



UNIVERSIDADE DO PORTO

Self-Evaluation Report

Institutional Evaluation
European University Association

October 2009

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Introduction

In 2007, the University of Porto (U.Porto) launched a comprehensive institutional evaluation process based on the principle of academic audit, intended to be repeated every 4 years. The institutional evaluation process entails three distinct phases (see Table 1) and uses a twofold approach, bottom-up and top-down.

Phase (i) was based on the Faculties' self-evaluation and also on the audits each Faculty did of another Faculty. This phase was launched on May 2007 with a two-day workshop attended by the self-evaluation teams of each Faculty, consisting of 5 to 10 members (nominated by the Dean) including representatives of teaching and research staff, administrative and management staff, and students (see Annex I), all together 92 people. During this workshop, that had the support of two experts from the European University Association (EUA) and the Director of CIPES (Centre for Research on Higher Education Policies), the self-evaluation committees were briefed on the guidelines for the self-evaluation and for the "external" evaluation of U.Porto's Faculties (Annex II¹). To a large extent, these guidelines are similar to those used in the EUA Institutional Evaluation Programme (IEP).

In phase (i) each self-evaluation committee carried out both a self-evaluating exercise and a quality audit of another Faculty: the "external" evaluation, intended to stimulate the sharing of good practices between Faculties. Therefore, each committee produced a self-evaluation report (including an improvement plan) and an audit report. This phase ended in June 2008 (with the exception of one Faculty that finished its self-evaluation report in December).

In phase (ii) all the reports were analysed in depth by the Continuous Improvement office of the Rectorate. The comparison and analysis of the reports allowed the production of a synthesis. This document - Summary Report (Annex III) - is a crucial element of the institutional self-evaluation of U.Porto since it expresses the global bottom-up perspective.

Phase (iii) started in March 2009 with the nomination, by the Rector, of the self-evaluation committee members (Annex I). This committee produced this institutional self-evaluation report of U.Porto, combining their top-down point of view with the findings resulting from the self-evaluations and the "external" audits of Faculties conveyed in the Summary Report. This process ends with the submission of the U.Porto's Self-Evaluation Report to the IEP evaluation team, and the subsequent visits and report.

Table 1: Phases, procedures and outputs of the institutional evaluation process

Phases	Procedures	Outputs
(i)	Self-evaluation and "external" audit of Faculties based on guidelines with special emphasis on the improvement plan	14 self-evaluation reports and 13 "external" audit reports
(ii)	Analysis of content of the self-evaluation and "external" audit reports	Summary report
(iii)	Self-evaluation of U.Porto Participation in the IEP of EUA	Institutional self-evaluation report Institutional evaluation report

Institutional context

Brief historical overview

The Portuguese university was founded in 1290 and was established (for the most of its time) in Coimbra.

With the Republican Revolution, on the 5th of October 1910, several changes were introduced into the Portuguese educational system, namely by the establishment of the universities of Lisbon and Porto. The University of Porto was created on the 22nd of March 1911 by a decree of the first Portuguese Republican government, as an offspring of older schools: the Polytechnic Academy, the School of Medicine and Surgery, the Royal Academy of the Navy and Commerce and the Royal School of Surgery. The decree that created U.Porto divided it into a Faculty of Mathematical, Physicochemical, Historical and Natural Sciences (Faculty of Sciences), a Faculty of Medicine with its appended School of Pharmacy, and a Faculty of Commerce. The Faculty of Sciences appended a School of Engineering.

Today, U.Porto's Faculties, research and interface units form a comprehensive, complex and diverse institution, covering the most important fields of knowledge. The U.Porto brings in more students than any other Portuguese higher education institution. Every day, a student community of nearly thirty thousand, broadens its horizon of

¹ In Portuguese

knowledge at its 14 Faculties and a Business School, supported by an academic staff of a nearly 2000 full-time equivalent (FTE) and a technical and administrative staff of 1700 FTE. Over recent years, U.Porto R&D activities have seen a great qualitative and quantitative increase. Considering the last 10-year period, teaching staff and researchers of the University of Porto were consistently responsible for more than 1/5 of Portuguese scientific articles indexed in the ISI – WoS data bases.

Geographical position of the institution

Porto is the second city of Portugal, and the centre of an urban region with a population of over one million inhabitants. The city lies at the mouth of the steep valley of the river Douro, in northern Portugal. Typically, the north of Portugal is characterized by coastal plains that give way to higher grounds in the hinterland. The coast is typically of sandy beaches, with some rocky strands.

