projects in the following areas: law and environment; legal computing and artificial intelligence; heritage, art and sciences.

The precise instruments devoted to this ambition are "Convergence programmes" for trans-disciplinary research and cluster hiring to empower strategic domains and interdisciplinary

research seminars. On this latter point, the Sorbonne Doctoral College and its pooled offer of **interdisciplinary seminars** (see action E12) will provide a particularly powerful and effective lever for these exchanges. This will be a decisive factor in attracting the best candidates, eager to contribute to the lively intellectual and creative community that will emerge within the scope of the revamped and reinvigorated Sorbonne University.

✓ Action R2: Convergence programmes

Designed along the lines of the Convergence programmes set up at UPMC, these specific Idex programmes are intended to actively encourage research at the intersection of disciplines.

Convergence programmes will be jointly proposed by several Labex projects in different disciplines and selected by a scientific committee responsible for coordinating requests for projects. The following steps will be followed:

- ▶ A symposium will bring together teams interested in a particular theme, allowing them to discuss and define the programme's specific areas of focus.
- ▶ A call-for-projects will then be launched and teams from different disciplines invited to submit joint proposals. The projects selected by the Convergence programme panel will be allocated a consolidated budget for the duration of the programme.
- ▶ A concluding symposium will be held to present the findings of the programme and its integration into the Idex's research structure.

Means. Financial needs support the tailored packages proposed to new staff, as well as operating costs (travel, reception of candidates for interview, etc.). Three levels of chairs (junior, senior, distinguished) will be accompanied by the hiring of post-doctoral fellows. The partnership foundation might give supplementary fundings.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Launch of six Convergence calls for proposals among Idex members on interdisciplinary themes identified by the Idex Scientific Committee ▪ About fifty projects have been funded ▪ At least two of these calls have resulted in cluster hiring ▪ Publication of at least one paper in an international peer-reviewed journal per project 	<ul style="list-style-type: none"> ▪ Two annual calls on interdisciplinary themes identified by the Idex Scientific Committee and annual support for 20-25 projects ▪ One of those annual calls results in cluster hiring ▪ Opening of these calls to international teams at partner institutions

✓ Action R3: Cluster hiring

The emergence of new themes, especially at the junction of different disciplines, usually calls for concerted efforts to bring together the requisite expertise in the complementary disciplines. With institutions traditionally organised on the basis of individual disciplines, this has proved virtually impossible to achieve.

Means. Idex funding will permit the hiring of: 39 doctoral students (3 years); 50 post-doctoral fellows (1 year), 1 assistant (4 years); seminars and external juries (30 k€/year); and cover organisation and operating costs (20 k€/year).

Sorbonne University restores the cross-disciplinary dimension that is critical to all world-class universities, making it possible to implement a cluster-hiring policy through two means:

- ▶ Chairs funded by the Foundation.
- ▶ Hiring coordinated by Sorbonne University Faculties and Schools.

This policy will allow the simultaneous recruitment (offering the best terms of employment) of several world-class researchers in different disciplines to work on new strategic themes of convergence for research and education at Sorbonne University. It will be available to the most successful Convergence projects.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Have launched a minimum of six calls-for-proposals (CfP) resulting in 3 to 4 recruitments (chairs or positions) ▪ Have appointed 15 to 25 academic staff to coordinated Chairs in 4 years, with a minimum of 50% from abroad ▪ Annually redeploy 5% of the academic staff positions to be filled through coordinated recruiting and to have recruitment 	<ul style="list-style-type: none"> ▪ Have launched 20 CfP for chairs/co-coordinated recruitment ▪ Have appointed between 60 and 90 academic staff in 10 years for coordinated Chairs, with a minimum of 50% from abroad ▪ Annually redeploy 7% of the academic staff positions to be filled through coordinated recruitment

1C. Implement common platforms & resources

In order to better support its research strategy, the IDEX will implement the coordination and sharing of its resources and dedicated structures, providing support for data access, data diffusion, project writing and methodology.

✓ Action R4: Data and statistical analysis centre

By merging the research resources of its various institutions, Sorbonne University will be equipped to undertake comprehensive research programmes that no individual institution would have the capacity to tackle on its own.

Means. The IDEX will mainly support the cost of technicians in order to implement the database and replacement of obsolete equipment. IDEX funding will also support personnel costs to develop digital tools.

Under the impetus of INSEAD, a **Data and Statistical Analysis Centre**, along the lines of the Harvard Data Center, is being set up to provide data collection, archiving and statistical support services. The centre will pool databases previously developed by several members of Sorbonne University: INSEAD, MNHN and other laboratories, UPMC statistics laboratory and the Labex2 project CalSimLab.

This unified resource will encourage cross-disciplinary research, offering a single point of access to databases in a wide range of fields. After the first phase:

- ▶ Economics researchers will be able to access demographic or medical data to test an economic theory.
- ▶ Law researchers will be able to assess the social or economic impact of legal or regulatory measures.

Data will be available via the centre on a subscription basis with third-party data providers or accessed directly at the centre.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Diffusion of services through the Sorbonne University partners ▪ Database updating in real time ▪ Continuous system maintenance ▪ Modernisation of obsolete equipment ▪ Identification of new data and software needs ▪ Economic exploitation of the professionally verified databases, competences, codes and protocols ▪ Assessment of future human resource needs 	<ul style="list-style-type: none"> ▪ Increased visibility of European data in published research worldwide ▪ Increased use references to the Sorbonne University Data and Statistical Analysis Centre and increase number of citations of Sorbonne U research) Recognition for the quality of the Centre's data ▪ Adaptation/access to data for the general public ▪ Encouragement of data journalism ▪ Opening up the Centre to professionals outside the Sorbonne U, including those in other countries

✓ Action R5: Methodology support

The IDEX will also offer the opportunity to provide methodology support through an annual call-for-proposals. Examples include:

- ▶ Data processing and analysis of texts (Laboratory of excellence Observatory of Literary Life - OBVIL)
- ▶ Computer-assisted legal document writing (automatic contracts, legal text templates, etc.) and artificial intelligence for the Sorbonne University International Law School.

✓ Action R6: Document resources

The wide range of disciplines covered by Sorbonne University provides a wealth of documentation, which is increasingly made available in electronic form. These intrinsically complementary resources will support research and education in the multidisciplinary areas of focus pursued within the IDEX, and they will be leveraged by facilitating access to information across Sorbonne University, mainly through two tools:

- ▶ The Shibboleth System of open-source software.
- ▶ The Eduroam worldwide roaming access service for the international research and education community.

Two key actions will be implemented:

- ▶ A dedicated portal will be created to promote the outcomes of research conducted at Sorbonne University. The portal will contain scientific publications and defended theses from all partner institutions.
- ▶ The digitisation of cultural documentation held by Sorbonne University partner institutions will be undertaken to make these resources available to students and possibly other users as well, building on UPMC's experience with the digital library Jubilothèque and the MNHN's remarkable documentary resources.

Access to the Shared Library Services that make up the core of the Sorbonne University documentation network will be given to the entire community (students, professors, researchers and other staff alike). All new acquisitions will be made as widely accessible as possible to French and European partner institutions.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Train faculty, doctoral candidates and students in how to search for information (at 3 years) ▪ Establish a reference list ▪ Establish the portal ▪ Share documentation (50%) ▪ Implement of a platform for distance learning ▪ Scanning (30%) 	<ul style="list-style-type: none"> ▪ Share documentation (100%) ▪ Scan (100%)

Contract-based research

Sorbonne University aims to further pursue the efforts of its fellow institutions to support its teams in developing contract-based revenues. In particular, it will ensure that indirect costs are fully taken into account and seek to extend opportunities for funding from public (national, European and international) competitive calls and contracts from industry.

In order to develop the volume of support for its fellow laboratories, Sorbonne University intends to draw on the extensive experience acquired by UPMC and UTC in monitoring, structuring, applying, negotiating and managing this type of programme.

✓ Action R7: A unique back-office for the management of external research funding and public contracts

The increasing amount of funding for contract-based research from all types of partners makes it all the more necessary to have an efficient organisation to manage these contracts: accounting, reporting, fund tracking and hiring processes are very sensitive issues especially when taxpayer or donor money is concerned.

Means. Action R7 will partially mobilise resources from the governance and management teams of the IDEX. But the IDEX will enable Sorbonne University to hire dedicated staff for supporting contracted research.

Sorbonne University will create two offices for financial management and human resources responsible for the management of these research contracts and provide support to laboratories. These will be set up on the same model as the existing offices at UPMC which prove to be very successful.

Sorbonne University aims to increase funding from French national agencies, local governments, charities and international organisations, whether public or non-governmental.

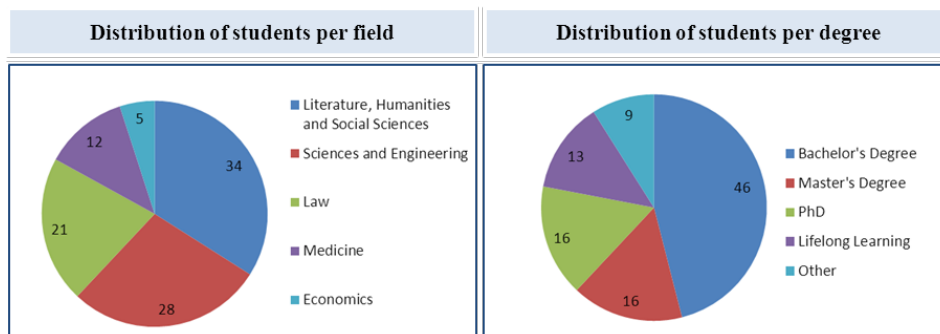
The team in charge of developing these resources at UPMC will be extended to a Sorbonne U-wide office, dedicated to 4 key tasks:

- ▶ Monitoring calls for proposals
- ▶ Advising intellectual property rights
- ▶ Filling out applications
- ▶ Negotiating contracts

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Setting up offices dedicated to the development of funding from governments / not-for-profit agencies, the financial and human resources management of contacts ▪ Increasing grants volume by 30% 	<ul style="list-style-type: none"> ▪ Increasing the volume of these grants by 90%.

5.3.2 Transform education

Assets



Sorbonne University, 2010

Our offer encompasses an exceptionally wide range of fields which are combined in a number of double major degrees at undergraduate level, namely in Law, Economics, History, Philosophy, Science and ICT. Sorbonne University’s 32 doctoral schools are divided into six main fields: Law, Economics and Management; Literature and Humanities; Modelling and Engineering; Technology; Energy, Resources and Universe; Living World and Environment; and Life and Health Studies.

The quality of our different institutions’ educative offer has been confirmed at all levels by the independent evaluation agency, the AERES. Affiliated with the prestigious 'Assistance Publique' Paris hospitals in the major areas of university medicine, Sorbonne University is one of the top medical training centres in France, hosting 10,000 medical students and two of the top three rated hospitals in France.

Beyond academic excellence, integration on the labour market and the career development of its graduates is a priority for Sorbonne University, resulting in high employment rates of our Master’s and Doctorate graduates. Sorbonne University will draw on the experience and expertise of INSEAD Business School whose graduates have exceptionally high employment rates.

Key actions

Strategic intent	Flagship targets	Actions
<div style="background-color: #c00000; color: white; padding: 2px 5px; display: inline-block;">2</div> Transform education	2A Create the Sorbonne Bachelor College	<ul style="list-style-type: none"> E1: Double-major programmes E2: Multidisciplinary bachelor's degree E3: The health-sciences-law-humanities programme E4: Professional bachelor's
	2B Develop innovative Master's programmes	<ul style="list-style-type: none"> E5: The International Law School E6: Master's of Engineering E7: Multidisciplinary "system of systems" engineering degree E8: MBA courses for healthcare professional development E9: Certification Call for Proposals E10: Joint master's degrees E11: The University Institute of Applied Studies
	2C Expand best practices within the Sorbonne Doctoral College	<ul style="list-style-type: none"> E12: Interdisciplinary seminars E13: A consolidated training offer E14: Doctorate-MBA, Doctorate-LLA programmes and Executive doctorate E15: Doctors' career development and tracking
	2D Boost life-long learning	<ul style="list-style-type: none"> E16: Access to learning at Sorbonne University for people returning to study E17: Meeting the needs of business E18: Life-long learning for primary- and secondary-school teachers
	2E Develop education resources	<ul style="list-style-type: none"> E19: Learning Network E20: Self-directed language learning E21: A library documentation network E22: Instructional design, education support and ICTE E23: Contemporary studies on-line courses

2A. Create the Sorbonne Bachelor College

The goal of developing exacting, multidisciplinary study programmes will be pursued initially within the scope of the *Sorbonne Bachelor College*. The approach will then be progressively extended to all courses on offer at all Sorbonne University institutions, drawing on experience acquired with the IDEX.

Means. For all actions regarding the Bachelor's, the funding provided directly through the IDEX will be devoted to: (a) hiring tutors; (b) hiring lecturers to teach within new double major programmes.

Differentiated bachelor's degrees based on multidisciplinary teaching

To speed up the development of the Sorbonne Bachelor College, numerous teaching projects are in preparation in order to offer new programmes from the start of the 2012 academic year, in line with Sorbonne University's teaching ambitions.

2011	2012	2013	2014	2015
Double undergraduate courses	Units now offered at other faculties	Units with credits added to the main course studied by students	Launch of a multidisciplinary undergraduate programme	A Sorbonne University multidisciplinary undergraduate degree

In addition to the double major undergraduate courses initiated in 2010, the introduction of a unit system also helps prepare for the launch of the multidisciplinary undergraduate degree system.

Units enable students at one school to complete part of their studies at another school. They will progressively be extended to associate members of Sorbonne University.

The double major degrees and unit system will gradually be developed to include a fully integrated single Sorbonne University Bachelor’s degree. This degree will be composed of Majors and Minors and students will be free to choose from the whole range of undergraduate courses offered by Sorbonne University.

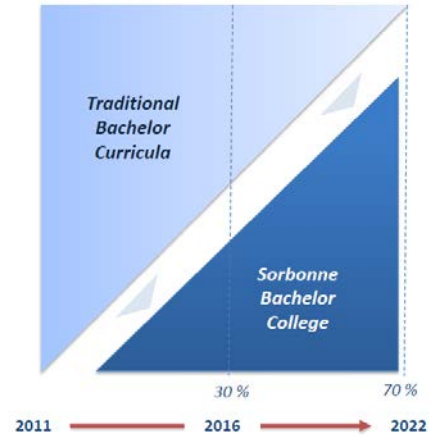
✓ **Action E1: Double-major programmes**

Within the scope of the IDEX, Sorbonne University intends to strengthen and diversify the demanding double major programmes introduced by the *Sorbonne Bachelor College*, which have attracted top-performing students. Several of these programmes are already firmly established within Sorbonne University – Law and History, Art History and Law, Science and Economics, Science and History, Science and Musicology, Science and Philosophy, Law and Science, History and Information-Media.

Additional double major programmes are currently being designed with partner institutions: Science/Social Science, Life Sciences/Political Science, Science/Humanities, and Science/Design and Science/Heritage.

The aim behind these double major bachelor’s courses is to offer specially selected, highly motivated undergraduates a unique set of high-level study programmes—and equip them with the tools they need to understand the world in which they live.

The double major programmes offer an equal number of modules taken from the bachelor’s courses available at each of the two faculties or schools. English is used extensively in all courses. All students in these programmes are required to spend at least part of their third year at a leading university in another country.



Starting point	Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> 7 programmes 100 new students in 2010-2011 1 new programme to be opened in September 2011 	<ul style="list-style-type: none"> Expected applicants to the double diploma: 420 students 2 new bachelor’s programmes: Science and Patrimony; Science and Geography 4 new master’s programmes: Digital Life; Risk and Crises Management; Public Health; Science and Epistemology 	<ul style="list-style-type: none"> Offer new master’s programmes: Security and Defence; Communications and Media; Management and Innovation;

✓ **Action E2: Multidisciplinary Bachelor’s degree**

▶ **The Humanities and Technology bachelor’s**

Seeking to pave the way for the Sorbonne College, we will set up a multidisciplinary bachelor’s degree that aims to widen the range of course and enhance synergies between Sorbonne University institutions.

This degree will combine courses in three core fields: technology, mathematics and philosophy, preparing students to further studies in engineering and Master’s degrees at UTC or partner institutions. The Bachelor of Humanities and Technology is innovative in several ways:

► **A multi-disciplinary first-year programme, in residence at the IRD in Bondy**

This first year of a bachelor's will be an intensive multidisciplinary foundation year of study tailored to the diverse needs and profiles of strongly motivated, high-potential students with a scientific *baccalaureate* (or equivalent). The course encourages cultural and social diversity and gender balance with the aim of overcoming certain social and cultural barriers to entering higher education. Entry is selective and the level of study is intensive and demanding, with 72 credits to be obtained over the year rather than the usual 60.

Students accepted will be offered accommodation at the **Centre IRD** France Nord in **Bondy** (in the north eastern suburbs of Paris), in facilities made available by IRD in cooperation with the municipal authority. Classes will be taught at all three Sorbonne campuses in Paris. They will also benefit from practical and educational support at the Bondy site from designated teachers, researchers and students (as part of a peer-tutor programme).

Students who successfully complete this first-year programme can subsequently enrol in a double-major or a single-major bachelor's degree course offered at Sorbonne University. They also qualify to enrol at the International Law School or in the engineering master's programme or join the second year of a medical degree through the procedure described below. This programme will be extended to other institutions in the coming years.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> Expected number of students: 50 	<ul style="list-style-type: none"> Expected number of students: 150

✓ **Action E3: The health-sciences-law-humanities programme**

Targeted actions will be implemented for specific curricula, namely in medical studies. To address the problem of the high failure rate at the beginning of medical studies, Sorbonne University will develop an original programme, which will enable students to enrol in a bachelor's programme in health sciences, law and humanities. At the end of the first year, students will be able to choose to pass a competitive medical school entrance exam.

