CAMPUS OF INTERNATIONAL EXCELLENCE "CAMPUS VIDA"
CEI09/0049

"THE VALUE OF RESEARCH"

FINAL REPORT

INDEX

PROJECT DETAILS

"CAMPUS VIDA"
FINAL REPORT

Project Details:

Type of CEI: **Global** X **Regional**

Acronym:

Coordinating University: UNIVERSIDAD DE SANTIAGO DE COMPOSTELA

Participating/Promoting Universities in the Aggregation:

Other CEI promoting institutions:

Period: 2009 - 2014

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1. INTRODUCTION

At the end of 2009, the CAMPUS VIDA project promoted by a Strategic Group comprised of 14 entities from the public and private sector and lead by the Universidade de Santiago de Compostela (hereinafter: USC) was awarded the Campus of International Excellence (hereinafter: CEI). Thus began an ambitious plan which, managing intelligence and shared capacities, aims at modernizing the way our University functions, while consolidating an innovative system based on talent and internationalisation.

CAMPUS VIDA was created to become a reference Bio-Campus, developed on four strategic principles:

- **Life Sciences Specialization**, to consolidate and optimize current scientific-technological capacities in these disciplines of particular academic, social and economic impact for our environment, and as a focal point to direct and project the institutional objectives of excellence and internationalisation.
- **Academic Excellence,** promoting the principles of Teaching and Research Excellence as the basis of our competence and international projection, to strengthen our current role as Social and Higher Education benchmark.
- **Experience in Translational Research,** materializing an institutional strategy that will ensure the social value and the economic impact of the Research. Starting from the concept of *Open Innovation* to maximize the existing talent among all the Bio-Health innovation system stakeholders to achieve results transferable to society in general and to the productive sector in particular
- **Cooperative Strategy:** CAMPUS VIDA is developed as part of an institutional strategy shared in the context of UNIVERCITY, understood as a physical, economic, knowledge and social ecosystem committed to the objectives that define the CEI Action Plan.

Based on this, and managing intelligence and collective capabilities, **CAMPUS VIDA undertakes the MISSION** of boosting our regional innovation ecosystem contributing to develop a new model of sustainable economic and social growth based on talent, entrepreneurship and internationalisation.

CAMPUS VIDA has focused its efforts on these principles to reach the objectives defined by its **Strategic Plan** in 6 areas of improvement defined by the Ministry of Education (Teaching improvement; Scientific improvement; Knowledge transfer; Transformation of the campus for the development of a comprehensive social model; Adaptation to the European Higher Education Area and Interaction with the social, business and territorial environment), which can be summarized as below:

1. Develop, attract and mobilize excellent talent
2. Perform translational research focusing on innovation
3. Create jobs, companies and entrepreneurs
4. Internationalize CAMPUS VIDA as the global bridge for Galicia's Innovation System

5. Develop UNIVERCITY as a commitment to sustainable development

The following Map illustrates the organization and traceability of the CAMPUS VIDA project that allows for the control, monitoring and evaluation of all the proposed actions.

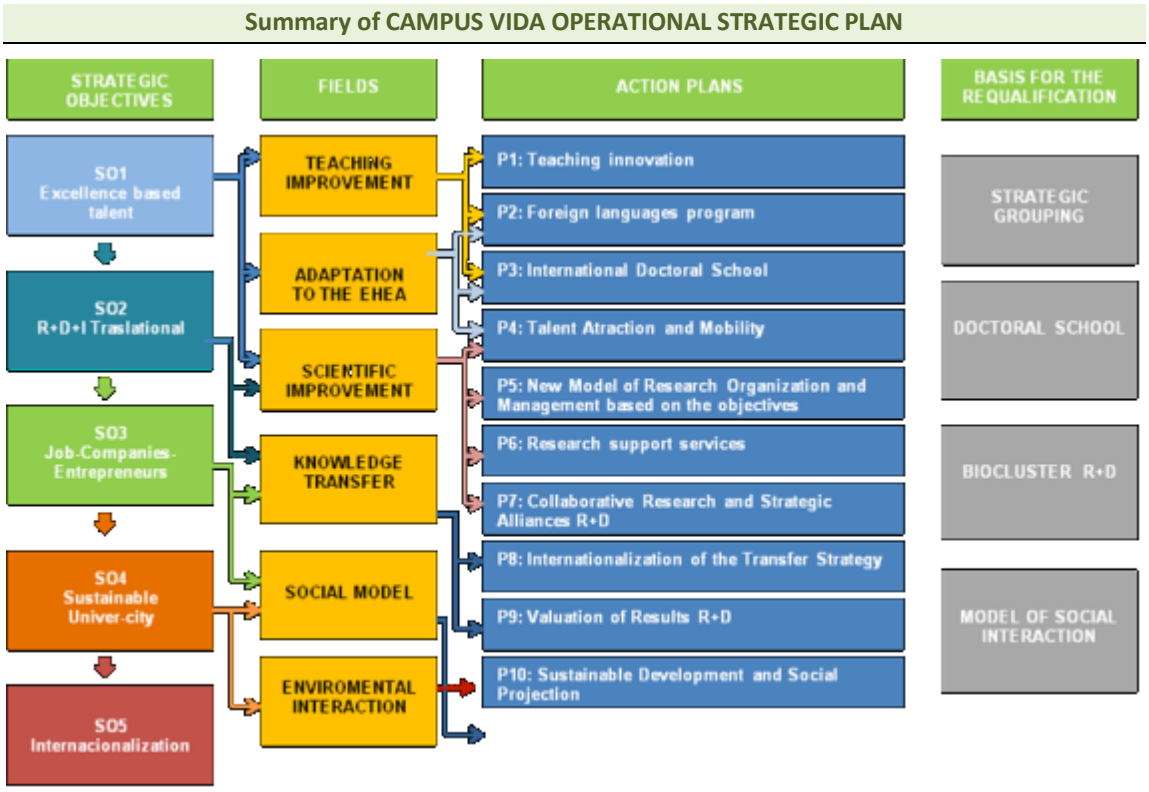


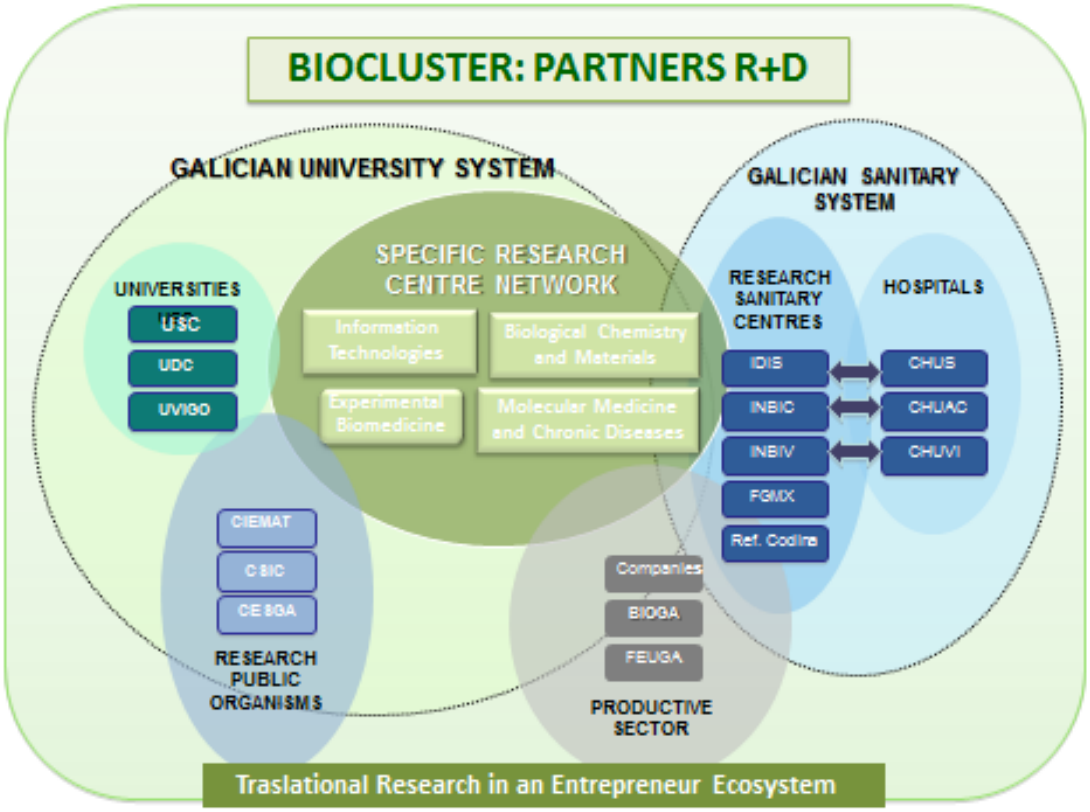
Chart 1: Strategic Plan of CAMPUS VIDA

This Strategic Plan has been developed during the 2010-2013 period and has become visible in central actions such as:

- The **transformation of the courses taught and their full integration into the Bologna process** already materialized in the 2010-2011 academic year, in addition to advances in the **consolidation of the Teaching Innovation Plan** that will ensure the academic efficiency and its international projection, while significantly investing in the **renewal and adaptation of the teaching infrastructures.**

- **The regularization and consolidation of the International Doctoral School** in the 2012-2013 academic year promoting the creation of a specialized offer of PhD course that integrates 49 programs aligned with the Campus Vida goals in three thematic clusters: *Healthy Life; Biomed and New Technologies* and *Industry Applications for Health*. Supported by a specialized academic structure and by the Network of Research Centres of excellence that provide high capacities of integration and scientific orientation, the doctoral school has increased by 40% the number of theses defended and almost by 50% the number of foreign students.

- **The construction, implementation and operation of the Research Centres Network** - CIMUS, CIQUS, CITIUS and more recently CEBEGA - already comprises more than 300 researchers in a cooperative network that reinforces their capacities and international projection. CAMPUS VIDA has already led to the **integration of the Research Centres Network with the Hospital Research Institutes Network** and its articulation with the business cluster. This process is allowing the consolidation in CAMPUS VIDA of a research organization model based on excellence, cooperation and translationality, much more efficient to generate economic and social impact.



- **CAMPUS VIDA has helped keeping alive the research excellence policy** that had begun in better financial circumstances, boosting the **development of a policy to support the recruitment of talent staff** that, despite the current context of restrictions, has enabled **to employ during this period more than 300 pre-doctoral researchers, 100 post-doctoral researchers and the promotion as permanent Professor of 65 seniors researchers, 30 of them in the *Life Sciences*.**

- **The integration of an internationalisation strategy** in the more competitive research units, organizing scientific capabilities available around the specialization focus of CAMPUS VIDA. On the basis of the principles of Smart Specialization, a more **efficient scientific positioning in the context of European R&D** has been promoted, with **more than 72 FP7 active projects, being the coordinators of 19 of them, and multiplying by 300 the number of proposals submitted and by 5 the returns of FP6**. This puts USC, and thereby CAMPUS VIDA, among the 25 Spanish institutions that achieved more returns in the FP7 and a regional reference for the scenario that H2020 opens.

- The advances in Research transfer strategy, establishing capacities and partnerships for an **efficient valorisation** of research results in the context of the **CAMPUS VIDA Biocluster**. At the same time the development of **new result management models** has been promoted (Acelerador de Transferencia (Technology Transfer Seed Fund); Innovative Public Tenders; Mixed units…) to allow the consolidation of more stable cooperation and open innovation strategies.

- The **promotion of the UNIVERCITY strategy** which promotes an interesting dynamic in creating new opportunities for students and entrepreneurs in an environment increasingly involved with the progress and value of scientific excellence

As it has been highlighted in previous yearly **Progress Reports for 2010, 2011 and 2012**, as well as related financial performance reports submitted to the Xunta de Galicia, the project has been developing reasonably as planned, informing in each case of any deviations noted.

In particular, the **main deviations experienced by the project are due to the impact the economic crisis on the development of scientific policies that have affected especially construction actions that involve significant investment**. In particular, budgetary constraints and some urban constraints have affected the following initiatives:

- The construction and development of two centres which were respectively funded in collaboration with the CSIC and CIEMAT, both public research institutions dependent on the Public Administration, and being postponed at the request of both institutions

- The construction of the new Faculty of Medicine, whose project has been reformulated and postponed due to the high investment in the current economic situation, and has forced a reformulation of the modernization and adaptation actions of the current faculty and new spaces developed at the Hospital

- Development of Campus Humanization Plan, planned in cooperation with the Local Council, which an important part of its activities has been reduced due to the budgetary difficulties experienced by the local administrations

In any case, it should be noted that these actions did not depend on budget funded by the program, whose implementation has been achieved according to the planned schedule, or, in some cases with some modifications in the investment category that were authorized in 2011.

Context and current vision of the CAMPUS VIDA project

The Universidade de Santiago de Compostela, as promoter and leader of the CAMPUS VIDA project, has undertaken its development in a difficult period, maintaining the commitment of its execution, from the budget resources to the actions and strategic objectives proposed.

During this period, and as previously mentioned and explained below, CAMPUS VIDA has helped organize and visualize teaching and research capabilities in the Life Sciences, and in a very particular way in the Bio-medical field, creating good practices in the necessary dynamic of smart specialization and of excellence that Universidade de Santiago de Compostela and its partners in the Campus Vida Strategic Grouping have been committed to.

However, if the experience and current situation of CAMPUS life is contextualized, it could be summarized in two central aspects of the project, one of clear progress, and another of weak advance and clear challenge for the future:

- CAMPUS VIDA has clearly established itself as a regional academic and scientific reference of excellence in the Bio-health field, with its competence and capacity for innovation recognized by both the institutional environment, and the social and economic agents. Proof of this is that within the framework of the new Strategy for Regional Innovation (RIS3), agents of the innovation system have considered "Active ageing" as a priority challenge for a scientific and technological environment that recognizes Health as a strategic focus and CAMPUS VIDA as the base in the smart specialization capabilities towards its achievement.

  In this context, Campus Vida acts as an academic and scientific support of excellence for the proposal of Galicia as a co-location centre in LifeKIC-2014 - aligned with the objectives of Active and Intelligent Ageing - under the leadership of the regional government and integrating in a shared strategy the BIOGA and Health business clusters and the Public Health System, all partners of the campus of excellence

- On the other hand, CAMPUS VIDA has developed an academic, scientific and competitive entrepreneurial environment, which progresses significantly in its international positioning. However, it still shows a certain weakness in their ability to attract and consolidate international talent as a strategic value in the process of internationalisation and visibility of its more specialized teaching offer. The development of conditions capable of counterbalancing an *a priori* little attractive and restrictive socio-economic context, at the time that formulates strategies of visibility of a range of training courses more and better specialized and articulated with social challenges, appears as a clear challenge to the progress of CAMPUS VIDA.

2. WORK PERFORMED

In operational terms, the CAMPUS VIDA strategic plan has been deployed following the structure shown in Figure 1. Grouped by areas of activity, the development and the achievements of the ten actions included in the strategic plan are summarized below. This information is complemented by annexes I, II, III, IV and V with tables describing actions, results, progress indicators, resources and construction actions respectively.

2.1. TEACHING IMPROVEMENT AND ADAPTATION TO EHEA

USC has been a pioneer in offering EHEA adapted degrees. The teaching offer was already implemented in the academic year 2010-2011, fully transformed and integrated into the Bologna process. In accordance with the foreseen objectives, between 2009 and 2014 the International Doctorate School was launched (Plan 3) -one of the CEI actions-, changes have been brought into the Management structure of the Teaching Innovation Plan (Plan 1), performances for the attraction and mobility of talent (Plan 4) and, in through the Modern Languages Centre, actions related to the strengthening of the language skills of the University community have been promoted (Plan 3).

2.1.1. Teaching Innovation Plan

The Teaching Innovation Plan pursues a double objective: the creation of an academic teaching offer relevant, competitive and of quality, adapted to the requirements of the European Higher Education Area (EHEA) and the promotion of a new model of academic organization adapted to new teaching methods that incorporate the adoption of technological tools to support *e-learning processes and long lasting learning*.

The actions developed in the framework of this plan are grouped into two lines of work:

- The implementation of the **Teaching Training and Innovation Centre**, as the unit responsible for the deployment and coordination of the Teaching Innovation Plan: **strengthening of human, organizational and technical skills, development of new training activities** and design of **new activities and methodologies to strengthen the language skills** of the University community for implementation at the Modern Languages Centre.
- The **adaptation and renovation of teaching equipment and infrastructures which include actions on physical and virtual infrastructures**. In the first case, in order to alleviate the impact of the crisis and optimize investments, there have been numerous actions to **renovate teaching spaces**, such as classrooms and laboratories, as well as in the campus environment to improve and humanize its urbanism. A detailed description of the construction actions is included in Annex V. With regard to the technological infrastructures, the Learning Technology Centre (CeTA) has been the unit responsible for coordinating the development and implementation of new technologies for education. Most prominent in this field action has been the development of a new **Virtual Campus**, incorporating new tools and functionalities. It has also provided the CeTA of **new equipment and human resources specialized in e-learning processes.**

The **international dimension** of this plan has focused on the development of **innovation actions in the field of language training** (new teaching materials, self-learning modules and new methodologies to support individualized training, etc.).

The **most significant results** of the development of this plan are summarized below:

- The offer of a **complete catalogue of degrees adapted to the EHEA**.
- The introduction of a **new teaching and learning model** by increasing the University training skills in different disciplines.
- The **optimization of the resources of the BIOCLUSTER** for their increasing participation in educational processes (internships, decentralization of teaching using the SERGAS network, etc.).
- The provision of **numerous refurbished and renovated educational spaces**.

2.1.2. Knowledge of foreign languages and international promotion of Spanish/Galician programs

This plan sought to improve the language skills of the University community as a way to promote the international dimension of CAMPUS VIDA, both in regards to the attraction of international talent and the option of expanding the international mobility of the University community.

From the Modern Languages Centre (CLM) **a comprehensive offer of activities and services has been available to the University community for the improvement of their language skills** that include the increase in language courses offered (more languages and diversified educational training for different groups and needs), improvement in the certification processes (certificate tests, official recognition of qualifications services, access to mobility programs tests, external tests, etc.). New services of linguistic development have also been operating. Of special interest to the internationalisation of scientific activity, and of the campus, is the language support for teachers and researchers participating in international projects and members of the University community who participate in mobility programs. It also worth mentioning the organization of cultural exchange activities (CLM-Tandem program) and development in collaboration with CeTA of self-study modules.

Efforts made in the expansion and diversification of the courses offered to adapt to the different needs of user profiles in terms of type of languages, training modalities, number of courses, activities and complementary services etc. have **resulted in a significant increase of activity rates in the CLM activities** and the levels of participation in language development activities. In quantitative terms, it is worth mentioning that the number of students of CLM has increased by a 21 % reaching a total of 2.710 students in 2013.

The main impact of the development of this plan is **to improve the language skills of the University community**. Data on participation in activities are added to those relating to the evolution experienced by the indicators relating to language skill certificates of the members of the University community. For instance, the number of PDI and students that have passed language certificate tests has increased by 95 and 350% respectively in the period.

2.1.3. Implementation of the International Doctorate and Post-graduate School

The promotion of the International Doctorate and Post-graduate School is one of the main actions referred to in the CEI project, both for its role in the consolidation of academic excellence and for its effect on the internationalisation of CAMPUS VIDA.

In the process of creation and implementation of the school the following actions are highlighted:

- **Creation and organizational articulation.** Between 2009 and 2011, the creation and organizational articulation of school was addressed, also strengthening teaching capacities and the structuring of a training offer integrated by 13 doctoral programs. In addition, performances began to group the programs around the CAMPUS VIDA thematic clusters, to promote alignment and complementarity with the Life Sciences research programs.
- **Adaptation to regulations.** During 2012, the academic and administrative structuring process was addressed to adapt the school to the new regulation from the Ministry of Education on Doctorate studies, which ended in 2013 with the inclusion of the EDi in the Registry of Universities, Centres and Degrees (RUCT) of Ministry of Education, Culture and Sport with the reference 15028506.
- **Development of the new training programs.** During 2012 new doctorate programs were developed and existing ones updated, being verified by competent agencies (ACSUG and ANECA).
- **Development of multidisciplinary skills.** With the aim of providing comprehensive training to their doctoral students training actions are offered to promote multidisciplinary skills such as communication, teamwork, gender balance, etc.

In what the international dimension of the plan refers to, in this initial period of creation and launch of the EDI, the **internationalisation strategy** has been directed to:

- **Establish and consolidate partnerships with prestigious foreign universities, institutes and research centers** with the aim of signing **mobility** agreements for doctoral students and teaching staff and the **official recognition of joint degree programs**. (University of Sassari, École Nationale Supérieure de Chimie, etc.).
- **Design of EDI internationalisation programs**, such the European Doctorate ERASMUS MUNDUS NANOFAR program (focused on training scientists in the field of Nanomedicine) or the participation in the Marie Sklodowska Curie call.
- Also, the **actions for mobility promotion** of the project Mérimée for doctoral co-supervision with the Universities of Nantes-Angers should be noted, as well as the launch of numerous calls for travel scholarships to facilitate the participation of doctoral students in courses, training activities or scientific conferences abroad.

A result of this work is the **formalization and consolidation of the EDI, encouraging the creation of a specialized offer of Doctorate courses that integrates 49 programs aligned with the goals of CAMPUS VIDA through its organization in three thematic clusters: *Healthy Life; BioMed and New Technologies and Industry Applications for Health***. Supported by a specialized academic structure and the Network of Research Centres of excellence that

provide high integration and scientific orientation capacities, the Doctorate School **has increased by 12% the number of theses read in the Life Sciences area and almost by 50% the number of foreign Doctoral students, highlighting the increase of 13% the number of theses with international or European mention in the Life Sciences area.**

2.1.4. Talent attraction and mobility

The main purpose of the plan of attraction and mobility of talent was the consolidation of the human potential in research and innovation, stimulating the choice of a research career as a possibility for professional development.

In this sense, actions aimed at researchers, researchers in training, doctors at the start of his career or with a consolidated experience have been developed. The following should be noted:

- **CAMPUS VIDA Pre-doctoral Contracts Program**, aimed at recruiting training researchers at the EDI, and the CAMPUS VIDA Post-doctoral Grants Program aimed at researchers at the start of their professional career.
- **Design and implementation of programs of mobility**, such as International Mobility of Research Excellence Program, which first call went to researchers in India, or Academic Development Institutional Program with Brazil, for engineering students. USC also has a long history in the management of ERASMUS MUNDUS programs and the promotion of mobility projects for the entire University community.

In the current context of economic restrictions, CAMPUS VIDA has kept the research excellence policy that had begun in an better economic period, promoting the development of a policy to support the recruitment and employment of talent that has made possible the recruitment, during this period, of more than **300 pre-doctoral researchers, 100 post-doctoral researchers and the promotion as permanent staff of 65 seniors research and teaching staff, 30 of them in the Life Sciences area.**

On the other hand, it is worth mentioning, **the impact of CAMPUS VIDA in the development of new instruments of scientific policy in Galicia** such as, for example, the **Pre-doctoral Contracts Program** which started in 2011 as a USC program, and it is developed from 2012 in collaboration with the Xunta de Galicia through the Predoctoral Training Program, incorporating a specific offer for thesis projects associated with the objectives of CAMPUS VIDA.

The objectives, actions, results, international perspective and indicators associated with previous plans are synthesized in the following table that provides an overview of the development of the Teaching improvement and adaptation to the EHEA area.