The U.Porto is not located on a single common campus. The University buildings – Faculties, R&D institutes, student residences, cultural and sport facilities – are grouped in three main sites, called ‘Pólos’². In the city centre – where the neoclassical rectory building marks the birthplace of the U.Porto – lays “Pólo 1”; “Pólo 2” is located on the campus of Asprela, in the northern limit of the city of Porto; “Pólo 3” is located in the Campo Alegre area, in the south-western part of the city, over the river Douro bank, not far from “Pólo 1”. A number of other institutes and centres are scattered all over the city and even beyond its limits (see Annex IV).

The distribution of U.Porto in 3 geographic areas brings difficulties: puts students apart and hinders the sharing of human and physical resources.

A brief analysis of the current labour-market situation

Over the recent past there has been an improvement in the educational level of the workforce in Portugal. According to data published by the *Instituto Nacional de Estatística* (the Portuguese statistics agency), in 2008 the higher education graduates accounted for 14.8% of the economically active population, whilst in 2001 it accounted for 9,6%. In the north of Portugal a similar trend occurred: 12,8% of professionals with higher education in 2008 and 7,6% in 2001.

According to a survey conducted in April 2009 by the Employment Observatory of the U.Porto (54,3% response rate), 69,0% of the 2006/07 U.Porto’s graduates were employed, 9,9% unemployed, 10,6% were engaged in vocational training, and 9,4% were extending or complementing their studies (enrolled in master, postgraduate or doctorate programmes). The majority (84,3%) of the students employed found a job within the first six months after completing their degree, and the role they were playing in their current employment was suitable to the academic training acquired at U.Porto. Concerning the first job, 69,9% were running activities falling under the classification of “Intellectual and Scientific” professions, 53,5% had fixed-term employment, and 82,1% of the employers were companies - the majority being of private nature. A similar situation was observed with graduates who completed their education in 2005/06 at the U. Porto.

In national terms, graduates’ employability is heterogeneous, depending on academic training. As a result of the current crisis, the unemployment rate of graduates follows the global negative trend, although it tends to show lower values than other educational levels. In 2007 it was 7,5% whereas the national unemployment rate was at 8,0%; in 2008 it was 7,9%, exceptionally about 0.3 percentage points above the national unemployment rate. There is greater vulnerability to unemployment in areas related to education or to the civil servant professions (with the exception of medicine and other health professions). Additionally, bottlenecks in the offer of skilled employment for higher education graduates are persisting in the north of Portugal (notice that a June 2009 survey revealed that more than 90% of U.Porto’s alumni live in the Northern region - north of Coimbra). This is mainly due to its unfavourable productive structure (traditional products or products with small added value). This situation is worsening with the economic crisis, but may force the region to dramatically change its productive structure, stimulating the development of a knowledge based economy.

Faculties, research institutes, academic and administrative staff, and students

The University of Porto encompasses fourteen Faculties (see Table 2), one Business School, thirty libraries and twelve museums. In 2008, U.Porto enrolled 29896 students (52% female), held 1895,8 FTE teaching staff and researchers (75% PhDs, 38% female), and 1685,3 FTE non-academic staff (71% female).

The University of Porto Business School (EGP-UPBS)³ offers an MBA (in partnership with other universities and business schools from the northern region of Portugal) and an Executive MBA. EGP-UPBS also offers short and mid-duration executive programmes, upper management seminars, in-company training programmes and

² http://sigarra.up.pt/up/WEB_BASE.GERA_PAGINA?p_pagina=1001373

³ <http://www.egp-upbs.up.pt/>

business services (selection and recruitment of qualified workers, and applied research and consultancy activities).

R&D is undertaken in all areas of knowledge, by research teams grouped into Research Units (see Annex XII), hosted in the different Faculties/Services of the U.Porto or in autonomous Research Institutes. Some of these Research Institutes are installed on independent premises and are ruled by non-profit entities in which the U.Porto, collectively and/or through its individual Faculties/Services, is a leading member (for instance, INESC Porto⁴, INEGI⁵, ICETA⁶, INEB⁷, IPATIMUP⁸, IBMC⁹, CIIMAR¹⁰). In general, the best R&D Units are integrated in Associate Laboratories. This type of R&D institution is recognized by the Portuguese Government for the implementation of specific objectives of the national science and technology policy, and benefit from specific funding and regulations to hire researchers.