Students will enrol in a **bachelor's programme in health, sciences, law and humanities** composed of modules adapted from the current programme, with the aim of developing a more multidisciplinary approach. Each student will be able to put together a course of study in line with his or her abilities and work capacity. Exposure to other disciplines will allow students to understand that there are options available other than the medical professions for people who wish to help meet the healthcare needs of society.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> Number of expected students: 1,700 (first 2 years) 	<ul style="list-style-type: none"> Expected number of students: 3,500

✓ **Action E4: Professional Bachelor's**

In order to provide students with a real life experience of key concepts and issues and ensure rapid employment, Sorbonne University will extend its vocational bachelors from the currently available range of programmes (18 at UPMC, 5 at UPA and 2 at UPS, encompassing a total of approximately 400 students).

These courses will comprise innovative teaching methods (for example project-based learning) and professional-standard workshops under the auspices of the University Institute of Applied Studies (action E11).

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ 30 vocational bachelor's degrees, 600 students ▪ 5 vocational master's degrees, 100 students ▪ Implementation of 2 technological halls 	<ul style="list-style-type: none"> ▪ 50 vocational bachelor's degrees, 1000 students ▪ 10 vocational master's degrees, 200 students ▪ Implementation of 4 technological halls

2B. Develop innovative master's programs

Master's programmes will focus on the acquisition of skills for professional life, either in research or in professional schools.

All Labex will offer international master's courses as part of the commitment to excellence pursued by Sorbonne University, focusing firmly on breaking with traditional research practices by adopting a more open, cross-disciplinary scientific approach. These international courses will be particularly attractive to the best French and international students.

Means. As in the case of bachelor's, funding requested from the IDEX for actions related to master's programmes will mainly support personnel costs. Some of the operational costs will cover MBA fellowships for Sorbonne University students. However, IDEX funds will contribute to the setting up of the technology halls, which also require investment expenditures.

Students will be encouraged to exchange modules across master's courses at the different Labex and joint multidisciplinary seminars will be held along the same lines as those organised for research students. CalSimLab will play a particularly important role in equipping students in all disciplines with vital calculation and simulation skills.

✓ Action E5: The International Law School

Until now, no school in France has offered specific top-level, multidisciplinary legal courses for students or mid-career professionals. Yet this type of teaching is essential for people who intend to pursue careers as future chief financial officers, general counsels, corporate executives and management board members.

The International Business Law School will offer this type of international multidisciplinary programme in partnership with the Law School and INSEAD. Based in Paris, the school will also operate on the campus in Singapore. The initial programme will lead to an LLM in International Business Law and an INSEAD certificate (MBA programme).

This project is presented in the PROLEX Idefi application.

✓ Action E6: Master of Engineering

Alongside the single-discipline courses available at the Faculty of Engineering and at Ecole PolyTech, Sorbonne University is introducing a **five-year** Master of Engineering course, modelled on leading international engineering degree courses.

The aim is to produce highly skilled, creative and adaptable graduates that are eager to embrace scientific and technological change and in sync with society's expectations. With a strong focus on vocational skills, the course is highly selective and demanding (annual requirement of 72 credits).

It will offer a good balance between coursework in scientific and technical subjects and coaching in key skills and abilities, such as independent thinking, adaptability, teamwork and team management.

The programme is delivered by the **SorbonneTech Collegium** and a **partnership will be set up with the International Law School** to share modules. Gateways will be set up between the master of engineering and the engineering degrees at UTC to offer students the broadest possible choice of specialised subjects. Sorbonne University partners for this programme include several secondary schools (which provide the *classes préparatoires*), and engineering schools.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ To have increased the number of promotions for mechanical electronic ▪ To promote this model for other disciplines ▪ To have established the new contract "Science & Business Strategy" on the doctoral level 	<ul style="list-style-type: none"> ▪ Extend the principle of engineering curriculum for all disciplines, including medicine training ▪ Make this a standard model of university education in engineering

✓ Action E7: Multidisciplinary “System of Systems” Engineering Degree

In spite of the obvious industrial implications of a "system of systems" approach, dedicated academic programs such as the System Design and Management (SDM) master's programme in engineering *and* management offered by MIT, which educates experienced professionals to lead by using systems thinking to solve large-scale, complex challenges, are rare in France and anywhere else in Europe. The **MS2T Labex** project aims to fill this gap by developing three original aspects:

- ▶ A comprehensive 5-year engineering degree course, offering France's first-ever "Systems of Systems" programme
- ▶ The adoption of the highly specific approach to engineering instruction developed by UTC, which is based on continuous interaction between the concepts and the reality of industrial systems, making extensive use of the hardware and software platforms available at partner research laboratories
- ▶ A resolutely international dimension with teaching provided in English and the hosting of foreign students within current agreements with specific universities (Cranfield, Braunschweig and Shanghai) leading to double major degrees, and a partnership agreement for visiting international faculty experts.

Technological aspects will form the main focus of the programme, since students from UTC already benefit from a solid grounding in management provided by the Human Sciences and Technology Department. This partnership will be further strengthened with the introduction of the Faculty of Science master of engineering programme.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Creation of a new “Technological Systems of Systems Engineers” course ▪ Creation of an MS2T excellence chair ▪ Stronger experimental platforms 	

✓ Action E8: MBA courses for healthcare professional development

There is a growing need among all stakeholders for high-calibre executives with a dual background in medical and management/legal studies. The aim is to develop a degree course

between the Faculty of Medicine and the INSEAD Business School along the lines of the MBA programme offered by Wharton Business School at the University of Pennsylvania. This will concern in priority the IHU based at Pitié-Salpêtrière and the Labexs in the medical field.

The MBA programme will be organised to match with the regulatory framework of medical training in France, in partnership with AP-HP. The course will also be open to practicing doctors in the form of an Executive Medical MBA as part of continuing medical training.

✓ **Action E9: Certification call-for-proposals**

The *Sorbonne Bachelor College* will open each year a call-for-proposals to all bachelor's and master's departments of Sorbonne University for branding of projects that fulfil its standards in terms of multi-disciplinarity, novelty, internationalisation and student autonomy. An *ad hoc* committee will examine the projects and report to the Executive Committee for decision.

At present, Pantheon-Assas University offers two certifications to students from Paris-Sorbonne and UPMC (Liberty and Fundamental Rights / Law and Finance). In 2012, all three universities will open up such degrees to all their students.

✓ **Action E10: Joint master's degrees**

Several joint master's degrees are already offered to students enrolled in one of the Sorbonne University institutions. Some of our flagship programmes are the following:

- ▶ Ecology, Biodiversity and Evolution Ecology (EBE)
- ▶ Systematics, Evolution and Paleobiodiversity (SEP)
- ▶ Unity and Diversity of Life (UDV)
- ▶ Biochemistry and Therapeutic Biology (BMC)
- ▶ Biology and Physiology of Organisms (BIP)

In 2012, these joint master's degrees will develop into a Sorbonne University integrated degree.

✓ **Action E11: The University Institute of Applied Studies**

A University Institute of Applied Studies (UIAS) will support all of the **vocational training courses at Sorbonne University** providing students with opportunities to learn about key concepts and issues within their programme, through the use of scientific facilities and equipment.

The Institute will comprise teaching halls equipped with appropriate technology, and a management unit responsible for coordinating activities and managing/maintaining workshops in the various halls on a shared basis. A key area of focus from a teaching point of view will be **project-based learning**, an approach that has been extensively proven in vocational courses at Compiègne, as well as in other countries. The Institute will also be involved in providing technological support for all programmes within the scope of excellence described above. Sorbonne University already has ongoing experience of this type of high-level technological teaching facility—at Saint Cyr l'Ecole.

The four technology halls will be:

- ▶ An energy and environment technology hall (Saint-Cyr l'Ecole).
- ▶ An environmental engineering/water management technology hall (Ivry-sur-Seine).
- ▶ **A biological engineering technology hall** will be split between the sites of Jussieu and Compiègne on the basis of the specific expertise offered by each institution.

- ▶ A chemical engineering technology hall (Jussieu and rue Claude Bernard).

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> Implementation of 2 technology halls: Energy and environment (SaintCyr L'Ecole) and Environment/Water Engineering (Ivry/Seine) 	<ul style="list-style-type: none"> Implementation of 2 Technology Halls: Biological Engineering (Jussieu/Compiègne) and Chemical Engineering (Jussieu/Claude Bernard)

2C. Expand best practices within the Sorbonne Doctoral College

Doctoral studies in France show a clear need for a better professional integration. Sorbonne University will provide training in management, economics, and other areas for doctoral students (integrated PhD-MBA classes). All PhD students will be integrated into the Sorbonne Doctoral College

Means. Idex funds will be devoted to (a) provide MBA grants for PhD candidates entering double degree MBAs; (b) personnel costs for the development of new courses.

Doctoral education is a paramount component of any excellence initiative. By closely bridging research and education areas and training to the utmost of creativity and critical thinking, these candidates will become researchers and top managers of the future generation.

Because a doctorate involves the management of an original research project, there are common features that run throughout disciplines—such as the research methods employed and relationships between doctoral candidates and their supervisors—all of which could benefit from an exchange of best practices. This is the thinking behind the creation of the Sorbonne Doctoral College.

The Doctoral College is tasked with promoting interdisciplinary training and transferable skills, in line with the EUA "Salzburg II" recommendations on doctoral education. Underpinning this is the idea that a doctorate, whether in science, law, the arts or human sciences, will be significantly more valued if it is prepared in an **inclusive environment** which supports the implementation of an **original research project** and meets the **individual needs of each doctoral candidate** for their **personal and professional development**. Sharing of resources and best practices will gradually lead to the emergence of a common identity.

Doctoral schools will safeguard the specific features of each individual research programme, while ensuring that the same high standards set by the Sorbonne Doctoral College are met in all aspects of recruitment, study and living conditions, supervision, training and career guidance for doctoral candidates.

To take these specific needs into account, it is important to distinguish the different categories of doctoral candidates hosted at Sorbonne University, and whose proportions vary depending on the discipline: candidates on initial training courses who are paid on a doctoral contract (or equivalent) basis; candidates on continuing education, who require special arrangements to suit their professional commitments (secondary school teachers, hospital doctors, engineers from industry, etc.); and candidates who embark on PhD research for their own personal fulfilment.

✓ Action E12: Interdisciplinary seminars

Interdisciplinary seminars will be held to allow doctoral candidates to exchange with other communities and practice sharing their learning and knowledge—and queries—and also understand the different approaches pursued in other disciplines.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> An average of 8 annual interdisciplinary seminars including at least three that make a significant place (+ 40% of participants) for other disciplines within the major domains (SIMI/EVS/SHS) Use of English in at least 2/3 of the seminars Following these workshops: development of co-management with a thesis director in another major disciplinary field [and the secondary connection to a laboratory within the other discipline] 	<ul style="list-style-type: none"> 8 annual seminars with five giving a significant place (+ 40% of participants) to other disciplines within the major domains (SIMI/EVS/SHS) Use of English in at least 80% of the seminars Participation of at least 25% of international doctoral candidates from Labex partner institutions and Sorbonne University

✓ Action E13: A consolidated training offer

A range of additional courses will also be offered on a pooled basis by the Doctoral College, allowing doctoral candidates to explore **a wealth of options to acquire valuable skills and knowledge** in other sciences and gain insight into the major social, economic and industrial challenges (technology transfer, business creation, management, and more). This will enable candidates to build their **individual learning programmes** according to their career goals. Once again, SATT business advisors will be actively involved.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> Progressive regrouping of complementary training that is included in each component (language/professional/project staff) Identification of best practices (over two years), creation of the associated mutual services 	<ul style="list-style-type: none"> Strengthening support for professional training, with the consolidated file of the doctoral candidates, identification of individual paths, the progressive creation of an alumni network, the extension of the job fair

✓ Action E14: Doctorate-MBA, Doctorate-LLA programmes and Executive doctorate

To enable candidates to take up challenging careers, the College will create additional joint doctoral study programmes, along the lines of the Science and Management course sponsored jointly by UPMC and the Engineering College. Candidates will complete a PhD thesis in three years as well as an MBA, which includes classroom work during the research period, followed by an internship in industry after completion of the thesis. Candidates present their dual thesis at the end of this process.

Means. Idex funds will mainly support personnel costs (professors, tutors, but also technicians to set up learning platforms).

Drawing on resources at INSEAD Business School and the Law School, the principle of combined PhD-MBA courses will be extended to include a doctoral programme in Science and Industrial Strategy and another in Science and Risk Management. At the same time, Sorbonne University is setting up an "Executive Doctorate" with a number of business partners for executive staff, who are not already PhD graduates, in order to assure their international recognition. The executive doctorate programme will be proposed **in all disciplines**. Human resource executives with a PhD in philosophy or history bring undisputed added value to a business.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> Extension of the programmes to doctoral schools in humanities, law and social sciences One third of Sorbonne University doctoral schools participating in the programme (13 doctoral schools) 	<ul style="list-style-type: none"> All doctoral schools involved in the programme (total of 32)

Efforts will also be made to **raise the international profile** of the University's doctoral candidates and to attract top-performing international candidates by developing international doctoral programmes as part of the LABEXs and with the support of Sorbonne University doctoral schools.

✓ Action E15: Doctors' career development and tracking

Regular publication of quality and career development indicators, based on the four-year "Doctor X wanted" survey conducted by the doctoral training institute (IFD-UPMC), is the most efficient way to **increase stakeholders' awareness** of the added value of a doctorate, to **account for the quality** of programmes and to **further attract** high-calibre candidates.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> The creation of consolidated services for the Doctoral College Creation of a "Sorbonne U doctoral candidate association" 	<ul style="list-style-type: none"> A post-doctorate career programme in association with a new Sorbonne U Alumni Association Regular publication of post-doctorate career positions of Sorbonne U alumni

2D. Boost life-long learning

Life-long learning is an essential career development tool that allows employees to experience different jobs and/or responsibilities. Although continuing education is widespread, it tends to be provided by specialised agencies in France, despite the fact that universities offer better capabilities for providing appropriate training. Sorbonne University intends to develop its offer in life-long learning for professionals in the public and private sectors.

✓ Action E16: Access to learning at Sorbonne University for people returning to study

This offering will be developed in formats that are appropriate to individuals' availability, in particular via extensive use of **e-learning** and **self-assessment**. Tailored learning provision allows candidates' own **experience** to be taken into account – this approach is already in place in all courses offered at its different institutions—and enables them to select the courses that they need from Sorbonne University's offering. The MNHN already boasts a long tradition of "museum conferences" open to a very wide audience.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> Implementation of a Life-Long Learning Department for facilitations and counselling Expected number of students: 400 	<ul style="list-style-type: none"> All the teaching offering from Sorbonne University available for Life-Long Learning students Expected number of students: 2000

✓ **Action E17: Meeting the needs of business**

A partnership will be developed with companies and business sectors to meet specific requirements. Maintaining employability is a key problem for individuals, as well as being an issue for companies, in terms of motivation, skills development, competitiveness and business development. Sorbonne University’s research excellence, and the complementary nature of the areas of expertise of its various constituent institutions, will be a key asset in this field.

Although it may take time to train for a new job, the socio-economic need is an urgent one: this means that rapid action is required. Sorbonne University will put in place a scheme that draws together and develops its various skills, with the following aims:

- ▶ To determine and anticipate emerging new jobs, in collaboration with companies, industry associations, regional trade academies and chambers of commerce.
- ▶ To leverage expertise from existing excellence training programmes—namely at INSEAD where courses are exceptionally well tailored to the needs of business and industry—to define new professional development pathways leading to these new jobs, in close collaboration with training managers.
- ▶ To work closely with training managers and the Learning Network to build specific training design capabilities targeted at business, within the scope of continuing education.

Also within the scope of this scheme is the assessment and monitoring of jobs, which will assist careers and employment departments, Employment Integration Assistance Bureaus (BAIPs) (in their task of training students for employment) and Sorbonne University’s Learning Network.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Implementation of a Competitive Skills Department ▪ Income: 250,000 euros per year 	<ul style="list-style-type: none"> ▪ Income: 500,000 euros per year

✓ **Action E18: Life-long Learning for primary- and secondary-school teachers**

A particular area of focus will be **primary- and secondary-school teachers**, who will be offered specially tailored “master classes”, and provided with broad access to documentation and teaching resources as well as laboratories and experimental platforms at Sorbonne University. The MNHN already offers initial and continuing training for secondary-school teachers with the education authority.

This training, coordinated by the Teacher Training Institute of the Paris Academy (Regional Education Authority), will offer programmes that provide a coherent pathway within the discipline. Programmes will be provided in the following formats:

- ▶ Conferences on topical subjects or societal issues;
- ▶ Seminars providing a more in-depth analysis within a given discipline, enabling teachers to refresh their focus and anticipate developments within the discipline;
- ▶ Practical workshops in laboratories or via technological platforms.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ 200 teachers/year 	<ul style="list-style-type: none"> ▪ 1,000 teachers/year

2E. Develop education resources

To support our ambitious strategy in the field of education, Sorbonne University is incorporating a key support structure into the IDEX: the Learning Network. Sorbonne University will develop a common network of pedagogical resources, articulating its learning centres in different locations into a “teaching resource network”, providing up-to-date pedagogical tools.

Means. The financial support of the IDEX is mainly required to hire qualified technical staff, as well as some investment in equipment.