SYNTHESIS OF TEACHING IMPROVEMENT AND ADAPTATION TO THE EHEA LEVEL PLANS				
OBJETIVES	**ACTIONS**	**RESULTS**	**INTERNATIONALIS.**	**MAIN INDICATORS**
TEACHING IMPROVEMENT PLAN				
- Teaching offer relevant, competitive and OF quality adapted to the EHEA. - New model of academic organization.	- Teaching Training and Innovation Centre: restructuring, self-learning, internationalisation - Educational and technological infrastructures.	- EHEA qualifications. - New teaching model. - Virtual campus / E-learning - BIOCLUSTER Participation. - Renovated infrastructures	- Language training Innovation: - Didactic tools. - Self-learning modules. - Individualized training.	- Success rate in 1st and 2nd academic periods: + 13%. - Renovated and updated areas allocated to Teaching and Research (m2): + 187%
PROMOTION OF FOREIGN LANGUAGES KNOWLEDGE PROGRAM AND INTERNATIONAL PROMOTION OF SPANISH/GALICIAN LANGUAGES PLAN				
- Improvement of University community language skills.	- Increase in the number of courses taught. - Improvement in certification processes. - Language dynamisation services	- Increase in the activity and participation levels at CLM - Improvement in University community foreign language skills	- No specific activities in cross-cutting areas	- No. of students enrolled CLM: +21% - No. of PDI and students that pass the language certificate tests: +95 and +350% respectively
IMPLEMENTATION OF THE INTERNATIONAL DOCTORATE AND POST-GRADUATE SCHOOL PLAN				
- Transform the EDI in a Health cluster - Internationalisation of the Doctorate School	- Creation and organizational articulation of the School. - Adaption to regulation. - New training offer. - Complimentary activities on multidisciplinary skills	- 49 Doctoral programs. - Training specialization in CAMPUS VIDA clusters. - International inra-university collaborations - Increase in number of thesis read, doctoral students, specially foreigners.	- Alliances with foreign doctorate training institutions. - EDI internationalisation programs - Agreements to develop mobility actions.	- Number of doctorate programs: 49 - No. of thesis read in Life Sciences : + 12% - No. foreign doctorate students : +47% - Thesis read with international mention in Life Sciences: +13%
TALENT ATTRACTION AND MOBILITY				
- Consolidate human capital in research and innovation	- Design of new USC programs and management of external projects for the employment and stabilization of researchers, and for international attraction and mobility.	- Employment of researchers. - New tools for international attraction and mobility. - Impact in the creation of new scientific policy tools by Xunta de Galicia.	- Cross-cutting through the plan	- No. of employed researchers in Competitive Programs in Life Sciences : +104% - No. on International mobility agreements and projects +177%

Table 1. Summary of Teaching improvement and adaptation to the EHEA Plans.

2.2. SCIENTIFIC IMPROVEMENT

The USC submitted its proposal to the 2009 CEI call already being leader in the field of the Life Sciences and, in particular in the more specialized scientific focus of Biomedical research. Within the framework of the project, CEI has defined **a new model of scientific organization structured on the Research Centres Network**, comprising University research capacities, and their interaction with the Health Research Institutes Network, associated with the Hospitals Network **(Plan 5)**. In a complementary manner, **the skills related to research services (Plan 6)** have been strengthened and a **specific plan focused on the promotion of collaborative research supported by a network of strategic alliances (Plan 7)** has been implemented. The potential of this new model represents its greatest exponent in the international dimension of the research accomplished by CAMPUS VIDA in this period and due to its transversal nature to three plans, it is explained in a specific heading in this section.

2.2.1. Development of a new organization and management model based on objectives

Within the framework of the CEI project, **a scientific organization model has been defined to integrate critical mass, interdisciplinarity and translational objectives and vision and strategic prioritization**. This model is structured on the consolidation of the Research Centres Network and their interaction with the Health Research Institutes Network, associated with hospitals. The articulation of both networks, acting in a cooperative environment and strategies shared with other agents of the system (Health system, universities, research centres, foundations and companies) make up a dynamic BIOCLUSTER covering the entire research-valorisation- innovation value chain with the capacity to articulate the interaction between the clinical sector - aware of the real needs in terms of human health and the base for the implementation of research results -, and production area, essential to ensure that these advances reach the market.

In the period 2009 and 2014, advancements in the implementation of this model were as follows:

- **The creation and implementation of the Research Centres Network**, comprised at this early stage by the following centers: **Center for Research in Biological Chemistry and Molecular Materials (CIQUS), Center for Research in Molecular Medicine and Chronic Diseases (CIMUS), Center for Research in Information Technologies (CITIUS)**. The scientific potential of this network is visible capacity and activity data reported from 2011: the three centers altogether added more than **500 researchers from more 20 different countries** (among which there are "4 ERC Grantees"), with a portfolio of **180 active projects** (including initiatives unique as the INNOPHARMA, METBIOCAT, TRANSINT, etc.), they have submitted more than **30 new patents** and created around **15 companies**.
- Regarding the creation of the **BIOCLUSTER** the most significant results of the process are: **the accreditation of the Instituto de Salud Carlos III the the Santiago Health Research Institute - IDIS, the completion of the work at the Centre of Experimental Biomedicine of Galicia (CeBEGa) which will be operational in 2014, the integration of two Health**

Research Centres linked to the two major hospitals of the Galician Healthcare Network (INIBIC and IBIV), the incorporation to the Health and Life Sciences Companies Cluster (BIOGA), as well as the incorporation of the International Nanotechnology Laboratory (INL) located in Braga.

2.2.2. Improvement of research support services

Enhancing capabilities to provide research services has been supported by the **acquisition, implementation and maintenance of scientific infrastructures** (at the Research Centres Network, at BIOCLUSTER centers and also of a general nature), in the **incorporation of specialized technical personnel** (15 technicians specialized in services and management support) and the **redefinition of processes** to achieve more efficient operation, taking advantage of the potential that represents the network organization; and for example, the purchasing central has been created and the technology platforms have been integrated to facilitate their use by all stakeholders within the BIOCLUSTER.

The results of this action are projected on the Scientific Improvement actions: improved infrastructure, highly qualified staff and a more efficient management represents a clear improvement in the conditions of accomplishment of these services, of key importance for the research activity. They not only contribute to the CAMPUS VIDA scientific progression, but also to its international dimension, since they increase its attractiveness with regard to participation in international projects.

2.2.3. Collaborative research and research and innovation strategic alliances

The strategic, operational and infrastructural reforms carried out in the framework of the CEI project, as well as the adoption of an internal network operation have served as the base for defining and implementing an **institutional strategy of research and innovation partnerships** incorporating the following actions:

- **Promotion of public private consortiums based on new schemes of cooperation**, such as the mixed units between USC and companies (with Esteve and Viaqua, for example) and the formation of alliances with the business sector to access processes of innovative public procurement (CPI) - as the participation of the CITIUS in CPI tenders of the Innovasaude program.
- **Participation in research consortiums and networks for the development of projects.** Continuity strategy with the collaborative model that research groups were already developing prior to CAMPUS VIDA, the new scientific organization of the Centres Network and the BIOCLUSTER favors the structuring of more powerful and attractive scientific clusters for their participation in international projects. INNOFARMA, TRANSINT projects or the KIC proposal on Healthy Living and Active Ageing reflects the potential of CAMPUS VIDA in this aspect.
- **Promotion of inter-university cooperation** in the framework of the Galicia University System for promoting and encouraging the development of University research projects and more far-reaching performances such as the creation of University Research Centres, as for example the Technological Institute of Industrial Mathematics.

- **Collaboration with companies and organizations**, strategy that continues to work under the guidelines prior to the CEI project, and where CAMPUS VIDA is very dynamic because, despite the adverse economic context, the USC turnover levels have recovered in 2013 to 2009 levels. Multinational pharmaceutical companies integrated into CAMPUS VIDA through clusters, the Health System and public administration institutions are among the CAMPUS VIDA clients.

On the other hand, as in previous performances, these results are increased by the **incorporation to policies derived from the RIS 3 instruments inspired by the experience of CAMPUS VIDA, this is the case of the new Galician Innovation Agency program for the creation of mixed units.**

2.2.4. Internationalisation activities

The internationalisation plan in scientific improvement sought to increase the competitiveness of CAMPUS VIDA R&D internationally.

In strategic terms, the development of this plan has meant the **integration of an internationalisation strategy in more competitive research units**, organizing scientific capabilities available around the focus of specialization of CAMPUS VIDA and promoting a more efficient scientific positioning in the context of the European R&D. Operationally, this approach has translated in the development of numerous and varied actions, such as: **the establishment of partnerships, improving the human capacity through the promotion of mobility, the organization of workshops and international conferences and activities of dissemination and promotion.**

The success of the strategy of internationalisation has its greatest exponent in the results obtained with regard to the framework program: **more than 72 active projects (35 in Life Sciences), 19 coordinated by the USC which means that the number of proposals has been multiplied by 300 and by 5 the FP6 returns**. These figures place at USC, and CAMPUS VIDA, between the 25 Spanish institutions with more returns achieved in the FP7 becoming a regional benchmark for the scenario that H2020 opens. Other significant achievements in the field of internationalisation are also the success achieved in the **"IDEAS" program of the European Research Council (with 4 Starting Grants, and 1 Advanced Grant)**, as well as the presence and visibility in international research networks (EATRIS, SusChem, WssTP, etc.) as a result, more than **700 collaboration agreements have been signed in this period**. On the other hand, the creation of the BIOCLUSTER gives CAMPUS VIDA a greater potential for participation in international initiatives (**candidates for KIC on Healthy Living and Active Ageing, or the EIPon Agricultural Productivity and Sustainability**) and has helped facilitate the involvement of Galician business clusters in international projects, as it is the case of the TRANSBIO. The international projection of CAMPUS life is also reflected through international participation in USC programs, such as the participation of **60 European groups in the call for the development of INNOFARMA**. Finally, here it is included the relevance of publications in international collaboration of researchers from CAMPUS VIDA that, to mention only one example, in the case of the CIQUS, it represents 66% of its ISI production.

SCIENTIFIC IMPROVEMENT PLANS SUMMARY			
OBJETIVES	**ACTIONS**	**RESULTS**	**INDICATORS**
NEW RESEARCH ORGANISATION AND MANAGEMENT MODEL BASED ON OBJECTIVES			
- Increase critical mass of excellence - Promote the convergence and complementarity of resources in Biomedical area - Orientation of capabilities to generate impact	- Creation and implementation of the Research Centres Network - Articulation of the BIOCLUSTER	- Capacity, activity and results obtained by the CIQUS, CIMUS and CITIUS in the period 2009-2014. - Effective integration of relevant actors in BIOCLUSTERS (SERGAS, INL...),	- No. JCR Articles Life Sciences: +26%. - Impact index: +15%.
IMPROVEMENT OF RESEARCH SUPPORT SERVICES PLAN			
- Acquisition and maintenance of scientific infrastructure and Equipment to support research at CAMPUS VIDA.	- Scientific infrastructures (Centres network, BIOCLUSTER, general). - Organization: central purchasing. - Technical staff in the Centres network.	- Strengthening of technical capacities and expertise. - More efficient operation.	- Renovated and updated areas allocated to Teaching and Research (m2): +454%
RESEARCH AND INNOVATION COLLABORATIVE RESEARCH AND STRATEGIC ALLIANCES			
- Establishment of long range strategic alliances.	- New models of public-private partnership (CPP). - Research networks. - Articulation with Calicia Univeristy System (SUG). - Partnerships with the business sector.	- CPP: INNOPHARMA, mixed units with ESTEVE y VIAQUA, CPI Innovasaude… - Networks: TRANS-INT, TRANSBIO, KIC. - SUG Articulation: ITMATI - Single networks and projects: SusChem - Increase in contracts with companies. - Impact in RIS3 policies.	- % Articles in collaboration on focus Life Sciences: +3% - No. on European projects: +154%
INTERNATIONALISATION ACTIVITIES			
- International collaboration scientific production. - Participation in framework program: 72 projects (33 Life Sciences), 19 coordinated. USC among the 25 Spanish universities with more FP7 returns. - Participation in IDEAS program. 3 Starting Grants and 1 ERC Advanced Grant. - Intensification of the presence in international research networks. - Greater potential for participation in other specific international initiatives - Increase in the international projection of the activity developed in CAMPUS VIDA. - Promotion of the participation of the business sector in international projects.			

Table 2. Summary of Scientific improvement Plans.

2.3. TRANSFER AND VALORISATION

CAMPUS VIDA Strategic Plan defined a transfer strategy focused on the Bio-Health sector, which has a great social and economic projection. A sector for which it is essential the advanced management of industrial and intellectual property rights (patents and licences) resulting from the research generated. As well as its efficient valorisation to allow, among other implications, the creation of new technology based companies both of academic and private origin.

The chart on the next page summarizes the development of the plans included in this strategic area referred to the strengthening of the capacities of Intellectual and Industrial Property -IIP - IPR management (Plan 8) and the development of valorisation of R&D results (Plan 9).

2.3.1. Strengthening of IIP management capacities

In brief, the main actions developed in this area focused on the **specialization of IIP management capabilities in the areas of knowledge of CAMPUS VIDA and to promote the internationalisation of the strategy associated with the commercialization of patents.**

To this end, suitable human and technical resources, a unit specialized in the fields of chemical-pharmaceutical, biotechnology and applied physical sciences were provided; also new University IIP Management regulations were developed and the support capacities were strengthened with the signing of agreements with companies and institutions of international prestige (University of Oxford, Kauffmann Foundation, etc.). Given the expertise of the unit, a work protocol was signed to support SERGAS R&D units.

The most significant exponent of the potential which represents the strengthening of IIP management capacities for its promotion internationally is the data related to **Life Sciences patent portfolio which by 2013 is made of 81 titles, representing an increase of 35% over 2009. More than a half of the patents are shared with BIOCLUSTER agents.**

2.3.2. Valorisation of results

Actions in this area have focused on providing support services for the design and implementation of projects and in the consolidation of the actions already being developed at USC in terms of entrepreneurship, thus advancing the establishment of inter-institutional agreements that allow to maintain the leading position of CAMPUS VIDA in the promotion of spin-offs, as well keeping its own dynamisation actions.

In terms of valorisation, the most prominent action has been creating the **CAMPUS VIDA Accelerator**. Set up as a Seed Fund, this new instrument provides technical assistance and funding for the commercialization of results generated by CAMPUS VIDA research projects. Since the beginning of its activity in 2012, 58 Accelerator projects have been submitted, of **which 13 initiatives have received support**. Its success as a marketing support mechanism is evidenced by the results obtained: **2 licensed technologies, 1 company created and 2 in creation, 1 technology in a pilot plant and 5 under negotiation for licensing.**

With regard to the **promotion of entrepreneurship** as a mechanism of valorisation, during the active period of CAMPUS VIDA, **13 new technology based companies have been created**, forming an EBTs base creating 400 qualifies jobs, with a market value of more than 20 M€. These achievements are the result of the consolidated path of the USC in promotion of spin-off companies and also the development of new actions in the framework of the CEI project such as, for example: **the adoption of new methodologies for the promotion of entrepreneurship, establishing institutional partnerships, the presence notably in networks of entrepreneurship, promotion of the mobility of entrepreneurs through programs such as Erasmus for Young Entrepreneurs (EYE) or the review of the regulatory framework for the creation of spin-offs.**

To this, we add the signing of **strategic agreements with the SERGAS, Barrié Foundation and the Botín Foundation for the development of joint actions in the field of valorisation** which allows expanding the range of support tools and services in the commercialization of results provided by the University.

TRANSFER AND VALORISATION PLANS UNIT				
OBJETIVES	**ACTIONS**	**RESULTS**	**INTERNATIONALIS.**	**MAIN INDICATORS**
FORTALECIMIENTO DE CAPACIDADES DE GESTIÓN PII				
- Specialize IIP management capacities in CAMPUS VIDA areas. - Promote internationalisation of IIP management.	- IIP Management UnitI - Regulation. - Increase services and users. - Agreements with foreign institutions. - Participation in international events.	- International IIP management. - Regulation. - Increase in IDIS-USC patents. - Services to SERGAS. - Partner networks. - Promotion of international patents.	- Transversal approach: actions and results include internationalis.	- No. Registered patents in Life Sciences: +35%. - No. Patents shared with Biocluster partners: 49.
VALORISATION OF R&D RESULTS				
- Development of a Valorisation Unit - Methodology for participation of private investors in R&D results	- Transfer accelerator - Valorisation alliances programs - Entrepreneurship promotion	- Valorisation Fund results - 16 spin-off created, 20 M€ Market value. - Presidency of Iberian-American network Emprendia. - Impact in new scientific policy tools.		- No. Valorisation projects: +800%. - No. Companies created: +86%.

Table 3. Summary of Transfer and valorisation Plans.

2.4. SOCIAL PROJECTION AND INTERACTION

CAMPUS VIDA has been developed on an institutional strategy shared in the context of the UNIVERCITY, understood as physical, social, of the knowledge and economic ecosystem. The development of this concept materialized through the social projection and sustainable development plan (Plan 10).

The main activities and achievements in this strategic area are summarised below:

- The **USC Sustainable Development Plan** aims at projecting the concept of UNIVERCITY from the CAMPUS VIDA Humanization Plan, **promoting volunteering, participation, and environmental and social education activities.** Of the full portfolio of activities that includes this initiative, the most significant were the **establishment of the Sustainable Development Office, the consolidation of the Sustainability Scholarhip Program, the development of the USC in transition project, as well as the application of bioclimatic and sustainability criteria in new CAMPUS VIDA buildings**. With strengthened organizational and management capacities, the plan has led to the following impacts: **increased participation of the University community in activities of environmental education, improvement in indicators of energy efficiency, increase in the number of buildings with bioclimatic criteria or improvements in the management of hazardous waste**, to mention just a few examples.
- In terms of **mobility**, despite the limitations for the development of the actions envisaged due to economic constraints, **awareness-raising activities**, together with innovative programs as the bicycle loan have obtained great results which include the **decline in the use of the car by members of the University community and the increase in the use of bicycles.**
- **Accommodation infrastructure and sports facilities have also been subject to renovations** with new specific spaces for graduate students, researchers and visiting professors with a positive impact on the attraction of talent. The renovation of the sports facilities also enables the increase of the range of sports activities and their integration into the life of the city.
- Finally, the international dimension of the social plan is visible through the **CONCIENCIA programme**, unique initiative through which Nobel Laureates visit CAMPUS VIDA to give talks and hold meetings with researchers.

In summary, this section has described the development of CAMPUS VIDA strategic plan through the ten operational plans defined in 2009. In the light of the above, the project has been developing reasonably according to the expected forecasts; additionally, its evolution over the period has been reflected in the successive progress reports and the implementation reports submitted to the Xunta de Galicia. The documents have also been justifying deviations on the initial objectives, which are mainly due to the impact of the economic crisis on public scientific policies.

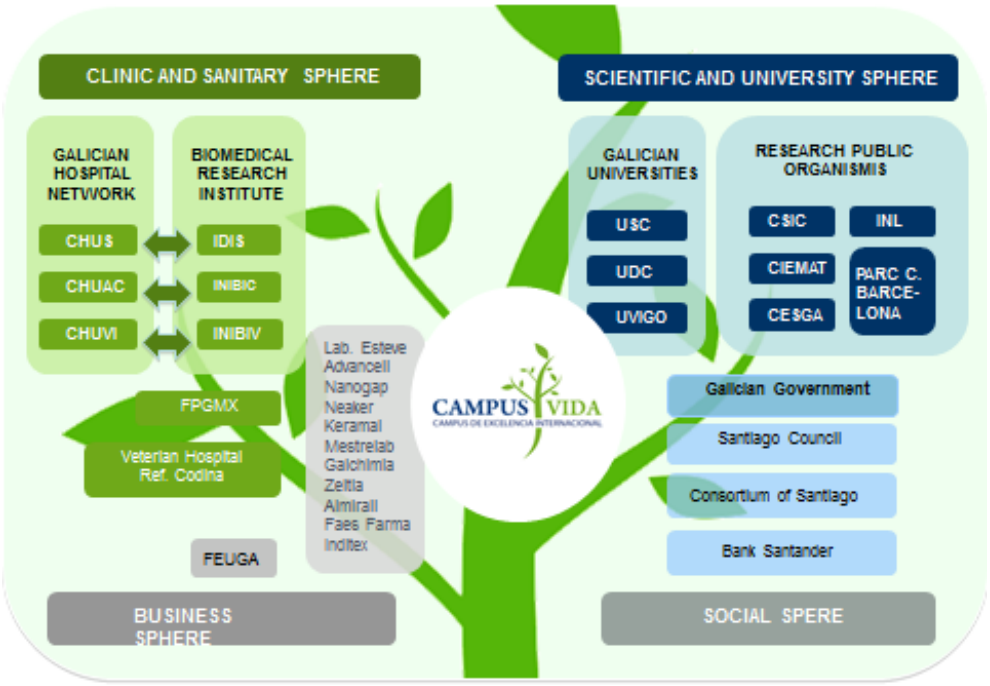
PLAN 10: SOCIAL PROJECTION AND SUSTAINABLE DEVELOPMENT				
OBJETIVES	**ACTIONS**	**RESULTS**	**INTERNATIONALIS.**	**MAIN INDICATORS**
- Execute the Sustainable Development Plan - Promote the mobility and accessibility - Improving residential and sports infrastructures - Social projection of the science in the city	- Sustainable development plan. - Promotion of alternative means of transportation - Adaptation of accommodation and sports infrastructures - Conciencia programme	- Sustainable Development office: more actions, positive evolution of all sustainability indicators - Decrease in the use of the car and increase in use of bicycles - Adaptation of residential infrastructure to functional requirements of an international campus - Interaction of the University community with Nobel Laureates	- Conciencia Programme	- Environmental education activities: +127%. - Water consumption efficiency (l/person/day): - 42%. - No. of buildings with four or more bioclimatic criteria in the contract tendering: +67%. - % People in the University community that drive their cars:-15%.

Table 4. Summary of Social projection and sustainable development Plans.

This section has summarized the development of the strategic CAMPUS VIDA plan through the ten operating plans defined in 2009. **The project has been developing reasonably as planned**, its evolution has been reflected in yearly progress reports and financial performance reports submitted to the Xunta de Galicia, informing in each case of any deviations noted. In particular, the main deviations experienced by the project are due to the impact the economic crisis on the development of scientific policies that have affected especially construction actions that involve significant investment.

3. MANAGEMENT

CAMPUS VIDA was conceived as a dynamic ecosystem of agents who share values and human resources, infrastructure and academic, scientific, social and economic objectives. But above all, they are a set of actors who have common interests, and therefore understand it as its own project, collaborating in its definition and contributing to their development. Based on that, CAMPUS VIDA was created driven by a Strategic Group officially incorporated in February 2010, by integrating the main actors of different environments on which an operating and open Biocluster should be articulated: academic-scientific; business; health and social.



Since its constitution in February 2010, **the management and supervision of the CAMPUS VIDA progress has been exercised by the Executive Committee, whose main function is to validate the implementation of the Strategic Plan and perform regular monitoring to comply with the objectives set**. The Committee is comprised of representatives of all sectors included in the Strategic Group, chaired by the Rector of the Universidad de Santiago de Compostela and, acting as Vice President, the President of the University Social Council.

From its objectives and to the extent where first steps of the Strategic Plan have been materialized, and articulating actions shared with the members of the group, CAMPUS VIDA has evaluated organizational models and legal formulations suitable to establish a full consortium management that ensure University autonomy favouring an optimal convergence of objectives among the different agents. However, the socio-economic circumstances of the 2009-2012 period has generated conservative approaches, both in the institutional environment (Public Health System, Council, OPIs...), as well as business, which has led to very restrictive positions regarding the development of new organizational units or consortium structures.