Table 2 – Number of students, academic and non academic staff (FTE)*

Faculties/Services	Students	Academic Staff (FTE)	Non-Academic Staff (FTE)
Faculty of Architecture	1000	79,5	35,0
Faculty of Fine Arts	800	67,9	33,0
Faculty of Sciences	3648	265,8	135,6
Faculty of Nutrition and Food Science	449	20,9	22,5
Faculty of Sport	1494	61,3	34,0
Faculty of Law	998	32,3	16,0
Faculty of Economics	2859	140,4	61,8
Faculty of Engineering	6922	435,3	322,3
Faculty of Pharmacy	1306	75,1	58,0
Faculty of Arts	3721	199,4	114,0
Faculty of Medicine	2357	227,4	188,5
Faculty of Dental Medicine	506	57,4	45,0
Faculty of Psychology and Education Science	1579	84,6	49,5
Institute of Biomedical Sciences Abel Salazar	2257	146,5	106,0
Student Support Services	-	-	258,1
Rectorate	-	9,0	206,0
Total	29896	1895,8	1685,3

* Year 2008

To foster innovation and incorporation of knowledge in the society, U.Porto offers a set of services and programmes aiming at supporting knowledge transfer. The UPIN¹¹, the Research, Development and Innovation Office of U.Porto, is responsible for the technology transfer, and coordinates, in cooperation with the existent offices of each Faculty and R&D institutes, the process that starts the moment that an invention disclosure is delivered to the collection and monitoring of profits derived from its commercial application.

The *Serviços de Acção Social*¹² (SASUP, the student support services of U.Porto), established in 1980, has legal, financial and administrative autonomy. Its mission is to ensure equal opportunities of access to the U.Porto, and to promote a favourable environment for academic success through a variety of services: scholarships, accommodation, catering, sports activities, medical and psychological assistance. During the academic year 2007/08, 4809 students received grants from SASUP (the average scholarship being 157 € per month), 4,525 meals (90% co-funded) were served per day in the 20 canteens, 2308 students were enrolled in regular sports activities and 581 medical appointments were accomplished.

Sports infrastructures are concentrated in the Asprela campus (mainly in the Faculty of Sport). Students and there associations claim for insufficient sports facilities and demand for more time availability. In the mid term this situation will be improved with the rehabilitation of the old University Stadium (located in “Pólo 2”) and with the planned construction of new sports premises.

⁴ <http://www.inescporto.pt/>

⁵ <http://www.inegi.up.pt/>

⁶ <http://www.iceta.up.pt/news.htm>

⁷ <http://www.ineb.up.pt/>

⁸ <http://www.ipatimup.pt>

⁹ <http://www.ibmc.up.pt/>

¹⁰ <http://ciimar.up.pt>

¹¹ <http://upin.up.pt>

¹² <http://www.sas.up.pt>

Other entities playing a very important role at U.Porto

The *Instituto Arquitecto Marques da Silva* foundation (FIMS) was created to comply with a legacy and has the mission of promoting culture, science, education and arts, in particular, the artistic and architectural heritage of José Marques da Silva (an influential and outstanding architect of Porto from the first half of the twentieth century) and of other previous century Portuguese architects. It has also the duty of promoting the architectural culture in general, and to treat and recover architecture files and assets, both national and international.

The *Orfeão Universitário do Porto*¹³ (OUP, university choir) was founded in March 1912 (one year after the creation of U.Porto). Today, OUP gathers nearly 200 students from the various Faculties of U.Porto, divided into 19 groups working under three main lines: choir, ethnographic and academic. During these years, OUP has been a privileged vehicle for promoting choral music and the Portuguese culture. The work of OUP was recognized through several awards and honours. Among others, OUP received the *Medalha de Ouro de Mérito Artístico da Cidade do Porto* (gold artistic medal of Porto city), the *Grau de Comendador da Ordem de Instrução Pública* (Order of Public Instruction), the “Grau Comendador da Ordem da Benemerência” (Order of Benefaction), and it was appointed as *Pessoa Colectiva de Utilidade Pública* (Institution of Public Utility). OUP has been performing all over the world.

The *Teatro Universitário do Porto*¹⁴ (TUP) was created in 1948 by a group of students of the University of Porto. In line with its amateur and academic character, TUP is devoted to dramatic experiments, thus becoming an instrument for disseminating drama. Staging collective and unprecedented plays in Portugal, TUP has already participated in several international festivals. TUP follows high quality standards in choosing plays, in staging and in the training of its actors, and regularly organises theatre courses and workshops. TUP is well-known for its undeniable contribution to the creation of independent theatre in Porto.