✓ Action E19: The Learning Network

Sorbonne University aims to integrate teaching resources within a shared structure, as an extension of traditional discipline-based teaching spaces. This is the Learning Network, modelled on the “Centres for Teaching and Learning” at universities in the English-speaking world.

The Learning Network, located across several campuses (Assas, Sorbonne, Molitor, Jussieu, Pitié-Salpêtrière, Compiègne, Fontainebleau and Singapore), will coordinate a series of centres that combine user-friendly workspaces and meeting areas, allowing access to documentation and multimedia resources, and bringing together all actors within the University Community. It will be gradually rolled out over the course of the IDEX, as the various property-related activities are completed. Upon its launch, it will use the University’s library network.

Starting point	Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> Opening of the Assas learning centre in January 2012 Extending activities hosted by existing libraries 	<ul style="list-style-type: none"> Opening 4 other centres (Molitor, Jussieu, Compiègne, Sorbonne) Implementation of a physical High Speed Network between the centres 	<ul style="list-style-type: none"> Opening of 4 other centres (Vaugirard, Clignancourt, Malesherbes, Pitié-Salpêtrière) Construction of a dedicated building at Jussieu

✓ Action E20: Self-directed language learning

Language resources will provide facilities for guided independent learning of all the languages taught across the University, and for the development of innovative teaching practices. The facilities will allow individual or group work.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> 25 on-line language teachers Implementation of new ICTE-based language teaching Cultural areas teaching programme 	<ul style="list-style-type: none"> 25 on-line 50 language teachers

✓ Action E21: A library documentation network

The Learning Network project will leverage the recognised innovative capabilities of the documentation network. The libraries at Sorbonne University have already developed services, which will be implemented on a fully-fledged basis in the Learning Network. They will offer:

- ▶ Extended opening hours (some have already received Noctambu late-opening certification),
- ▶ Personal and group workspaces,
- ▶ Access to new reading and study technologies (such as tablet PCs),
- ▶ Mobile services,

- ▶ New forms of digital teaching materials (on-line manuals).

Training in information management will be carried out throughout the University. UPMC's current programme for the new bachelor's degree will be gradually rolled out to all disciplines and levels of education at Sorbonne University. The use of open distance learning will also be developed, integrating information management training within the more general framework of the development of e-learning.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ New media for reading and learning in the existing learning centres of Sorbonne University ▪ Interior reorganisation and extended opening hours in all main libraries 	<ul style="list-style-type: none"> ▪ New media for reading and learning in all the learning centres (main and peripheral) of Sorbonne University

✓ Action E22: Instructional design, education support and ICTE

This department will be tasked with supporting the entire University community, promoting new types of pedagogical relationships between teachers and students, based on the development of on-line learning platforms, video-conferencing and supported self-training. It will utilise the diverse digital resources of the Learning Network.

The institutions of Sorbonne University use proven state-of-the-art collaborative tools (such as Moodle and Sakai). Their efforts are currently focused on three areas: mobility, user-friendliness and remote-presence collaborative working.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Implementation of a Teaching Skills Department and a Video Studio ▪ 10 multimedia amphitheatres: 70 semester courses (14,000 students) 	<ul style="list-style-type: none"> ▪ 30 multimedia amphitheatres: 200 semester courses (40,000 students)

✓ Action E23: Contemporary studies on-line courses

Cross-disciplinary teaching in history, philosophy, sociology, law, economics and science will be delivered on a shared basis. The Learning Network's contemporary studies will act as a reference and support for joint courses within the Sorbonne University bachelor's degree programme. This will provide an ideal forum for demonstrating the value of Sorbonne University's latest research outcomes to students, thereby stimulating their curiosity and fostering interest in potential fields of employment.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Implementation of on-line general and advanced courses in 40% of scientific fields at Sorbonne University ▪ Organisation of inter-science meetings (1 per year): expected audience: 600 attendees per meeting 	<ul style="list-style-type: none"> ▪ Implementation of on-line general & advanced courses in up to 100% of scientific fields at Sorbonne University

5.3.3 Drive innovation

Research impact and economic partnerships

In the field of economic development, Sorbonne University aims to strengthen the role currently played by its institutions, to rank among the leading research universities, against which it has chosen to measure itself.

Means. All the actions relation to knowledge and technology transfer depend on other funding from the Investing for the Future programmes, or on the direct participation of the partners.

This is a multi-faceted role, which first of all concerns the teaching and development of executives for roles in companies, government, and non-profit organisations. By teaching them together, from double-major bachelor's degrees to the joint doctoral studies programme as well as through Life-long Learning, the University will train executives that are more open, and more capable of working in diversified environments such as major international groups, market-leading intermediate-sized companies, or innovative SMEs.

Part of the role of a research university is also to contribute to the development of a competitive economic environment by providing the companies with analyses, concepts, know-how and technologies which, once they have been matched up with the right market, will deliver incremental and, assuredly, breakthrough innovations. This partnership may take the form of **partnership-based research** or **knowledge transfer** from research unit to company, and sometimes a combination of the two.

Sorbonne University's research impact strategy will be based first of all on the experience of UPMC and UTC, who have made partnership-based research and technology transfer a priority for over 20 years, and on the capabilities of INSEAD Business School and Panthéon-Assas University in the fields of economic strategy and entrepreneurship.

The creation of Sorbonne University will immediately enable things to be taken further. The diversity of skills that it has at its disposal, and the synergies that are becoming established, will enable its institutions to make a richer contribution to economic development than is allowed by the current over-specialisation. The *Investing for the Future* programme offers Sorbonne University the opportunity to take this approach to the next level, and extend it to different areas of research, and to all of its institutions.

Social and cultural impact

Part of Sorbonne University's mission is also to facilitate the widest possible dissemination of knowledge, and to take an active part in debates taking place in contemporary society.

Since it opened, the Museum's vocation has been to transmit knowledge to the widest possible audience. Its exhibition galleries, botanical and zoological gardens, and wide range of potential activities, from a simple stroll to conferences and courses, offer a unique range of forums for the transmission of knowledge. The other partners have also developed arrangements, which are immediately shared.

Sorbonne University will further supplement its activities in this area.

Our assets

Sorbonne University founding partners—namely UPMC and UTC—have developed solid partnerships with the economic world, particularly in the fields of digital technology and the service sectors. They have built ties with companies and clusters in the frame of contractual research, technology transfer, innovation programmes and career services.



INSEAD Business School's established and extensive links with industry and the business world—it has 35 chairs, 6 fellowships, 13 research funds, which are all privately funded—is also a key asset and will pave the way for further development of such partnerships throughout Sorbonne University.

► Contractual research

Sorbonne University research contracts with companies amounted to approximately 40-45 M€ in 2011. Contractual research between UPMC / UTC and private companies has reached a particularly high level of involvement: more than 20 million euros per year for UPMC—more than double the recurring allocations that the university gives to its faculties—and nearly 9 million euros per year for the UTC.

► Promoting innovation

UTC is currently developing an innovation ecosystem, bringing together local academic and business partners to yield concrete results – patents, company and job creations for instance – in four strategic areas: innovation and entrepreneurship, industrial excellence, industrial and social transformation, and local economic and social development. This strategy will be further implemented by a wide range of stakeholders: the UTC, the UTC Foundation, the Quadrivium seed fund, the Lutech SATT, student associations, professional organisations and local and regional institutions (National Agency for Innovation, Clusters, OSEO,...).

As far as technology transfer is concerned, UPMC's portfolio of patents is today made up of approximately 300 patent families, including some that have been kept in co-ownership with other public institutions, large industrial groups or SMEs. Approximately 60 licences are currently granted (patents, software, knowledge and expertise) and yielded a revenue of 900,000 euros in 2009. A policy for the negotiation of mandates for research and licence contract signature has been implemented with the CNRS and Inserm. Thanks to UTC's foundation, this university has

created an incubation fund that will enable the most promising technology transfer projects to be supported.

UPMC is also a founding member of the Agoranov incubator, which helps and advises those with innovative projects to launch their own companies. More than 45 companies created in recent years have come out of UPMC or are closely linked to its technologies or researchers. Among these, three have been listed on the stock exchange (Collectis, Neovacs and Carmat). UTC contributes also very actively to the Picardie incubator.

Key actions

Strategic intent	Flagship targets	Actions
<div style="text-align: center;"> 3 Drive innovation </div>	3A Galvanise knowledge and technology transfer	<ul style="list-style-type: none"> • DRP1: LUTECH SATT • DRP2: QUADRIVIUM seed fund
	3B Foster translational medicine and contractual research	<ul style="list-style-type: none"> • DRP3: Carnot Institutes and IHUs: "SEE and HEAR", ICM and ICAN • DRP4: Contracts with Industry • DRP5: Fraunhofer Raunhofer Gesellschaft Cooperation
	3C Contribute to the digital revolution	<ul style="list-style-type: none"> • DRP6: Transfer in the digital context • DRP7: The Sorbonne Inter-Age University
	3D Create 22,000 m ² of innovation space	<ul style="list-style-type: none"> • DRP8: The Compiègne Innovation Centre • DRP9: PARIS PARC

Some members of Sorbonne University have accumulated substantial experience in industry partnerships and can point to some exceptional successes in this area. Their patent portfolio has nearly 400 families and offers a high potential for technology transfer.

However, the impact of research conducted within Sorbonne University could be much higher. International comparisons show that its success could be greater and its company partnerships closer. While the quality and commitment of the research teams is excellent, there are opportunities for progress in the organisation of partnerships and technology transfer.

Our Idex project proposes major initiatives to develop these relationships and extend the best practices already in place at some Sorbonne University's institutions.

3A. Galvanise Knowledge and Technology Transfer

Transferring research results and knowledge to the economy and society requires the combination of several instruments, focusing on different points in the chain of knowledge transfer. The LUTECH SATT and the QUADRIVIUM seed fund will provide support in this field, and additional means will be provided to the specific departments in charge of developing relations with the economic world.

✓ Action DRP1: LUTECH SATT

The LUTECH SATT aims to broaden the scope of technology and knowledge transfer enabled by research at Sorbonne University. It associates Sorbonne University with the CNRS and, among other establishments, those affiliated with the PSL* Idex. It will increase the number of projects and provide them with support to help them mature from the technological, economic and legal points of view. LUTECH will leverage the diverse skills that bring together its members, particularly in key areas such as design, management and business strategy.

When the transfer of technology is best done through the creation of new businesses, their incubation will be provided through close collaboration with the Agoranov and Picardy incubators. Within four years, this incubation function will be integrated into Lutech.

✓ **Action DRP2: QUADRIVIUM seed fund**

Quadrivium aims to solve a major problem of new companies: the lack of available capital for start-ups. It will provide selected projects with seed money at a stage when the venture capital industry is reluctant to invest.

At first, Lutech and Quadrivium will particularly emphasize the transfer of research results emanating from the IDEX core of excellence. The objectives below are the share of Lutech and Quadrivium activity for Sorbonne University laboratories.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ 120 invention disclosures per year ▪ 75 patent applications/year ▪ 35 new licenses/year ▪ 30 companies created since 2011 and Quadrivium has invested 5 million euros in pre-seed ▪ 45 million euros invested by Quadrivium 1 in twenty companies ▪ 1,600 jobs created by the licences and/or companies ▪ Integration of incubation capabilities in Lutech 	<ul style="list-style-type: none"> ▪ 140 invention disclosures per year ▪ 90 patent applications/year ▪ 45 new licenses/year ▪ 95 companies created since 2011 ▪ 5 million euros invested in pre-seed business for approximately 40 companies by Quadrivium ▪ 100 million euros invested by Quadrivium 1 and 45 million euros by Quadrivium 2 in 20 other companies ▪ 5,600 jobs created by these transfers

3B. Foster translational medicine and contractual research

✓ **Action DPR3: Carnot Institutes and IHUs: "SEE and HEAR", ICM and ICAN**

Two Carnot Institute projects were approved in the IDEX scope.

- ▶ The renewal of the **Carnot Institute "See and Hear"** will enable the development of an exemplary partnership with leading companies of all sizes by the Institute of Vision and Labex LifeSenses.
- ▶ **The Carnot "ICM"** will help develop relations between companies and the research teams in neuroscience at the Pitié-Salpêtrière which constitute the research dimension of the **IHU A-ICM**.

The IHU ICAN is also developing relationships with companies involved in the IHU's related areas and whose social and economic stakes are particularly high.

The three institutes are now pooling their biological collections to provide a unique resource available through only one desk to their researchers as well as researchers from other sites and companies. Their goal is to establish long-term partnerships with companies of all sizes that may be involved in this research.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Creation of a unique bio-collection for the 3 institutes ▪ Creation of four joint research teams and three chairs with companies ▪ Using tools for customer relations and quality control ▪ 60% increase in the volume of research contracts 	<ul style="list-style-type: none"> ▪ Create mixed teams of eight and ten research chairs with companies ▪ 200% increase in the volume of research contracts

✓ Action DRP4: Contracts with industry

Sorbonne University's goal in the next four years is to put in place a one-stop-shop for all research units, enabling them to negotiate research contracts with companies. This organisation, to be truly unique, must be close to various research campuses, putting business developers in proximity to laboratories or, for the most active, business developers within the laboratories to handle industry relations.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Reorganisation of UPMC, the UTC and the MNHN in charge of developing relationships with businesses, and expanding and pooling procedures 	<ul style="list-style-type: none"> ▪ Operation of unique and decentralised offices to development contract research

✓ Action DRP5: Fraunhofer Gesellschaft Cooperation

To move past barriers between the academic and business worlds, the IDEX plans to invest in the development of relationships with a method that has been used in Germany involving the *Fraunhofer Gesellschaft* (FhG) and many universities. This approach has amply demonstrated its effectiveness and its ability to work with SMEs in Germany and is based on two complementary principles:

- ▶ Focus on a limited number of laboratories and technology from the IDEX core of excellence. Then extend these efforts to other units but only after the first phase is well underway.
- ▶ Give laboratories the means to identify, contact and work with potential partner companies.

This action will be implemented in the framework of a strategic partnership with the FhG specifically for a contribution to methodology (including through the hosting of imported skills), and the development of joint working groups, enabling our laboratories to have access to the FhG business partner network.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Creation of two SU-FhG joint working groups ▪ Creation of four joint research teams and four chairs with companies ▪ Using tools for customer relations and quality control ▪ 60% increase in the volume of research contracts ▪ 20% volume of research contracts with SMBs 	<ul style="list-style-type: none"> ▪ Creation of six SU-FhG joint working groups ▪ Creation of 10 joint research teams and 12 chairs with companies ▪ 200% increase in the volume of research contracts ▪ 40% volume of research contracts with SMBs

3C. Contribute to the digital revolution

This highly dynamic industry is one of the few sectors recognised by international studies as having a high potential for job creation. This sector is an ecosystem of companies of all sizes in Paris and its suburbs, coordinated by the Cap Digital cluster and employing more than 200,000 people.

✓ Action DRP6: Transfer in the digital context

Many Sorbonne University research teams are already heavily involved in these developments, particularly in the field of digital engineering, content, health and autonomy. The integrative nature of Sorbonne University will broaden these interactions even further with other disciplines, such as humanities, law and management.

The impact of Sorbonne University on this sector will result in the creation of a significant number of new companies introducing new technologies and new uses into the market.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Creation of two joint research teams and three chairs with companies, that include elements of the humanities and social sciences ▪ 40% increase in the volume of research contracts 	<ul style="list-style-type: none"> ▪ Creation of five joint research teams and seven chairs with companies, that include elements of the humanities and social sciences ▪ 90% increase in the volume of research contracts

✓ Action DRP7: The Sorbonne Inter-Age University

The Sorbonne Inter-Age University (“life-long university”) is one of the oldest institutions of its type in France. With 16,000 registered students in 2010, it covers all areas of the humanities, in particular literature, history, history of art, geography and philosophy. Since the start of the new academic year in autumn 2010, its offering has also included sciences, law and political science.

The Inter-Age University provides a forum for making the latest and most advanced research across all disciplines at Sorbonne University accessible via specialist-led conferences. New communications technologies, available via the Teaching Resource Network, further enhance the possibilities for transmission.

By leveraging the experience of the MNHN in particular, Sorbonne University will boost its opportunities for making contact with a broader public audience, via:

- ▶ Joint conferences and debates, such as the “Museum conferences” or UPMC’s “Science à Cœur” programmes.
- ▶ Presses Numériques de la Sorbonne (Sorbonne digital press), which extends the renowned activities of the Sorbonne Press to all disciplines at Sorbonne University
- ▶ The “Sorbonne sonore” reading aloud initiative, launched in 2007, “Radio Sorbonne” and “TV Sorbonne”, as well as audio-visual productions and the “savoirs partagés” (“shared knowledge”) programme produced by IRD and broadcast on the Synapse channel.

These schemes will be further developed within the scope of the IDEX, within which the various Labex projects are pursuing the novel approach of developing such interdisciplinary cross-fertilisation while also aiming to engage in contemporary social issues.

3D. Create 22,000 m² of innovation space (Paris Parc & Compiègne)

Sorbonne University seeks to foster innovation through dedicated facilities, and namely two major infrastructures: Paris Parc on Jussieu Campus and Compiègne Innovation Centre. These mixed areas, similar to Research Parks, will be dedicated to hosting companies and the emergence of new research teams or young start-ups.

✓ Action DRP8: The Compiègne Innovation Centre

This Centre aims to host and support maturation and creativity among students and researchers. Currently, in an experimental phase, the Centre selects projects with the highest potential and provides the project carriers with funding, advices and support. The construction of a new and dedicated building will start in the fall of 2011 with an opening in 2013. This 6000 m² will host these projects and technological facilities at their disposal.