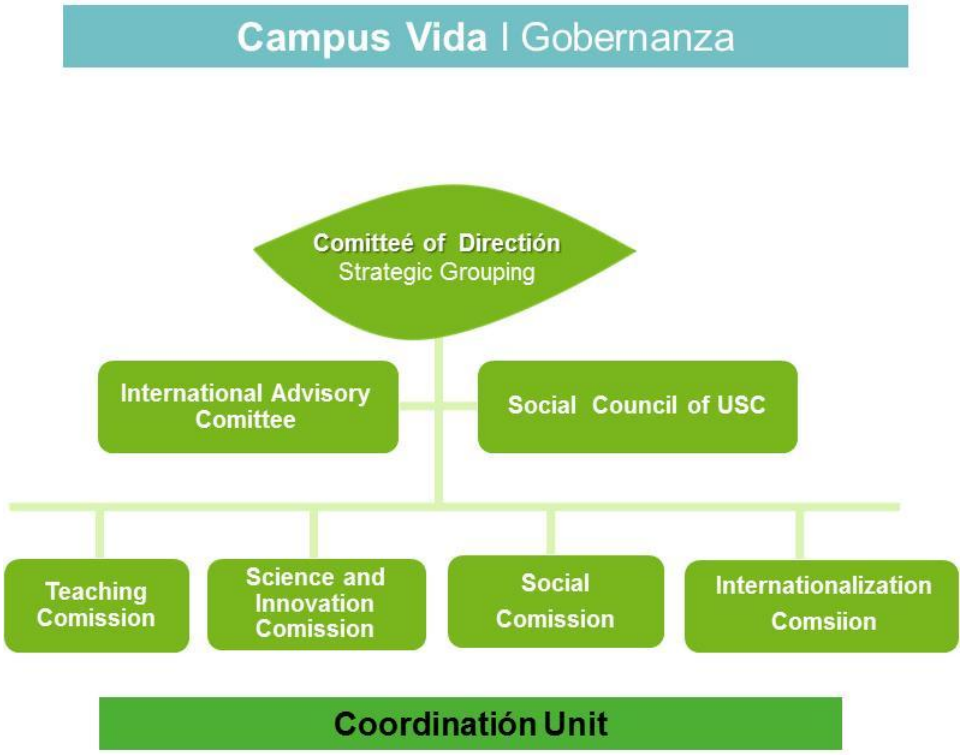
However, the USC, as leader of the CEI project, took over the development of the CAMPUS VIDA strategy. And in the process, it has acted from the conviction that the accomplishment and sustainability of University Excellence promoting CAMPUS VIDA should be ensured through an efficient integration of the academic institution that leads the project with its social and economic environment. And this backbone must materialize through the development of transparent and balanced governance between academic excellence and the social and economic interests.

With this objective in mind, and through the development of the Strategic Plan lines of action, CAMPUS VIDA has been establishing interaction and integration spaces that allow to build the effective governance of the project objectives. In particular, some of the actions listed below and more specifically described in the attached report, are good examples of the settlement of a culture of Biocluster, despite short-term difficulties, to create more institutionalized organizational spaces:

- TRANSBIO is an international project that integrates Bioclusters of France, Spain and Portugal, developing processes of **good practices of cooperation in educational objectives (postgraduate), of transfer and entrepreneurship in the Biomed focus.** CAMPUS VIDA is involved in this project by integrating three strategic partners, USC - through the International Doctorate School, the Transfer Unit and the Research Centres Network - as well as BIOGAS, cluster of biotech companies integrated in the Group and IDIS, Research Health Institute representing the health system
- NANOVALOR and VALTECH are projects of cross-border cooperation for the development of **valorisation and transfer strategies** in different technologies. CAMPUS VIDA participates by integrating BIOGA, the University-Business Foundation, International Nanotechnology Laboratory, and sharing goals and best practices with university partners and Portuguese university and technology partners.
- The development of CAMPUS VIDA life has improved the organizational consolidation of the Health Research Institute, comprising researchers from the Santiago Hospital Complex, the Foundation of Genomic Medicine and the Research Centres Network on **shared strategy for the development of transversal and translational research programs.**
- The creation of the regional candidacy as a partner in the project Life KIC as a new Knowledge Innovation Community (KIC) in the field of "Innovation for healthy living and active ageing" to compete in the EIT call, has allowed to integrate all the agents of the Group which supports CAMPUS VIDA in a **common strategy of smart specialization on *Advancing active and healthy ageing*.**

On these and other equivalent experiences, CAMPUS VIDA is developing management practices and open innovation processes that guarantee the active participation of different actors and the proper coordination of programs and projects that are being developed in action area. In this process, defining best practices and governance criteria is progressing, to get adequate and effective cooperation between the academic and executive spheres of the project. Institutional initiatives such as Life KIC, or the RIS strategy recently approved, are fully

aligned with the objectives of CAMPUS VIDA, **integrating it as a scientific and technological reference agent.**



In parallel, the USC, being responsible for the project, has established an operational management structure to ensure the normal development of CAMPUS VIDA Strategic Plan, as well as to ensure the effective management of established investments. This structure is organized in Sector Commissions responsible for programming, monitoring and evaluating the development of the strategic lines in its areas of activity, as well as proposing plans of action. In particular, during these first years they have performed:

- **Teaching Commission**, comprised by the coordinators of the master's and doctoral programs associated with the International Doctoral School, deans and representatives of research centres associated with the Campus focus of specialization.
- **Scientific and Innovation Commission**, which is responsible for ensuring the proper development of the Research Centres Network, of the ecosystem of knowledge transfer and technological development of large research infrastructures. It is chaired by the USC Vice-rector for Research, and representatives of the R&D institutions that participate in CAMPUS VIDA and the directors of the Centres of the Research Centres Network.
- **Internationalisation Commission**. Presided by the USC Vice-rector for Internationalisation.

It also operates the **Coordination Unit**, which from a technical perspective it assumes the supervision of the management on the following functions performance:

- Campus administrative management.
- Promotion and coordination of the implementation of measures envisaged in the Strategic Plan.
- Development of indicators, projects and annual performance and economic reports for their referral to the Board of Directors.
- “Networking” activities management.
- Coordination of the Transfer Program and monitoring of the implementation of associated services.
- Coordination of the Internationalisation Programme.
- Coordination and monitoring of the Talent Tecruitment Programme.
- Coordination of the Communication Programme and scientific and technological Dissemination strategies.
- Coordination of competing proposals to the Campus of Excellence subprograms or other public announcements and supervision of the funds awarded management.

4. FUTURE PROSPECTS: CAMPUS VIDA: BASIS FOR A NEW 2015-2020 STRATEGY

CAMPUS VIDA was create to become a Bio-campus of reference, and as this report reflects, and despite the difficulties that resulted in the current economic climate, it has progressed significantly in its objectives, integrating academic and research strategies and capabilities, especially in the Biomedical focus. Budget constraints and conditioning to the recruitment of new talent conditioned some of the strategies of the CEI. However, the strategies and actions of greatest relevance raised by the 2010-2014 Strategic Plan have been launched.

Based on the achievements and progress made during these years by the CAMPUS VIDA project, during the year 2014 we are proceeding to analyze the progress of each of the nine plans implemented within the framework of the Plan to assess the specific results obtained at the end of the year, assess the progress in the target indicators and establish strategies for the continuity of the project.

However, and despite the fact that we are talking about a process that is still active, the USC assumes the continuity and progress of the project of the Campus of Excellence CAMPUS VIDA, assuming for the period 2015-2020 two essential challenges that have been addressed in the current report:

1. **Advancement in the process of internationalisation of the Biomedical specialization focus, that has developed during these years, especially formulating new strategies for the international positioning of a specialized postgraduate and doctoral teaching offer**
2. **Extend the model of smart specialization already started, to new strategic areas aligned with RIS 3 of the regional innovation system and the Science and Technology strategy promoted by the Spanish government**

For progress in these goals, the USC, promoter and manager of the CAMPUS VIDA project, assumes that, with its strengths and weaknesses, it continues being a regional scientist reference, offering also proven interaction and technological cooperation skills with major institutional and productive agents. It is the R&D institution with greater scientific projection and international presence, generating more than 40% of the regional scientific production and bringing together more than 30% of whole of Galicia in presence in the FP, with a capacity for growth and evident projection.

From this assessment, the USC is also responsible for leading the processes of scientific specialization and international positioning of the regional innovation system, so that **over the base of specialized academic and scientific excellence, optimize and consolidate strategies for collaboration and articulation with companies and institutions, integrating to the whole of the science-technology-innovation-entrepreneurship system a shared work program.**

In line with the above, and looking to its objectives of international positioning, academic competition, scientific excellence and innovativeness, the **2011-2015 USC Strategic Plan is unfolding on the application of principles of smart specialization**. It is about establishing the strategic areas to develop capacities and critical mass to be more competitive, aligning them

with the challenges that face our environment to develop smart economic, sustainable and inclusive growth.

In 2009, when initiating this process, the selection of the areas of specialization were organized and promoted within the **strategic framework of the two International Campuses of Excellence promoted by the USC** and that deserved the recognition of the MINECO:

- **CAMPUS VIDA,** that focused on the field of the life sciences, has integrated a dynamic BIOCLUSTER which brings together the main regional agents of the Bio-Health area. CAMPUS VIDA, has also recently integrated in the International Network of Campus of Excellence in the Agro-food field.
- **CAMPUS DO MAR,** that focused on scientific, technological and socio-economic objectives in the fishing-maritime field, integrates a consortium with the participation of the three Galician universities, 4 universities of the North of Portugal, regional IPOs, sector companies and organizations.

And from these advances, CAMPUS VIDA intends to continue to organize efficiently their scientific capacities around specific targets on which to improve their scientific and innovative impact.

Continuing with the development of this strategy of **CAMPUS VIDA is the framework for integrating the alignment of the capabilities of the USC with the smart specialization strategy RIS 3 of the regional environment, Galicia, always within the priorities of Horizon 2020 and coherent with the 2013-2020 Spanish Strategy.**

From this commitment and from the experience of the first three years of CAMPUS VIDA, **the specialization for the period 2015-2020 Strategy focuses on the following challenges:**

- **Challenge 1. Health, Wellbeing and active aging:** prevention and health promotion; Diagnosis; Treatment of chronic diseases; Integrated assistance; active ageing and independent living; Nutrition and health safety and food technology; Intelligent Tele-monitoring; Learning and occupational activities (in old age)
- **Challenge 2. Bio-based economy (agriculture, livestock, forestry, fisheries, environment):** production (agriculture, fisheries, and livestock), transformation (processing/manufacturing and packaging), consumption; Efficient use of natural resources; Efficient, sustainable management and planning of the territory; Protection of the environment and biodiversity; Environmental Biotechnology; Management, Treatment and Recovery of waste;
- **Challenge 3. Inclusive societies - cultural heritage:** Valorisation and promotion, preservation and protection of cultural identity; Language and heritage.

According to the principles and objectives of the CEI CAMPUS VIDA, this specialization must be integrated into an efficient strategy that promotes **progress on three priority assets/objectives: academic excellence, regional cooperation and international positioning**. With this goal, four main areas of activity are planned focused on:

- **Organize the available R&D&I capabilities around the three priority areas** by identifying areas of specific competence to achieve an optimal structuring with the socio-economic environment within the framework of Galicia RIS3 and H2020 strategy;
- **Design and consolidate a specialized teaching offer aligned with the priority objectives** and capacity for projection in areas of international cooperation (ERASMUS MUNDUS...)
- **Strengthen the international position of CAMPUS VIDA** in these fields, driving positioning strategies, especially looking at the profitability of the H2020 program, and always on the basis of excellence and experience provided by its strategic areas already integrated into the operations of the International Campuses of Excellence (CAMPUS VIDA and Campus do Mar) in recent years;
- **Optimize the collaboration with economic and institutional the agents** of our environment in the framework of H2020, from a strategic integration of capabilities aligned with the identified challenges

The Action Plan must ensure the integration and reorganization of capabilities, as well as the collaboration with the environment, and should be understood as a driving mechanism for the internationalisation of CAMPUS VIDA and Galicia. To do this, internal actions will be defined, oriented to both research groups and stakeholders and economic agents.

Below are exemplified some lines of action that are already programmed to start in the 2014-2015 academic year, aligned with the established activity areas:

1. Structure, organize and integrate the existing R&D capabilities onto the strategic challenges

   Lines of Action:

   - Identification of strategic routes/agendas in each of the priority areas and identified value chains within each Challenge.
   - Develop strategic partnerships with the most relevant actors in the environment, organized according to the identified value chains. We will work with the main agents of the R&D&I regional productive system, both the subsystem of knowledge creation (research institutes, hospitals, regional administration, technology centres) and environments (clusters, associations, companies...) and institutional (regional administration, local authorities, etc.).

2. Strengthen the international position of the USC on the basis of excellence provided by its strategic areas integrated into the International Campuses of Excellence, CAMPUS VIDA and Campus do Mar

   Lines of Action

   - Strengthen the international positioning of the USC large European initiatives, defining specific strategies to integrate into the most relevant European initiatives, networks and platforms:

     It is essential an institutional positioning in initiatives (JTI, JPIs, PPPs, Era-nets) with capacity to finance projects, and in those (EIPs and large technological

platforms) which still not offering financing, largely direct the strategic agendas and work programs of the H2020. In this sense, CAMPUS life is already present in the JPI Healthy Diet for a Healthy Life, Innovative Medicines (IMI), JTI in Bio-based Industries, the EIP on Agricultural Productivity and Sustainability and participates in the preparation of a proposal for the 2014 KIC on Active Ageing and possibly for Food for Life. Those initiatives directly related to the challenges of the USC will be selected, in particular initiatives as *Ambiented Assisted Living, JPI More years and better lifes and Suschem platform* and it will be decided on the most appropriate way to be part of them, directly as partners (through the institution and/or some of the USC partners), or either through the integration of researchers of international relevance in the scientific committees.

- Improve the international visibility of CAMPUS VIDA TEACHING OFFER

  The international promotion of CAMPUS VIDA is required as a branding strategy and for its global positioning. The objective is to maximize existing opportunities and resources so that they will act as an incentive to the attraction and international mobility of students, teachers and researchers. USC already effectively manages many international programs, such as ERASMUS MUNDUS, ITN networks within the Marie Curie actions, or the COST actions. This task is to further enhance it as a vehicle of international projection. Therefore the following will be done:

  - Improve visibility of research capacities of CAMPUS VIDA among Erasmus and PhD students: meetings between foreign students (undergraduate and master) and doctoral training with leading researchers by areas and scientific disciplines, emphasizing the opportunities for international interaction.
  - Promote in conjunction with the International Doctorate School and the Research Centres Network the preparation of strategies in the field of Erasmus Mundus doctoral Programs, training networks, Industrial Doctorates and Marie Curie exchange in strategic areas.

3. Optimize the collaboration with the economic and institutional agents of our environment in the framework of H2020, from a strategic integration of capacities aligned with the identified challenges.

Lines of Action:

- Promote the CAMPUS VIDA STRATEGIC AND GOVERNANCE GROUP:

  The progress of the strategies of collaboration and strategic alliances within the framework of CAMPUS VIDA has resulted in the progress of a close relationship with various agents of the Galicia Innovation System, such as Coruña and Vigo universities, the Business-University Foundation (FEUGA), Hospital foundations, and participating in sector structures such as the *Life Science Business Technology Cluster-Bioga, the Galicia Food Cluster (Clusaga), the Galicia ICT Cluster or the*

Galicia Health Cluster; also working with the Innovation Platform of the Galician Health Service (SERGAS) and other units of the Regional Department for Labour and Welfare.

The immediate goal is the definition and implementation of a stable and operational coordination unit which minimizes the overlap of efforts and functions and facilitates collaboration in the design and management of strategic projects as it is explained in the governance section of this annual report.

ANNEX I. DESCRIPTIVE CARDS OF ACTIONS

I.1. Teaching improvement and adaptation to EHEA

AREA	**TEACHING IMPROVEMENT AND ADAPTATION TO EHEA**
ACTION	**PLAN 1: TEACHING INNOVATION PLAN**
OBJECTIVES	To help provide large, attractive and quality training for teachers to improve performance and quality, preparing them on the EHEA needs and promote innovation when designing courses to, finally, attract international students and provide them with Higher Education of excellence.

REQUALIFICATION OBJECTIVES

The teaching innovation plan is a tool to search and achieve academic excellence at USC. During the development of Campus Vida, the efforts in this area have aimed at:

- Offering relevant, competitive and quality courses adapted to the requirements of the European Higher Education Area (EHEA).
- Promoting a new model of academic organization adapted to the new teaching and learning systems.

SUMMARY OF THE WORK PERFORMED AND THE PARTICIPANTS ROLES

To achieve the above objectives, the development of the innovative teaching plan has been focused on two main lines of action: the launch of the teaching training and innovation centre and the adaptation and updating of teaching equipment.

1.1 Teaching training and Innovation Centre

The Teaching Training and Innovation Centre is the instrument for the development plan of innovation and teacher training activities. The aim of this unit is to organise activities to acquire and enhance teaching, research and management skills which are necessary for the professionalism of university teachers. In the framework of the Campus Vida project, the actions related to this unit have focused on:

- The strengthening of innovation and teaching training services capacities increasing human resources and incorporating new spaces.
- The development of new training activities to adapt teachers' competencies to the requirements of the EHEA, as for instance the development of self-study modules.
- Support the internationalisation of the teaching community through the promotion of linguistic competencies, developing new activities and methodologies for its application from the Centre of Modern Languages (CLM) as described in Plan 2.

1.2 Adaptation and updating of teaching infrastructures and equipment

Actions relating to infrastructure and equipment of a physical nature (education facilities) and the virtual nature (technological tools) are explained below.

1.2.1 Renovation and adaptation of teaching spaces

The University of Santiago addressed an action plan consisting on the renovation and remodelling of buildings which functional and safety conditions did not meet the standards required to teaching infrastructures for its adaptation to the EHEA in the period 2005-2011. This first phase was established in the framework of the CEI project after a second plan of action for the period 2011-2015 where the same model of intervention has been applied. This model, as well as the refurbishment also included the relocation and construction of some new Faculties, including the Faculty of Medicine, as well as punctual interventions in different centres. The investment plan to renovate and create new academic buildings, as well as the set of projects and pre-projects which drafting had begun, has been delayed due to the economic crisis and budget reductions resulting from this context. In this

sense, the investments planned for the new buildings of the Faculties of Medicine, Dentistry and Education Sciences, due to the decrease in financial resources have been suspended and redirected to the existing faculties for the adaptation to the EHEA.

With the goal of optimizing investments, actions in educational infrastructures have focused on specific of improvement works, such as:

- Classroom renovations: reorganisation of spaces to adapt them to the educational requirements of the EHEA, improvement of heating and acoustic comfort, equipment improvement, etc.
- Construction, adaptation and equipping of practice laboratories and elimination of occupational hazards.
- Purchase of teaching Equipment.
- Construction, remodelling and adaptability of toilets, paving works and improvement of road safety.

1.2.2 Development of technological tools

The development of technological tools in the framework of the CAMPUS VIDA project is done by the Learning Technology Centre (CeTA), responsible for developing and implementing new education technologies at the University.

1.2.2.1 Virtual Campus

The Virtual Campus http://www.usc.es/es/servizos/ceta/tecnoloxias/campus-virtual.html is a tool that supports the teaching-learning processes developed by the university. The institutional platform, based on Moodle, provides a virtual educational environment with all the necessary tools to achieve its integration in the teaching and improve the learning process.

During the CEI Project, a new virtual campus model has been developed based on Free Software (FS) technologies that have allowed advancing towards a Total Personal Learning Environment (TPLE) in the social web. The Moodle platform that supports the campus has been installed and personalized to meet the university needs and characteristics. The main functionalities are explained below:

- Connection of the platform with the enrolments database and Teaching Organisation Plan (POD in Spanish). This means that each time a student enrols in a subject, they automatically have access to the subject virtual classroom. Additionally, each subject has its own virtual classroom in the campus, and automatically allocated to teachers when their POD is available.
- The access to the Virtual Campus is done by an official user ID common to other USC tools, allowing the user to access all applications once logged in.
- The platform installation has been done taking into account the students' teaching and learning needs and characteristics. In this sense, the following virtual campus characteristics are highlighted:
    - Custom made virtual classrooms depending on the tools required to teach and learn the subject. Teachers have access to a wide range of tools that can be used based on the subject's needs and characteristics.
    - Student follow-up. Students' progress reports for teachers to check are generated, showing information on the student's activity on the Virtual Campus, giving access to tools and results obtained in the different areas. Also, the teacher can send individual messages based on the report results, contributing to a more individualized follow up of the student.
    - Self-study. The platform allows independent learning of students. Teachers and students perform a review of their virtual classroom and the accomplishment of tasks. This information helps with the learning regulation, the teacher's continuous supervision and the achievement of the subject competences.
    - Co-learning. The platform allows the creation of communities, so teachers and students can work in specific collaborative and coordinated classrooms.
    - Innovation. New uses for the platform are being continually sought for and incorporated. For example, trials have taken place to use mobile devices (mobile phones and tablets) to access academic results and

integrate these results in the Virtual Campus.

In 2013 an important increase in the use of some of the Virtual Campus tools has been noted. 4,796 forums were created, as well as other collaborative learning tools (databases, glossaries, wiki, etc.)

1.2.2.2 E-Learning process support tools and uses

The New Learning Technology Centre has been set up with new Equipment and resources to increase and develop new teaching training programs related to the implementation of new teaching and learning systems. Furthermore, in the e-learning area, a personalized support service with technical staff specialised in designing courses and tools is provided to teachers, like the implementation of virtual training actions. Some of the new CeTA courses worth mentioning are:

- Videoconference and interactive whiteboards.
- Pilomedia: Support tool for the creation of multimedia didactic contents to be used via the Virtual Campus.
- Access via Moodle to an environment in the cloud that allows to reach a Total Personal Learning Environment (connection to Dropbox, Google Drive and USC institutional repository)
- Methodologies for blended learning with the new free software platform serving the needs of individualized education to adapt to different learning paces.

CeTA has been developing teaching innovation projects through the Virtual Campus, such as the "Implementation of an objective skills assessment test structured for Degree in Medicine" where students undertake roles in simulation scenarios and skills are tested using different testing tools (the ones with a role give marks for the performance).

MOST SIGNIFICANT RESULTS

- **Complete catalogue of EHEA adapted degrees**. USC has been a pioneer in offering EHEA adapted degrees, and its CAMPUS VIDA global and specialized teaching offer fully transformed and integrated into the Bologna process was created in 2010-2011 academic year.
- **Implementation of a new teaching and learning model** increasing the university's teaching capacities in different areas, result achieved thanks to the innovation in the use of classroom tools, but also thanks to the improvement of teachers, students and administrative and service staff self-training capacities and competences.

  This has lead to the re-organisation of infrastructures and equipment, the recognition of the teaching coordination, the implementation of good student personalized follow-up practices, the internationalisation of courses taught and the development and adoption of flexible technological training process support tools (VIRTUAL CAMPUS and e-learning process support tools: videoblogs, didactic units, etc.)
- **Optimisation of the BIOCLUSTER resources for its use in educational processes**. The strengthening of the relations of the environment agents that enables the BIOCLUSTER, allows to improve the training capacities of University especially in the practical application knowledge acquired at the University. In this sense, it is worth highlighting the boost to internship programs in companies and institutions of the BIOCLUSTER, decentralization of the clinical teaching using the SERGAS network, as well as coordination with Secondary Schools and Professional Education.
- **Remodelling of the educational infrastructure plan**. Following the development of the teaching innovation plan, the centres that have better teaching spaces adapted to the EHEA requirements are as follows: Faculty of Medicine, Faculty of Biology, Faculty of Pharmacy, Faculty of veterinary Medicine, School of Nursing, School of Dentistry, Faculty of Chemistry, Faculty of Mathematics, Polytechnic School, Faculty of Educational Sciences, Faculty of Economics, Faculty for Teacher Training, School of Psychology, Faculty of Geography and History.

INTERNATIONALISATION ACTIVITIES

The efforts of the teaching innovation plan in regards to internationalisation have focused in increasing the language self-study capacities. To this end, language learning tools have been developed, new self-study modules have been offered at the Supervised Self-study Centre (CAT) and at the Modern Languages Centre (CLM) and the

individual training in language learning has been promoted.