The Institute of Common Resources and Initiatives (IRICUP) was created by the U.Porto Senate in 2000 and started operation in 2003. The mission of IRICUP was to promote the cohesion and the institutional spirit of U.Porto through active cooperation of all University bodies and to contribute to the national and international prominence of U.Porto, fostering its global development towards levels of excellence. After the publication of the new statutes of the University, in May 2009, IRICUP was made extinct. However, it is mentioned here due to its role in the implementation of the U.Porto’s information system SIGARRA in all the Faculties (see Section III – Information and Communications Technologies).

In addition to the contribution of U.Porto students to the governing bodies of the University and Faculties, they are also organized into representative entities - the Students’ Associations. The U.Porto recognizes students’ associations as privileged partners in pursuit of its mission. Associations transmit and amplify the student voice in many decision-making processes, and contribute to the governance of the University, including the budget plan, mentoring and teaching methods, curricula definition, assessment schemes, and other topics of interest to students.

¹³ <http://www.orfeao.up.pt>

¹⁴ <http://teatrup.wordpress.com/>

Section I: Norms and values

Mission and Global Vision of the Institution

Being a higher education institution strongly rooted in research, the U.Porto's mission is to create scientific, cultural and artistic knowledge, to promote the economic and social value of knowledge, and to actively participate in the progress of the community in which it is inserted. This statement was present in the previous statutes (January 2006) as well as in the new ones published in May 2009.

Therefore, U.Porto sees itself as an institution of education and of research and development, seeking to be a reference in terms of the cultural, artistic, technological and scientific qualification level of its students, as well as in what concerns the production and dissemination of knowledge.

In carrying out its activity, the U.Porto favours a set of principles that purports to be known and assumed throughout the University, such as freedom of scientific, cultural and technological creation; high ethical standards; meticulousness; transparency and quality; equal access and treatment; promotion of creativity and entrepreneurship; respect for the environment and for sustainable economic and social development; and following an equal opportunities policy. The analysis of the self-evaluation reports pointed out that the mission assumed by the Faculties coincides with the one defined for the whole University.

In June 2006, the new Rector announces following Vision of the U.Porto:

“To be one of the 100 best European Universities in 2011 (according to accepted international standards for evaluating university education), for the celebration of its first century”

The achievement of this Vision stands on four strategic themes: Education, Research, Internationalisation and Governance. For each of these themes, a strategic goal was defined:

- reach excellence in the various levels of higher education, according to international standards;
- transform U.Porto into a Research University by increasing the quantity and quality of research work;
- reinforce U.Porto's internationalisation;
- ease the governance and management of U.Porto, improving effectiveness and efficiency.

These strategic goals, stemming from the Rector's manifesto proposed in his candidacy (June 2006), were used as U.Porto guidelines by the Rectorate team since then. However, the self-evaluation of the Faculties showed that, in general, the match between these strategic goals and those of the Faculties is not clear. Although Faculties, explicitly or implicitly, have their own strategic objectives, it is not obvious that they derive from the sharing of the strategic goals of the U.Porto, suggesting that the organisational cultures related to different disciplinary areas play an important role in this matter.

Governance and Management

Improving governance, organizational structure and decision-making mechanisms was considered a priority policy area for the Rector of the U.Porto in order to move towards its strategic goals. The organizational model of U.Porto prevailing until now was considered inadequate: the governing bodies were characterized by a strong collegiality but without mechanisms to clearly allocate the corresponding responsibility, making the coordination between the Rector and Faculties difficult and the decision-making processes too complex (see Section II).

In September 2007, a new law was approved by the *Assembleia da República* (the Portuguese national parliament), defining a new framework for higher education institutions, including a general governance model for the universities. This law, *Regime Jurídico das Instituições de Ensino Superior* (RJIES), implied the development of new statutes for the U.Porto, which were produced by the *Assembleia Estatutária* (the Statutory Assembly) constituted by the Rector, fifteen elected internal members (twelve from the teaching staff and three students) and five external members.

The new statutes were published in May 2009. The governance model embedded in the new statutes is based on both efficiency and participation, with the hope that it will foster quality and productivity; enhance internal coherence; and improve the articulation between the centre, the Faculties and the R&D units and institutes. The Statutory Assembly also decided that U.Porto should be converted into a public foundation (under a private law system). Notice that U.Porto, the country's biggest Higher Education Institution (HEI), was one of the three (out of fourteen) Portuguese public universities which took on this challenge presented by the 2007 law of changing into a foundation.