The Innovation will provide a platform of platforms, with technical platforms structured around technological sectors; services, allowing all types of users (students, professors, researchers, inventors,...) to test ideas and tools and explore concepts; a project hub for internal (students, professors and researchers) and external project leaders (partner companies, inventors,...); an environment fostering creativity and hybridisation

✓ Action DRP9: PARIS PARC

The construction of Paris Parc, using a portion of Sorbonne University's Campus Plan endowment, will provide a meeting and exchange venue in the core of the Sorbonne University science campus at Jussieu.



This 15,000 m² building will aim to accommodate Lutech, the incubator Agoranov, and many new companies created from research—in incubation phase and as start-ups—as well as research teams from existing businesses who wish to benefit from proximity to Sorbonne University's laboratories.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> Construction of the Innovation Centre in Compiègne Paris Parc: Studies completed, construction initiated, planned delivery and opening in 2016 	<ul style="list-style-type: none"> Paris Parc houses two dozen new companies or branches of existing companies

5.3.4 Strengthen an authentic international footprint

Our IDEX project will reassert Sorbonne University's reputation and promote excellence at the international level. This commitment is reflected in a new three-pronged international policy:

- ▶ **Develop strategic partnerships:** to enhance its reputation worldwide and support its development strategy, Sorbonne University intends to strengthen its cooperation with other institutions, focused on the ERA (European Research Area) and further abroad. It has privileged partners in emerging countries with which it has built strong ties. These partnerships will define Sorbonne University's priorities, and be equally divided between institutions in Europe and those outside Europe.
- ▶ **Extend Sorbonne University's presence on target campuses:** foreign branches of institutions in Singapore (INSEAD, Pantheon-Assas and UPMC) and Abu Dhabi (Paris-Sorbonne and INSEAD) will be important beachheads in the network of such partnerships.
- ▶ **Share academic resources and support:** our IDEX project gives new impetus to this decisive international policy to make the Sorbonne a top-ranking international university within four years. Several initiatives have been launched in order to bring Sorbonne University's commitment to openness and influence into reality from 2012 and provide the necessary tools.

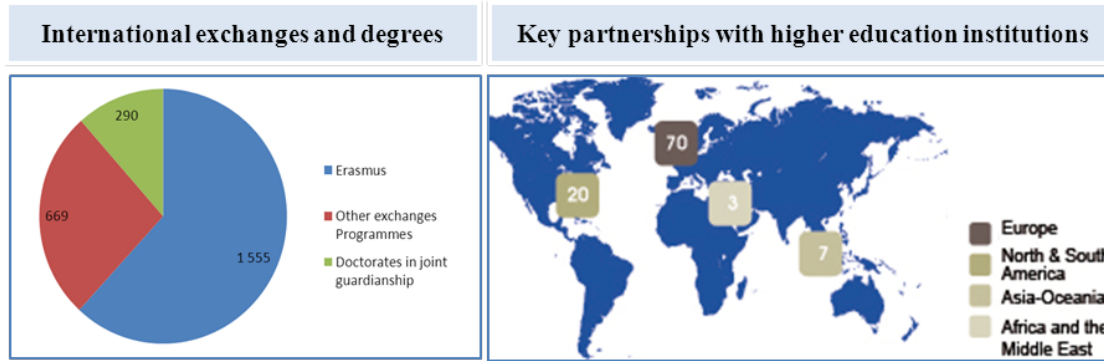
Means. No specific line of the IDEX is devoted to international actions, because their funding will be ensured through governance and campus life for what concerns the setting up of an office for international affairs; and through research, education and technology transfer actions.

Assets

Situated at the heart of Paris and integrating a large part of the historical buildings of the Sorbonne, Sorbonne University has a major competitive advantage on the international scene.

This advantage is further increased by our existing ties our membership of international alliances.

- ▶ The University participates in 62 European programmes in the 7th FP (coordinating 5) as well as 19 Marie Curie programmes (coordinating 5).
- ▶ It is a partner to 79 international research laboratories including 41 in Europe, 15 in Asia and 7 in North America. INSEAD's Singapore campus will also be opening its doors to members of Sorbonne University
- ▶ It has developed 2,500 exchange programmes: 1,555 Erasmus programmes, 669 other exchange programmes and 290 PhDs in joint supervision: 70% with Europe, 20% with America, 7% with Asia and 3% with Africa and the Middle East.



Sorbonne University, 2010

Key actions

Strategic intent	Flagship targets	Actions
<p>4 Strengthen an authentic international footprint</p>	<p>4A Create world-class facilities for researchers & students</p>	<ul style="list-style-type: none"> • I1: An international student centre • I2: Reinforce mobility and openness • I3: Attract the best post-docs and international scientists
	<p>4B Build international strategic partnerships</p>	<ul style="list-style-type: none"> • I4: European policy • I5: Strategic partnerships with international universities
	<p>4C Develop a network of world campuses</p>	<ul style="list-style-type: none"> • I6: Develop a campus in Singapore • I7: Develop a campus in Abu Dhabi

4A. Create world-class facilities for researchers & students

Support will be offered to academic staff and students who wish to apply to grants at the European level. Sorbonne University actively encourages its community to answer international calls for projects and to develop joint projects with international partners. It is one of only two French universities to be core partners of an EIT ICT node and is a key player in all European initiatives including the European Framework programme and other smaller grants such as ERC (of which 21 are currently active on campus).

These programmes will all be coordinated by the Office for International Relations—a fully equipped international department which will coordinate with the University's faculties, schools, colleges and institutes—and will provide help identifying new partners and developing existing relations. The International Student Centre will host the office in charge of assisting incoming and outgoing students and faculty.

✓ Action I1: An international student centre

Sorbonne University's international student centre, **located at a single site and managed on a shared basis**, will house classrooms equipped with multimedia resources for teaching French as a foreign language, as well as appropriately sized meeting and communal areas, and a multicultural documentation zone. The centre will support the development and implementation of international bachelor's and master's degree programmes, the aim being to attract the very best foreign students and provide excellent opportunities for international students via strategic partnerships with leading global universities.

✓ Action I2: Reinforce mobility and openness

Developing student exchange programmes is one of our major objectives. Our organisation into campuses will facilitate the hosting and sending of students overseas, thanks to the simplification of the way staff numbers are balanced. Initially, this will be primarily through structuring and facilitating, not only by increasing the number of Erasmus, but also **through educational programmes offered in international partnership**, and designed for a two-way exchange of students. Secondly, our IDEX project will create the conditions that make these programmes more attractive to students by offering **exchange preparation**, including: an adequate supply of language and foreign cultures classes, French as a foreign language, and a significant increase of courses given in English.

Objectives at two years	Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> Pooling of reception services for international students and French as a foreign language training, plus programme documentation of foreign exchanges. Networking of language centres. Targeted training of professors and researchers in English. Establishment at least one international master's programme in each Labex. 	<ul style="list-style-type: none"> Create a unique structure for the reception services for foreign students and training in French and to prepare others for foreign exchanges. Develop the teaching in English with special training for full professor/researchers Set up international partnership courses in 80% of the master's programmes. One out of three students enrolled in the course-related activities of our IDEX are also in an exchange programme. 	<ul style="list-style-type: none"> Develop teaching in English: 70% in master's course credits. 90% exchange of students enrolled in courses related to our IDEX's master's activities. An International Alumni Association.

✓ Action I3: Attract the best post-docs and international scientists

A significant part of our IDEX's success will depend on Sorbonne University's ability to enhance its appeal and attract excellent young researchers and established scientists. A dedicated office will be set up at the heart of the campus to deal with all issues encountered by foreign staff and students (including visas, housing, transport, campus life, etc.). Sorbonne University will also promote teaching in English, namely at the MA and PhD level.

Objectives at two years	Objectives at four years
<ul style="list-style-type: none"> Dissemination of calls for applications to the IDEX to clearly identified targets and networks of excellence. Support the search committee activities of (e.g. for Cluster Hiring) Reception office for newly recruited researchers, offering services through partnerships with external agencies. 	<ul style="list-style-type: none"> A common structure for reception and support the needs of international scientists Pooling of skills and knowledge from researchers and members of the Sorbonne University on the different types of collaborative projects in cultural or geographic areas in countries of preferred partners

4B. Build international strategic partnerships

UPMC is currently one of the 21 members of the LERU (League of European Research Universities): it will cede its place to Sorbonne University. In the coming years we hope to join other leading university alliances, such as IARU.

✓ **Action I4: European policy**

Our Idex will **place the European dimension at the heart of Sorbonne University activities**. The Idex will accomplish this by focusing on European research and exchange programmes one of its highest priorities.

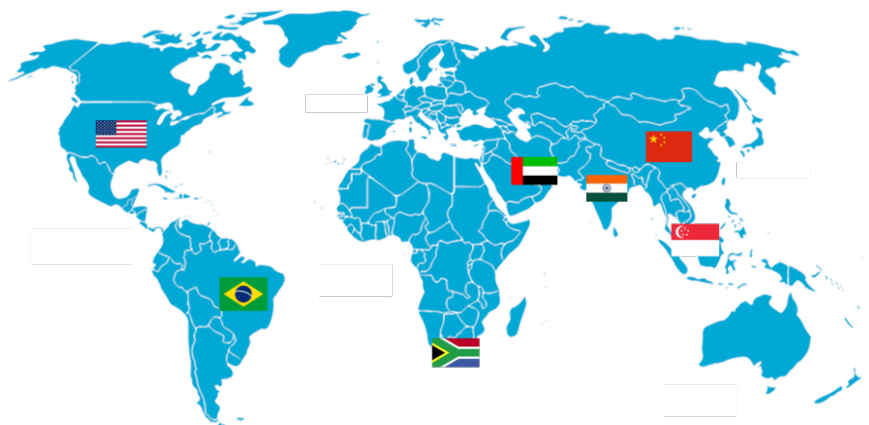
European Programmes and Contracts

Fostering its comprehensive dimension will allow Sorbonne University to **respond more effectively to major European projects**, which are now being drafted in anticipation of FP8. The University's capacity to do this is illustrated by its contribution to the Framework Programme and more recently to two of the first three KICs (knowledge and innovation communities) designated by EIT on climate change and the future information & communication society, in which L-IPSL and SorbonneTech are involved.

However, data presented by the members of the LERU shows that Sorbonne University has a **considerable scope for improvement**. The total volume of European research contracts could be doubled within the next five years. The number of researchers supported by the European Research Council (ERC) could also be increased significantly even though Sorbonne University presently hosts 24 ERC-funded researchers, managed either by the universities or the EPST. UPMC and UTC operate a joint European Office, which is already working for Panthéon-Assas University, Paris-Sorbonne University and INSEAD.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> Set up a unique office dedicated to the development of EU funding: monitoring the commission planning process, supporting PIs, negotiating contracts and consortia, hiring project managers Increase the volume of EU funding, especially the grants from ERC 	<ul style="list-style-type: none"> Increase the volume of EU funding (x 3) Within this office, put in place a monitoring and support unit for the projects in response to international calls-for-proposals

✓ **Action I5: Strategic partnerships with international universities**



Selected partnerships with institutions will enable Sorbonne University to establish a new tradition in dynamic exchange programmes, to increase the two-way flow of undergraduates, PhD students and researchers and to expand cross-disciplinary cooperation. In this perspective, the priority will be to strengthen ties with institutions in seven regions:

India

Many bilateral cooperative endeavours have been launched with Indian partners. A range of projects conducted by Sorbonne University founders and Indian research teams have namely been financed by the CEFIPRA, The Indo French Centre for the Promotion of Advanced Research.

Sorbonne University has already identified several partners, some of which have already been approached (in Bangalore):

- ▶ In the field of Mathematics, Physics, Chemistry: Indian Institute of Sciences, Tata Institute of fundamental research, Statistics Institute, Jawaharlal Nehru Center for Advanced Scientific Research (JNCASR)
- ▶ In Biology: Indian Institute of Science, National Center for Biological Science
- ▶ In the field of Law: National Law School of India University

China

Basing ourselves on already established partnerships at Sorbonne University institutions with Chinese counterparts, we will seek to develop privileged relations with universities in Shanghai and Beijing. Our three key partnerships are the following:

- ▶ The Shanghai-based **UTSEUS** (grouping over 1000 students), of which UTC is a founding member and active stakeholder
- ▶ The Beijing-based office that is shared with LERU universities
- ▶ The Beijing and Shanghai-based **French-Chinese Institute at Renmin University**, of which Paris Sorbonne is a founding member. This Institute, which was set up in 2010, offers dual degrees between French and Chinese universities and encourages student exchanges

Brazil

Sorbonne University will reinforce its current links with the University of Sao Paulo (USP).

- ▶ At present Paris Sorbonne is developing a programme with USP on urban development and culture
- ▶ UPMC has several international research laboratories in Sao Paulo in seven fields: engineering, physics, material science, mathematics, biology and medical science

South Africa

Sorbonne University will develop relations with South Africa, and specifically with Cape Town University.

United States of America

Sorbonne University will continue extending its partnerships with American universities, and reinforce two specific ones:

- ▶ Yale University, with which Panthéon-Assas has very close ties
- ▶ University of Pennsylvania, a key partner of INSEAD Business School

Singapore (see Action I6)

Abu Dhabi (see Action I7)

4C. Develop a network of world campuses

The opening of campuses abroad obviously involves risks, however these have been carefully identified namely thanks to the experience acquired the INSEAD in Singapore and Paris-Sorbonne in Abu Dhabi.

✓ Action I6: Develop a campus in Singapore

Sorbonne University has already started developing a campus in Singapore, with the strategic integration of the international research laboratory of UPMC with the INSEAD Business School and the opening of the Sorbonne Law School in Singapore.

UPMC's research laboratory brings together mixed research teams and universities in Singapore, including:

- ▶ A mixed laboratory comprising the CNRS, UPMC, Joseph Fourier University (UJF) and the National University of Singapore (NUS) in the fields of imagery and medical engineering. This laboratory is composed of about thirty people funded by ANR and AStar contracts.
- ▶ The Nanyang Technological University (NTU) in Singapore, which is developing into one of the top international technological universities. UPMC is very involved in the NTU's mixed laboratory CINTRA (researching carbon nanotubes), in partnership with the CNRS, Thales and IEMN. This laboratory is supported by AStar, the DGA and the DSTA (the French equivalent of the DGA in Singapore).

The IDEX would be an opportunity to develop Sorbonne University's research presence in Singapore and set up training programmes, on the same model as MIT and ICL courses, and "executive" programmes with INSEAD. An Executive Master of Science jointly offered by UPMC and INSEAD should be set up by 2014, and a Master of Engineering in Health Sciences designed jointly by UPMC and Nanyang is planned to open by 2016.

The Sorbonne Law School will open in January 2012, within the 10,000 m² premises of INSEAD, and construction plans for further development of the campus are under consideration.



✓ Action I7: Develop a campus in Abu Dhabi

A Sorbonne University campus in Abu Dhabi will be established by 2016, drawing on the established experience of Paris-Sorbonne University Abu Dhabi (PSUAD) and INSEAD.

An agreement is currently being signed between UPMC and PSUAD, introducing a Bachelor in Mathematics and Physics. Courses will begin in the 2012 Fall term with a cohort of 30 students. Permanent on-site lecturers will be recruited in support.

Within the next five years we aim to open further campuses in India, China and Brazil and have already identified interested partners for these initiatives.

5.3.5 Foster an integrated campus life at the heart of Paris

Campus life is key to developing a strong feeling of community and especially important to create an attractive environment for international students and staff. Sorbonne University will build a

unified urban campus profiting from its unique location; foster on-campus student life; and develop the international, inter-university dimension of the Latin Quarter, via a commitment to establishing modern, welcoming, multi-function facilities.

Means. Idex funds will provide a partial support of investment concerning an action which requires a major financial effort. Therefore, it is essential to find other partners.

Assets

Sorbonne University's main disciplines are strongly linked to locations at the heart of the city:

- ▶ Letters and human sciences at “the old Sorbonne”
- ▶ Law and economic sciences at the former Panthéon Law Faculty and the building on the rue d’Assas
- ▶ Sciences at the Jussieu campus
- ▶ Medicine at the hospital campuses and at les Cordeliers
- ▶ Natural and human sciences at the Jardin des Plantes and the national collections (Jardin des Plantes and Musée de l’Homme)

However, unlike other universities that enjoy worldwide visibility and a global reputation, the absence of a genuine campus to act as a melting pot to forge an identity for students, professors/researchers and administrative personnel, weakens the key asset of Sorbonne University: its location at the heart of Paris.

Key actions

Strategic intent	Flagship targets	Actions
5 Foster an integrated campus life at the heart of Paris	5A Create world-class facilities for researchers & students	<ul style="list-style-type: none"> C1: Student residences C2: Communal facilities for on-site campus life
	5B Facilitate cultural and sports practice	<ul style="list-style-type: none"> C3: Promotion of participation in sport C4: Promotion of cultural activities
	5C Modernise student services facilities	<ul style="list-style-type: none"> C5: Promotion of student health C6: Student orientation and career
	5D Install financing means for students	<ul style="list-style-type: none"> C7: On-campus student jobs C8: Sorbonne Grants programme

5A. Create world-class facilities for researchers & students

Student life premises will be built, taking into account both the urgent need for accommodation and a desire frequently expressed by our communities for places of sociability.

✓ Action C1: Student residences

As part of the Campus Plan, Sorbonne University has decided to prioritise improvements to accommodation for its 14,000 foreign students (including 4,500 in master's programmes, and 2,500 studying for doctorates). The University thus proposes to create and manage an **International Student Residence** on the available building plots in the west park at the **Cité Internationale Universitaire de Paris (CIUP) international student complex**. This project is

particularly important for us, and we are well aware that France is far behind in terms of student accommodation compared to international standards.