MOST IMPORTANT DEVIATIONS IN THE ACHIEVEMENT OF OBJECTIVES

Budget restrictions have forced a re-scheduling of the actions on physical infrastructures. The building of new facilities has been proposed but it has been decided to renovate and upgrade the existing ones.

AREA	**TEACHING IMPROVEMENT AND ADAPTATION TO EHEA**
ACTION	**PLAN 2: PROMOTION OF FOREIGN LANGUAGES KNOWLEDGE PROGRAM AND INTERNATIONAL PROMOTION OF SPANISH/GALICIAN LANGUAGES**
OBJECTIVES	To promote the Foreign Language Knowledge Program and the International Promotion of Spanish/Galician Languages.

REQUALIFICATION OBJECTIVES

The improvement of the University community language skills is one of the strategic objectives of the CEI project, seen as a tool to improve the international dimension of CAMPUS VIDA when it comes to recruiting international talent, as well as increase the international mobility options for students, researchers, teachers and administration and services staff.

The Universidade de Santiago de Compostela has extensive experience in teaching languages, with the first Language Institute created 1975, which shows the great potential in the CEI project to strengthen the language activities, resources and services offered to meet the specific needs of the University community. For this reason, different objectives have been set out depending on the recipients: students, teachers and administration and services staff. As for the students, back in 2009, USC decided to request that all graduates have obtained the common framework for language minimum level of B1 on a foreign language, as well as introducing language skills (B2) as transverse competences in USC with ECTS credits. Additionally, the Doctorate School (see Plan 3) is requesting that all doctors achieve a minimum level of B2 in English and a second language at B1 level. On the other hand, increasing the percentage of courses taught in English in the short term, meant that teacher would need to have their language skills certified. Finally, increasing the language knowledge of administration and services staff is essential to stay within the EHEA.

SUMMARY OF THE WORK PERFORMED AND THE PARTICIPANTS ROLES

The actions and capacities related to the improvement of the University community foreign language skills and the international promotion of the Spanish and Galician languages as a way to attract foreign students, was undertaken by the Modern Languages Centre (CLM), which replaces the old Language Institute with the objective of giving answers in terms of internationalisation required by a project like CAMPUS VIDA.

The CLM has developed, in addition to training activities, others activities critical to the progress of CAMPUS life, such as the accreditation of language skills, linguistic dynamisation, linguistic consulting, translation and interpretation. With a new direction, and under the supervision of a Coordination Commission for the planning and monitoring of the progress of the CLM, in line with the objectives of CAMPUS VIDA, the actions highlighted in the framework of this plan are described below.

2.1 Increase in the language courses offered

2.1.1 Foreign Languages

The improvement of the courses taught, comes from the segmentation of activities by student profile (students, teachers, and administration and services staff). On the basis of this exercise, the different types of courses were consolidated promoting self-study and the use of new resources such as virtual classrooms or resources developed by the teaching innovation plan to improve language competencies (see Plan 1). This commitment has allowed creating and consolidating a range of courses in different modalities (face-to-face and blended) and for different groups (students, teachers, researchers) in the following languages: English, German, Czech, Chinese, Danish,

French, English, Italian, Japanese, Portuguese, Russian and Catalan.

2.1.2 International promotion of Spanish and Galician

The training offered in Spanish and Galician has improved and consolidated, offering activities to different foreign groups who visit USC: students from bilateral agreements, students of the Socrates-Erasmus programme, student from national programs; researchers recruited on projects...). As in the case of foreign languages, not only the number of courses taught has increased, but self-study through virtual resources has been encouraged.

2.2 Improvement in the language certification processes

The improvement on language certification processes is based on the development of the following actions:

- B1-A and B1-B certified tests in German, English, French, Italian and Portuguese are being performed.
- Recognition of diplomas for the official approval of language levels, as an alternative to the B1 and B2 certified tests.
- Language tests necessary for participation in ERASMUS and EUROPRACTICUM mobility programs are performed.
- External exams for CILS, DELE, DFP Juridique, Goethe-Zertifikat, NOKEN and Catalan Official Certificates are performed.

2.3 Other activities for language promotion

Additionally, other language promotion activities are being carried out:

- Specific service support to teachers and researchers involved in international consortiums with the participation of countries such as Japan, China, Russia, Poland, Czech Republic, Arab countries and Romania.
- Language support to members of the University community who took part in mobility programs with China, Arab countries, Russia, Japan, Poland, Czech Republic and Romania.
- The Supervised Self-study Centre (CAT) self-study modules. This CLM unit provides support tools and language-pedagogic assessment for people interested in learning different modern languages. The CAT offers users a variety of resources (DVDs, videos, texts, etc.) that allow developing the areas of greatest interest for the student offering an alternative to the classroom training.

CLM Program - Cultural and linguistic exchange program to facilitate the integration into the Santiago college life of students coming to USC, also giving an opportunity to USC students of meeting other students who intend to study at another University abroad, contributing to the enrichment of academic experiences at USC.

MOST SIGNIFICANT RESULTS

The CLM deployment of the promotion of the knowledge of foreign languages plan and international promotion of Spanish and Galician has contributed significantly to increase rates of activity and participation of the University community in language learning activities and to improve the language skills of the University community, as it was its aim:

- **Increased rates of activity and participation in the training offer**
  - **<u>Foreign languages</u>**:
    - Increase in the number of courses and increase in the number of languages taught (English, French, German, Italian and Portuguese) aimed at teaching staff.
    - Increase of training modalities: number of annual and summer intensive courses for students.
    - Incorporation of new languages to the courses offered in Arabic, Czech, Russian, Polish, Danish, Chinese, Japanese and Modern Greek.
    - Increase in the number of students enrolled at CLM and the number of participants in the various activities (self-study modules, mixed, etc.).

- **Increase of the training offer of Spanish and Galician with more courses, more seats and new modalities being offered.**
- **Development of language training complimentary activities:**
  - Increase in the number of students enrolled in the supervised self-study modules.
  - Implementation of the self-study modules.
  - Implementation of pilot virtual classrooms for Russian and Czech.

- **Improvement of the University community language skills due to the improvement of language certification processes:**
  - Increase in the number of language tests. 6 calls.
  - Increase in number of B1 certification tests, 4 calls in 2010, 2011, 2012 and 2013.
  - Intensification of the B1 certification in English, French, German, Italian and Portuguese.
  - Implementation of new B1 language certification tests according to the CEFR and new B1 language certification tests according to the CEFR for mobility programs aspiring participants (tests for candidates to Socrates, Europracticum, PCL B!, Goethe and CILS).

The main impact of the development of this plan is **to improve the language skills of the University community**. Data on participation in activities are added to those relating to the evolution experienced by the indicators relating to language skill certificates of the members of the University community. For instance, the number of PDI and students that have passed language certificate tests has increased by 95 and 350% respectively in the period.

INTERNATIONALISATION ACTIVITIES

The international component of this plan is transverse and permeates throughout its development, as described in the summary section of work performed.

MOST IMPORTANT DEVIATIONS IN THE ACHIEVEMENT OF OBJECTIVES

There aren't any significant deviations

AREA	**TEACHING IMPROVEMENT AND ADAPTATION TO EHEA**
ACTION	**PLAN 3: IMPLEMENTATION OF THE INTERNATIONAL DOCTORATE AND POST-GRADUATE SCHOOL**
OBJECTIVES	Generate a range of integrated and interdisciplinary training for researchers in English to act as point of attraction and mobility of students, teachers and researchers related to Life Sciences. Promote the recruitment of doctoral students and visiting researchers to the biocluster who will benefit from the use of existing research and teaching infrastructures such as the Research Centres Network, the Hospital System, etc.

REQUALIFICATION OBJECTIVES

Implement the Doctorate School and promote its specialisation as a cluster of Health and Welfare strongly rooted into the academic, social and economic fabric of the Galician region.

Projecting the Doctorate School at the forefront of the international arena.

SUMMARY OF THE WORK PERFORMED AND PARTICIPANTS ROLES

The promotion of the Doctorate School is one of the main actions referred to in the strategic plan, both for its role in the consolidation of academic excellence, and its effect on the internationalisation of the Campus. The work carried out within the framework of this plan includes the creation and organizational structure of the school, its adaptation to the new regulation of the Ministry of Education in the field of Doctorate studies and the development of training programs.

3.1 Creation and organisation of the International Doctorate School (EDI)

Between the years 2009 and 2011, the creation and organizational articulation of the International Doctorate School in Biomedical Sciences and Health Technologies was addressed. In 2011, their teaching capacity was strengthened by completing the initial offer, consisting of 13 doctoral programs, with the following areas: Dental Sciences, Medical Morphology, Vision Sciences, Biochemistry and Molecular Biology, Innovation in Safety and Food Technology and Public Health and Medicine Research and Veterinary Health. This increase in active doctoral programs integrated in the School led to a substantial improvement in quality levels related to the number of students, in particular foreign students, and programs with mention of excellence. At the same time, it promoted an organizational process of the different programs, grouping the different thematic programs in theme clusters to promote alignment and complementarities of research programs within the Life Sciences *(Healthy Lifestyle and Health, Prevention, Diagnosis and Treatment of diseases and Innovative Technologies and Applications in the Health Care industry).*

3.2 Adaptation to regulations

During 2012, the modification of the academic and administrative structure of the school became an inescapable commitment to **adapt to the new doctorate studies regulations established by the Ministry of Education (RD 99/2011) and by the Universidade de Santiago (DOG 29 August 2012)**. Finally, a unique and multidisciplinary International Doctorate School (EDI) was created, structured in three thematic areas: Biomedical Sciences and Health Technologies, Experimental Sciences and Teaching Techniques, Social, Legal Sciences and Humanities.

The current structure of the EDI was approved by the USC Governing Board at the meeting on 26th October 2012 and was approved by Social Council at the meeting on 12th November 2012. The creation of International Doctorate School at the Universidade de Santiago de Compostela was authorized by the Xunta de Galicia according to the 95/2013 Decree of 13 June (DOG 26th June 2013), to be included in the Registry of Universities, Centres and Degrees (RUCT) of Ministry of Education, Culture and Sport with the reference 15028506.

3.3 Development of the new training programs

During 2012, the EDI worked in the process of elaborating new doctorate programs or updating the pre-existing ones, always aiming at consolidating the excellence of the programs offered, being verified by competent agencies (ACSUG and ANECA). Many of the programs offered are transformations of programs that are highly prestigious and of great quality that hold the Excellence Mention (ME) or the Report towards Excellence (IF).

3.4 Complimentary actions to develop multidisciplinary skills

In addition to doctoral training activities the EDI develops multidisciplinary skills actions for doctoral students such as, the adoption of the gender perspective in research, communication, teamwork and conflict resolution but, above all, seek to encourage the internationalisation of researchers integrated in the doctorate school. These activities include the following: **Skills Training Course for Young Researchers** (equivalent to the GRADschool in the United Kingdom), which are held within the framework of an agreement between the Barrié Foundation and the Universidade de Santiago de Compostela for the skills training of its graduates and researchers; **"Approach to Gender in Research"** course in collaboration with the USC Gender Balance Office; free software and tools training ("R commander", installation of G-Linux operating system, etc.). Finally, the celebration of two editions of the **"Young Researchers Meeting (EMI)"** are also included within the complementary activities to make USC pre-doc students research more visible and to promote the discussion of pre-doc students scientific issues.

MOST SIGNIFICANT RESULTS

The efforts made throughout the CIE project to create and implement the International Doctorate School have resulted in the following accomplishments:

- **USC is the Spanish University with highest number of doctorate degrees on offer** adapted to the RD99/2011 regulation. In 2013-2014 academic year 49 verified doctoral programs have been launched, with a total of 840 places, of which 662 are programs related to Campus Vida. In the 2014-2015 academic year, this offer increases by 5 programs, 4 of them related to Campus Vida.

- **Increase in the international training opportunities for doctoral students.** The EDI is the unit responsible for the organisation of the doctorate studies in all areas of knowledge since it comprises all the doctoral programs verified after the adoption of the RD 99/2011 regulation. This integration allows a more efficient management of resources (material and human) to facilitate greater coordination in the design of training offered to doctoral students and internationalisation actions – USC strategic line-, and therefore promoting synergies.

  Specialization of the doctorate courses offered in fields around CAMPUS VIDA research lines. The school has not only worked to maintain USC's leadership in the field of the Health Sciences and to promote the visibility of the Research Excellence in all the subject areas in which USC has recognized leadership, but has also developed the intra-university collaboration building strategies that have enabled integration and approach to other thematic areas in the CAMPUS VIDA moving towards the specialization of research training. In cooperation with the coordinators of doctorate programs, **doctorate programs research lines aligned with research areas that define the CAMPUS VIDA clusters have been identified (Healthy lifestyle and Health, Prevention, diagnosis and treatment of diseases and Innovative technologies and applications in the Health care Industry)**. This analysis has shown that thesis development within those clusters is not restricted to the field of Biomedical and Health Science programs, but that a large part of the lines of research related to Life Science and Technology of life often done at USC, are developed in the fields of Experimental and Technological Science and Social and Legal Science programs. **Of the 628 researchers enrolled in new programs, 506 develop thesis in programs related to CAMPUS VIDA research lines, representing more than 80%.**

- **Promotion of the inter-university cooperation in doctoral training, with special emphasis on the establishment of partnerships with foreign institutions.** (See internationalisation activities section)

The impact of these results has been noticed in the **increase in the number of theses read at USC in recent academic years.** It is important to highlight the level of internationalisation of programs in terms of the strengthened presence of foreign doctoral students and the continuous increase of thesis with European/International mention. By comparing the data to 2008/2009 academic year (first year with comparable data) the following results are observed.

- Number of doctoral students and origin: the influx of doctoral students has grown at a rate of 32%, reaching in the 2012-2013 academic year a total of 2,684 doctoral students. Especially significant is the recruitment of foreign students, since the implementation of Campus Vida CEI, the number has increased by 47% (from 428 to 632), which reflects the international appeal of Campus Vida doctoral training programs.

- Number of read thesis: during 2012-2013 academic year, 287 thesis were read, which represents an increase of 46% from 2008-2009, in which 197 were read. Especially significant is the evolution of the thesis with European

mention (64 in 2013), representing a growth of 77%.

By areas of knowledge, it can be observed that all thematic areas show positive growth rates, in relative terms it is worth mentioning "Technical Teachings" and "Social and Legal Sciences" (increments of 100% and 61% respectively).

INTERNATIONALISATION ACTIVITIES

In this first stage of creation and implementation of the activities of the EDI, its strategy has focused on the quality of the training offered and its specialization on the research fields of the CAMPUS VIDA cluster. On this basis, the internationalisation strategy has been deployed focusing on the activities described as follows:

- **Establishment of partnerships with foreign universities, institutes and research centres aimed, at this early stage, at the signature of mobility agreements and the official recognition of joint degree programs.**
  - **Mobility Agreements for students and teachers.** Internationalisation and the search for excellence have been the engines of the activity of the EDI integrated programs research groups. As a result of this effort, solid partnerships at the international level have been established with prestigious foreign universities, institutes and research centres resulting in mobility agreements for students and teachers. It is important to stress the ones that have been established between the Advances in Microbial and Parasitic Biology program and the University of Sassari (Italy), the agreement between the Chemical Engineering and Environmental program and the École Nationale Supérieure de Chimie (France), as well as the collaboration agreements established between programs and research groups from many foreign universities and research centres.
  - **Official recognition of joint degree programs.** The intense alliance policy has led to the official recognition of doctorate programs designed in a context of international training which lead to joint Doctorate certificates. This is the case of the Agricultural and Environmental Sciences program, which enhances collaboration between Europe and Latin America researchers in aspects related to Agriculture, Environment, Biodiversity, the use of Land and Natural Resources in the Iberian-American context, thus contributing to the construction of the Iberian-American education space.
- **Design, preparation and organisation of EDI internationalisation programs.**
  - The most significant action in this area is the program of **Erasmus Mundus European Doctorate in Nanomedicine and Pharmaceutical Innovation (NANOFAR)**. Funded by the European Union, it is intended to train scientists in the field of Nanomedicine focusing on diagnosis, therapy and regenerative medicine based on scientific and academic excellence through international exchanges. It is offered in a University integrated Consortium along with USC, the French universities of Angers, which is the Coordinator, and Nantes, and the universities of Liege and Louvain (Belgium) and Nottingham (United Kingdom). Biotechnology companies (Advancell, Affilogic, Atlanpôle Biotherapies, Biowin Carlina Technologies, In-Cell-Art,...), academic institutions from outside the EU (CSIR in South Africa, the University of the Plata of Argentina) and hospitals clinical (Angers, Nantes, Liège and Santiago de Compostela) are also associate members.
  - In 2014 the aim is to **increase the internationalisation of doctoral programs certified through the MARIE SKŁODOWSKA-CURIE ACTION: INNOVATIVE TRAINING NETWORKS (ITN)**.
  - Other programs, both intra-university and exclusive of the USC, have a consolidated and extensive network of national and international collaborations with public institutions that guarantee a high degree of internationalisation. As an example, the program in Endocrinology brings together research groups that have made a substantial contribution to make Endocrinology a competitive reference of Galician science at international level. Proof of this is that the researchers/teachers of the program 1) both include of the most cited Galician scientists (Dieguez, Casanueva), 2) two of the 6 researchers that have been awarded the most prestigious international grant for projects funded by the European Research Council (M.López and R. Nogueiras).
- **Agreements for the development of mobility actions.** There are numerous actions to boost the international mobility of doctoral students developed from the EDI (travel bags for participation in conferences, attendance at seminars, participation in forums and international meetings, etc.), the most significant are highlighted

below.

- **"Merimée" project** funded by the French Embassy to develop international doctoral co-supervised program in Health Sciences with the Universities of Nantes-Angers. The École Doctorale Biologie-Santé Nantes-Angers and CAMPUS VIDA have formalized an agreement to collaborate in their Life Sciences doctoral programs. The EDI has participated in the launching of Calls for Grants to attend and participate in conferences, seminars and courses in the framework of the "Mérimée" project.
- **Calls for Travel Grants to attend courses and training activities, scientific conferences, etc.** For example, only in 2013: to attend the "NanoFar Autumn School" course, the "Glycoconjugates: from chemistry to biology (and vice versa)" (Nantes) course, the scientific meeting "Scientific Days of the Doctoral School Biology and Health Nantes-Angers" (Nantes), forums with other schools such as "Network of PhD Schools – Doc Net" coordinated by the University of Évora (Portugal), for participation in activities of the SUDOE TRANSBIO, for attending the "6th Young Scientist Symposium" (Bordeaux) and the "5th Summer School on Medicines" (Toulouse).

MOST IMPORTANT DEVIATIONS IN THE ACHIEVEMENT OF OBJECTIVES

There has been less progress, in relation to what it was expected, with regard to the implementation of international joint doctoral programs, but new cooperation agreements, as well as participation in new 9 ITN consortiums in H2020 and the experience of the implanted ERASMUS MUNDUS is a symptom that there is progress in the right direction. In any case, the strengthening of the international dimension of the doctoral programs is a priority objective in the future strategy for CAMPUS VIDA.

AREA	**TEACHING IMPROVEMENT AND ADAPTATION TO EHEA**
ACTION	**PLAN 4: TALENT ATTRACTION AND MOBILITY**
OBJECTIVES	Maximize the existing resources in CAMPUS VIDA so that they act as an incentive for the international attraction and mobility of students, teachers, researchers and professionals.

REQUALIFICATION OBJECTIVES

Taking into account that a project of excellence such as CAMPUS VIDA will only be sustainable if there are human resources that are able to fully develop it, specific program associated to the CAMPUS VIDA research and innovation objectives aimed at the attraction of talent has been defined. This program aims at:

- Strengthening, quantitatively and qualitatively, the human potential in research and innovation, stimulating the choice of the research career as a possibility for professional development.
- Strengthen the research lines associated with the CAMPUS VIDA Research Centres Network, incorporating researchers of international standing in those areas of knowledge that are defined as strategic.
- Encourage the transfer of knowledge between the University and the socio-economic environment offering a viable option for talented people to be included in the model of sustainable economic and social growth proposed by CAMPUS VIDA.

SUMMARY OS THE WORK PERFORMED

Talent attraction and mobility actions have been proposed through an integrated approach of the professional scientific career directed to doctoral students, doctors at the start of their career and established researchers. It also encourages equal opportunities in all the actions and, especially, gender balance, promoting the inclusion of female researchers to CAMPUS VIDA.

4.1 Employment of researchers

The employment and stabilization of researchers has been promoted, for those permanently employed at USC (PDI category) and for those employed through specific funding programs during the different stages of their scientific career. As for the employed linked to external funding instruments, University services identify external programs of interest (regional, national and international) and give technical assistance for the submission of proposals. Employment and stabilization of researchers is provided in the "Most Significant Results" section. On the other hand, in the framework of the CEI project employment programs for researchers designed and managed by the University have been launched; examples of this is the **CAMPUS VIDA Pre-doctoral Contracts Program**, linked to the International Doctoral School and the **CAMPUS VIDA Post-doctoral Grants Program**.

4.2 International talent mobility and recruitment

Promotion of international mobility actions are aimed at all the University community seeking to attract international talent to CAMPUS VIDA, as a way to strengthen its international projection. They include the design and management of USC programs, as well as the design and management of projects within the framework of the EU Mobility programs mainly.

In relation to the programs, the most significant ACTION in the framework of the CEI project is **International Mobility of Research Excellence Program** to conduct short-term research stays aimed at teachers and researchers from research centres of reference in countries of interest, with the aim of intensifying the interaction and projection of research and teaching units internationally. First CAMPUS VIDA call launched was the **International Mobility of Research Excellence from USC-India Program (PEIN)**, aimed at teachers and researchers from centres of India to carry out short-term research stays.

With regard to the recruitment of students, another outstanding action is the agreement within the **Science Without Borders Program**, whose objective is to increase the presence of Brazilian students, teachers and researchers in institutions of excellence outside Brazil. The action has made it possible to incorporate 100 students in different Engineering Degrees on our Campus, as well as the **Academic Development Institutional Program with Brazil (PIDA Brasil)**. Initiative that complements the previous one, this program focuses on strengthening the academic institutional relations aimed at attracting students, as well as the development of new exchange and

research activities and initiatives.

In addition to the above, the extensive experience and expertise of USC in the **promotion and participation in projects within the ERASMUS MUNDUS program framework** should be noted. Together with the Doctorate program NANOFAR (see International Doctoral School section), initiatives that facilitate the mobility of different groups of the University community to various countries in Europe, Asia and Latin America are highlighted. Following some of the most outstanding projects, such as the EXPERTS II (Exchange by Promoting Quality Education, Research and Training in South and South-East Asia) which is an initiative for the mobility of students and academic staff from Bangladesh, Bhutan, China, Philippines, India, Indonesia, Nepal, Pakistan, Sri Lanka and Thailand to Europe or ARCADE (Academic Relationship for Central Asia with Destination Europe) that gives students, researchers, teaching and administrative staff the opportunity to study, research or teach in Europe. 13 institutions of Central Asia, located in Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Turkmenistan, as well as by 7 European universities participate in the Consortium. With the same aim of these projects but in different geographical areas, the following projects have been launched: ALRAKIS, PEACE and PEACE II, EUPHRATES, MARHABA, MEDEA, AVEMPACE and EUMETALIC II.

Finally, as part of the mobility actions, USC has participated in **International Education Opportunities (IFO)** Call for Grants to carry out, during 12 months, project management support tasks in China, India and Arab countries, as well as mobility programs within the framework of CAMPUS VIDA activities.

MOST SIGNIFICANT RESULTS

- **Employment of researchers**

  Between 2009 and 2014 there has been a significant advancement in achieving the objective concerning the **consolidation of the human potential in research and innovation**, as shown by the following employment and stabilization of researchers data:

  Despite the current context of restrictions, has enabled to employ during this period more than 300 pre-doctoral researchers, 100 post-doctoral researchers and the promotion as permanent Professor of 65 seniors researchers, 30 of them in the Life Sciences.