At the top structure level, the University of Porto Foundation is managed by the *Conselho de Curadores* (Board of Trustees), consisting of five external members appointed by the *Conselho Geral* (see below) and approved by

the government. The new governance model (see Section II) comprises three main management bodies: the *Conselho Geral* (General Council), the *Reitor* (Rector, elected by the General Council and approved by the Board of Trustees), and the *Conselho de Gestão* (Management Council). There is also the *Senado* (Senate), an advisory body whose mission is to ensure the cohesion of the U.Porto and the participation of all units in its management.

Under the new scheme, all Faculties keep their management autonomy and self-governance capacity. However, the new model defines a more clear decision-making structure and reduces the current fragmentation of power and responsibility, facilitating better cooperation between Faculties, between Faculties and R&D institutes, and between Faculties and the central services. Hence, it is expected to gain effectiveness and efficiency in using common resources, facilitating the implementation of strategic decisions applicable to the University as a whole.

Academic profile

One of the U.Porto's priorities concerning the teaching/learning area is to reinforce post-graduate education taking advantage of the strong potential of its Research Units and Institutes. Specifically, it was decided to foster the offer of multidisciplinary programmes; to promote the joint organisation of courses by several Faculties; and to develop new second and third Bologna cycle programmes, some of them jointly with other universities.

The Bologna reforms will be fully implemented by the end of the academic year 2008/09. Recently, U.Porto established a new procedure for the evaluation and monitoring of all the programmes of the first and second Bologna cycles. The scheme was designed in order to assess and improve the quality of teaching, and includes the evaluation of curricula contents and the adequacy of the outcomes. This occurs within a new legislative framework that requires the accreditation of all the programmes by the (new) *Agência de Avaliação e Acreditação do Ensino Superior* (A3ES, the national agency for assessment and accreditation of Higher Education), putting even more pressure on the education and training reforms that are in place.

The paradigm shift from teaching to learning and competence development require a cultural change entailing incremental actions. A key element of a new quality culture in education and training should be the focus on the learning goals and outcomes and on the learning-teaching processes. To raise awareness about the new paradigm is of the utmost importance. Accordingly, programme design and development is one of the U.Porto main concerns. A profound effort is needed in order to identify the learning outcomes of each course and to check if they fit student needs, employability requirements and market needs (medium and long-term). At the same time, some puzzling questions remain without clear answers: What is the correct balance between research-oriented and profession-oriented programmes? How do we promote life-long training? How do we attract the teaching staff for this activity? How do we prepare teaching staff for the new teaching/learning paradigm?

More and more, U.Porto is being promoting new and better educational practices and teaching methods, in line with the new teaching/learning paradigm, and challenging teachers and researchers to actively participate in this process. The annual award *Excelência E-Learning U.Porto* was created to reward lecturers who, during the academic year, provide on-line content for supporting the teaching/learning process on the University's e-learning platforms, according to an educational strategy. The objective of the award is to promote good practices in applying e-learning, encouraging and acknowledging the use of new technologies in supporting teaching/learning activities. Furthermore, U.Porto is promoting distance education, contributing to attracting and integrating more students and to approaching employers (through flexible and customised education).

U.Porto stimulates an education model strongly based on research activities, believing that it is only possible to reach excellence in education by developing excellence in research. The U.Porto's policy has been to encourage the development of R&D by improving infrastructures, facilities and laboratories, and by stimulating the economic valorisation of research results. At the central level, the UPIN office was set up, with the mission to promote and to support R&D; to foster interdisciplinary approaches; to enhance active cooperation between the various units of the U.Porto; and to ensure that R&D is carried out with a high level of quality. This office is organised into three interconnected units: the Strategy, Promotion and Assessment unit for RD&I, the Economic Appraisal unit for Results of RD&I, and the Funding Promotion unit for RD&I activities.

Internationalisation

U.Porto wishes to significantly increase its current level of internationalisation. Five points are considered strategic to this objective: (i) increasing the number and quality of foreign students, academic staff and researchers at U.Porto; (ii) enhancing the involvement of U.Porto students, academic staff and researchers in partnerships and cooperation programmes with prestigious or strategic foreign universities and research centres; (iii) intensifying and enlarging partnerships with prestigious or strategic universities, either through bilateral agreements or through the participation in European funded programmes; (iv) increasing investment in the organization of joint and/or double/multiple degree programmes with prestigious or strategic foreign

universities; (v) valorising the relationships with Portuguese-speaking countries and Latin-American HEIs within the framework of their geo-strategic connections with Europe.

Regarding internationalisation objectives, the self-evaluation of Faculties showed that a raise in mobility flows represents an opportunity, not only in the framework of Bologna but also for increasing connections with the CPLP countries (the Community of Portuguese Language Countries). Faculties also think that improvements in the teaching/learning area, as well as in the research and development areas, have a potential positive influence on the internationalisation strategy, and consider that the diversification of funding sources is an opportunity for investing more in external relations and in internationalisation.