Sorbonne University is also keen to develop the accommodation opportunities available to its French students. As part of its **urban campus** programme, the municipality of **Ivry-sur-Seine** plans to develop student accommodation to meet an important need in a town that is home to several university sites. Sorbonne University could become involved with this initiative, since it has two locations in Ivry: the Charles Foix Hospital, and an IUFA (University Institute of Applied Studies) technology hall, part of the Aqua Futura project, on the site of the City of Paris water treatment facility. The conversion of the former Jean Rostand Hospital into student accommodation, including a restaurant facility, is currently being studied.

Discussions are also under way with the municipality of **Boulogne-Billancourt** regarding the feasibility of a university hall of residence on Seguin Island. This residence would include a teaching resource centre linked to the Sorbonne University Learning Network, and could be used for students on double-major programmes as well as students preparing for the competitive entrance exams for France's elite *grandes écoles*, in order to foster mixing between these two student populations.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Collaborate with the Cité Internationale Universitaire de Paris to build new students residences in the framework of the Campus Plan. 	<ul style="list-style-type: none"> ▪ Build a student residence with 150 rooms and 190 beds on the Jussieu campus, in accordance with its development plan. ▪ Contribute to the building of a student residence on Séguin Island.

✓ Action C2: Communal facilities for on-site campus life

Intertwined with the different Learning Network sites, Sorbonne University will set up communal facilities to foster the development of a genuine on-campus life.

The **Clignancourt Centre**, in the north of Paris, is currently being completely renovated. Emblematic of Sorbonne University's policy of fostering a genuine campus life, this site will also have **new teaching and scientific networks clearly focused on the northern suburbs of Paris**. With these goals in mind, the Clignancourt renovation, being carried out under a public-private partnership with the Bouygues Group, and in close consultation with the municipal and regional authorities, goes well beyond merely rebuilding offices, lecture theatres and classrooms. This site aims to integrate more effectively with its immediate environment, including the area on the other side of the Paris ring road. This policy will also be applied to the **IRD campus at Bondy**, where the multidisciplinary, in-residence first-year bachelor's will be run (Action E2).

We also aim to construct a "Sciences, Arts and Letters" network around Sorbonne University and its partners (the Conservatoire national supérieur de musique (CNSM), the Cité de la Musique and the Cité des Sciences et de l'Industrie). This network would establish Sorbonne University within the northern districts of the capital and in the inner suburbs, where university institutions are currently absent.

The same approach will be implemented to the **west and south of Paris**, at **Boulogne-Billancourt** and **Ivry sur Seine**, in conjunction with the residences referred to above.

At the heart of the Latin Quarter, another property development currently being handled by Sorbonne University, dubbed **Champollion Sorbonne**, also has a clear focus on student life.

Thanks to the provision by the Chancellery of Universities and Paris-Sorbonne of several buildings between rue de la Sorbonne and rue Champollion, in the immediate vicinity of “the old Sorbonne”, a centre will be created, in the form of a traditional Parisian arcade, which will have an open relationship with the city life going on around it. By 2013-2014, not only Sorbonne University—the project manager—but all of the university institutions located at the site will be able to offer students a genuine and significantly improved campus life.

In the longer term, the outline plan for the completion of the renovation of the **Jussieu** and **Salpêtrière campuses** also has a strong focus on the “student city” and an open relationship with the neighbourhood.



Projected student residence on Jussieu campus

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Establish a student life centre with the finalisation of the Clignancourt Centre renovation ▪ Complete the Champollion Sorbonne project. Opened to the city life going on around it, the centre will comprise a restaurant-cafeteria and facilities for use by student union groups as well as cultural and social groups 	<ul style="list-style-type: none"> ▪ Foster the emergence of a genuine university life in Boulogne-Billancourt and Ivry sur Seine, as well as in neighbouring areas, enabling the creation of new teaching and scientific partnerships and networks. ▪ Build a “Sciences, Arts and Letters” network around Sorbonne University and its partners to establish Sorbonne University within the northern districts of the capital and in the inner suburbs, where university institutions are currently absent

5B. Facilitate cultural and sports practice

Health, sport and cultural infrastructures will be developed and the resources of partner institutions will be pooled.

✓ Action C3: Promotion of participation in sport

Particular effort has also been focused on **sports policy**. This initially concerns **high-level sport** for the time being, with special conditions in place for the athletes concerned (a total of 112 in 2009-2010, with 54 at Panthéon-Assas, 3 at Paris-Sorbonne, and 55 at UPMC), namely in the form of an induction and support charter (modelled on the high-level sport mission set up at UPMC, and rolled out across the whole of Sorbonne University), as well as via the creation of specific education pathways (for example the special law degree created at the start of the 2010-2011 academic year).

However, more generalised actions are planned, aimed at individual and collective sporting activities for students and staff. Participation in sporting activities by students at Sorbonne University is above the average for universities in Paris (13% compared with 11%), with students involved in more than 70 sports, and a total of 38 PE and sports teaching staff available across the University. The sharing of available classes and facilities, already in place between Panthéon-Assas and Paris-Sorbonne, will be rapidly extended as part of this initiative. A global study of the member establishment facilities and their use will ensure an optimised use of space.

A special policy designed to promote the participation of disabled students in sports has already been put in place across Sorbonne University (including an access for the disabled to the gym at the Jussieu campus, sharing of existing specific classes, and organisation of joint trips) and this will be extended.

Starting point	Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> Coordinated courses Implementation of the high-level sport mission 13.2% registered for sport classes (compared to an average of 11% in Paris) 	<ul style="list-style-type: none"> Common sport policy and common sport facilities 20% of students registered for sport classes 	<ul style="list-style-type: none"> 40% of students registered for sport classes

✓ **Action C4: Promotion of cultural activities**

Sharing of cultural activities is also already in place, for example in the fields of music (with a Sorbonne University choir, orchestra and brass band, for trained and student musicians) and theatre, with opportunities for “amateur” productions, alongside specific workshops for public speaking and rhetoric, launched at the start of the new academic year in 2010, and currently restricted to students in joint law/history and law/history of art courses. These workshops will gradually be rolled out, along with writing workshops, which are currently available in the form of specific modules on certain programmes.

Students will have the opportunity to be awarded **high-level musician** and **high-level dancer** status, along the lines of the **high-level sport** status outlined above. Awarding specific status in this way will allow the students concerned to combine demanding artistic endeavours with high-quality university studies.

5C. Modernise student services facilities

With a view to creating a distinctive identity for the entire Sorbonne University community, the founding institutions immediately decided to share all of their practical, cultural and healthcare facilities, and make them available to the other institutions.

✓ **Action C5: Promotion of student health**

Health policy, and in particular medical prevention, is a key priority. It is now managed at the level of Sorbonne University, rather than being handled separately by each individual institution. A coordinated **inter-university preventive medicine and health promotion service** (SIUMPPS)—open to all students of Sorbonne University—was opened at the start of the 2010 academic year, with the aim of improving student healthcare and health monitoring, developing health prevention and education initiatives, and promoting the integration of disabled students.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Perform systematic checkups to 80% of students in their first three years of study (currently 45%) ▪ Develop a monitoring network among academic and administrative staff for the early detection of students in need of assistance (medical, psychological or social) ▪ Improve the management of psychological disorders ▪ Increase immunisation coverage among students ▪ Pursue prevention activities ▪ Establish a referral centre for the care of students with a dysfunction (dyslexicon, dyscalculate, dyschecker, dyspraxis) ▪ Create a culture of preventive medicine 	<ul style="list-style-type: none"> ▪ Implementation of the Sorbonne University Health Centre to meet the health needs of the student population ▪ Provide medical monitoring for the university curriculum ▪ The creation of an inter-university EU "HandiCitizen Sorbonne University" to support disabled people

✓ Action C6: Student orientation and career

The Learning Network will enable innovative, shared services to be offered that complement the services provided by partners' career and employment departments. It aims to offer regular sessions on courses on offer at Sorbonne University, in addition to open days held by partner universities, for secondary school students and parents.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ Implementation of a shared digital platform for training information and job opportunities ▪ Implementation of a e-Portfolio system ▪ Implementation of a systematic long-term career tracking of awardees 	<ul style="list-style-type: none"> ▪ Retrospective long-term study of awardees career development

5D. Install financing means for students

On-campus Student Jobs and Sorbonne Grant programmes will support part-time jobs for students on the premises and support best-performing students with grants.

✓ Action C7: On-campus student jobs

This programme will enable students to take up part-time jobs, working 20 or 40 hours per month within the institutions of Sorbonne University, in administration, libraries, laboratories, museum collections or for the excellence projects that define the scope of our initiative. The aim is not only to enable students to supplement their income from means-tested grants and gain initial work experience, but also to involve them in the structures of Sorbonne University.

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> ▪ 1000 students concerned 	<ul style="list-style-type: none"> ▪ 2500 students concerned

✓ Action C8: Sorbonne Grants programme

The programme will be designed to support the best-performing students from among those receiving means-tested grants on programmes that fall within the scope of excellence of the IDEX. The amount of such scholarships will be linked to students' education plans, and will take account, in particular, of funding needs arising from specific programmes (double-major courses, mobility, placements, etc.).

Means. IDEX funds devoted to campus life will provide grants and fellowships to students, as well as operating costs for the various initiatives of campus life (organisation of events, support to student initiatives and association).

Objectives at four years	Objectives at ten years
<ul style="list-style-type: none"> 500 students concerned 	<ul style="list-style-type: none"> 1250 students concerned

A day in the life of...
...a Sorbonne University Doctoral College Student
Year 2016

A PhD student in Law, Puneet has previously completed:

- ✓ A bachelor's at the National Law School of India University, a key partner of Sorbonne University
- ✓ A Master in Law and Business at Sorbonne Law School

 8:30 am	Puneet leaves the Jussieu student residence and heads for the on-campus Data and Statistical Analysis Centre to finalise his paper for <i>International Economics</i> .
 11:00 am	As a student delegate, he attends the Sorbonne University Academic Senate bi-annual meeting to discuss academic and research issues.
 2:00 pm	He conducts a one-hour tutoring session in "writing skills in English" for Sorbonne Bachelor College students at the Learning Centre on the Assas Campus.
 3:30 pm	He meets with a Sorbonne University International Relations advisor in order to discuss visiting scholar opportunities at the Sorbonne Law School in Singapore .
 4:15 pm	He joins other fellow PhD students at the Sorbonne campus library where they have booked a group workspace .
 9:00 pm	He attends a play at the Clignancourt Centre , to which he has unlimited access thanks to his Culture Card .

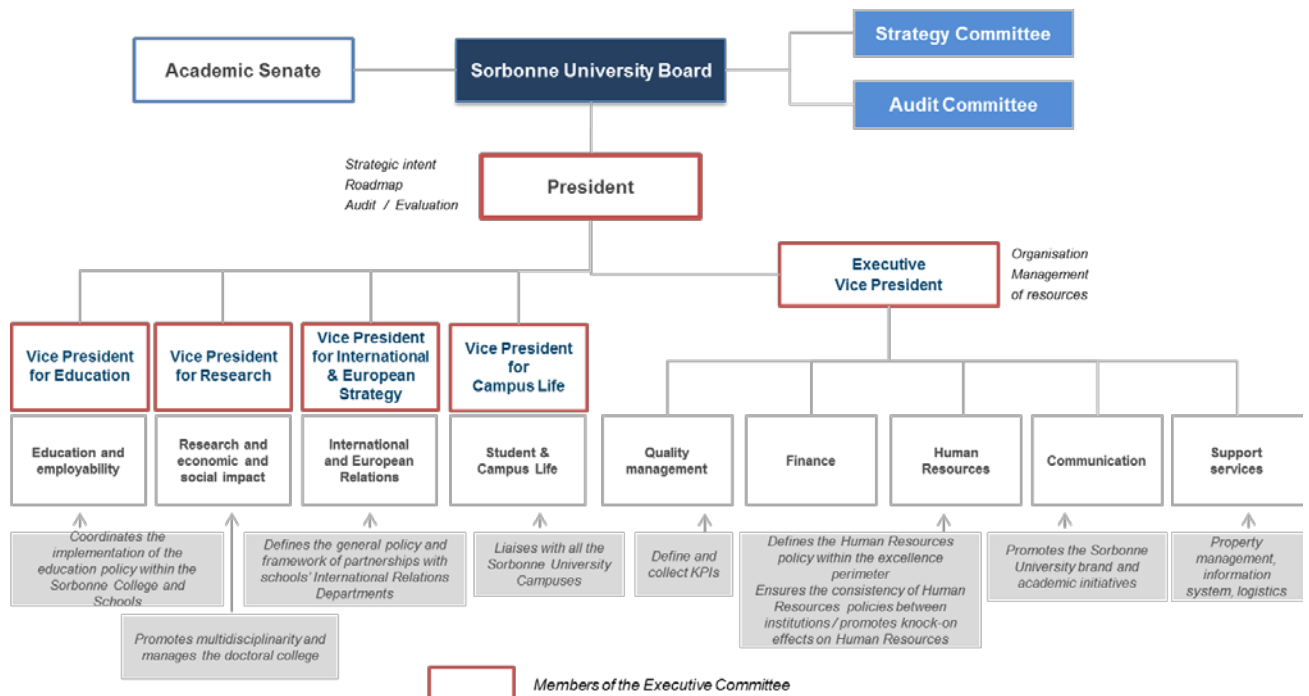
5.4. GOVERNANCE, ORGANISATION AND MANAGEMENT

The governance of Sorbonne University is based on international models. It provides legitimacy to the executive and management teams, transparency of the decision-making processes, relevant balance of powers between stakeholders and ensure clear, clean lines of responsibility. It will be implemented immediately and be adjusted when the governmental decree announcing the creation of Sorbonne University is published. It will drive institutional change and embody the successful integration of all component members of Sorbonne University. Detailed functional instruments will ensure that it is fully operational. It will enable an effective and efficient management of IDEX projects' funding, traceability and objectives.

Means. IDEX funds will support the hiring of the dedicated direction team and common management services.

5.4.1 The Governance Model and Organisational Design

The Governance Structure of Sorbonne University includes four statutory bodies—the Board, the Academic Senate, the Strategy Committee and the Audit Committee. The Board is the decision-making body and three others are advisory.



The organisation distinguishes between four main university functions (research, education, international and campus life) and administrative services implemented through dedicated departments.

Top-Level Governance Bodies

The Sorbonne University Board

- Main responsibilities
 - The Board is the central governing body of Sorbonne University.
 - It is responsible for the IDEX project and as such defines and votes the strategic intents of the perimeter of excellence and validates the annual roadmap.
 - It reviews recommendations from the Strategy Committee and advice from the Academic Senate.
 - It elects the President and grants him/her a yearly quitus.
 - It makes decisions on key policies and projects.
- Composition and functioning
 - The Board meets at least twice a year.
 - It is composed of 16 members, of which the majority are external. It includes representatives from industry and civil society.
 - The majority rule ensures fair representation of the different stakeholders (replacing the previous veto power and unanimity rules).

The Academic Senate

- Main responsibilities
 - It represents the different communities: academic staff, students, administrative staff and alumni.
 - It provides the Board with consultative advice concerning research, education, student life and allocation of funds within the IDEX.
 - It is informed of the decisions made by the Board and receives an annual report from the president.
- Composition and functioning
 - The Academic Senate meets four times a year.
 - The Academic Senate is composed of 36 delegates representing the faculties and schools of Sorbonne University as well as delegates of the associate members.

The Strategy Committee

- Main responsibilities
 - It advises the Board on strategic and scientific priorities and helps define the strategic agenda and the roadmap.
 - It reviews the overall performance of the University.
- Composition and functioning
 - The Strategy Committee is composed of 15 representatives from the cultural, scientific and industrial communities, appointed by the Sorbonne University.
 - The Strategy Committee meets twice a year.

The Audit Committee

- Main responsibilities
 - It provides external opinions on finances, reporting, quality and performance.
- Composition and functioning

- The Audit Committee is composed of four qualified people: one member from the Board, two independent members and one public auditor.

Executive Management

To carry out the IDEX project the Executive Management of Sorbonne University has been reinforced and placed under the authority of an Executive Committee, headed by the President and responsible for:

- Spearheading the ambitions as part of a comprehensive strategy of the new unified University and establishing a roadmap and resource planning to achieve the IDEX objectives within four years.
- Defining and implementing functional policies to set up a performing administration. In particular a single human resources and talent management policy will bring a common framework enabling cluster hiring across member establishments and offering candidates attractive terms of employment within the University's perimeter of excellence.

Executive Committee

- Main responsibilities
 - The Executive Committee supports and advises the President.
 - The Executive Committee makes day-to-day decisions regarding the IDEX project and initiatives within the perimeter of excellence.
- Composition and functioning
 - The Executive Committee gathers the management team: President, Executive Vice President, VP for Research, VP for Education, VP for International and European Relations and VP for Campus Life.
 - The Executive Committee meets every week.

President

The President is elected by the Board for a four-year mandate. The first president will come from Sorbonne University but all future presidents will be appointed in accordance with international standards by international job tenders. Among the responsibilities of the President:

- Define the strategic intents of the perimeter of excellence which will be approved by the Board after consultative advice from the Senate and recommendations of the Strategy Committee.
- Prepare the Sorbonne University budget, which is voted by the Board.
- Represent Sorbonne University and play a prominent role in fund raising.
- Interact frequently with all communities within Sorbonne University.