  On the other hand, the **CAMPUS VIDA Pre-doctoral Contracts Program contributes to boosting the election of a research career by providing the student working conditions stable during the period of development of their doctoral thesis.**

- **International talent recruitment and mobility**

  Mobility actions intensify the international projection of CAMPUS VIDA, especially in research and teaching areas. In this sense, the most outstanding results - given the novelty of the initiatives - were obtained with the implementation of **PEIN USC-India** and PIDA Brazil. The first one was designed in 2011 with the aim of financing research stays, and materialized in 2012 and 2013, with more than **120 visiting researchers**. In the case of the **PIDA Brazil, this initiative has made possible to incorporate 100 Brazilian students in several Engineering degrees**. These initiatives are additional to the results obtained by the **dozen ERASMUS MUNDUS projects**, promoted or with participation of USC, **which facilitates the access of the University community to more than 50 countries outside the EU**. Finally, it should be mentioned that the USC has coordinated and participated in 6 2013 TEMPUS projects with a total amount of 5 M Euros.

  In relation to the international appeal of CAMPUS VIDA, it should be noted that there has been an increase in the number of applications for Post-docs at USC through the Marie Curie program, the last call we received a total of 8.

- **Impact on the development of new scientific policy instruments in Galicia**

  Finally, in should be highlighted the impact of CAMPUS VIDA in the development of new scientific policy instruments in Galicia because of the CAMPUS VIDA Pre-doctoral contracts program, which started in 2011 as a USC program and from 2012 is developed in collaboration with the Xunta de Galicia through the Pre-doctoral Training Program, where a specific offer has been established for thesis related to the CAMPUS VIDA objectives.

INTERNATIONALISATION ACTIVITIES

The international component of this plan is transversal and it is part of its development, as described in the most significant results section where it refers to achievements in attracting talent and international mobility programs.

MOST IMPORTANT DEVIATIONS IN THE ACHIEVEMENT OF OBJECTIVES

There aren't any significant deviations.

I.2. Scientific improvement

AREA	**SCIENTIFIC IMPROVEMENT**
ACTION	**PLAN 5:DEVELOPMENT OF A NEW RESEARCH ORGANISATION AND MANAGEMENT MODEL BASED ON OBJECTIVES**
OBJECTIVES	Generate a new Research management model as an evolution of the existing one, which maximizes CAMPUS VIDA capacities in Life Sciences especially, and in this first stage, in the Biomedical field.

REQUALIFICATION OBJECTIVES

Increase the critical mass focusing on excellence and, therefore, its scientific and technological potential.

Promote the convergence and complementarities of the available resources within objectives and trans-disciplinary actions, promoting specialisation and thus its projection on the Innovation System and the business environment.

SUMMARY OF THE WORK PERFORMED AND THE PARTICIPANTS ROLES

The USC submitted a proposal to the 2009 CEI Grant Call already holding a leadership position in the field of Life Sciences and, in particular, in the more specialized scientific focus of Biomedical research. Within the framework of the CEI project, a model of scientific organization that integrates critical mass, inter-disciplinarity, translational vision and objectives and strategic prioritization fostering specialization and the ability to impact has been defined. This model is structured on the **consolidation of the Research Centres Network**, comprising University research capacities and their **interaction with the Network of Health Research Institutes, associated to the Network of Hospitals.**

The articulation of both networks, acting in a cooperation environment sharing strategies with the Hospitals of the Health System, Universities, foundations and companies, **make up a dynamic RESEARCH-VALORISATION-INNOVATION BIOCLUSTER** with capacity to articulate the interaction between the clinical sector - aware of the real needs in terms of human health and key for the implementation of research results -, and productive sector, essential to ensure that advances reach the market.

MOST SIGNIFICANT RESULTS

- **Research Centres Network**

In the process of setting up and launching CAMPUS VIDA a new research organization model, beyond the traditional one based mainly on research groups, has been implemented. This traditional model entailed constraints to the development of the scientific potential caused by atomization, need for greater coordination, dispersion of capabilities and resources, etc. The pillar of the new Research model is the **Research Centres Network**, implemented between 2009 and 2014 as follows: May 2010 the **Centre for Research in Biological Chemistry and Molecular Materials - CIQUS** - (http://www.usc.es/ciqus) is created; in July 2011 the **Centre for Research in Molecular Medicine and Chronic Diseases – CIMUS -** (http://www.usc.es/cimus) and in June 2012 the **Centre for Research in Information Technology - CITIUS -** (http://www.usc.es/citius). The success of this plan lies, not only in the creation and initiation of centres' activities but in the results obtained in the period, which include the following:

- **Centre for Research in Biological Chemistry and Molecular Materials – CIQUS**

  Focuses its activity in the implementation of trans-disciplinary strategies to solve scientifically relevant problems in the field of Biological Chemistry and the development of new functional materials. It is the only Centre in Spain in the field of Biological Chemistry, emergent discipline which goal is the development of molecular approaches to understand and manipulate biological processes.

  Key features:

  - 35 Principal Investigators y 135 researchers, 2 ERC Grantees (1 Advanced Grant, 1 Starting Grant).
  - More than 11M€ income from a portfolio of 40 projects between 2011 and 2013.

- 80-90 JCR articles/year, mean impact factor > 5.8 (in 2014).
- 10 registered patents
- 6 Spin-offs.

Facilities:

- 22 chemistry and molecular biology labs.
- Instrumental support laboratories.
- Cell culture labs, dark and cold rooms, radioactive facilities
- NMR, AFM microscopy, femtosecond spectroscopy, PLD, lithography, electrophysiology labs

Research project (example):

- METBIOCAT: Metal catalysis in biological habitats: New strategies for optical bio-sensing and targeted therapy. Led by Prof. J. L. Mascareñas –Scientific Director of CIQUS- and funded by the European Research Council (ERC) through a prestigious ERC-Advanced Grant.

Technology platforms:

- IC-Tagging: based on the muNS protein it overcomes some of the major problems found in protein production. A spin-off, Vir-Factory Biotech, has been created.
- Drug-like molecular library: A proprietary multicomponent-assembled library (4000 small molecules) open to collaborative research with academia and biotech companies
- Polymeric (dendrimeric) nanostructures. Designed multivalent nanostructures to be used in drug delivery systems, polymer therapeutics and diagnosis agents.

- **Centre for Research in Biological Chemistry and Molecular Materials – CIMUS:**

The centre develops interdisciplinary research focusing on prevention, knowledge and treatment of chronic diseases. CIMUS research addresses the following areas: Cancer, Endocrinology and Nutrition, Cardiovascular and Neuroscience. Additionally, it has significant capacities in the areas of Genetics, Functional Genomics, Experimental Therapies and Biostatistics.

Key features:

- International staff with 30 PIs and 230 researchers from 20 different countries. 2 ERC Grantees (2 Starting Grant).
- Portfolio of 90 active projects, 14 of them international.
- More than 200 publications in 2013 with an impact factor of 5,5
- 15 patents applied for in the last 3 years.
- 4 Spin-offs.

Facilities:

- 40 labs.
- Platforms: Drug Discovery Screening, Genotyping, Nanodelivery, Metabolic Phenotyping and Biostatistics/Bioinformatics.
- Labs: Radioisotopes, Microscopy, P2 Security, Cell culture

Research project (example):

- INNOPHARMA and TRANSINT. Both described in Plan 7.

- **Centre for Research in Information Technology - CITIUS:**

  CITIUS focuses its activity on interdisciplinary research in ICT applied to different sectors. The areas of expertise cover several fields such as Ambient Intelligence and Multimodal Interfaces, Web Intelligence, Personal Robots, Business Intelligence, High Performance and Cloud Computing, Data Engineering, Computer Vision, and E-Health.

  Key features:

  - 32 principal investigators and 68 researchers.
  - More than 50 active projects in 2011-2013
  - 8 certified patents, including 2 US patents USA and 8 software registrations in 2011-2013
  - 3 spin-offs
  - USC holds the top place in Spain for Mean Normalized Citation Score (MNCS) in Mathematics, Computing Science and Engineering in the "CWTS Leiden Ranking 2013"

  Facilities:

  - Labs: Robotics, Digital Content, Immersive and High Performance Computing Technologies.

  Research projects (examples):

  - SERVANDO, telemedicine platform for home monitoring of chronic patients.
  - SIRIUS, platform that integrates automatic extraction of the Retina AV Index
  - LASER-PET (See Plan 7).

- **BIOCLUSTER**

  - The **Santiago Research Health Institute - IDIS has been awarded the Carlos III Institute of Health accreditation (March 2010) thus becoming one of the first centres of reference in Biomedical R&D**. IDIS, comprised by the Santiago University Hospital Complex and USC research groups, is one of the key structures in the Translational objectives of CAMPUS VIDA. Within the framework of IDIS more than 600 researchers integrated into 63 groups organized in the following 6 research areas collaborated in 2013: Oncology, Genetics and Systems Biology, Endocrinology, Neuroscience, Epidemiology, and Inflammation. This collaboration has resulted in 455 published scientific articles, editorials and reviews in 285 international journals indexed in the Journal Citation Report with a mean impact index of 4.56. The collaboration of IDIS as part of CAMPUS VIDA allowed to undertake more than 30 research projects, contracts and clinical trials with a total income of €14M in 2013.
  - The completion of the **Galicia Experimental Biomedicine Centre (CeBEGa)** took place in the second half of 2014. This will allow to meet the demand, within the R&D Bio-cluster, of quality healthy and genetically defined laboratory animals, as well as unique infrastructures to perform the most advanced techniques in Biomedical experimentation based on animal models.
  - The **two Biomedical Research Centres of the two major hospitals of the Galician Health Network** have been integrated into CAMPUS VIDA, the INIBIC linked to A Coruña Hospital and the University of A Coruña, and the IBIV linked to the Hospital of Vigo and the University of Vigo. The incorporation of these Health Research Institutes adds new capacities with a clear specialization and activity in the clinical area (Endocrinology, Neurosciences, Cancer, Immunology, Cardiology, Respiratory, Aging...), as well as in transversal capacities (Nanomedicine, Bioinformatics and Tele-medicine, Regenerative Medicine, Clinical Epidemiology, Genomics and Proteomics...).
  - The **capacities and resources of the Faculty of Veterinary USC has been incorporated into strategies of CAMPUS VIDA (degree accredited at European level)**, and its Veterinarian Hospital Rof Codina, which, in addition to complementing the scientific and technological basis of CAMPUS VIDA, it opens new opportunities for economic interaction with a social and business environment linked to animal

health, food security and public health, generating increasing global interest and exceptional activity in the Iberian Northwest industrial environments.

- CAMPUS VIDA also achieved its consolidation as a key player for the promotion of innovation in the field of health in the region. In fact, it joined in 2011, as a founding member, the **Galician Health Cluster**, and in 2012 the **Cluster of Biotechnology Companies (BIOGA)**. Through their representatives in the Cluster, USC has collaborated on the definition of the R&D and innovation strategic areas for the respective strategic plans, also participating in training programs, trade missions and financing events organized in collaboration with both.
- The **International Nanotechnology Laboratory (INL)** has joined the Strategic grouping. The INL is a Centre of International Excellence promoted by the Governments of Portugal and Spain with which USC has already developed major cross-border projects in the framework of nanomedicine.

INTERNATIONALISATION ACTIVITIES

The internationalisation activities are transversal to the scientific improvement areas, for this reason, a specific section has been developed and it is included after Plan 7.

MOST IMPORTANT DEVIATIONS IN THE ACHIEVEMENT OF OBJECTIVES

The economic crisis context and its impact on public investment in science, directly affect the completion of the objectives planned for the consolidation of the new scientific organisation model. Economic difficulties create a vicious circle that puts at risk the future sustainability of some lines of research, mainly linked to the difficulties to retain and attract talent, both nationally and internationally.

AREA	**SCIENTIFIC IMPROVEMENT**
ACTION	**PLAN 6: IMPROVEMENT OF RESEARCH SUPPORT SERVICES PLAN**
OBJECTIVES	Better use and management of new technical and infrastructure resources. Recruitment of qualified technical personnel.

REQUALIFICATION OBJECTIVES

Acquisition and maintenance of CAMPUS VIDA research support infrastructure and scientific equipment.

SUMMARY OF THE WORK PERFORMED AND THE PARTICIPANTS ROLES

The development of this plan includes all actions related to the improvement in the technical, human and organizational provision of research services. The addition of these resources, both to the Research Centres Network and the BIOCLUSTER centres, have been taken from a network approach, looking for the optimization of investment to be used by all scientific workers integrated in CAMPUS VIDA. The actions developed throughout the CEI project are as follows:

6.1 Acquisition, development and maintenance of infrastructure

6.1.1 Research Centres Network:

- **CIQUS**:
  - Basic and small Equipment provision for its launch in 2011.
  - Equipment for laboratories of femtochemistry, PLD, lithography, AFM, electrophysiology, specific facilities and instrumental support.
- **CIMUS:**

- Basic and small Equipment provision for its launch in 2011.
- Equipment: radioisotopes, microscopy, P2 Security.
- Platforms: drug discovery, genotyping drug delivery and nanodelivery.

- **CITIUS:**
  - Basic and small Equipment provision for its launch in 2011.
  - Equipment: Robotics lab, digital content laboratory, immersive technologies laboratory.

6.1.2 BIOCLUSTER Centres:

- Equipment for IDIS: advanced image for in-vitro studies
- Equipment for CeBeGa.
- Equipment for A Graña Biology Station: non-invasive image - functional and anatomical – for animal studies.
- Equipment for the National Genotyping Centre node: proteomics, lipidomics and metabolomics equipment.
- Innopharma Platform: toxicological, pharmacological and biopharmaceutical high performance screening.

6.1.3 Acquisition, development and maintenance of infrastructure of general interest

6.2 Creation of Purchasing central

6.3 Research Centres Network technical staff:

A total of 15 technicians have been hired for different areas related to research services support (support infrastructure and equipment technical personnel, management of purchasing central, warehouse, etc.) and the development of internal functions related to the management, promotion and dissemination of the centres activities (marketing, economic management, communication technicians, etc.).

MOST SIGNIFICANT RESULTS

As part of the axis of scientific improvement, the improvement of research support services is an action of transverse character that has allowed to improve the scientific centres integrated in the BIOCLUSTER. The specific equipment, qualified personnel and more efficient organisational processes significantly contribute to the achievement of the results of the remaining plans of this area: the scientific progression, particularly on the international side of the research centres and the BIOCLUSTER entities (see Plan 5) and the establishment of partnerships for the development of the cooperative research strategy (see Plan 7). Therefore, although the results of these two plans are also the result of the improvements incorporated in the research support services to the research, the following achievements are included:

- **Strengthening technical capacities and know-how in the field of research**

The main result of this performance is the important strengthening of technical support capacities, essential for the improvement of the quality of scientific activity (derived from the provision of infrastructure, equipment and technical personnel). The different CAMPUS VIDA labs have equipment and qualified personnel to develop their scientific activity in the internationally, contributing to improve the attractiveness of CAMPUS VIDA to participate in international projects.

- **Improvements in the efficiency and optimization of research services and associated processes**

A second milestone, no less important, are the efficiency and optimization improvements of research services processes. This achievement is the result of the efforts made to integrate and promote the coordinated use of the resources of the various centres comprising the BIOCLUSTER, avoiding the overlapping of infrastructure and the dispersion of resources. Examples of relevant results are the **optimizing of the provision of equipment and the use of services** achieved through the central purchasing of the Research Centres Network and the **integration of scientific and technological platforms of common interest to be used by all members of the BIOCLUSTER.**

INTERNATIONALISATION ACTIVITIES

The internationalisation activities are transversal to the scientific improvement, for this reason a specific section that is included after the Plan 7 has been developed.

There are no proper internationalisation activities linked to the development of this plan, however, improvements in the provision of infrastructure, the efficient operation of the services and the existence of highly qualified technical staff and management has an impact on the international dimension of the research activity of CAMPUS VIDA, because there are conditions for CAMPUS VIDA players that it make more attractive to participate in international projects.

MOST IMPORTANT DEVIATIONS IN THE ACHIEVEMENT OF OBJECTIVES

There aren't any significant deviations.

AREA	**SCIENTIFIC IMPROVEMENT**
ACTION	**PLAN 7: COLLABORATIVE RESEARCH AND STRATEGIC RESEARCH AND INNOVATION ALLIANCES PLAN**
OBJECTIVES	To promote activities aimed at fostering collaborative research with companies, with the goal of establishing public-private consortiums that may lead large projects of interest to the members of the strategic group. Promote activities aimed at promoting the participation of groups and researchers of the group in large projects, especially internationally.

REQUALIFICATION OBJECTIVES

In the field of biomedical and biotechnology research and innovation, the adoption of a model of collaboration is especially relevant since the materialization of results and consequent business (business and scientific) developments require the establishment of long-range strategic alliances in R&D. It is therefore necessary the establishment of strategic consortium, with both business partners and financial partners, to enable the development of results-generating projects.

SUMMARY OF THE WORK PERFORMED

Until the launch of the CEI project, which implements a new model of scientific organization based on the Research Centres Network and its interaction with the BIOCLUSTER, research groups worked independently in the development of collaborative research activities and there was no common corporate strategy in regards to this area.

Strategic reforms (new research organization model and commitment to scientific specialization), operational and infrastructural (launch of centres, the EDI, the reinforcement on the research capacities, etc.), as well as the adoption of an internal network operation - better coordinated - have served to lay the foundations on which to define and implement an institutional strategy in the field of research and innovation alliances.

In this sense the sum of capacities inherent in the conformation of the BIOCLUSTER is representing a great opportunity to boost cooperation strategies between the public health system, University research and the business community as listed below:

- **New cooperation model: commitment to public-private consortiums.** It has been promoted the promotion of public-private consortiums based on new schemes of cooperation such as **R&D mixed units between the USC and companies** and the creation of alliances with the business sector to **access innovative public procurement processes**.

- **Participation in research networks and consortiums for the development of projects**. This strategy gives continuity to the collaborative model that was already developed by individual groups previously to CAMPUS VIDA. The new scientific organization, which enhances coordination and pursuit of internal synergies through the Research Centres Network and the BIOCLUSTER, favours the development of this strategy because it allows to internally structure more powerful scientific conglomerates (in terms of scientific capacity or integration of value chains) which has a positive impact on the attractiveness of the USC as a partner, about the possibility of access projects and the role exercised by the USC to expand options to lead consortium or work packages in national and mainly international projects.
- **In the context of the region of Galicia, efforts have been directed to foster inter-university collaboration.** USC has participated, at corporate level, in strategic projects of the University of A Coruña and Vigo, has promoted inter-university collaboration with groups from the other two Galician universities for the development of research projects and has promoted the creation of inter-university research centres.

Finally, in the field of **collaboration with companies**, work continues on the existing direction prior to the CEI project promoting R&D projects or providing technological services to companies. In this regard, in addition to focusing the efforts individually to companies - as it has been done prior to CEI - an intense activity of approach and consolidation of relations with intermediate agents such as clusters has been developed.

MOST SIGNIFICANT RESOURCES

The most significant exponent of the results of the alliances strategy for collaborative research and innovation are the achievements in international projects, in particular FP7, which have been highlighted in the chapter about internationalisation of Plan 5. The cases described below to show the most significant achievements of this strategy in addition to the results already mentioned:

- **New models of collaboration: public-private consortiums**
  - **R&D mixed units**
  - **USC - ESTEVE:** In October 2011, the University of Santiago and the pharmaceutical company Esteve inaugurated an 'in-vitro' evaluation unit, currently located on the CAMPUS VIDA CIMUS. This model of public-private collaboration in R&D means that the staff employed by the academic centre develops research tasks in the company projects, in laboratories located in the academic centre and equipped by the company. Esteve unit in CAMPUS VIDA unit was the first of its kind in Galicia and its objective is the development and implementation of automated methods for the determination of the 'in vitro' pharmacological activity for new potential pharmacological agents. In 2014 Esteve and USC have renewed Joint Operational Unit in CIMUS, increasing its funding to 3 M€ for the period 2014-2016.
  - **USC – VIAQUA:** This mixed unit realises on a technological centre CETAQUA, under the patronage of the AGBAR Foundation and its main objective is to contribute to the research, development and evaluation of technologies related to the integral water cycle, enhancing the synergies between the business, research and teaching sectors. CETAQUA has been placed in the building EMPRENDIA in CAMPUS VIDA.
  - **Innovative public procurement (CPI)**
  - **Laser-Pet Project.** This initiative aims to develop a new technology for the production of radioisotopes PET (positron-emission tomography) based on the use of a compact laser accelerator and shielded. With a budget of EUR X million and the Technological Fund co-financing, this project entails the organization of processes of innovative public procurement for the outsourcing of technology providers that participate in the developments envisaged in the framework of the project.
  - **Participation in Innovative Public Procurement consortia of the INNOVASAUDE program.** The BIOCLUSTER centres are also active in participation in consortia that are candidates to Innovative Public Procurement and Pre-commercial Public Procurement processes, recent implementation mechanism increasingly used by the public administration to promote innovation. In this sense in Galicia is developing a pioneering initiative at national level, the program INNOVASAUDE promoted by the Galician Health Service (SERGAS) to promote innovation in Galician hospitals with a significant focus on ICT for health

application.

- **Research networks for the development of projects**

  - **INNO-PHARMA Project:** R&D collaborative project consisting of the implementation of a pharmacogenomic platform applied to the validation of targets and discovery of drug candidates in preclinical phases. It also seeks to boost the pharmaceutical sector in Spain developing a space of open innovation for early drug discovery. Promoted by the CIMUS, in collaboration with IDIS, it has the support of major companies in the pharmaceutical and biotechnology industries, such as: Brainco Biopharma S.L., Palobiofarma S.L., Vivia Biotech, S.L., Almirall, Esteve, Glaxo SmithKline Investigación y Desarrollo S.L. For the financing of its budget, that amounts to 10.2 M€, it has the support of the Ministry of Economy and Competitiveness through the Technological Fund.

    Among the results already obtained by INNO-PHARMA the following should be mentioned:

    - Reception of more than 100 applications from laboratories and public research centres in Europe (http://innopharmaplatform.com) in the open call for the joint development of projects of therapeutic targets.
    - Submission of 12 proposals to European projects calls: Human Braun Project, E-rare, era-NET neuron and Horizon 2020.
    - Agreements signed with five pharmaceutical companies to promote training and exchanges with industry professionals.
    - Agreements signed to act as a beta - test of companies that come to the platform.
    - Incorporation of INNO-PHARMA to the European Network of Screening Platforms EU-OPENSCREEN of the ESFRI Roedme of the European Union (http://www.eu-openscreen.eu/) that brings together 8 European platforms of high capacity.
    - Participation in the IMI Open PHACTS project in collaboration with several international pharmaceutical companies (Pfizer, Astra Seneca, GlaxoSmithKline, Lundbeck, Merck Serono, Esteve, Novartis, Janssen, E. Lilly). Positioning and international visibility of the platform to consolidate networks of collective intelligence at international level, such as more than 4,000 scientific publications between IMI researchers.

  - **TRANSINT Project:** Five-year R&D project aimed at the establishment of a nanotechnology-based oral diabetes drug. The project is led by the USC, who coordinates a consortium of 17 institutions and companies - among which the multinational Sanofi is present- and has a budget of €11M. The project will culminate with the preclinical phase for which subsequently a pharmaceutical company is responsible in developing it. The researchers will work with molecules containing insulin already known, marketed or in clinical trial process, only that to improve their effectiveness and prevent toxicities they will be transported in the organism through a nano-transporter.