From the Faculties' point of view, the features that endanger external relations and internationalisation are linked with the lack of funding for supporting internationalisation strategies, and with linguistic and cultural factors that do not ease the use of a second teaching language. On the other hand, Faculties deem they have the strength of highly qualified human resources, although suffering from substantial weaknesses, such as: few protocols and cooperation agreements with first-rank European institutions; few courses taught in English (due to linguistic and cultural factors that prevent the use of a second teaching language and to a conservative mentality); difficulties in attracting quality foreign lecturers for PhD supervision; financial restrictions; and lack of support in this area.

Academically-related activities

The University of Porto is increasingly trying to address and to respond to the problems, challenges and opportunities of the country. One example is the organisation of the *Porto Cidade Região*¹⁵ (Porto City/Region) meetings. This event already gained the stature of a forum for discussion of territorial, socio-economic and cultural themes that may determine the future of the north of Portugal. During these meetings, solutions and concrete measures for establishing a development paradigm rooted in knowledge are discussed with the academy.

Another example is the organisation of the *Universidade Júnior*¹⁶ (Junior University). Every year, in July and in September thousands of youngsters (5000 in the year 2009) from the basic and secondary levels of education come into the laboratories of U.Porto, accompanied by professors and researchers from the various fields of knowledge. They experience an initial contact with academic life, stimulating the students in pursuing their studies in higher education and helping them in choosing their future field of study. This project has drawn the attention of some foreign universities which want to adopt this model.

A third success example was the public/private partnership between the municipality of Porto, the University of Porto and the *Associação Empresarial de Portugal* (Portuguese Enterprises Association) to develop the Digital Porto Project, after its approval by the Program for Digital Cities and Regions. This Program, co-funded by the European Union, was designed to accelerate the deployment of broadband services throughout Europe. The University of Porto was responsible for coordinating the project of the fibre optical infrastructure of the city of Porto. With the new Metropolitan Ethernet Network (MEN) in place, Porto Digital is now able to deliver a new wave of residential and business services, while interconnecting and providing low-cost broadband access to some 50 institutions – including universities, primary and secondary schools, museums, municipalities and Municipal Council services – with the ability of being easily extended in a cost-effective way, due to the fact that the network geographically covers the city overall. Recently, Porto's social housing neighbourhoods were connected to the metropolitan fibre network and TV was offered to the families at no cost.

Each year, the 4-day exhibition *Mostra de Ciência, Ensino e Inovação* (Science, Teaching and Innovation Exhibition)¹⁷ offers to visitors the possibility of attending several dozens of science and technologic demonstrations produced at the U.Porto, as well as to participate in tests, experiments and trials. This event is also particularly focused on students from the primary and secondary levels of education. During the exhibition, the students can obtain detailed information regarding the programmes offered by the University. The event is also open to people interested in knowledge, becoming a privileged forum for the understanding of the impact that the U.Porto has on the society and on the scientific and technological development of the country.

U.Porto is also concerned with other publics, offering a substantial continuous education catalogue¹⁸ (around 400 courses), the *Programa de Estudos Universitários para Seniores* (higher education programme for people aged above 55 years), and the *Universidade de Verão* (summer university).

¹⁵ <http://portocidaderegiao.up.pt/>

¹⁶ <http://universidadejunior.up.pt>

¹⁷ http://sigarra.up.pt/up/web_base.gera_pagina?P_pagina=122595

¹⁸ http://sigarra.up.pt/up_uk/WEB_BASE.GERA_PAGINA?p_pagina=122268

Similarly, the University of Porto is gradually increasing its cultural and artistic offer, namely through its various museums. Via Portuguese and European competitive financial programmes, the U.Porto's museums were equipped with high standard management tools, information systems and databases, making it possible to share on-line information with other museums. U.Porto is now integrated in the greatest European network of museums, libraries, archives and multimedia collections (EUROPEANA). Additionally, in association with several outside institutions, U.Porto is involved in many initiatives open to the city and to the region (workshops, exhibitions, conferences, symposiums, fairs, theatre festivals and other projects in poetry and music), helping to attract a new public for cultural events, promoting U.Porto and fostering the U.Porto's mission.

Funding

In Portugal, all public higher education institutions are (basically) funded directly by the central government. The amount allocated to each institution is determined through a formula which parameters vary almost every year. This formula takes into account the number of students, the inherent costs of the teaching areas, the "quality" of the academic staff and pedagogical efficiency.