Vice Presidents

- The Vice Presidents for Research, Education, International and European Strategy and Campus Life are elected by the Board after international job tenders. The first Vice Presidents will be appointed within Sorbonne University to manage the transformation and achieve the milestones of the roadmap.
- The Executive Vice President: he/she will be nominated by the President after validation from the Board of Sorbonne University and will be in charge of administrative issues in line with international academic standards.

Among responsibilities the Executive Vice-President:

- Supervise the budgetary process and all financial affairs.
- Is responsible for the main functional processes: human resources, internal calls for tender within the perimeter of excellence, quality management...

Operational management

The top-level governing bodies will be in direct contact and in constant interaction with the direction teams of the Faculties of Arts and Humanities, Medicine, Science, the Law School and, of the UTC Institute of Technology and INSEAD Business School.

These interactions will take place in particular in three areas: Education, Research and Services. An Education Committee and a Research Committee will meet on a weekly basis throughout the first four years in order to coordinate their actions. These committees will include the relevant Vice President and his team alongside the relevant heads from each faculty/school. A similar process will be implemented for Services, with the Executive Vice President meeting the heads of Services (or equivalent) of each faculty/school on a weekly basis.

This is fundamental in order to find a proper balance between: (a) incentives from the executive committee to actively foster change; (b) bottom-up projects enabling the appropriation of the IDEX project by the community of staff and students.

5.4.2 The transition phase

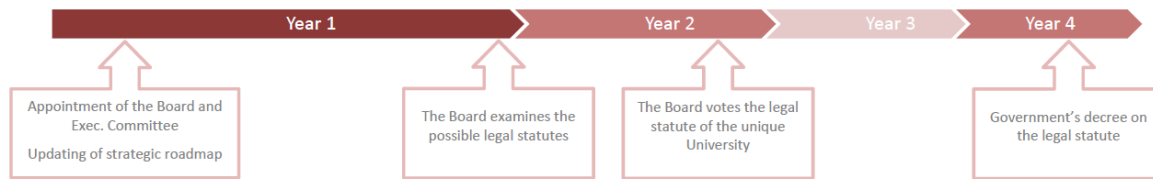
In 2012 the new governance will be fully implemented as decided by the Board in December 2011. During the transition phase the final legal frame will be designed and the organisational structure and the operational management will be fine-tuned.

As a consequence, change Management is key to achieving the targets outlined in this document and namely the strategic aim of re-establishing Sorbonne University. For this reason, all processes and practices will be carefully managed.

Shifting representation from founders institutions to the community of Sorbonne University

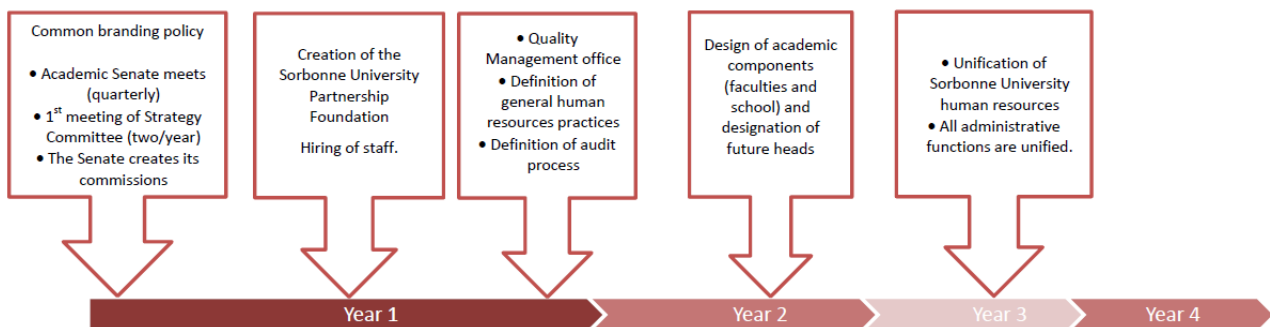
During the transition phase, the Board of Sorbonne University will have 22 members, and will include the Head of each of the founding institutions, although the majority of Board members will remain external to the founding members. To ensure a smooth transition, the founding members of Sorbonne University have selected a candidate for the position of President, who has prepared an Executive Committee, and is ready to submit it to the Board. The transition phase will end when the final legal status of Sorbonne University is approved by the French government and the founding members formally vote the creation of the single University. This is planned to take place in year 4.

Adopting the legal frame to the governance of Sorbonne University



The legal status will be defined in negotiation with the French government, according to the legal instruments available at the time of creation of the unified University. It must enable Sorbonne University to function in the manner described. In the transition phase, Sorbonne University will keep its status as a *Fondation de Coopération Scientifique* (FCS).

- By the end of 2012, the appropriate status will be identified and submitted to French authorities
- By 2016 at the latest, Sorbonne University will implement the new status and achieve a fully integrated structure



Implementing a fully integrated organisation by 2016

Several milestones have been identified to implement the organisation of various functions of Sorbonne University:

- 2012: Implementation of the functional and administrative organization : appointment of the Executive Committee (VP Education, VP Research, VP International & European Strategy, VP Campus Life, Executive Vice-President), establishment of functional policies and key operational procedures (human resources, resources allocation...), updating of the strategic roadmap...
- 2013: Homogenisation of practices at the Sorbonne University level
- 2014 / 2015: Integration of functions (level of subsidiarity...) within the unified University to ensure international management standards for the perimeter of excellence: information system, processes and best practices...

5.4.3 Functional implementation: finance, quality management and resources allocation

Sorbonne University has set-up a dedicated management system to round out reporting and reviews of actions underway in the different departments. The aim is to enable executive management to accelerate the integration process and report on project progress. The management system is designed to **overcome the complexity of implementing the Idex project** and at the same time **ensure meaningful engagement** of internal stakeholders (academic staff, support

staff, students) and external stakeholders (most valued partners, institutions, industry, etc.). In short, the proposed management system will enable the executive functions of Sorbonne University to establish a clear **strategic agenda** and **key decision milestones**. This information and quality management system will ensure the post-event reporting process.

Strategic roadmap

Our IDEX proposal sets a four-year timeframe for several initiatives and projects: governance, the use of the Sorbonne University name, Sorbonne University diplomas, and a single University-wide strategy for education and research. To help us achieve our IDEX objectives by 2016, the Executive Committee will be responsible for establishing a detailed strategic roadmap that sets key milestones for the following dimensions: research, education, technology transfer, student life and functional issues.

A dashboard of operational indicators will allow us to monitor each initiative's progress. Tailored to the needs of the Executive Committee, these tools will enable us to track and report on progress of the IDEX project's strategic agenda within each of the University's bodies of governance.

Financial management

In addition to strategic management which focuses on defining projects, strategic thrusts and milestones, the implementation of the IDEX will also put in place specific financial processes and operational guidelines to structure and monitor the different initiatives involved in the project.

- The financial aspects and tools involved in the project (i.e., multi-year funding schedules for the full perimeter of excellence, the preparation and supervision of budgets voted by the Sorbonne University Board, cash flow, etc.) will be handled by financial experts.
- Operational monitoring of efforts pursued by each department involved will enable us to measure performance and promote best practices.

For all financial and management processes, the appropriate management resources will be deployed to support the teams involved and report to stakeholders on overall progress as well as progress in the individual projects underway.

Audits and reviews to foster best practices

Implemented across the perimeter of excellence, the management system reflects the strategic thrusts of the project with regard to operational aspects and helps anticipate decisions by supplying the agenda for the University's governance bodies (i.e., the Board and the Strategy Committee). At the operational level, the management system will take the shape of a roadmap and dashboard for the executive functions to establish project phases and milestones and ensure that the project stays on course.

While the Sorbonne University management system is intended to support decision-making by members, the reporting process and 'normative' performance indicators (use of financial resources, etc.) will focus on maintaining overall financial stability. This will involve the following control, assessment and audit measures:

- An external audit of all financial, accounting, quality control, reporting and performance aspects conducted two years after receipt of funding. This will provide a mid-term review, prior to the final audit at the end of the four-year period.

- An audit committee, composed of independent members and reporting to the Board, tasked in particular with issuing responses and recommendations regarding annual financial accounts and resource allocation.
- An appraisal unit to carry out occasional reviews on request from governance bodies.

Resource allocation procedures

The goal of the IDEX project is to transform Sorbonne University and make it an international benchmark. The perimeter of excellence is dynamic and aims to mobilise members and partners around the different types of initiatives: candidate projects under the *Investing for the Future* programme; new research and education initiatives; as well as projects that aim to align services and infrastructure with international standards or to exceed those standards.

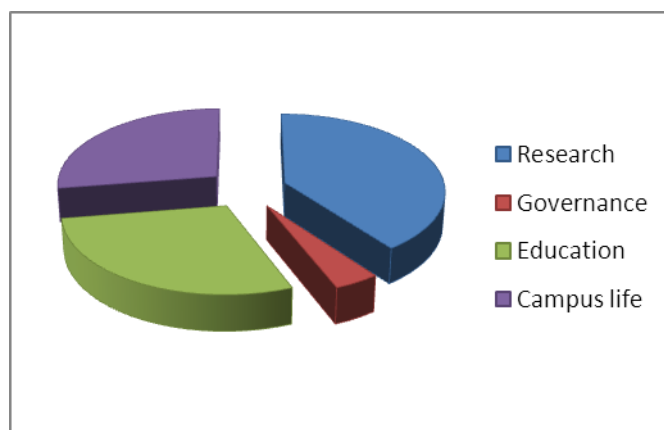
Consequently, all projects are now managed by Sorbonne University and not by the separate institutions. Sorbonne University has defined a specific allocation procedure for each category of project:

- Projects selected under the *Investing for the Future* programme (Labex, Idefi, IHU, SATT, etc.) will be funded and evaluated via the Sorbonne University governance and organisation structure. In addition to the Executive Committee, the Sorbonne University administration will be responsible for project funding. Audit procedures and evaluation tools will be used to report on process quality, progress made and results achieved.
- Non-selected or specific projects will come under internal IDEX calls for projects in order to ensure the emulation and choice of best proposals. A scientific committee composed of independent experts will be responsible for selection. The Executive Vice President is responsible for procedures regarding internal calls for projects.
- Projects related to services and infrastructure will be submitted to Sorbonne University's governing bodies and will involve the various stakeholders concerned (the French government via the Campus Plan, local authorities and other partners, etc.)

5.5. MEANS

General remarks on the means requested

The general distribution of IDEX funds is: about 40% for Research, 28.5% for Education, 27.5% for Campus life and social impact, 4% for Governance.



Within the funds directed to Campus life and social impact, the importance devoted to campus life needs to be underlined: the funds requested amount to 50 M€ which represents more than 15% of the total. This is a strategic choice for Sorbonne University, because we believe an active campus life is fundamental to create a dynamic scientific community as well as to reinforce its ability to attract international students and staff.

As for knowledge and technology transfer, no funds have been requested through the IDEX, since all actions are going to rely on a network of actions financed either through different projects of the *Investing for the Future* or directly through the partners.

All the funds requested for the IDEX will go to the perimeter of excellence, conceived in a dynamic manner. Therefore table 4 does not apply in our case.

Explanations on the hypotheses used to construct the budget

We have used standardised costs to estimate HR expenses:

- Doctoral candidate: 33 k€/year
- Post-doctoral fellow: 54 k€/year
- Senior chair: 160 k€/year

5.6. HUMAN RESSOURCES

Principles

To promote an attractive policy to academic staff and outside contributors engaged through the IDEX, Sorbonne University proposes the following transformative objectives:

- The concept of a recruitment package within Labex proposals: the recruitment package for a senior or junior staff member can include the recruitment of doctoral students, post-doctoral researchers, technicians or engineers (or making them available from current staff) and the allocation of the required premises for them.
- A shared reception service for candidates to handle questions including housing, administrative formalities, and children's schooling to be addressed in advance, through co-operation with local organisations.
- A diversification of types of recruitment, to reinforce the principle method of recruitment of statutory posts, the development of shared chairs with research organisations, company-sponsored chairs, and academic staff contracts with increased efforts in terms of publicising the call for applicants;
- The development of recognition mechanisms for investment (and development of different facets of academic staff positions), within member establishments' budgets. An innovative policy of incentives for research investment, for pedagogical investment, and for taking responsibility in the research and educational structures has already enabled UPMC to double the number of incentives in terms of those previously distributed by the Ministry.

- A career development policy, organising incoming and outgoing promotions in order to offer each person the promotion that he or she deserves, as well as ensuring the regular renewal of the community.

This policy, which is in line with the European Researchers Charter and the Code of Conduct for the Recruitment of Researchers, will also apply to doctoral and post-doctoral researchers who represent a significant part of the research strength.

Developing the University's appeal should start with the first stages in a researcher's career, through the quality and transparency of the recruitment procedures and also through support for research projects and career development. For doctoral students, the Sorbonne Doctoral College will continue to follow the policy that is already underway. Establishing a genuine status of post-doctoral researcher, extending the recent UPMC initiative, will guarantee these young researchers the quality and means to carry out their research and will support them in their career development.

Talent policy and recruitment processes

The new IDEX project will make Sorbonne University better able to attract French and international academic staff and further develop its human resources through a talent management policy. This policy will be progressively rolled out over a period of four years and will be embodied in a Careers and Human Resources Department.

To make the University more attractive across its scope of excellence, new methods of recognition and remuneration have already been devised in preparation of a new system of talent and career management, which will be clear and discernible both internationally and within the communities.

- From 2012, the Sorbonne University bodies will be guarantors of the recruitment process within the perimeter of excellence. Recruitment will be pooled and subjected to dedicated contractual arrangements initiating the policy of talent management. This best-in-class process will initially be complementary to current recruiting practises; however it is expected to become the preferred practice by 2016.
- In 2013, a human resources function covering the IDEX's perimeter of excellence—the Sorbonne Bachelor College, Schools and the Sorbonne Doctoral College—will be established under the responsibility of the Executive Vice President. Beyond the new remuneration arrangements and contracts in this scope of excellence, it will, in conjunction with relevant stakeholders, create policies for career development and talent management for the community of academic staff.
- Integration of the human resources function will be finalised by 2016 in order to harmonise—beyond the common policies and IDEX's perimeter of excellence—human resources management practices at the various campuses and schools.

The recruitment process is designed to be aligned to world-class standards and to be able to attract the best-qualified people for a dedicated position.

- Open positions:
 - Open positions are at the Sorbonne University level and subject to a common policy and will be validated by the Board after consulting with the Academic Senate.
 - Recruitment of personnel within the IDEX projects will follow the Sorbonne University HR policy.
- Human resources management:

- After hiring, human resources are managed at different levels according to the personnel category and the type of contract, in application of the subsidiarity principle.
- All personnel hired for an IDEX project will also apply for ERC Starting or Advanced Grants.
- For academic positions, the research committee will have the following responsibilities:
 - Define the description of the position and publish the international call for candidates.
 - Appoint the search committee, made up of independent experts in the related field to evaluate the applications and interview selected candidates.
 - Review the candidates and the search committee's recommendations for each position. If the call for applications is unsuccessful, the post will not be opened.
- Within this recruitment process, the final hiring process will depend on the seniority of the position:
 - For Sorbonne University Senior Chairs: The Vice President for Research will negotiate the package with the successful candidate, and this offer will be submitted to the Sorbonne University Board.
 - Sorbonne University Junior Chairs: The Vice President for Research will negotiate the offer with the candidate.
 - Sorbonne University Starting Chairs: The Sorbonne University Research Department will propose a standard contract.

This emphasis on talent and career management will help to ensure the autonomy and specificity of the recruitment process and management of resources within the perimeter of excellence, while at the same time fostering emulation beyond it.

Technical and administrative staff

Increasing the University's appeal must be accompanied by a policy of HRM motivation through compensatory bonuses for increased responsibilities and commitment to the job, as well as continuous skills improvement. Significant progress needs to be made in this field to fully assume the "new" employer responsibilities assigned to these establishments.

This is particularly required in a sector of activity marked by international competition in terms of research and strong pedagogical evolution leading to a permanent evolution of the context of work and the skills required for academic and support staff.

To be attractive, Sorbonne University must offer development and career opportunities for its staff as well as their promotion within the University.

In particular, the employment pyramid needs to evolve to achieve a fair balance between professors and lecturers on one hand and technicians, engineers and category C staff on the other. Actions will also be undertaken to ensure a better balance between men and women in recruitment and promotion.

Personalised staff monitoring, for academic support staff will be established through the co-ordination of human resource management, teaching and research in order to support them in their careers and to offer them training or career changes corresponding to their aspirations.

6. KEY DATA AND FINANCIAL PLANNING

Table 1: Proportion of faculty and students involved in the excellence Initiative

Table 1.1.

	Excellence Perimeter	All partners of the Idex
Academic staff. Dec 2011	1600	5768
Academic staff. Jan 2012 <i>(depending on scnd wave of IA)</i>	2900	

Table 1.2

	Students in Idex programmes			All students
	year 1	year 4	year 10	
All cycles	12850	33600	54500	65000

Table 2: Capital grant requested (in M€)

Capital grant requested	1440
Yearly expected interests from the capital grant (3,413% rate)	49

Table 3: Presentation of the resources and expenses of the actions of the perimeter of excellence of the Idex – total over 4 years (in M€).