  - **KIC Proposal on Healthy Living and Active Ageing:** CAMPUS VIDA has positioned itself as an essential player in the regional proposal to participate in the call of the European Institute of Technology (EIT) for the KIC on Healthy Living and Active Ageing. The KICS are association networks involving universities, research centres, companies and regional or local agencies to work at European level the problems affecting society, through the development of initiatives to increase prosperity based on knowledge. The management of the KIC merges education with entrepreneurship, research with innovation and the public sector with the private, to establish partnerships and common projects that improve social and economic well-being of European countries. CAMPUS VIDA concurs in a call with representation, in addition of Galicia and Basque regions, of Scotland, Denmark, Italy, Germany, Holland and Spain.

- **Inter-University collaboration within the Galicia University System framework**

  - **Creation of the Industrial Mathematics Institute (ITMATI):** strategic agreement promoted by the three Galician universities for the creation of the ITMATI (www.itmati.com). Located in CAMPUS VIDA, it integrates capacities and competitive resources to promote technology transfer specializing in industrial

mathematics and operational statistics for effective response to business demands and the public administration. ITMATI has 18 associated principal investigators and since its creation in 2013 as it has formalised a Mixed Unit with REPSOL and more than twenty R&D collaborative projects with companies from sectors such as economic-finance, tourism, energy, materials, etc.

- **Contracts with companies:**

  Finally, and although in the current crisis the business investment in R&D has fallen significantly, CAMPUS VIDA has been very dynamic in the signing of R&D contracts with companies, recovering in 2013, levels of billing previous to 2009. Pharmaceutical multinationals are among the companies that work with the centres (for example: Boehringer Ingelheim, Astra Zeneca, Novo Nordisk), companies integrated into CAMPUS VIDA through the BIOGA cluster and Galician biotech companies (for example: Advancell, Nanogap, Lonza Biologics), institutions of the health system (e.g.: Institut de Recerca de l'Hospital de la Santa Creu y Sant Pa, Fundació Clínic per a la Recerca Biomèdica) and public administrations (e.g.: United States Department of Agriculture).

- **Impact on the development of new instruments of scientific policy in Galicia**

As in the Teaching Improvement area, it should be highlighted the impact of CAMPUS VIDA in the development of new instruments of scientific policy in Galicia, according to the experience developed in CAMPUS VIDA with R&D mixed units, in the framework of policies arising from the RIS3 process, the Galician Innovation Agency (GAIN) has launched a support programme to the creation of R&D Mixed Units.

INTERNATIONALISATION ACTIVITIES

In the objectives of this program, there was the establishment of international alliances, in particular with Research Centres of reference, or through the positioning in platforms or networks that facilitate the materialization of consortiums of research/training, particularly in the context.

In that objective, and at the expense of an intensification of this strategy in H2020, international positioning actions developed by CAMPUS VIDA have its greatest exponent in the significant increase in the participation and achievement of international projects. However, the results obtained in the area of internationalisation cannot be exclusively assigned to the alliance strategy, as they have transversal character to the whole of the area of Scientific Improvement, for this reason a specific section has been developed and it is included after Plan 7.

MOST IMPORTANT DEVIATIONS IN THE ACHIEVEMENT OF OBJECTIVES

Progress in the effective involvement of Campus Vida strategic partners in the governance of the CEI has been slight, something that has been compromised especially by institutional policy constraints, and that should be corrected thanks to the stable cooperation that is being consolidated.

AREA: SCIENTIFIC IMPROVEMENT INTERNATIONALISATION ACTIVITIES (PLANS 5, 6 AND 7)

The internationalisation plan of the Scientific Improvement sought to quickly increase the human and technological capacities of the research centres and strengthen their European networks and associations, as a way to increase international competitiveness, not only of the Research Centres but CAMPUS VIDA as a whole.

Therefore, a coherent set of actions were designed to improve the contacts of the Universidade de Santiago de Compostela (USC) with major research centres in Europe and strengthen the existing relations in a more systematic way within the framework of the European Research Area. The actions included in this plan contemplated the establishment of strategic alliances, improving human capacity through the promotion of mobility, the organization of international conferences and workshops and dissemination and promotion activities. The main results obtained in the area of internationalisation are summarised below:

- **Scientific production in international collaboration**

The impact of the dynamism of the Research Centres of CAMPUS VIDA is visible, among others, through the indicators relating to the **scientific production in international collaboration** because, regardless of its quantitative value, they are a reflection of the cooperative development of research activity by teams associated with institutions located in different countries. So, for example: in the case of the CIMUS in 2011 of the articles published in indexed journals, 39.7% were in international collaboration (62 articles of a total of 156) and CIQUS has published 66 articles in ISI journals, 63% are collaborative, both nationally and internationally).

- **Participation in Framework Program**

The international alliances strategy developed by CAMPUS VIDA has its **greatest exponent in the significant increase in the participation and achievement of FP7 projects**. USC has participated in a total of 372 proposals of which 72 were approved (35 in Life Sciences). This degree of participation represents an increase of 300% from previous programs and has placed the USC within the 25 Spanish institutions with greater participation in the FP and the first of Galicia. At the same time, the number of participating groups significantly increased amounting to a total of 104 groups.

USC has been present in many of the FP7 areas, demonstrating a dispersion of capacities that can be optimized. However, **greater involvement, presence and competence, in terms of proposals and their success, they focused, in terms of the theme of the projects, in areas promoted by CAMPUS VIDA.** Projects in the thematic areas of Bio-economy and Health take 20% of resources obtained, concentrated in programs like KBBE, HEALTH, ICT or SECURITY. In terms of the number of projects, of the 72 approved projects, 33 belong to the fields related to Life Sciences; 2 of them coordinated by the USC, 11 as partner and 2 networks of excellence.

- TRANS-INT Transporting Therapeutic Macromolecules across the Intestinal Barrier
- REPROBESITY new therapeutic agents against complicated obesity
- NEUROFAST The Integrated Neurobiology of Food Intake, Addiction and Stress
- INNOPHARMA pharmacogenomics platform for early drug discovery
- HELIX The Human Early-Life Exposome - novel tools for integrating early-life environmental exposures and child health across Europe
- µAQUA MicroArrays for the detection of pathogens and their toxins in fresh water
- MOSSCLONE Monitoring Air Quality using Moss
- EARTH2OBSERVE Global Earth Observation for Integrated Water Resource Assessment
- WATER_2020 Conceiving Wastewater Treatment in 2020 - Energetic, environmental and economic challenges
- LIVEWASTE Sustainable management of livestock waste for the removal/recovery of nutrients
- FACET Flavours, additives and food contact material exposure task
- SUSMILK Re-design of the dairy industry for sustainable milk processing
- PRIORITY Protecting the food chain from prions
- BAMMBO Sustainable production of Biologically Active Molecules of Marine Based Origin
- REPROSEED Research to improve Production of Seed of established and emerging bivalve species in European hatcheries
- iSEAS Knowledge-Based Innovative Solutions to Enhance Adding-Value Mechanisms towards Healthy and Sustainable EU Fisheries
- AGFORWARD Agro-forestry systems for Europe

- **Participation in the IDEAS Program**

It is also worth mentioning, the remarkable success achieved in the IDEAS Program of the European Research Council, with 4 Starting Grants, and 1 Advanced grants in the period, which is understandably below to the expectations that a scientific community such as USC should have, in relative terms it is above the average of the Spanish University System.

- **Presence in international research networks**

Over the period 2009-2013, more than 700 collaboration agreements have been signed, which has contributed in a decisive manner to facilitate the participation in international research networks, Joint Technology Initiatives and international platforms of CAMPUS VIDA, which is allowing to achieve greater visibility in international consortiums.

As an example, we could highlight the following: “Innovative Medicines Initiative”, “ChemBioBank”, “EATRIS” (European Infrastructure for Translational Medicine), “WssTP” (Water Supply and Sanitation Technology Platform), “European Technology Platform Food for Life”, “Bio-based Industries Joint Technology Initiative”, “European Innovation Partnership on Agricultural Productivity and Sustainability”, “SusChem” (European Technology Platform for Sustainable Chemistry), “EIBIR” (European Institute for Biomedical Imaging Research), “ENIGMA” (Evidence-based Network for the Interpretation of Germline Mutant Alleles), “NIH-founded GPCR-Network”, “RIGEMAMEF” (Iberian-American network of Molecular Genetics Applied to Forensic Medicine), “Partnership for International Research and Education (PIRE): Simulation of Electronic Non-Adiabatic Dynamics for Reactions with Organic Macromolecules, Liquids, and Surfaces” funded by National Science Foundation (EEUU) and lastly, a Cost Action (Action IC1002: Multilingual and multifaceted interactive information access (MUMIA).

- **Greater potential for participation in other international initiatives**

The creation of the BIOCLUSTER has represented an opportunity to place CAMPUS VIDA as a key player in the regional proposal to participate in the KIC on Healthy Living and Active Ageing, and strength to boost the role of the hospitals network within the European Infrastructure for Translational Medicine.

In this line, it is worth noting that the USC researchers are part of the European Innovation Partnership on Agricultural Productivity and Sustainability and are members of the Executive Committee of the European Agroforestry Federation. Around them, there have formed two working groups which rank more than 30 groups of competitive R&D in these strategies.

- **Increase in the international projection of the activity developed in CAMPUS VIDA**

The international projection of CAMPUS VIDA as a scientific reference is also shown through the participation of international proposals in USC calls. This is the case for example of INNOFARMA (see Plan 7), within the framework of this initiative, an international call has been made for the co-development of specific valorisation projects of active molecules getting applications from more than 60 European R&D groups.

- **Promotion of the participation of the business sector in international projects**

The development of strategic alliances with the productive sector (see Plan 7), focused mainly on the consolidation of relations with business clusters through their involvement in CAMPUS VIDA, has enabled an intense dynamic of co-operation and visibility that has begun projecting internationally. This is the case of the participation of the Business Technology Cluster in Life Sciences (BIOGA) in the INTERREG SUDOE TRANSBIO project, or the addition of partners in the Agrofood Cluster and the Aquaculture Cluster of Galicia, through USC, to FP7 projects.

The previous results in internationalisation show that CAMPUS VIDA is demonstrating a competitive and relevant scientific capacity that has been progressively promoting in the international context. Even though this progress has been slow and overly concentrated in certain areas and research groups, we should not forget the qualitative increase, and in some cases quantitative, which can be seen in the last years of FP7 entry into force, as well as the weight that this evolution has in the specialization of CAMPUS VIDA. In fact, greater participation, presence and competition, in terms of proposals and their success, have focused, in terms of the theme of the projects, in Bio-economy and Health, which attract the 20% of the obtained resources.

I.3. Transfer and valorisation

AREA	**TRANSFER AND VALORISATION**
ACTION	**PLAN 8: STRENGTHENING OF IPR MANAGEMENT CAPACITIES**
OBJECTIVES	Improve the support to the researchers of the Network of Centres and partners of the Grouping with agents of industrial/copyright specialised in the areas of knowledge prioritised, all this with the aim to obtain titles of industrial/copyright of greater quality, what will have to redundar in the optimisation of the strategies of valorisation and in a more efficient relation with customers and business partners.

REQUALIFICATION OBJECTIVES

Specialized the Industrial and intellectual property (IIP) management capabilities in the areas of knowledge of CAMPUS VIDA

Promoting the internationalisation of the strategy for licensing and commercialization of patents.

SUMMARY OF THE WORK PERFORMED AND PARTICIPANTS ROLES

8.1 Creation of a Industrial and Intellectual Property (IIP) specialized management unit

As a first step of the Valorisation Plan, there was a need to improve the support to researchers of the Research Centres Network and Group partners, with intellectual/industrial property officers specialized in their areas of knowledge, goal of obtaining intellectual and industrial property titles of higher quality, which would be an increase to the commercial value.

For this reason the IIP management unit specializes in three areas: Chemicals/Pharmaceuticals, Biotechnology and Applied Physical Sciences. This unit was created based on the USC experience and ability in valorisation management, its implementation meant the development of the following actions:

- Review and redefinition of its strategic approach and performance, with an orientation to a greater selection in applications for patent titles and more attention to the international dimension of the processes of negotiation and license which required in the transfer to the Bio-Health sector.
- Training of a core of specialists in IIP management in the three areas of specialization. In this sense, it should be noted that within the framework of the CEI project in 2011 an ICT applied to the Biomedical field IIP Technical expert was employed. Also technician with a background in Financial Economics and Accounting specialised in economic valuation of patents was employed. This team has taken on the following functions: preliminary analysis of patentability of communications of invention, advice in the drafting of the application, brokerage with IIP agents qualified for the approach and drafting of claims, presentation and monitoring of applications for national and international extensions, management of titles (maintenance, changes of ownership, etc.) and finally, training and awareness of researchers and agents of the BIOCLUSTER regarding IIP.
- Training of the staff of the unit. Training and continuous updating of the personnel of the unit has been facilitated through the participation in various courses and other vocational training actions. For example: Technology Transfer Training Programme of Isis Innovation, which included participation in courses with internships (4 technicians in 2011), preparation of the European Qualifying Examination, training course of the annual meeting of the Association of University Technology Managers (AUTM) in the United States. The interest of participation in these actions also lies in the possibility of networking for the establishment of alliances with these entities for the development of joint actions in the field of technology transfer and valorisation.
- Expert advice from the Institute of Industrial Law at the University. To reinforce the capabilities of the unit, especially in aspects related to legal issues and the training of the team, this Department of the USC also gives support, which is a reference at national level regarding IIPI.

- In terms of resources, the unit has been equipped with modern support tools for IIP management processes which include: development of a financial tool for evaluation of patents, maintenance of licenses for the use of Business Insights and Frost and Sullivan information technology services, Medtrack license acquisition (the latter is one of the most important information platforms in the Healthcare industry, that allows to search and quickly analyze data relating to the Pharmaceutical and Biotechnology industries) and incorporation of I-PENDO patent management tool..
- Finally, it is worth mentioning the establishment of Agreements with IP Agents (ABG, PONS...), developers (DIGNA BIOTECH) and international brokers for realization of joint actions in the field of management and promotion of patents.

8.2 Elaboration of a new IIP internal management regulation

In order to incorporate amendments made to recent regulation on this subject and assimilate IIP management processes to the fields of reference at international level, the University has developed a new regulation. References were taken by recent regulations adopted in Spanish universities and those of universities of international reference that stand out for their achievements in knowledge transfer.

8.3 Expansion of the range of services provided by the IPR unit and target audience

Although the unit was create associated with Research Centres Network, given the interest of its specialized nature, it is already providing service to all members of the BIOCLUSTER. In particular to the Galician Health Service (SERGAS), with this entity a protocol of work has been developed to advise their R&D units regarding IIP. The activities include the following:

- Expert advice: support to researchers during the drafting of the patent report by specialized IIP agents of PII.
- Processing: realization of procedures to request titles in the Spanish Office of Patents and Trademarks, and European Patent Office.
- Definition of the strategy of international protection and realization of all processes using the selected agents.
- Follow-up: advice on the modification of the report or claims if requested by Spanish Patent and Trademark Office. Collaboration with agents of the industrial property when resolutions come from other offices (European Patent Office or USPTO).
- Maintenance of titles: monitoring and control of the payment of fees in the corresponding offices.
- Support in the design of projects valuation and financing for these applications.

8.4 Agreements with foreign companies and institutions

Actions to promote a more efficient management of the portfolio of results in the international sphere have been implemented.

8.4.1 Agreements with companies

Assuming that for generating new result protection titles of higher quality and better opportunities of transfer, is key to know the criteria that move companies to invest in the development of a new technology, agreements have been established to know the transfer and innovation strategies of companies and entities of reference showing researchers and transfer managers their priorities and how to act. Agreements with leading institutions are as follows:

- **Novo Nordisk** (2012). It counted with the collaboration of Franklin W. Okumu, researcher of the "Oral Formulation Research" Department, integrated in the Novo Nordisk Diabetes research unit.

- **TCD Pharma y Amadix** (2012). The business model of both companies is to identify new therapies and tools of diagnostics in cancer, to assess and, where appropriate, license, research results. Its interest focuses on identifying outcomes at early stages of development to undertake the process of maturation until its entry into the international market.

8.4.2 Agreements with other institutions

- **Incorporation into the I-Bridge platform**. I-Bridge Network (Kauffmann Foundation) (2012-2013) was established as the reference platform for international dissemination. 26 new research results of CAMPUS VIDA were disseminated through this platform, resulting in the request for additional information and establish conversations with 8 of them, and the signing of 2 first choice agreements.
- **ISIS Innovation - University of Oxford (2012).** A strategic agreement was signed to receive advice in the design and implementation of the Proof of Concept Fund and the Transfer Accelerator Fund (see plan 9).
- **Office of Technology Development of Harvard University (2012).** An agreement was reached to receive training on Proof of Concept Funds, these actions allowed to know the functioning of its Biomedical Accelerator Fund.
- **Institute of Biomedical and Biomolecular Research, University College of Dublin** (2013): Professor David James Brayden visited Campus Vida to give a seminar on the use of technologies of "drug delivery" for problematic drugs. Inventor on more than 10 patents and with a continuous history of collaboration with the industry, he told participants his experience in research and transfer in Nanomedicine.

8.5 Participation in international events

An annual programming for participation in international technology transfer promotion events was developed, as for example BioSpain; ILSI-BIOMED, etc.

MOST SIGNIFICANT RESULTS

The most significant exponent of the potential which represents the strengthening of IIP management capacities for its promotion internationally is the data related to Life Sciences patent portfolio which by 2013 is made of 81 titles, representing an increase of 35% over 2009. More than a half of the patents are shared with BIOCLUSTER agents.

In addition to these quantitative results, the following achievements are noteworthy:

- With the implementation of this plan, CAMPUS VIDA has adopted a policy of protection of results, aligned with the objectives of the CEI project and the resources and capabilities needed to operate efficiently in managing IIP, in the context of the wider process of valorisation and transfer of results and capabilities to promote market placement.
- In particular, it is worth noting that the staff of the unit is trained to deal with IIP management processes at international level, so they participated in international training activities. Result of this effort is the increase in the portfolio of international titles.
- In relation to the previous point, the strengthening of capabilities to operate in the international arena is the most distinctive achievement in relation to the stage prior to CEI. The agreements and activities developed in collaboration with foreign entities described in the section on work carried out on this card are placed here (Universities of Oxford, Harvard, Kauffmann Foundation, etc.).
- Participation in international projects for the development of valorisation actions at international level. This is the case of the following projects:
  - BIOEMPRENDE, project of cross-border cooperation for the promotion of the Biotechnology sector in Galicia. Throughout this project, unit technicians have developed actions of analysis and assessment of the

commercial potential of technologies in the Biotech sector, including the definition of IIP protection strategies. This project was the first step to give access to CAMPUS VIDA technologies to Proof of Concept Fund or the creation of spin-offs, such as e.g. Biostatistics.

- NANOVALOR, project of cross-border cooperation between Galicia and Northern Portugal, focused on the identification of technologies with commercial potential in the field of Nanoscience and the definition of valorisation and transfer processes adapted to the peculiarities of this technological discipline.

- From the unit, assistance has been given to IIP management processes of the international projects portfolio in which the USC participates, as well as specific national projects.

INTERNATIONALISATION ACTIVITIES

Specific internationalisation activities haven't taken place because, as reflected in previous paragraphs, the IPR management unit and its capacity-building actions have focused on increasing their potential for action at the international level. The internationalisation actions and their results have been described in the previous paragraphs of this article.

MOST IMPORTANT DEVIATIONS IN THE ACHIEVEMENT OF OBJECTIVES

There aren't any significant deviations

AREA	**TRANSFER AND VALORISATION**
ACTION	**PLAN 9: R&D RESULTS VALORISATION**
OBJECTIVES	Development and establishment of capabilities and programs for the efficient valorisation of research strategies and results that optimize transfer processes and the creation of new technology based companies, generating a solvent framework to attract private investment to the development of public research.

REQUALIFICATION OBJECTIVES

Developing a Results Valorisation Unit associated to the Research Centres Network to, in specialized way and progressively, undertake the functions of identification of patentable and subject to valorisation of research results, the evaluation of their commercial potential and the establishment of necessary valorisation projects and business development.

Define a methodology of private investors' participation in the management Public R&D results in order to develop and manage a Proof of Concept Fund, to valorise research results generated in the BIOCLUSTER in the shortest possible time.

SUMMARY OF THE WORK PERFORMED AND PARTICIPANTS ROLES

The actions included in this plan are concentrated in the provision of **support services for the design and implementation of valorisation projects**, as first step of the technology transfer process, and secondly in the **promotion of entrepreneurship**, as a way of marketing of R&D results as a generator of companies intensive in technology and innovation and highly qualified employment.

Since the valorisation process integrates the entire sequence of technical and commercial actions to lead to the results of scientific activity from the laboratory to the market, this plan was developed in coordination with plan 8, with regard to the aspects of protection of results.

9.1 CAMPUS VIDA valorisation fund: Transfer accelerator

The most distinctive action, due to its innovative character in the context of university valorisation instruments

nationally, was the design and implementation of a Valorisation Fund, focused on the provision of technical and financial assistance for the development of Proof of Concept projects.

The **Transfer Accelerator** program grew out of the need to improve the process of valorisation of research results, as a key aspect of the technology transfer process, giving it a financial tool for the maturation of research results, increasing the potential for returns and reducing uncertainty and risk to partners, clients and investors. For the design and implementation of this program the collaboration of the University of Oxford through Isis Innovation was necessary.

The actions of the program began with its design, based on the analysis and consultations to potential investors and international managers with experience in these programs. For the definition and implementation phases, we had the participation of ISIS Innovation. After its start phase, two calls for projects involving a total of 58 candidates were launched in 2012 and 2013. Once evaluated, there was a selection of 17 projects that met the following requirements for access to the Fund: gap in its technological development, translational character of the proposed work, existence of market and detection of potential partners for its development.

The participant projects of the Transfer Accelerator in this period were the following:

- Marketing actions for commercialization of a new DNA site-directed mutagenesis and cloning method, CiPCR
- Wavefront coding in ophthalmology
- Servando, an open architecture for the comprehensive follow-up of patients at home
- Antioxidant and antibacterial ingredient for cosmetics formulation
- Production of livestock feed with parasiticide fungal spores
- Design and manufacturing of active GRIN beam shapers for laser applications
- Ionanofluids: Ionic Liquids + Nanoparticles
- Development of microspheric vaccines against the fish pathogens Aeromonas salmonicida and Neoparamoeba pemaquidensis
- Aqueous pharmaceutical system for nail psoriasis treatments
- AFFINITIER: A Software to design, analyze and organize molecular binding experiments
- OBS: Obestatin analogs for muscle regeneration
- OPENET4PEOPLE: Software to manage location-based mobile marketing campaigns
- SIAM: New membrane bioreactor for the removal of organic matter and nitrogen from wastewaters

9.2 Entrepreneurship and creation of EBTS

Prior to the launch of CAMPUS VIDA, the University of Santiago was already an international leader in the field of promotion of entrepreneurship, with instruments (UNIRISCO society, the programs Company-Concept and Woman Emprende, etc.) and infrastructure (such as the Emprendia building for incubation services and technology). In the specific context of this plan, entrepreneurship promotion activities have focused on five main areas:

9.2.1 Adoption of new methodologies for the promotion of entrepreneurship.

Creation of multidisciplinary teams integrated professionals to scientific teams with business administration skills. In this sense, there have been two outstanding performances: the ARGOS program, which has teams of entrepreneurs with the obligatory participation of a member with knowledge of business management, and the MANAGING DAY program that recruits professional managers for spin-off projects in its early stages of development.