At the U.Porto, the amounts allotted by the Rector to each Faculty follow a similar formula, although taking into consideration factors for internal cohesion. Within this model, at the Faculty level deans have large autonomy in the definition of their budgets. The Rector defines the amounts that are allotted to Faculties but does not control the way Faculties spend their money. Notice that the formula does not consider any amount for funding research. In fact, the U.Porto's R&D units, as occur with all Portuguese universities, apply directly to *Fundação para a Ciência e Tecnologia* (FCT, the Portuguese Foundation for the development of science and technology) and other national and international funding sources.

Over the last 7 years, the amount transferred from the *Orçamento do Estado* (OE, the state budget) to the public universities declined considerably. Accordingly, U.Porto is progressively raising its own revenue (money not coming from OE). To reach 50% of revenue coming from sources other than OE (namely from services, R&D funding, fees, private subsidies, EU funding, etc.) is an important goal for the near future. It is believed that the switch to the foundation model (May 2009) will make the decrease of the financial dependency on the OE more feasible, by facilitating the increase of other sources of funding.

Table 3 shows the "basic" U.Porto budget in 2008 – including Faculties, SASUP and Rectorate, but not including the contributions of the R&D institutes, the Business School and other related units (these institutions had a global budget of about 43 million Euros in 2007) – and the corresponding source. Notice that, in 2008, the own revenue of U.Porto (not coming from the OE) was 77.9 million Euros, approximately 39% of the "basic" U.Porto budget. In 2008, the student tuition fees amounted to 28.155.806 Euros accounting for 36% of the own revenue and 14% of the "basic" budget of U.Porto.

Table 3 – U.Porto budget in 2008 (Euros)*

Faculties/Services	From the OE	Own revenue	Total
Faculty of Architecture	3.240.612,00	1.756.535,00	4.997.147,45
Faculty of Fine Arts	2.111.165,00	1.675.305,00	3.786.469,80
Faculty of Sciences	15.594.395,00	6.521.423,00	22.115.818,20
Faculty of Nutrition and Food Science	1.159.841,00	803.346,00	1.963.187,30
Faculty of Sport	3.276.115,00	1.963.815,00	5.239.929,62
Faculty of Law	1.638.120,00	1.483.507,00	3.121.627,24
Faculty of Economics	7.010.823,00	4.299.440,00	11.310.262,78
Faculty of Engineering	26.335.306,00	17.533.789,00	43.869.094,54
Faculty of Pharmacy	4.986.896,00	1.614.571,00	6.601.466,94
Faculty of Arts	7.339.629,01	7.621.752,00	14.961.380,63
Faculty of Medicine	12.674.662,00	7.269.529,00	19.944.190,83
Faculty of Dental Medicine	2.748.934,00	1.468.246,00	4.217.180,32
Faculty of Psychology and Education Science	4.634.107,00	2.962.229,00	7.596.335,72
Institute of Biomedical Sciences Abel Salazar	10.709.534,00	3.280.971,00	13.990.504,72
Student Support Services	7.875.200,00	8.432.058,00	16.307.258,48
Rectorate	11.948.168,00	9.255.532,00	21.203.699,90
Total	123.283.507,00	77.942.047,00	201.225.554,00

* R&D Institutes, the Business School and other units are not considered

The perspectives opened by the foundation model of a more integrated and flexible management structure, encouraged the institution to reorganize its accounting systems, which clearly need improvement. For instance, U.Porto shall implement a "full costing" system in order to better demonstrate the real costs of all activities, an

urgent need for the imminent future financial sustainability of U.Porto, complying with the EU legal rules for supporting R&D.

The implementation of a truly full cost accounting system for the whole University, integrating all faculties and services, is dependent on the institutional and governance framework, and is only feasible after the institutional changes (which occur in 2009) are implemented (see section II – The new governance model). Considering this, U.Porto is currently developing a project which, in the beginning of 2010, will allow the whole University to benefit from an integrated analytic accounting system.

Section II: Governance model and organizational structure (Special Focus)

The Current Governance Model (until September 2009)

For the past twenty years the organization of U.Porto was ruled according to the following model (see Annex V):

- A central governance based on two large collective bodies both with inherent and elected members from the academic community (teaching/research staff, non-teaching staff and students):
 - *Assembleia da Universidade* (University Assembly) with 250 members;
 - *Senado* (Senate) with 150 elected members and also some invited members from the community. The Senate had three commissions – *Permanente* (Permanent), *Disciplinar* (Disciplinary) and *Académica* (Academic) - to deal with specific matters;
Due to their too large dimension, the University Assembly and Senate had great difficulty in meeting and a very slow and inefficient decision-making process. The consequences of the presence of external members were also far from satisfactory.
- A single body – the *Reitor* (Rector) – elected for four-year mandates by the University Assembly.