	IDEX grant	Other grants	Contribution of the partners	External resources	Investment	Operating costs	Staff
Research	78	58,9	864,1	138,4	93,1	164,5	881,9
LABEX	50		629,7	109,2	48,6	76,2	664,2
<i>selected</i>	21,2		267	46,3	20,6	32,3	281,6
<i>application</i>	28,8		362,7	62,9	28	43,9	382,6
IHU		58,9	194	6,8	43,1	65,8	150,8
Transdisciplinary seminars	0,8		1,6			0,6	1,8
Convergence Programme	7		8	8		6	17
Cluster hiring	7		8	8		4	19
Data Centre	2,8		4,8	1,6	1,4	1,4	6,4
Methodological support	3,2		1,6				4,8
Documentation	4		8			4,5	7,5
Contracted research	0,8		6			0,4	6,4
European & international	2,4		2,4	4,8		5,6	4
Education	56		134,4	36	20,8	37,9	167,7
BACHELOR COLLEGE	16		72,4	16	3,2	17,9	83,3
<i>IDEFI Bachelor College</i>	1		10			2	9
<i>3rd year abroad</i>	3,5		5,6			1,1	8
<i>Campus IRD Bandy</i>	2		0,8	4	3,2	0,8	2,8
<i>Health-Law-Sciences-Hum</i>	7,5		46			10	43,5
<i>Professional bachelor</i>	2		10	12		4	20
MASTER							
<i>Call for project</i>	4					1,6	2,4
DOCTORATE							
<i>Prof. Training</i>	1,8		9			2,7	8,1
<i>Double track Doctorates</i>	2,2		11			3,3	9,9
LIFE LONG LEARNING	4		14	8		2	24
<i>Learning network</i>	24		22		6	6	34
<i>Technology halls</i>	4		6	12	11,6	4,4	6
R&D			4	35,8	35,8		6
<i>Compiègne Innov. Centre</i>			2	13	13		4
<i>Paris Parc</i>			2	22,8	22,8		2
<i>Funding through other "Investing for the Future" actions (table 5)</i>							
CAMPUS LIFE	53,8		11,2	6	16,4	22,2	32,4
<i>On-Campus Jobs & Health, sport, culture</i>	16					8	8
<i>Sociability spaces</i>	10		4		2	5	7
<i>Social impact</i>	24			6	14,4	5,2	10,4
<i>Social impact</i>	3,8		7,2			4	7
GOVERNANCE	8,2		0,2			0,2	8,2
TOTAL	196	58,9	1013,9	216,2	166,1	224,8	1096,2
<i>FYI: other grants for "Investing for the Future" programmes (table 5)</i>							
LUTECH		57,3	2,8	2	838	5,4	47,9
IEED & IRT		1,6				0,8	
Carnot		9,9	12	18	5,3	8	26
Quadrivium		8		32	32	3,2	4,8
EQUIPEX selected		10,2			10,2		
EQUIPEX (application)		58,2					
BioSanté1		14,3					
BioSanté2		19,2					

Explanations about the hypotheses concerning the Labex

- *Funding of Labex2 through the IDEX.* The amount for actions from Labex2 projects submitted is 28,8 M€ (average of 0,48 M€ annually per project). Depending on the results of the call for projects Labex2, and in the case that the average amount spent on selected Labex2 projects exceeds the annual funding of 0,48 M€ per project, the average funding for the other Labex2 projects will be reduced. This other Labex2 projects will be financed only after they have been improved and selected under a procedure established by Sorbonne University. However, Sorbonne University does not want this amount to be less than 0,35 M€ annually per project. If the results of the Labex2 call for projects are so favourable that it would be impossible to fund such actions at an average annual minimum of 0,35 M€, the IDEX grant application for these actions should be reviewed.
- *Estimation of the contribution of the IDEX partners to the Labex2.* The IDEX partner contributions to Labex2 projects (which were not requested as such in the form A2) were established on the basis of the contributions of Labex1 partners, in proportion to the IDEX funding requested for the Labex2.
- *External resources.* The resource estimate was based on external data provided for Labex2 projects, which is more accurate than those provided for Labex1. This estimate took into account all the external resources obtained by the Labex2 project partners when at least one of their supervisors was within Sorbonne University. The Equipex1 that have been mentioned in the external resources obtained were deducted from the partner contributions. External resources mobilized, as well as those within the Labex2 by IDEX members, has formed the basis for the external resource estimation of IDEX members of the Labex1, according to the same ratio as for the partner contribution.

Table 4: Presentation of the resources and spending of the other IDEX actions - total over 4 years (in M€)

N/A. All IDEX funds will be directed to the perimeter of excellence.

Table 5: Total budget over 4 years – resources and spending (in M€)

	Resources mobilised for the IDEX	Total of resources
FUNDING FROM THE INVESTISSEMENTS D'AVENIR		
Amount requested for the IDEX	196	-
Other IA funding affecting the IDEX	237,6	-
<i>Funding obtained</i>	160,2	-
<i>Equipex</i>	10,2	-
<i>BioSanté1 and IHU</i>	73,2	-
<i>IEED / IRT</i>	1,6	-
<i>Carnot</i>	9,9	-
<i>SATT / Quadrivium</i>	65,3	-
<i>Pending fundings (1st and 2nd wave)</i>	77,4	-
<i>Equipex</i>	58,2	-
<i>BioSanté2</i>	19,2	-
CONTRIBUTION OF THE HIGH. ED. INSTITUTIONS OF THE IDEX		
Université Panthéon-Assas	78,8	384
Université Paris-Sorbonne	146,5	714
Université Pierre & Marie Curie	406,6	1981,8
INSEAD	87,8	428
UTC	59,1	288
TOTAL	778,8	3795,8
CONTRIBUTION OF THE RESEARCH INSTITUTES WITHIN THE IDEX PARTNERS		
CNRS	75,3	439,56
INSERM	42,8	249,584
IRD	8,1	47,44
TOTAL	126,2	736,584
CONTRIBUTION OF OTHER PARTNERS		
MNHN	105	511,6
CONTRIBUTION OF THE TERRITORIAL AUTHORITIES		
Amount requested for the IDEX	15	-
CONTRIBUTION OF THE PRIVATE SECTOR		
Amount requested for the IDEX	21,6	-
OTHER CONTRIBUTIONS		
Amount requested for the IDEX	182,8	-
TOTAL		
Total of the resources mobilized for the actions of the IDEX project	1663	-

Table 6 : Distribution of the expenses according to the nature of the 4 year budget (in M€)

	IDEX grant	Total of resources
Human resources	147,6	1088
Operating costs	30,7	444
Investment	17,7	131
TOTAL	196	1663

Table 7 : Distribution of the expenses by activity of the 4 year budget (in M€)

	IDEX grant	% of total	Total of resources
Research	78	39,8	1139,4
Education	56	28,6	226,4
R&D	0	0	217,8
Campus life	53,8	27,5	71
Governance	8,2	4,1	8,4
TOTAL	196	100	1663

7. ANNEX – LETTERS OF SUPPORT

Letter from the AP-HP
Letter from the Archives nationales
Letter from BNP Parisbas
Letter from Cap Digital
Letter from the CMN
Letter from the LERU
Letter from the MACIF
Letter from the MIT-Sloan
Letter from the Mayor of Paris
Letter from PSA
Letter from Paris Sciences et Lettres
Letter from RTE
Letter from TF1
Letter from Total & Bouygues
Letter from Valéo
Letter from the Wharton Law School



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Professor Louis Vogel
President of the PRES Sorbonne University
12, place du Panthéon
Paris – 75005

Paris, le / 5 DEC. 2011

Dear President Vogel,

LA DIRECTRICE GENERALE

As a member of the Board of Sorbonne University, the AP-HP wishes to express its strongest support to the IDEX application of Sorbonne University.

The AP-HP is directly implicated in all three Parisian IHUs and therefore in particular with Sorbonne University which directs two of them : the Institute for translational neurosciences at the Pitié-Salpêtrière and the Institute Cardiology-Metabolism-Nutrition.

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These two projects are a clear demonstration of the quality and dynamism of our collaborations. They also show the importance of research at the interfaces for biomedical research : from this point of view, the creation of Sorbonne University will be a major asset, since it will add to the strength of the University of Paris 6 the quality and skills of research teams in humanities and law.

The AP-HP is also very interested in the way Sorbonne University will promote R&D and translational research. The network encompassing the SATT and the Quadrivium seed fund will have a direct impact of research on public health. The success of these initiatives is all the more likely since, in the 2011 rankings of French Hospitals, the 1st and the 3rd hospitals in France are both part of Sorbonne University.

In the context of international biomedical research, the AP-HP insists on the importance of strengthening ties with top-level universities. Creating Sorbonne University is key to ensure the visibility and ongoing quality of French biomedical research at the international level.

I wish Sorbonne University the best in the IDEX competition and am confident that this new structure will foster future collaborations.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Mireille FAUGERE".

Mireille FAUGERE

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**Direction / Mission partenariats
scientifiques**

Paris, le 30 novembre 2011

Affaire suivie par
Elsa Marguin-Hamon
60 rue des Francs-Bourgeois
75003 Paris
Tél 01 40 27 60 09
Fax 01 40 27 66 45
elsa.marguin@culture.gouv.fr

The French National Archives (*Archives Nationales*) have recently established a partnership with the PRES Sorbonne University. Decided last June, negotiated during the summer, this agreement was signed and officialized last October. Our institution is not at the heart of the IDEX project submitted this December by Sorbonne University. But we have been regularly informed of the development of this project since our first talks with Sorbonne University, and, being an official associate member, we have been able to participate in the discussions, which have taken place in the Academic Senate. We are thus able to express our firm support of it, and want to show to the jury that this support goes well beyond a simple appreciation of it.

As the Director of the *Archives Nationales*, I want to stress that the idea of being associated to a PRES, and more specifically, to be a unique and privileged partner of Sorbonne University, was grounded on a series of shared principles which are highlighted by the IDEX of Sorbonne University: interdisciplinarity, a close alliance between education and research, diffusion of knowledge to a wider public. We are particularly excited by the possibilities of collaborating in order to develop new ways of reaching out to a wider public, notably thanks to the possibilities, which new technologies offer us.

A good example of this is the new communication centre, which we will soon open in the northern suburbs of Paris, and where we will develop a specific program directly oriented to the inner cities population. The expertise of Sorbonne University's communities and their experience setting up similar programs will be invaluable to us. At the research level, we will have access to the resources of a multidisciplinary university: at the moment, as is natural, most of our projects are with historians and art historians, as well as some jurists. But we also want to establish connections with scientists, and the possibility of developing long-term collaborations with the Museum National d'Histoire naturelle is of course very exciting. Numerizing our collections and integrating them in learning programs will also be possible with Sorbonne University, especially thanks to its Learning centers. This offers us the new and stimulating perspective of not only making our collections more accessible, but also of using them in innovative forms of teaching, in all fields of knowledge.

We were looking for a partner to help us develop the *Archives Nationales* and encourage access not only to academics, our natural users, but to society as a whole. We chose Sorbonne University because of its excellence, its



interdisciplinarity, and the potential of its students, professors and researchers. The IDEX project proposed by Sorbonne University confirms that we were right to select this institution as our sole partner: our goals fit together perfectly - in fact they are the same. Even if we are not formally part of the IDEX project, we eagerly anticipate being able to participate in the different axes around which it is built, with projects not only for Research but also for Education and even Student Life. By integrating the scientific community of Sorbonne University, we are convinced that we will reach our goals much faster and much more efficiently.

This is why, I am proud to be a partner of Sorbonne University and proud of their IDEX project, and I sincerely hope that the jury will recognize its excellence and its potential. It is in this spirit that I give it my full support.

La directrice des Archives nationales


Agnès Magnien

**BNP PARIBAS**

Jean-Louis Guillot
Conseiller de la Direction Générale
3 rue d'Antin - 75002 Paris

M Louis Vogel
President of the PRES Sorbonne University
12 place du Panthéon
75005 Paris

Paris, November the 30th, 2011

Dear President Vogel,

You asked for our opinion on the project of creating an "International Law School" within the framework of Sorbonne University. We wish to express our utmost interest in this project, which would combine the skills currently present within Paris II and the INSEAD.

This innovative and ambitious project addresses a pressing need: companies such as ours must be able to rely on professionals with comprehensive skills in legal affairs. We need students who are able to pass seamlessly from one legal system to another, who can analyse complex international operations, work with international teams. We need students with both in-depth and wide ranging education, who can immediately integrate an English working environment.

This is why it is fundamental that the best students and professionals should have access to an education in Law comparable to that which exists in Management.

Law is currently undergoing an evolution similar to that which has previously affected the finance sector, and is becoming ever more important within companies. The internationalization of companies is a massive trend, requiring extensive knowledge of various legislation, regulations or jurisprudences. Companies have to adapt to a legal environment in constant evolution, guided by common law or civil law, international law or soft law.

On other continents, other universities are presently creating curricula similar to the "International Law School". The quality of the education in Law and the presence of "MBA" addressing the needs of professionals have become essential assets in the competition between international universities. Sorbonne University can rely on the expertise of Paris 2, the leading French University in this field and of the INSEAD, one of the world's leading business schools. It is therefore of the utmost importance that Sorbonne University should profit of their synergies to set up such as school.

We therefore completely share the objective of the "International Law School" and intend to support it.

Yours Sincerely,
Jean-Louis Guillot



Monsieur le Président Louis VOGEL
Président du PRES Sorbonne
Universités
Place du Panthéon
75005 Paris

Paris, le 05 décembre 2011

Nos Réf : 11-325

Objet : Lettre de soutien pour le Labex « IDEX »

Monsieur le Président, *Ma ami*

Je voudrais par cette lettre affirmer le soutien du pôle de compétitivité « Cap Digital » au projet d'IDEX porté par le PRES Sorbonne Universités dont l'Université Pierre et Marie Curie fait partie.

Le pôle de compétitivité Cap Digital rassemble les acteurs de la filière des Contenus et des Services numériques. Il regroupe à ce jour plus de 700 membres, PME innovantes, Grandes entreprises, Laboratoires académiques, tous issus des secteurs de la création (Image, vidéo, musique, Interactivité, jeu vidéo, ..) du traitement des connaissances (fouille de données, traitements sémantiques, moteurs de recherche, ..) et des services (services pour les mobiles, services dans la ville, pour la santé au quotidien, robotique,...).

Le développement de l'industrie des services numériques dépend fortement des relations de nos secteurs d'activités avec les acteurs académiques, et plus particulièrement de leurs actions de valorisation, et de leurs projets de recherche en collaboration avec les entreprises. L'UPMC est l'un des partenaires clé du pôle Cap Digital, il est membre du Conseil d'Administration du pôle depuis son origine.

Nous avons noué des relations étroites avec les équipes du PRES et notamment avec l'UPMC dans le contexte d'un projet conjoint intitulé « Institut de la Vie Numérique », en réponse à l'appel d'offre IRT. Cet Institut, même s'il ne prendra pas la forme d'un IRT comme initialement prévu, va néanmoins être construit par un consortium de partenaires fondateurs académiques et industriels, dont l'UPMC est l'un des piliers. De plus, il est prévu que cet Institut puisse se déployer dans les futurs locaux de Paris Parc, spécialement adaptés à la recherche industrielle multidisciplinaire, à la valorisation vers les PME et à l'animation de filière.

L'UPMC constitue pour Cap Digital et pour ses membres un pôle de compétences incontournable sur les thématiques technologiques de l'informatique et des télécommunications, l'école doctorale partagée avec Télécom Paris, également partenaire clé de Cap Digital, illustre cette excellence.

Dans les domaines de la robotique, et avec l'UTC, membre associé du PRES Sorbonne Universités, l'UPMC soutient et contribue à des projets collaboratifs avec de nombreuses PME innovantes du pôle.

Les jeux sérieux, les études sur les usages du numérique (avec le laboratoire de P8/Lutin, membre également de Cap Digital), les services innovants sur le Web, sont d'autres domaines très importants dans la collaboration avec le Pôle.



Enfin au niveau européen, Cap Digital est engagé dans le laboratoire européen EIT ICT-Lab aux côtés de l'UPMC. Rappelons que l'EIT-ICT-Lab est l'un des seuls KIC labellisés au niveau européen, le seul dans le domaine des TIC. Conjointement, avec l'Institut Telecom, l'INRIA et Alcatel-Lucent, l'UPMC participe au laboratoire LINCIS sur le web du futur, ce qui est un sujet fondamental pour tous les acteurs de Cap Digital.

Tous ces éléments soulignent l'ampleur des collaborations déjà établies avec l'UPMC et le PRES Sorbonne Universités, dont nous souhaitons qu'elles s'amplifient dans le contexte du futur IDEX.

Je vous prie d'agréer, Monsieur le Président, l'expression de toute ma considération.

A handwritten signature in black ink, consisting of a long horizontal stroke followed by a large, stylized loop and a final upward stroke.

Henri Verdier
Président du Conseil d'Administration
Cap Digital



CENTRE DES MONUMENTS NATIONAUX

Le Président

Paris,

30 NOV 2011

To whom it may concern.

The Centre des monuments nationaux, created in 1914 as Caisse nationale des monuments historiques et des sites is today in charge of curating, opening to the public and undertaking research on more than a hundred State-owned monuments, from prehistoric caves to the modern villas of Le Corbusier and Mallet-Stevens. With nearly 9 million visitors per year it is the first cultural and touristic public operator in France and a major publisher thanks to its editing house *Editions du Patrimoine*.

The *Centre des monuments nationaux* has long wanted to expand its scientific activities and to share its professional experience and knowledge in the business of conservation, cultural mediation, edition and economic development of historical and artistic venues, and has decided that the most fruitful way of doing this was by establishing an exclusive partnership with the academic community.

This was the reason for which we decided, in May 2011, to contact Sorbonne University. We were particularly attracted by the unique scientific potentialities of its three constituent universities, a potential which has since been reinforced with the inclusion of the Museum national d'histoire naturelle. We were officially associated to Sorbonne University in October 2011, only six months after our first meeting demonstrated the complementarity of our respective institutions, and the ease with which we would be able to define future cooperations.