9.2.2 Establishment of institutional partnerships for the promotion of entrepreneurship.

CAMPUS VIDA international projection increases its appeal to establish institutional agreements for the development of actions for the promotion of entrepreneurship. Over the next six years different agreements were signed with various institutions, among which the following are included:

- Bancaja Chair for Young Entrepreneurs. Its activities are primarily directed to students with the aim of stimulating entrepreneurial attitudes and facilitate the creation of new companies.
- Program Akademia from the Bankinter Innovation Foundation: Annual course of "Innovation 360º" on the Emprendia building aimed at students in the final year, master and doctorate students. The course offers complementary training in innovation and entrepreneurship, and is based on a teaching method based on action, has entirely digital materials with a first-level content generated by the international experts of the Bankinter Foundation "Future Trends Forum".
- Repsol Foundation Entrepreneurs Fund. Institutional presentations are organized in Campus Vida and Campus of Lugo and it promotes and supports the presentation of projects to this Repsol Foundation initiative that give entrepreneurs intensive support to their business project in their first years of life.
- Youth Galicia NET. Palacio de Congresos. In collaboration with BIC Galicia and Igape USC participates annually in this event through the Campus Vida incubator (Uninova).
- “Getting Contacts”. International event in collaboration with the city of Santiago, showing the capabilities of Campus Vida in support of entrepreneurs, intellectual property management and valorisation processes.
- Youth in Movement. Eurocity Tui-Valença. In collaboration with the External and European Union Relations Directorate General of the Xunta de Galicia, USC provided training in the mobility program “Erasmus for Young Entrepreneurs”.

9.2.3 Promotion of entrepreneurs mobility

USC has participated in two projects of promotion of entrepreneurs international mobility: “EUROPA EMPRENDE” from the Erasmus program for Young Entrepreneurs (EYE) and "New entrepreneurs: learning to be an entrepreneur", in collaboration with RedEmprendia and oriented towards the mobility of entrepreneurs between the Iberian Peninsula and Latin America.

9.2.4 Participation in organization of outreach activities and events

CAMPUS VIDA organizes and participates regularly in entrepreneurship promotion events held in Galicia, such as: the "Contest of innovative business ideas and business projects", that counts with the collaboration of the Galician Institute for Economic Promotion (IGAPE), which mobilizes an average of 400 innovative business ideas, and the "Investors in Biotechnology Event", forum for presentation of business projects to investors organized by the Cluster of Biotechnology companies (BIOGA) member of the BIOCLUSTER.

In addition, numerous training activities for entrepreneurs’ managerial skills and business management have been organized: seminars on entrepreneurship, conferences on patentability, elaboration of business plans, consolidation and business growth, etc.

9.2.5 Review of the University regulatory framework for the creation of spin-offs.

A new operational scheme has been defined and implemented incorporating the new legislation in the field of University entrepreneurship and has been embodied in a draft of "Rules for the creation of spin-offs" (in review stage).

9.2.6 Participation in RedEmprendia:

In the specific field of entrepreneurship, CAMPUS VIDA is a member of the Emprendia Network and actively participates in its initiatives. The President of this network which brings together 18 universities Spanish and

Iberian-American, Professor Senén Barro is a permanent teacher and research of CAMPUS VIDA, which also has in its facilities the technical secretariat of the network.

9.3 Partnership strategies for the development of valorisation and entrepreneurship actions

Collaboration agreements have been signed with entities such as the SERGAS, Barrié Foundation and the Botín Foundation for the development of joint actions for the promotion of valorisation.

- **CAMPUS VIDA valorisation fund: Transfer Accelerator**

Strengthening organizational and technical capacity in terms of valorisation, in addition to the best allocation of resources (Tools, databases, specialized advisory services) has made it possible to **accelerate the process of valorisation expanding portfolio of transfer projects with different objectives**: license, fundraising for proof of concept and creation of companies, thus creating a solvent framework to attract private investment to the development of public research.

In regards to the **Transfer accelerator**, the results linked to the 17 projects supported by the Fund are as follows:

- 2 licensed technologies: Servando, an open architecture for the comprehensive follow-up of patients at home and Antioxidant and antibacterial ingredient for cosmetics formulation.
- 2 company created and 2 in development
    - Createds: i-Grape (Antioxidant and antibacterial ingredient for cosmetics formulation) y Software 4 Science (AFFINITIER: A Software to design, analyze and organize molecular binding experiments)
    - In development: “OPENET4PEOPLE: Software to manage location-based mobile marketing campaigns” y “Development of microspheric vaccines against the fish pathogens Aeromonas salmonicida and Neoparamoeba pemaquidensis”
- 1 technology in a pilot plant: SIAM.
- 5 technologies in negotiation for licence/exploitation: Production of livestock feed with parasiticide fungal spores, Design and manufacturing of active GRIN beam shapers for laser applications, Aqueous pharmaceutical system for nail psoriasis treatments, Wavefront coding in ophthalmology, Ionanofluids: Ionic Liquids + Nanoparticles.
- 1 project dropped (no cost) + 1 negative result. CiPCR + Obestatin analogs for muscle regeneration

On the other hand, it should be noted that, as a result of advances in management and internationalisation of the transfer and valorisation processes in Campus Vida, during this period, 75 international patents have been requested, 35 first choice agreements with companies signed and 15 technologies licensed.

A prominent impact of this action is the adoption of policies derived from the RIS3 Valorisation program which takes the USC transfer accelerator as reference. Also the SERGAS has launched a program of Valorisation in the context of the INNOVASAUDE initiative similar to CAMPUS VIDA Transfer accelerator, with regard to objectives and processes.

- **Entrepreneurship**

On the other hand, 13 new companies based on USC technologies have been created between 2009 and 2014, forming a base of EBTs that created 400 jobs, with a market value of more than 20 M€. The new firms are: Software 4 Science, ALVARIZA ASISTENCIA TÉCNICA AMBIENTAL, S.L., XUNTOS. ATENCIÓN PSICOLÓXICA E PSIQUIATRÍA, S.L., DEROCERAS, S.L., FAZ cultura, desenvolvemento e innovación, S.L., BIOSTATECH, ADVICE, TRAINING & INNOVATION IN BISTATISCS, S.L., CILENIS, S.L., GENEAQUA, S.L., BIOVÍA S.L., Biocen, Ermet, Métrica Global e ISEM.

- **Strategic alliances**

As a result of the partnership for the promotion of the valorisation strategy, two projects of valorisation are funded by the Barrié Foundation: CTC-TRAP y Quorum Quenching, Lentimed by Mind the Gap of Fundación Botín, and Obestatina and Oxalacetato para tratamiento de Ictus by SERGAS.

INTERNATIONALISATION ACTIVITIES

All actions of technology valorisation and transfer are internationally developed from start to finish, that is: analysis of the international commercial and technological context in the implementation of processes of valorisation, patents of international geographic coverage, identification of technological, commercial and financial partners in the international arena, international license patents and creation of companies with the aim of operating in the international market.

Therefore, internationalisation activities are inherent to all the valorisation process as described in paragraphs relating to work and more significant results that have been already suggested in questions such: collaboration with ISIS Innovation (University of Oxford) in the definition of the Transfer accelerator, international promotion of technologies involved in the transfer process, international mobility of entrepreneurs projects, and participation of international events for the promotion of entrepreneurship.

MOST IMPORTANT DEVIATIONS IN THE ACHIEVEMENT OF OBJECTIVES

Given the context of budgetary constraints affecting the development of the project, some of the activities under this plan were redirected, so for example, although in principle it was expected the implementation of two distinct IIP management and valorisation units, we have opted to integrate both units and to concentrate efforts and resources of the plan 9 in the creation of the Proof of Concept Fund. The results of the Transfer accelerator, pioneering initiative in Galicia which has served as a reference for the start-up of new programs of valorisation of the Galician Innovation Agency (GAIN), confirm the success in the election of this strategy.

I.4. Social projection and interaction

AREA	**SOCIAL PROJECTION AND INTERACTION**
ACTION	**PLAN 10: TRANSFORMATION OF THE CAMPUS FOR THE DEVELOPMENT OF AN INTEGRAL SOCIAL MODEL**
OBJECTIVES	Project the concept of UNIVERCITY from the Humanization Plan of CAMPUS VIDA, promoting activities relating to volunteering, participation, and environmental and social education as set out in USC the Sustainable Development Plan.

REQUALIFICATION OBJECTIVES

Implement the Sustainable Development Plan, which seeks to optimize the resources of USC, reduce the environmental impact of its activities, incorporate or intensify the knowledge and consideration of environmental aspects in teaching and research, and to value its heritage as an economic and social asset that must be enhanced and preserved.

Promote mobility and accessibility through the promotion of means of transport with low environmental impact, improvement of public transport and the reduction of road traffic on university campuses with the aim of improving the quality of University life.

Improve existing university houses and halls, as well as the sports facilities in order to integrate its sports offer in the city, opening USC facilities, schools, and sports competitions to any citizen.

Project the image of the City of Santiago as a universal focus of knowledge and provide a bridge for the reinforcement of scientists among leaders of the highest scientific relevance worldwide and USC researchers and the Campus Vida Group.

SUMMARY OF THE WORK PERFORMED AND THE PARTICIPANTS ROLES

10.1 Sustainable Development Plan

The following activities were developed in the framework of the Sustainable Development Plan between 2009 and 2013:

10.1.1 USC Sustainable Development Office

To implement the Sustainable Development Plan a coordinator was initially appointed and later, in 2011, the Sustainable Development Office was created and put into operation as a technical and administrative unit with its own identity within the University organization. Competencies are the design and the implementation of actions in the field of social responsibility and, particularly, within the framework of the CEI project, the implementation of the Sustainable Development Plan. Most outstanding actions with regard to its deployment are described in the below.

10.1.2 Sustainability Scholarship Program

To encourage student participation in the activities of the plan, a scholarship was launched in 2012program offering degree, master, *diplomatura* and *licenciatura* (old degree programs) students the possibility of collaborating in the implementation of sustainability actions in different fields.

10.1.3 USC in Transition Program

This environmental education initiative included specific actions segmented for different members of the University community (students, teaching and research staff and administration and services staff). Its aim was to boost these groups to implement small-scale transition projects, and also to promote other more sustainable models of life and contribute to reducing the University's footprint and ecological debt. The project's identifying mark is the relationship with the environment, through its interaction with several citizen groups, being aware of its potential as a social reference progressing towards a more conscious and sustainable lifestyle. The project relies on the advice and analysis of specialists in environmental education and activism, and pioneer in the Spanish University System. This project is characterized by its "bottom-up", cross-cutting initiatives, and the interaction with the

environment and social participation.

10.1.4 Social Networks

The dynamisation of activities of environmental participation, promotes the use of social networks, so to this end, two profiles on Facebook and Twitter are managed.

10.1.5 Application of bioclimatic and sustainable building criteria

The new buildings at CAMPUS VIDA are designed according to a series of criteria relating to the use of renewable energy (geothermal in CITIUS, solar heating in CIQUS-CIMUS), efficient management of urban waste (specific allocation of containers, internal and external, to achieve an effective selective sorting of waste), use of natural light, landscaping with native species, accessible buildings to the entire University community.

10.1.6 Other actions

In addition to the above, the following actions should be noted:

- Creation of urban vegetable gardens and training program in the field of ecological horticulture, food and health, and carbon footprint.
- Increase of green areas and the number of green routes.
- Study and cataloguing of the Lugo's flora in its Campus, and the development of botanical, accessible routes in a virtual environment, which will allow a better understanding of the unique natural heritage of this campus.
- Actions to support the Botanical Garden, a unique element for the environmental training of the University, which represents an area of research, dissemination and recreation of scientific and landscape value, which can be used and enjoyed not only by the University community but also by the city.
- Supply the Museum of Natural history with educational elements, which act as facilitator and catalyst of scientific and outreach activities, in collaboration with the Sustainable Development Plan and coordinated with the local environmental education program.

10.2 Mobility and Accessibility

This plan has been significantly affected by the economic constraints that have affected the CEI project as a result of the economic crisis. In this sense, planned pedestrianisation measures not could be executed, so efforts went to: promote awareness and dissemination of sustainable mobility actions, implementation of the bicycles loan program and bicycle allocations to student halls, increase the number of bicycle parking spaces, encourage the use of shared transport and collaborate with the consortium of Santiago in the preparation of the city's Mobility Plan.

10.3 Improvement of halls, accommodation and sports facilities infrastructures

The works undertaken in halls and accommodation infrastructures have focused on alleviating deficiencies arising from the use and aging of materials, as well as dysfunctions as a result of not achieving the functional standards and security. Comprehensive renovations of two buildings and the improvement of conditions of all residences fire fighting systems, are added to other performances such as: resolution of structural problems, restoration of facades to eliminate risk of fall of materials, improvement of outdoor lighting with new installations, WIFI networks set up, improvement of conditions of habitability, renovation of rooms, update of spaces for new uses by residents, supply and installation of equipment.

In regards to sports infrastructures, the improvement actions have focused on the renovation of existing facilities, such as: paving, improvement of facilities, functional improvements, improvement of safety conditions, and provision of equipment.

10.4 Conciencia Program

The ConCIENCIA program aims to promote scientific communication by personalities at the highest international level to project the image of the City of Santiago as a universal focus of knowledge and provide a bridge for the reinforcement of scientists among leaders of the highest scientific relevance worldwide and USC researchers and the Campus Vida Group.

In the framework of this initiative, visits of Nobel Laureates to the USC were organized with a program of activities which involved master lectures and also holding meetings with CAMPUS VIDA researchers.

MOST SIGNIFICANT RESULTS

- **Plan de Desarrollo Sostenible**

- **Sustainable Development Plan**

The creation of the Office of sustainability was an organizational reinforcement of the Sustainable Development Plan, based on the responsibility distributed, through centre coordinators and sustainability interns, they identify and carry out education and awareness activities in each Centre, thus making the Sustainable Development Plan closer and effective. This organizational structure was completed with the award of the USC in Transition Scholarships, for the development of the above awareness and social participation initiatives. The program increased to 42 the number of scholarships awarded each academic year aimed at the promotion of students' environmental training and the collaboration in outreach and participation programs in this area. Over the period 2009-2013 there have been a total of 175 Sustainability Scholarships awarded.

As a result of the intense activity promoted by the plan, the following impacts are highlighted:

- Increasing the participation of the University community in environmental training activities and particularly in action groups aimed at the reduction of the institution's environmental impact.

- Improvements power, heat and water energy saving, through performances in infrastructure, training and awareness campaigns. Development of a set of environmental indicators for monitoring the environmental performance of the USC and boost participation in surveys and rankings, designed for the knowledge of sustainability implementation levels in higher education institutions.

- Increase in the number of buildings with bioclimatic and accessibility criteria in its tendering specifications.

- Adaptation of buildings for community activities in the fields of culture and environment.

- Improvements in the management of hazardous waste, including the drafting of a waste reduction plan. Promotion the knowledge of waste management by the University community, particularly students, through courses, guides, provision of specific containers and promotional activities in general.

- **Mobility and Accessibility**

Despite the limitations for the development of the planned actions in the field of mobility and accessibility, the sustainable mobility awareness and dissemination program has obtained great results which include the decline in the use of the car by members of the University community (39.4% in 2007, 24.5% in 2012) and increasing the use of bicycles (1.7% in 2007, 4.0% in 2012).

- **Improvement of accommodation and sports facilities infrastructures**

Following the development of the CEI project, USC has better accommodation infrastructures (University Hall (thereinafter CM) Rodríguez Cadarso, Burgo de las Naciones and Bel e Gay student halls) that incorporate specific spaces for graduate students, researchers and visiting professors.

In regards to sports, the renovation of facilities contribute to the integration of the sports offer in the city through schools, competitions and sport activities open to any citizen, for example the DEPORVIDA project.

- **CONCIENCIA Program**

During this period, the CONCIENCIA initiative has managed the following Nobel Prize visits: Sir Harold W. Kroto, Mohamed ElBaradei, Ada E. Yonath, Samuel Ting, Ei-ichi Negishi, Sir Tim Hunt, Sir Richard J. Roberts, Richard Royce Schrock, Sheldon Lee Glashow, Ei-ichi Negishi, Sir Anthony James Leggett, Eric Allin Cornell and Albert Fert.

MOST IMPORTANT DEVIATIONS IN THE ACHIEVEMENT OF OBJECTIVES

Delay in the execution of the redevelopment project.

ANNEX II. SIGNIFICANT RESULTS

II.1. Teaching improvement and adaptation to EHEA

PLAN 1: TEACHING IMPROVEMENT				
Result No.	**EIE**	**Description**	**Format**	**Completion date**
1.1	Teaching improvement and adaptation to EHEA	EEES Catalogue of courses adapted to EHEA	Document	2010
1.2		Creation and provision of Teaching Innovation Centre	Document	2009
1.3		Development of new training activities	Courses	2009-10-11-12-13
1.4		New didactic tools for language training	Document	2009-10-11-
1.5		SERGAS network support for clinical training	Agreement	2009
1.6		14 Faculties with teaching areas adapted to EHEA	Building work	2009-10-11-12
1.7		New Virtual Campus model	Web	2012
1.8		New Virtual Campus tools	Software	2012
1.9		Employment of technicians for e-learning process support services	Contracts	2009-2011
1.10		Provide CeTA of new technical resources	Purchase	2010-2011

PLAN 2: PROMOTION OF FOREIGN LANGUAGES KNOWLEDGE AND PROMOTION OF SPANISH/GALICIAN LANGUAGES				
Result No.	**EIE**	**Description**	**Format**	**Completion date**
2.1	Teaching improvement and adaptation to EHEA	Organisational re-structure of Modern Languages Centre	Service	2010
2.2		Increase of courses offered: No. of language and No. of courses	Courses	2010-2012
2.3		Increase of courses offered: classroom taught and mixed learning	Courses	2010-2012
2.4		Increase in the number or enrolments at CLM	Document	2010-2013
2.5		Implementation of self-learning modules	Service	2010
2.6		Implementation of virtual classrooms	Services	2011
2.7		Increase in the number of certificate tests	Service	2010-2012
2.8		Language service to teachers in international consortiums	Service	2011
2.9		Language support to Mobility programs participants	Service	2011

PLAN 3: IMPLEMENTATION OF THE INTERNATIONAL DOCTORATE AND POST-GRADUATE SCHOOL				
Result No.	**EIE**	**Description**	**Format**	**Completion date**
3.1	Teaching improvement and adaptation to EHEA	Creation of International Doctorate School	CG Minutes	2010
3.2		Approval or Internal Regulations	CG Minutes	2011
3.3		Appointment of School Director	CG Minutes	2010 and 2011
3.4		Formalisation of Doctorate School according to regulation RD99/2011	CG Minutes	2012
3.5		Xunta de Galicia Authorisation by Decree 95/2013	DOG	2013
3.6		Inclusion of EDI in Ministry of Education RUT Ref:15028506	Document	2013
3.7		USC Spanish University with more courses offered RD99/2011	Progr.verificados	2011
3.8		Specialisation of Doctorate offer around CAMPUS VIDA clusters	EDI Catalogue	2012
3.9		Alliances with foreign institutions: Joint mobility and courses	Agreements	2010-2012
3.11		EDI internationalisation programs: participation in NANOFAR	Consortium	2012
3.13		Participation in Merimée Program	Agreement	2011
3.14		Organisation of GRAD-SCHOOL Courses	Course	2012 and 2013
3.15		Multidisciplinary skills courses program	Course	2013

PLAN 4: TALENT ATTRACTION AND MOBILITY				
Result No.	**EIE**	**Description**	**Format**	**Completion date**
4.1	Teaching improvement and adaptation to EHEA	Employment of Competitive programs researchers in training	Resolution	2009-2013
4.2		CAMPUS VIDA Pre-doctoral contracts program	Resolution	2011-2013
4.3		Employment of Competitive programs postdocs	Resolution	2009-2013
4.4		CAMPUS VIDA Post-doctoral Grants Program	Resolution	2012- 2013
4.5		Post-doc stabilisation Program	Contract	2009-2013
4.6		Starting Grantees Researchers	Resolution	2010-2011
4.7		Advanced Grantee Researcher	Resolution	2013
4.8		International visiting researchers through PEIN-PIDA-FP7…	Programs	2011-2013
4.9		Students received/sent in ERASMUS MUNDUS Programs	Programme	2009-2013

II.2. Scientific improvement

PLAN 5: DEVELOPMENT OF A NEW RESEARCH ORGANISATION AND MANAGEMENT MODEL BASED ON OBJECTIVES				
Result No.	**EIE**	**Description**	**Format**	**Completion date**
5.1	Scientific improvement	CIQUS; CIMUS and CITIUS: creation, appointment of researchers	CG Minutes	2010
5.2		CIQUS and CIMUS: appointment of Commissioning Directors	CG Minutes	2010
5.3		CIQUS; CIMUS: inauguration of new facilities	Event	2010
5.4		CIQUS and CIMUS: approval of Rector Commission and Strategic Plan	Report	2010
5.5		CITIUS: inauguration of new facilities	Event	2011
5.6		CITIUS: appointment of Commissioning Director	CG Minutes	2011
5.7		Operability CIQUS: projects portfolio(40); 90 JRC articles with mean impact factor 5.8; patents portfolio (10); spin off…	Report	2013
5.8		Operability CIMUS: projects portfolio (90, 14 intern.); 200 JRC articles with mean impact factor 5.5; patents portfolio (15); spin off…	Report	2013
5.9		Operability CITIUS: projects portfolio (50); 90 JRC articles with mean impact factor 5.8; patents portfolio (8); spin off…	Report	2013
5.10		CEBEGA: approval of technical and building project		2010
5.11		CEBEGA: completion of building work		2014
5.12		IDIS: ISCIII accreditation	Resolut.	2010
5.13		Incorporation to Strategic Group of Biomedical Research Institutes and Rof Codina; INL…	Agreement	2010
5.17		Incorporation of Health and BIOGA clusters	Minutes	2011

PLAN 6: IMPROVEMENT OF RESEARCH SUPPORT SERVICES PLAN				
Result No.	**Area**	**Description**	**Format**	**Completion date**
6.1	Scientific improvement	CIQUS; CIMUS and CITIUS: Identification of infrastructure needs included in the Strategic Plan progress	Report	2010
6.2		CIQUS and CIMUS : provision of common interest infrastructures.	Contracts	2010
6.3		CIQUS and CIMUS: Implementation of maintenance measures and protocols	Services	2010-2011
6.4		Centres Network (CIQUS; CIMUS and CITIUS): Employment of 15 technicians.	Contracts	2010-2011
6.6		CITIUS –infrastructures provision	Contract	2011
6.7		IDIS Equipment; CEBEGA; genotyping node	Report	2010-2012
6.10		Genotyping node equipment		2010-2012
6.11		Innopharma platform		2012
6.12		Creation of Purchases central		2011

PLAN 7: COLLABORATIVE RESEARCH AND RESEARCH AND INNOCATION STRATEGIG ALLIANCES PLAN				
Result No.	**Area**	**Description**	**Format**	**Completion date**
7.1	Scientific improvement	Esteve Mixed Unit	Contract	2009-2013
7.2		Viaqua Mixed Unit	Contract	2010-2013
7.3		Laser PET Project	Report	2012
7.4		CITIUS participation in Innovasaúde tenders	Report	2012-2013
7.5		Innopharma Project	Report	2102
7.6		Transint Project	Report	2012
7.7		KIC Healthy Living	Report	2013
7.8		Creation of ITMATI	Agreement	2012
7.9		Contracts with companies	Contracts	2009-2013
7.10		Creation Mixed Units Program by GAIN	Call	2013

SCIENTIFIC REPORT INTERNATIONALISATION ACTIVITIES, TRANSVERSAL TO PLANS 5, 6 AND 7				
Result No.	**Area**	**Description**	**Format**	**Completion date**
INT.1	Scientific improvement	Reinforcement of the International Projects unit	Contracts	2010
INT.2		Internationalisation plan design	Docum.	2010
INT.3		Scientific production in international collaboration	Articles	2009-2013
INT.4		Participation in 372 FP7 projects	Projects	2009-2013
INT.5		Participation in 72 FP7 Projects (372 proposals) and 33 Projects in Life Sciences	Contracts	2009-2013
INT.7		Participation IDEAS ERC program	Resolutions	2009-2013
INT.8		Collaboration agreements with international institutions in international Research networks	Agreements	2009-2013
INT.10		Participation in the preparation of KIC call proposal	Report	2012-13
INT.11		Participation on EIP on Agricultural Productivity and Sustainability	Agreement	2013
INT.12		Member of the Executive Committee at the European Agroforestry Federation	Minutes	2013
INT.13		60 proj of European groups to co-develop Innopharma	Projects	2013
INT.14		Project TRANSBIO	Agreement	2012