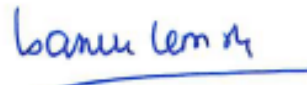
We are currently about to start our first concrete projects of collaboration in research, education and even publication by sharing our knowledge of the publishing sector with the *Presses de l'Université Paris-Sorbonne*. The IDEX of Sorbonne University opens new perspectives, and although, as associate members, we are not included in the perimeter of excellence, we are proud to participate in such an innovative project and especially happy to be able to collaborate with cutting-edge research teams such as those which have been selected by the LABEX call for projects. We are also currently working with Sorbonne University to develop new teaching activities directly oriented to the professionalization of students.



Hôtel de Sully - 62, rue Saint-Antoine - 75186 Paris Cedex 04 - Téléphone 01 44 61 20 00 - www.monuments-nationaux.fr

I want to stress that we chose Sorbonne University not only because of its recognized excellence in teaching and research in fields naturally associated with our activities, such as art history, archeology, history and geography, but also because it offered original ways of developing new cooperations in fields such as the sciences and law, and even applied economics.

The idea of interdisciplinarity and scientific cooperation, which are at the core of the IDEX of Sorbonne University, was in fact one of the reasons for which we were immediately open to an association with Sorbonne University. We are enthusiastic to be able to take part in such an innovative project, and eager to fully participate in the actions made possible by the IDEX. I can assure you that at all levels of the Centre, we are thinking of how to collaborate with Sorbonne University, and how to develop projects, compatible with the spirit of the IDEX. I thus give hereby my full support to Sorbonne University, which has already begun to make us think beyond our primitive goals, and rethink, in fact, what we imagined would be the first steps of the cooperation between our two institutions, in a more innovative and fruitful way. The *Centre des Monuments nationaux* sees in the IDEX of Sorbonne University an effective way to develop for the first time ever close links between a global university and our institution and of opening new paths in the scientific, academic and even economic fields.



Isabelle LEMESLE



LERU Office
Schapenstraat 34
3000 Leuven, Belgium

Leuven, 5 December 2011

To whom it may concern

The League of European Research Universities (LERU) follows with great attention the recent developments in the French university landscape, as driven, among others, by the excellence initiative of the French government.

In this framework, we are aware of the major efforts of one of our members, UPMC, to build a world-class comprehensive university in the heart of Paris, with five other partners.

Obviously, if successful, this would be a major achievement and an important step in the future positioning of French universities world-wide.

The possible transformation of the UPMC and its five Paris-based partners into Sorbonne University has the full support of LERU and we are ready to consider the substitution of UPMC by Sorbonne University within LERU.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'K. Deketelaere', written over a light blue horizontal line.

Prof Dr Kurt Deketelaere
Secretary-General LERU

Universiteit van Amsterdam • Universitat de Barcelona • University of Cambridge • University of Edinburgh • Albert-Ludwigs-Universität Freiburg • Université de Genève • Ruprecht-Karls-Universität Heidelberg • Helsingin yliopisto (University of Helsinki) • Universiteit Leiden • Katholieke Universiteit Leuven • Imperial College London • University College London • Lunds universitet • Università degli Studi di Milano • Ludwig-Maximilians-Universität München • University of Oxford • Université Pierre et Marie Curie, Paris • Université Paris-Sud 11 • Université de Strasbourg • Universiteit Utrecht • Universität Zürich



Wednesday 30th November 2011

Dear Sir,

By this letter, I would like to express the strongest support of MACIF to the IDEX project SUPER.

Since the beginning of 2011, we have initiated a strong collaboration with UPMC along the following lines:

- Studying in common how we could finance the 350M€ students housing program Sorbonne University and especially UPMC are attending to build.
- Studying how much we will invest in the Sorbonne University and partners Venture fund.
- Studying how we will fund, for which purpose and for how much, through the university foundation, two "Chairs" dedicated for researches

We fully perceive the importance of building a world-class comprehensive university at the heart of the Quartier Latin. Sorbonne University also opens new possibilities of extending our collaboration especially for the student housing program.

I wish Sorbonne University success in its project and look forward to extending our contacts and collaborations.

Kind regards

A handwritten signature in black ink that reads 'J.P. Challet'.

Jean-Paul Challet
Directeur Général Adjoint
Macif

Massachusetts Institute of Technology
Sloan School of Management
David C. Schmittlein
John C Head III Dean
Professor of Marketing



Phone: 617-253-2804
Fax: 617-258-6617
E-mail: dschmitt@mit.edu
<http://mitsloan.mit.edu>

December 2nd, 2011

President Louis Vogel
Sorbonne University
12, place du Panthéon
75231 Paris cedex 05

Dear President Vogel,

By this letter, I would like to express all the interest that the MIT Sloan School of Management takes in the initiative of excellence project presented by Sorbonne University, and its strongest support of this initiative.

Although we do not have formal partnerships with INSEAD, our faculty members have collaborated on research projects in an informal network of academic relationships. As a business school, it makes very much sense for INSEAD to join forces with complementary local partners to cross the boundaries of our academic disciplines. Such collaborations are critical to understand today's complex world environment and to prepare our students.

More specifically, we fully support the emergence of a world-class comprehensive university at the heart of Paris. Besides, the complementary of the research teams and disciplinary fields present at Sorbonne University also open new possibilities of extending our own collaboration across disciplines at an international level.

I wish Sorbonne University success in its project and look forward to extending our contacts and collaborations.

Sincerely,

A handwritten signature in black ink that reads "David Schmittlein".

David Schmittlein

Le Maire de Paris

Paris, le - 6 DEC. 2011

Mister President,

The City of Paris wants to reinforce its position as a one of the most important academic cities in the world. The creation of comprehensive universities, embedded within the urban environment, is key to this ambition.

The City of Paris fully supports the project SUPER. It already works hand in hand with its members on a number of key initiatives and intends to reinforce our relationship in the future.

Our collaboration is well established and geared towards cutting-edge sectors with initiatives such as Cap Digital, a Business Cluster for Digital Content, which has been developed in line with the City of Paris' strategy to focus on the digital sector.

We are particularly satisfied with our collaboration in order to develop Aqua Futura, the Laboratory of Water of the City of Paris, which integrates three R&D departments on Materials, Biology and Chemistry. This scientific and technological platform will not only oversee water quality but will also pilot innovative research programmes.

We are also proud to support "Paris Parc", which will dedicate 15 000 m² to innovation at the heart of the Latin Quarter. "Paris Parc" is a major initiative that aims to become one of the main French Business Incubators. To this end, it will welcome French and Foreign firms and work hand in hand with IDEX project's research laboratories.

In the near future, we intend to work with SUPER to form an urban campus, in line with international standards, which will fully integrate student accommodation, research and education facilities within the urban fabric of the city. In this way, we will help further develop an urban signature of the campus and find solutions to student accommodation issues.

I wish you success in your project and look forward to pursuing our collaboration.

Sincerely,



Bertrand DELANOË

Mister Louis VOGEL
President of Sorbonne Universities
12, place du Panthéon
75231 PARIS Cedex 5



PSA PEUGEOT CITROËN
Direction Recherche et Développement

Sylvain Allano, Executive Scientific Director

To Louis Vogel, President of the PRES Sorbonne University

Paris, 1st December 2011

Dear President Vogel,

By this letter, I would like to express all the interest that PSA Peugeot Citroën takes in the IDEX project presented by Sorbonne University, and its strongest support of this initiative.

Since many years, we have built up a strong collaboration with some members of Sorbonne University. PSA Peugeot Citroën and UPMC have recently created the first "Executive Doctorate" program. This program has been designed to enable PSA engineers and researchers to obtain a doctorate from UPMC while continuing to exercise their professional responsibilities. This approach will provide PSA engineers with solid research experience and to have access to the latest scientific discoveries. It will allow them to engage with their international peers, most of whom hold doctoral degrees.

Since 2011, PSA Peugeot Citroën University has set up strong partnerships with prestigious business and engineering schools universities worldwide to enhance its research capabilities and attract the best talents.

In early 2012, Sorbonne University will officially integrate this program and a project of an academic chair is already on its way with UPMC.

The creation of Sorbonne University opens new perspectives of collaboration. First of all, PSA Peugeot Citroën fully supports the emergence of a world-class comprehensive university at the heart of Paris. Besides, the complementary of the research teams and disciplinary fields present at Sorbonne University also opens new possibilities of extending our collaboration in the field of human sciences.

I wish Sorbonne University success in the IDEX competition and look forward to extending our contacts and collaborations.

Very truly yours



Route de Gizy, 78943 Yvelines Cedex 9 France



Paris, le 07 décembre 2011

To whom it may concern,

As responsible for the scientific and institutional project of the PSL IDEX, winner of first round of the "Initiative d'excellence", I would like to emphasize the interest for the Parisian academic environment of the IDEX project: Paris Sorbonne Universités.

From the very beginning, PSL project has called for the coexistence of several models of excellence in Paris, each with its own features and organization. The characteristics and assets of the Parisian PRES are indeed different from each other, and each PRES has adopted specific strategies to develop them. As a result, the overall quality of the scientific influence in Paris will be even stronger.

The ambition of the Sorbonne Universités project is to create a *research university* whose excellence would be grounded on a close association of three universities, Paris Panthéon-Assas, Paris-Sorbonne and Pierre et Marie Curie, each embodying a model of success in their respective field. As such, this project is clearly distinguishable from PSL IDEX, which is constituted by the close association institutions that for the most part do not have the French university status. Good-neighborly relations between these IDEX are a key element of research's dynamism in Ile-de-France.

Beyond that, the coexistence, in Paris, of different IDEX with outstanding performances and shared common values in terms of research is an optimal condition for the overall improvement of research in the Parisian area which is characterized by long-standing relationship of cooperation, beneficial to all. The new landscape created by this several IDEX cultivating healthy competition and genuine cooperation will help create a breeding ground for excellence and improved performances for all.

Therefore PSL IDEX strongly hopes that cooperation will be fostered with the other IDEX in Paris. Cooperations between PSL and Sorbonne Universités will continue since they provide a good framework for scientific dialogue. This cooperation, so valuable to research, is likely to persist even if institutional realities are now defined by IDEX and PRES. In many worldwide famous academics sites close cooperation exist between universities that are nevertheless in competition. This is the case of Boston area (with MIT, Harvard University, Boston University, the University of Massachusetts, etc.) of the London area (with Imperial College, University College, and King's College London).

In a time of renewal of the Parisian academic scene, there is every reason to believe that a similar balance will fall into play for the benefit of all. In this context we would like to emphasize the numerous assets of Sorbonne Universités among others, hopefully, future IDEX in Paris.



Monique Canto-Sperber



Réseau de transport d'électricité

LE PRÉSIDENT DU DIRECTOIRE

Mr Louis Vogel
 President of the PRES Sorbonne University
 Présidence of University Panthéon-Assas-Paris 2
 12, place du Panthéon
 75005 PARIS

La Défense, 1er décembre 2011

Dear President Vogel,

I wish to express the support of Réseau Transport d'Electricité (RTE) to the IDEX project presented by Sorbonne University.

RTE is the operator of the French electricity transmission system. As a public company, RTE operates, maintains and develops the high and very high voltage network. RTE employs around 8, 500 people principally involved in developing, engineering, operating and maintaining the network, relations with customers and research and development.

Since 2009, we have a growing collaboration with some members of Sorbonne University. RTE has a strong partnership with UPMC through two academic chairs in robotic and drone. We have contributed to those ambitious projects to reinforce our research and development actions in this domain and to attract future collaborators, trained at the highest level in research and by research.

Academic partnerships are essential to RTE, as they build a bridge between scientific prospective research and possible industrial implementation. It helps RTE to highlight the road to the future and prepares its employees to integrate in their fields innovations driven by academic research.

Research and development projects led by RTE are mostly multidisciplinary. They need to manage teams with various competencies. The creation of Sorbonne University will offer a new type of partnership which allows a coordinated access to a large variety of scientific domains and top level researchers.

The creation of Sorbonne University opens the door to new collaboration opportunities, especially in the framework of the European R&D set plan for the development of smartgrids, and networks of the future.

I wish Sorbonne University success in the IDEX competition.

Dominique Maillard

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 R.C.S. Nanterre 444 619 258

www.rte-france.com



Université Panthéon-Assas Paris II

A l'attention de M. Louis Vogel

10, place du Panthéon
75231 Paris cedex 05

Boulogne, December 5th 2011

Dear President Vogel,

Thank you very much for sending me a copy of the project of creation of Sorbonne University. As you well know, TF1 is a long-standing partner of the University Panthéon-Assas, with whom we have a special relation. I am proud to be one of the mentors of the University. Together, we have been able to develop three areas of collaboration:

- (1) the students of the Master programme of European business law follow operational and legal presentations on the premises of TF1;
- (2) professors from the Master programme take part in action of continuing education within TF1;
- (3) finally, our collaborators give classes at the University in the framework of the Master programme.

This collaboration corresponds to our ambition to offer students of Master programmes a direct experience of the professional environment and opportunities to complement academic education with concrete collaborations.

We are delighted to see that this philosophy is one of the cornerstones of Sorbonne University's educative strategy and excited by the new possibilities that it offers to deepen and extend our existing collaborations. In particular we look forward to collaborating with educative programmes in other disciplinary fields.

With this letter, I therefore wish to express our strong interest of TF1 in the IDEX project presented by Sorbonne University.

I look forward to collaborating with Sorbonne University and hope that your application will be successful.

Yours sincerely,

Nonce Paolini

Chairman and Chief Executive Officer



Mr. Louis Vogel
President of the PRES Sorbonne University
12 place du Panthéon
75005 Paris

Paris, November the 30th, 2011

Dear President Vogel,

You asked for our opinion on the project of creating an "International Law School" within the framework of Sorbonne University. We wish to express our utmost interest in this project, which would combine the skills currently present within Paris II and the INSEAD.

This innovative and ambitious project addresses a pressing need: companies such as ours must be able to rely on professionals with comprehensive skills in legal affairs. We need students who are able to pass seamlessly from one legal system to another, who can analyse complex international operations, work with international teams. We need students with both in-depth and wide ranging education, who can immediately integrate an English working environment.

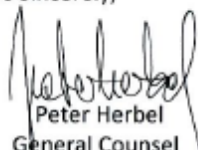
This is why it is fundamental that the best students and professionals should have access to an education in Law comparable to that which exists in Management.

Law is currently undergoing an evolution similar to that which has previously affected the finance sector, and is becoming ever more important within companies. The internationalization of companies is a massive trend, requiring extensive knowledge of various legislation, regulations or jurisprudences. Companies have to adapt to a legal environment in constant evolution, guided by common law or civil law, international law or soft law.

On other continents, other universities are presently creating curricula similar to the "International Law School". The quality of the education in Law and the presence of "MBA" addressing the needs of professionals have become essential assets in the competition between international universities. Sorbonne University can rely on the expertise of Paris 2, the leading French University in this field and of the INSEAD, one of the world's leading business schools. It is therefore of the utmost importance that Sorbonne University should profit of their synergies to set up such as school.

We therefore completely share the objective of the "International Law School" and intend to support it.

Yours Sincerely,



Peter Herbel
General Counsel
Total S.A.



Jean-François Guillemin
General Counsel
Bouygues



Le Président

Mr Louis Vogel
Université de la Sorbonne
12 place du Panthéon
75005 Paris

Paris, December 5th, 2011

Dear President Vogel,

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This innovative and ambitious project addresses a pressing need: companies such as ours must be able to rely on professionals with comprehensive skills in legal affairs. We need students who are able to pass seamlessly from one legal system to another, who can analyse complex international operations, work with international teams. We need students with both in-depth and wide ranging education, who can immediately integrate an English working environment.

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Yours Sincerely,

A handwritten signature in blue ink, appearing to be "P. Colombani", written over a horizontal line.

Pascal Colombani

Chairman of the Board



Thomas S. Robertson
Dean
Reillance Professor of Management
and Private Enterprise

Office of the Dean
The Wharton School
University of Pennsylvania

1000 Steinberg Hall-Dietrich Hall
3820 Locust Walk
Philadelphia, PA 19104-6364

215.898.4715 phone
215.573.5001 fax
robertson@wharton.upenn.edu

December 7, 2011

President Louis Vogel
Sorbonne University
12, place du Panthéon
75231 Paris cedex 05

Dear President Vogel,

On behalf of the Wharton School of the University of Pennsylvania, I write to express our strong support of the Initiative of Excellence project presented by Sorbonne University

Since 2001, Wharton has had a strong collaboration with INSEAD, a member of Sorbonne University. This strategic alliance is based on the shared belief that future market leaders in management education must have a global reach. They also must have a leadership position in America, Europe and Asia, and be part of an international business education and knowledge network.

Each school offers complementary centers of expertise for a compelling worldwide linkage across four dedicated campuses: INSEAD in Fontainebleau (France) and Singapore, and Wharton in Philadelphia and San Francisco. Both schools share common values regarding the importance of lifelong business education.

The *INSEAD-Wharton Center for Global Research & Education* fosters deep collaborative relationships across our schools to nurture world-class research, enhance the globalization of our curricula, experiment with global teaching innovations and encourage the exchange of faculty and doctoral students. These complementary research teams will open international collaborative possibilities for the Wharton School across disciplinary fields.

We support the emergence of a world-class comprehensive university in the heart of Paris and I wish Sorbonne University success in its project.

Sincerely,

A handwritten signature in black ink, appearing to read "T. S. Robertson".

Thomas S. Robertson