II.3. Transfer and Valorisation

PLAN 8: STRENGHTHENING OF IIP MANAGEMENT CAPACITIES				
Result No.	**Area**	**Description**	**Format**	**Completion date**
8.1	Transfer and Valorisation	Employment of specialised technicians	Contracts	2010
8.2		Staff training	Certificates	2010-2013
8.3		USC Industrial Law Institute consultancy	Service	2010-2013
8.4		Purchasing of IIP management process support tools		2010-2013
8.5		Agreements with industrial property agents	Agreements	2010-2013
8.7		Collaboration in the management of intellectual property with SERGAS. Establishment of contacts with Santiago, Coruña and Vigo Hospital Foundations. Advice to researchers and researcher's applications from the Santiago University Hospital Complex (CHUS).	Work protocol	2010
8.8		Agreements with international collaborators (Novo Nordisk; TCD Pharma; Amadix; IBridge; ISIS Innovation; Office of technology Development of Universidad de Harvard; Institute of Biomedical and Bio molecular Research University of Dublin…	Agreement	2012
8.14		Participation in international projects: BIOEMPRENDE; NANOVALOR; RENOVABLES…	Execution Report	2010-2012

PLAN 9: RESULTS VALORISATION				
Result No.	**Area**	**Description**	**Format**	**Completion date**
9.1	Transfer and Valorisation	Transfer accelerator (AT).	Call	2012-2013
9.2		AT: 17 Projects reached the Evaluation Committee; 13 Approved Projects	Projects	2012-2013
9.3		AT: RESULTS: 2 companies created; 2 companies in the process of creation; 1 pilot plant technology; 5 technologies in negotiation phase	Licences and Business plans	2013
9.9		Promotion of entrepreneurship: creation of companies	Agreements TT	2010-2013
9.10		New entrepreneurship methodologies: ARGOS; MANAGING DAY	Document	2011-2013
9.13		Entrepreneur mobility program EYE	Projects	2011
9.14		Participation in events	Documents	2011
9.15		New regulation framework for the creation of SMEs	Document	2010
9.16		Agreement with Barrie Foundation for valorisation actions	Agreement	2010
9.17		Agreement with Botín Foundation for valorisation actions	Agreement	2010
9.18		Agreement with SERGAS for participation in Valorisation program	Agreement	2013
9.19		Inclusion in SERGAS policies of a valorisation program	Document	2013

II.4. Social projection and interaction

PLAN 10: SOCIAL PROJECTION AND SUSTAINABLE DEVELOPMENT				
Result No.	**Area**	**Description**	**Format**	**Completion date**
10.1	Social projection and interaction	Creation of the sustainable development office	Resolution	2010
10.2		Award of Sustainability Scholarships	Resolution	2010
10.3		Award of Sustainability Scholarships, university participation e integration. USC in Transition Scholarships and Green Classroom	Social responsibility report	2011-2012
10.6		Environmental education activities organised by the ODS (average of 20 activities per year)	Social responsibility reports	2011-2012
10.7		USC in Transition Program: environmental participation activities (average 20 activities a year); 5 urban gardens and 15 privately managed allotments	Social responsibility reports	2011-2012
10.11		Introduction of bioclimatic criteria in the preparation of the project and building work of the Research Centres (CITIUS, CIMUS…)	Document	2010
10.12		Introduction of bioclimatic criteria in the purchasing of lab equipment (CIMUS, CIQUS and CEBEGA).	Document	2010
10.13		Accessibility actions in student halls and faculties	Project building work.	2010
10.15		Participants in the bicycle loan program at Santiago and Lugo Campuses	Document	2010
10.16		Promotion of waste management: increase in the provision of recycling infrastructure.	Infrastructures	2010
10.17		Projects of waste management in university residences: consolidation of composting as a waste treatment system	Action	2010
10.18		Calculation of environmental impact and University activity. Algorithm and panel of indicators to monitor the environmental impact of the USC.	IT Programme	2010

ANNEX III. PROGRESS INDICATORS

III.1. Teaching improvement and adaptation to EHEA

PLAN 1: TEACHING IMPROVEMENT PLAN						
Area	**Action**	**Indicator**	**Initial Sit.**	**Final Sit.**	**% progress**	**Health Sc**
Teaching improvement and adaptation to EHEA	Teaching offer adaptation to EHEA: Quality and internationalisation of the teaching offer in the EHEA framework	Performance rate in Degree	66,6%	76,5%	9,8%	83,2%
		Performance rate in Master	90,2%	91,0%	0,8%	94,4%
		Performance rate in 1st and 2nd academic periods	64,8%	72,2%	7,4%	77,2%
		Success rate in Degree	84,0%	85,3%	1,3%	89,1%
		Success rate in Master	99,4%	99,6%	0,2%	99,7%
		Success rate in 1st and 2nd academic periods	74,3%	88,0%	13,7%	89,6%
		Graduation rate in 1st and 2nd academic periods certificates	40,9%	43,1%	2,3%	60,3%
		Ratio student/teacher	1238,0%	1215,0%	-23,0%	1195,0%
	Teaching infrastructures and equipment	Increase in the area allocated to Teaching (m2)	5.240	7.500	43%	
		Renovated and updated areas allocated to Teaching and Research (m2)	5.400	15.500	187%	

PLAN 2: PROMOTION OF FOREIGN LANGUAGES KNOWLEDGE AND PROMOTION OF SPANISH/GALICIAN LANGUAGES					
Area	**Action**	**Indicator**	**Initial Sit.**	**Final Sit.**	**% progress**
Teaching improvement and adaptation to EHEA	CLM Activity: Activity and participation in the teaching offer	No. of students enrolled	2.231	2.710	21
		No. of students enrolled in summer courses	152	243	60
		No. of students enrolled in Spanish as a foreign language	849	598	-30
		No. of students enrolled in language certificate tests	3.231	4.010	24
		No. of students enrolled in external tests	76	271	257
	Improvement in language accreditation	No. of PAS that pass the language certificate tests	8	30	275
		No. of PDI that pass the language certificate tests	20	39	95
		No. Students that pass the language certificate tests	197	888	350

PLAN 3: IMPLEMENTATION OF THE INTERNATIONAL DOCTORATE AND POST-GRADUATE SCHOOL					
Area	**Action**	**Indicator**	**Initial Sit.**	**Final Sit.**	**% progress**
Teaching improvement and adaptation to EHEA	Launch of EDI	Number of doctorate programs	13	49	
		No. of doctorate students (2008/09-2012/2013)	2029	2684	32
		No. of thesis read in Life Sciences	164	184	12
	Internationalisation of EDI	No. foreign doctorate students (2008/09-2012/2013)	428	632	47
		% Thesis read with international mention in Life Sciences	25	38	13

PLAN 4: TALENT ATTRACTION AND MOBILITY					
Area	Action	Indicator	Initial Sit.	Final Sit.	% progress
Teaching improvement and adaptation to EHEA	Employment of researchers	No. of employed researchers in Competitive Programs in Life Sciences	166	338	104
		Starting Grantees Researchers (2010-2013)	1	3	200
		Advanced Grantee Researchers (2010-2013)	-	1	
	Mobility and attraction of international talent	% Foreign students in degree	5%	7%	6
		No. of enrolled foreign students in Post-graduate Program	120	178	48,3%
		No. of foreign teachers with a minimum stay of 3 months	10	32	220
		No. on International mobility agreements and projects	30	83	177
		No. of Life Sciences International mobility agreements/ projects 2013	n/a	21	

III.2. Scientific improvement

PLAN 5, PLAN 6 AND PLAN 7 (LIFE SCIENCES)					
Area	Action	Indicator	Initial Sit.	Final Sit.	% progress
Scientific improvement	Development of new organisation model based on objectives	No. JCR Articles	1.125	1.419	26
		No. 1st Quartile Articles	-	40%	
		Impact Index	4,6	5,3	15
		No. Internat. Collab Articles	27%	30%	3
		No. on European projects	13	33	154
		Increase in the area allocated to Research (m2)	7.410	41.030	454
		Renovated and updated areas allocated to Teaching and Research (m2)	5.400	15.500	187
		Increase in scientific-technical dissemination area (m2)	-	63.000	

III.3. Transfer and Valorisation

PLAN 8 AND 9: IPP MANAGEMENT AND VALORISATION (LIFE SCIENCES)					
Area	Action	Indicator	Initial Sit.	Final Sit.	% progress
Transfer and Valorisation	Patents	No. Registered patents in Life Sciences	60	81	35
		No. Patents shared with Biocluster partners	n/a	49	
	Valorisation and Entrepreneurship	No. Valorisation projects	2	18	800
		No. Licensed patents	5	12	140
		No. Companies created	7	13	86

III.4. Social projection and interaction

PLAN 10: SOCIAL PROJECTION AND SUSTAINABLE DEVELOPMENT					
Area	**Action**	**Indicator**	**Initial Sit.**	**Final Sit.**	**% progress**
Social projection and sustainable development	Sustainable Development Plan	Environmental education activities	11	25	127
		No. Sustainability Scholarships	28	42	50
		Thermal consumption efficiency (kWh/m2built)	42,4	26,5	-38
		Thermal consumption efficiency (kWh/person/day)	2,7	1,7	-37
		Electric consumption efficiency (kWh/m2built)	45,9	41,5	-10
		Electric consumption efficiency (kWh/person/day)	2,9	2,7	-7
		Water efficiency (m3/m2built)	0,41	0,24	-41
		Water consumption efficiency (l/person/day)	48,8	28,1	-42
		No. of buildings with four or more bioclimatic criteria in the contract tendering	3	5	67
		Actions focused on saving or rationalization of consumption of resources (water, electricity, natural gas, diesel...)	In all building work	In all building work	
		Management of hazardous waste kg/ person.year	1,77	1,70	-4
		Green routes in CAMPUS VIDA (%)	5	7	40
		% Green areas over the total campus area	40%	46%	6
	Mobility and accessibility	No. performances per year in buildings to improve accessibility	4	4	0
		% People in the University community that drive their cars (2007-2012)	39	24	-15
		% People in the University community that ride their bikes (2007-2012)	2	4	2

ANNEX IV. USE OF RESOURCES

AREA	PLAN	YEAR	FUNDING	CURRENT EXPENSES	INVESTMENT	HUMAN RESOURCES	SUBTOTAL	TOTAL
Teaching improvement and adaptation to EHEA	Launch of EDI	2010	300.000	3.270,69	132.630,01	69.095,30	204.996,00	374.522,83
		2011		45.402,81	63.499,92		108.902,73	
		2012		26.949,59	33.674,51		60.624,10	
	Internationalisation of EDI	2010	350.000	30.289,86	56.082,49	17.185,95	103.558,30	357.775,93
		2011		35.897,87	64.730,11	50.332,71	150.960,69	
		2012		48.844,40	54.412,54		103.256,94	
	Employment of researchers	2011	475.000	87.078,75	915,00	131.949,79	219.943,54	623.494,21
		2012		73.934,33	18.047,02	89.439,87	181.421,22	
		2013		44.920,33	1.703,20	175.505,92	222.129,45	
	Mobility and attraction of international talent	2010	895.000	1.204,27		603.519,44	604.723,71	1.726.125,32
		2011		11.756,01	4.857,95	500.833,49	517.447,45	
		2012		10.153,41	225,06	491.492,38	501.870,85	
		2013				102.083,31	102.083,31	
Scientific improvement	Develop. of a new research organisation	2010	130.000		16.680,00	24.077,16	40.757,16	281.912,91
		2011		2.586,70	25.102,96	140.510,96	168.200,62	
		2012		55.783,98	17.171,15		72.955,13	
	Improvement of research support services plan	2010	350.000	2.168,17	95.905,43	40.153,60	138.227,20	506.483,78
		2011		13.115,16	76.037,57	56.382,07	145.534,80	
		2012		2.558,15	212.488,12	7.675,51	222.721,78	
	Collaborative research plan	2010	180.000			11.373,70	11.373,70	283.572,60
		2011		141.260,00			141.260,00	
		2012		7.549,57	49.471,48	73.917,85	130.938,90	
Transfer and Valorisation	Strengthening of IPR management capacities	2010	120.000	23.147,19			23.147,19	130.591,02
		2011		40.972,27			40.972,27	
		2012		61.691,56	4.780,00		66.471,56	
	Valorisation and Entrepreneurship	2010	575.000	56.041,13	75.817,09	31.464,96	163.323,18	766.602,79
		2011		46.511,18	48.579,93	12.421,85	107.512,96	
		2012		42.513,83	109.319,47	2.891,53	154.724,83	
		2013		39.260,13	115.638,51	186.143,18	341.041,82	
Social projection	Sustainable	2010	375.000	67.866,84	91.608,86	870,00	160.345,70	452.572,82

AREA	PLAN	YEAR	FUNDING	CURRENT EXPENSES	INVESTMENT	HUMAN RESOURCES	SUBTOTAL	TOTAL
and sustainable development	Development Plan	2011		59.985,16	72.184,65	50.007,65	182.177,46	
		2012		24.880,30	43.390,07	41.779,29	110.049,66	
Construction actions	Teaching improvement and adaptation to EHEA	2011	1.500.000		790.713,97		790.713,97	1.568.803,06
		2012			778.089,09		778.089,09	
	Scientific improvement and transfer	2010	1.875.000		1.015.172,80		1.015.172,80	2.225.289,14
		2011			403.800,16		403.800,16	
		2012			646.891,27		646.891,27	
		2013			159.424,91		159.424,91	
	Social projection and interaction	2010	375.000		815.876,06		815.876,06	2.148.797,26
		2011			800.041,15		800.041,15	
		2012			532.880,05		532.880,05	
TOTAL			**7.500.000**	**1.107.593,64**	**7.427.842,56**	**2.911.107,46**	**11.446.543,66**	**11.446.543,66**

ANNEX V. INVESTMENT AND CONSTRUCTION ACTIONS ASSOCIATED WITH THE STRATEGIC PLAN

It's in this section the constructive actions undertaken within the framework of the Campus Vida project are reflected with the aim of improving the conditions of the buildings, in which the teaching and research activities are developed, to optimise the capacities of the Universidade de Santiago de Compostela and, particularly the environment CAMPUS VIDA, as a campus of International Excellence.

On the other hand, and being aware of the influence that the University plays in the activity of the city of Santiago de Compostela, as well as the prominence that its urbanism has, some targeted interventions have been developed during this period to give continuity to the historic dialogue between University and City to form an environment of excellence for a campus of excellence.

V.1. CONSTRUCTION ACTIONS ASSOCIATED WITH TEACHING IMPROVEMENT AND ADAPTATION TO THE EHEA OBJECTIVES

As is has been demonstrated in the successive Progress reports corresponding to the years 2010, 2011 and 2012, as well as corresponding economic performance reports submitted to the Xunta de Galicia, the construction project has been significantly modified especially taking into account budgetary and planning constraints that have been forced to delay investments in the new Faculty of Medicine, one of the relevant actions of the project, though not so much of the grant associated with the program.

Based on that, according to criteria of efficiency of expenditure, taking advantage of new opportunities for co-financing and the priorities of adaptation to the requirements of the EHEA, actions oriented to improving the spaces dedicated to teaching have been re-formulated, as well as those that complement activity in the classroom, facilitating adaptation to the new European Higher Education Area as a whole.

The actions developed in the framework of the Campus Vida project are as follows:

ACTIONS IN LIBRARIES

Actions aimed to improve the performance of some of the specialized libraries in centres located in the environment of CAMPUS VIDA, such as:

- **Psychology and Education Sciences Faculties**: full reform of the library has been carried out which has made it possible to increase the number of reading places, as well as increasing the capacity of deposit of publications, also an read has been developed for students group work.
- **Social Sciences Library, Concepción Arenal**: a control system of exclusive access for members of the USC community has been installed and implemented since it had detected use the library by non-University people, reducing the amount of reading places for students.

As well as in some historical libraries, due their academic and heritage value:

- **Faculty of Geography and History**: historic furnishings located in the reading room have been restored.
- **General library**: the reading room lighting has been improved and a dehumidifier system installed on the security camera to improve the conservation of valuable items.

- **NURSING FACULTY:** Actions in the building have been carried out to facilitate access for people with reduced mobility and improve firefighting conditions of the centre. Also renovations have taken place in areas of the centre. Additionally, renovations have been done to taken place in areas destined exhibition classrooms and laboratories of practice laboratories.
- **FACULTY OF MEDICINE AND DENTISTRY:** In this centre, actions have been undertaken such as new Anatomy and Dental Prostheses Practice Laboratories, as well as Clinical Skills, Physiology and Pathology classrooms.
- **TECHNICAL SCHOOL OF ENGINEERING:** The general distributor of the floor of the basement of the building has been renovated to enable a work space for students.
- **FACULTY OF MATHEMATICS:** the placement of a new roofing material has been recently hired that will improve the conditions of thermal and acoustic comfort of classrooms and the general entrance. Also the conditions of accessibility on the back of the building have been improved, facilitating the access of three users with mobility problems.
- **FACULTY OF PHYSICS:** a significant investment has been made in the improvement of the installation of electricity that solves the serious problems that are prejudicial to the proper functioning of the research laboratories.
- **FACULTY OF BIOLOGY:** There has been a comprehensive renovation of this faculty that has created new classrooms, practice laboratories and library, with their corresponding equipment.
- **FACULTY OF COMMUNICATION SCIENCES:** An air conditioning installation for radio and dubbing studios has been developed, which has significantly improved the of comfort conditions of the students to perform their practice work.
- **FACULTY OF SCIENCE**: An extension of other centre spaces that hosts laboratories has been performed, which were also equipped.
- **FACULTIES OF POLITICS AND LABOUR RELATIONS:** emergency exits condition of the master classroom and the auditorium have been improved. At the same time much of building cover, which conservation status was hindering the activity of classrooms due to water leakage, was repaired.
- **POSTGRADUATE CENTRE AND INTERNATIONAL DOCTORATE SCHOOL:** The Postgraduate Centre has been expanded with the creation of new offices and meeting rooms, at the time that new spaces were enabled for the operation of the new International Doctorate School.

- **MODERN LANGUAGES CENTRE:** available spaces were renovated in the environment of CAMPUS VIDA to locate the new facilities of the Modern Languages Centre whose activity has been intensified and in the framework of the objectives of CAMPUS VIDA
- **IMPROVEMENTS IN SAFETY AND HYGIENE CONDITIONS:** over this period of time, there has been an important set of actions in most of the buildings that have improved safety conditions for all users, especially in the conditions of exit in case of emergency, as well as firefighting facilities. They are worth highlighting the works at the School of Optics and at the School of Engineering to improve the quality of the air in the laboratories. Interventions on the facades of the Monte de la Condesa residence are also worth noting in this regard.

V.2. CONSTRUCTION ACTIONS ASSOCIATED WITH SCIENTIFIC AND TRANSFER IMPROVEMENT

New major infrastructures that have been developed in the context of the CAMPUS VIDA project have been the centres associated with the RESEARCH CENTRES NETWORK, although it must be stated that, as noted in the Economic Report of the original project, its financing has mostly proceeded from funds outside the Campus of Excellence Program. However, the major application of program investments has contributed to the implementation of new R&D infrastructure with its corresponding equipment. With this, coupled to the actions planned by the USC in the context of the overall project, it has enabled the availability of new research laboratories in adequate safety and comfort conditions for users. It should be pointed out that, so far, some of these areas were located in buildings that were between 50 and 100 years old.

In particular, the following actions are highlighted:

- **Construction and implementation of new buildings associated with the Research Centres Network,** specifically CIQUS (Centre for chemical research), CIMUS (Centre for Medical Research), CITIUS (Centre for Technological Research), and CEBEGA (Centre of Experimental Biology).
- **Provision of laboratories in renovated centres, particularly in the Faculty of Biology and the expansion of the Faculty of Sciences.** Its construction has been a very important progress on the use of research spaces associated to other existing buildings, such as the CIBUS (Centre for Biological Research), CACTUS (Scientific-Technical Services Centre) and Research Institutes located in Campus Vida.
- **Construction and equipping of new installations of the Dairy Products Unit**, technology centre managed by the Universidade de Santiago to service a strategic sector of the Galician economy
- **Smaller scale provisions:** smaller scale investments, actions such as the equipment of laboratories in the EMPREDIA building were completed, to facilitate the transfer of research into mixed units and spaces for incubation of new businesses. Also, works such as the renovation of a space at the Faculty of Chemistry were to host a new laboratory of Organic Chemistry were done and the improvement in security conditions for the laboratories gas installation in the Faculty of Pharmacy.

V.3. CONSTRUCTION ACTIONS ASSOCIATED WITH URBAN EQUIPMENT, SOCIAL IMPROVEMENT AND INTERACTION

University Hall buildings are between twenty and sixty years old and show deficiencies arising from the use and aging of materials as well as dysfunctions as a result of not achieving the functional standards and safety of nowadays. Aware of this problem, USC has been embarked on renovations and improvements in these infrastructures, making full renovations in some buildings, as well as other important projects to reduce the risk of fire in the rest of the residences. Campus Vida has allowed to keep this strategy as well as allowing some interventions in the sports facilities in order to eliminate existing deficiencies. Below is a summary of some of the actions developed in the framework of CAMPUS VIDA in this area.

RESIDENCIAS UNIVERSITARIAS

- **RODRÍGUEZ CADARSO HALL:** A comprehensive renovation of the building has been undertaken including the resolution of the problem of the building roof structural stability and proceeded to create new installations as well as supply and installation of equipment.
- **MONTE DE LA CONDESA HALL:** During this time a renovation program of the walls has started in the residents' rooms and also proceeded to furnishing some spaces dedicated to students' activities. Finally, during this period there have been improvements on the premises of the hall.
- **BURGO DE LAS NACIONES HALL:** Works in this residence have focused towards improvements in habitability of the rooms and improving the conditions of outdoor lighting with a new installation. The general water supply network has been replaced.
- **BEL E GAY HALL:** Building facilities have been improved as well as the set-up of Wi-Fi network.

SECURITY: The University completed in during this period the plan of building works in the University residences aimed at improving conditions of safety of emergency exit, undergoing the OHSAS certification. It is worth mentioning the building work of the Monte da Condesa Hall to remove the serious risks for users due to the state of the walls and in the elevators.

CULTURAL AND SPORTS CENTERS: the improvement actions have focused on the renovation of existing facilities, such as: paving, improvement of facilities, functional improvements, improvement of security conditions, provisioning of equipment. Beneficiary infrastructures of these improvements are as follows: Breogán School for Children, Sports Centre, Swimming Pool and Sports Fields.

URBAN EQUIPMENT

- **BOTANICAL GARDEN:** During these years works have been initiated in this land not only destined to research, but it also means an important equipping for the city and a cornerstone in urban conception of Santiago to form an element of the city against the protected area of Mount Pedroso. These measures have focused on the construction of a wooden path that allows a parallel walk to the Sarela River and shortly will proceed to

the execution of the cleaning and selection of plant species, as well as the restoration of existing mills and their corresponding channels of water.

- **LUIS IGLESIAS NATURAL HISTORY MUSEUM:** the new building built by the consortium of the city of Santiago and handed over to the University, is located in the Vista Alegre Park, nestled in the so-called North Campus. USC has made investments for the transfer of the Museum funds from its early location of the Faculty of Chemistry, as well as assembly and equipment in the different rooms where its collections are exhibited. This equipping is an important cultural transfer towards the Galician society.