The organizational structure was based on:

- Three central governing bodies (mentioned above);
- The *Reitoria* (Rectorate), which included the administrative support for the governing bodies and a few central services;
- Fourteen Faculties with different cultures and a large autonomy from the central governance, with its own juridical personality (at the same level as the University itself), each one having its own budget from the state national budget (OE), freely managed and accountable directly to the government and to the *Tribunal de Contas* (Accounting Court) and not to the Rector (the Rector simply consolidating their different accounts at the central level);
- The *Presidente do Conselho Directivo* or “Dean” (President/Dean) of the Faculties, elected by a local governance body – the *Assembleia de Representantes* (Assembly of Representatives) – without hierarchical dependence on the central governing bodies, which made any direct intervention from the Rector or other governance body in Faculty’s affairs impossible;

Degrees could only be awarded by the U.Porto but through a Faculty (at least one Faculty must be involved in the organization and teaching of the education programme required for the awarding of the degree). The real estate was the property of the University and major conservations were the Rector’s responsibility, but were handed out for use by the Faculties.

This model of organization has some positive characteristics: the decentralization of the decision-making process regarding some administrative and financial matters (so potentially higher efficiency) and the possibility, at least theoretical, of greater participation and involvement of the academic community in the definition and management of the processes concerning the mission of each Faculty. However, it revealed several important drawbacks, undermining confidence (and hence innovation and entrepreneurship) at institutional level, affecting the efficiency of management and decision-making processes and, so, impairing the capacity for change in order to follow the fast changing and increasingly competitive university environment all over the world. The following main drawbacks can be pointed out:

- major difficulty in defining a strategy for the whole University, common to all its Faculties, that could increase the competitiveness of the U.Porto, both nationally and internationally;
- major difficulty in defining common policies that could take full advantage of the comprehensiveness of the University of Porto, in particular from the variety of scientific, cultural and artistic areas covered by the University;
- difficult connection between central governance and the Faculties due to some form of mistrust from the latter towards the former;
- major difficulty in offering multidisciplinary education programs shared by several Faculties due to administrative obstacles and extensive time required to negotiate and approve the programs;
- sluggish decision-making processes, due to time-consuming discussions required to obtain some form of consensus among 14 different decision-making centres and within large collective decision-making bodies;
- great difficulty in efficiently using the human resources available in the whole university, since each Faculty preferred to have all the human resources required to teach its own education programs in-house, even though they were available (usually in greater number and with better preparation) in another Faculty covering the scientific area concerned;

- inefficient use of material and laboratory resources due to duplication, or even multiplication, of similar resources in different Faculties;
- insufficient quality and efficiency of support services replicated in each different Faculty, no matter its size;
- great difficulty to build a common strong and prestigious image that could expediently be presented world-wide.

Apparently, not all Faculties share the same point of view, believing that their management structures are adequate. In general, Faculties did not attribute great importance to this area during its self-evaluation. Their comments about governance and management were predominantly on threats and mainly about funding. Two Faculties called for even more autonomy and two others mentioned the potential loss of autonomy as a result of the reorganization of U.Porto, following the adoption of the RJIES. Even so, four Faculties identified the RJIES as an enabling medium for the modernization of the management structures. The frailties that the self-evaluation highlighted include (among others) the complexity and lack of effectiveness of the organizational structure; the weakness of the links between the management bodies and the R&D units; insufficiencies in monitoring the internal processes; and the weak participation of members external to the University.

Meanwhile, the management of universities in Portugal was facing increasing complexities and responsibilities due to: massification of higher education; demographic alterations (great reduction in birth rate); great reduction in higher education public financing implying the need to diversify university financing sources; increased accountability required from society; increased global competitiveness in the higher education sector for students and resources; increased personal responsibility for higher education leaders and managers.

Aware of the problems reported above, the rectorate team that took office in July 2006 presented a program that included improving governance, organizational structures and decision-making mechanisms as a priority policy area for the U.Porto. This policy was based on the following main pillars:

- to develop strategic management capacity for the University as a whole;
- to improve the cohesion of U.Porto;
- to implement a governance system based on trust (in the decision-makers), with the consequent simplification of the decision-making processes;
- to increase the efficiency of the decision-making processes by both reducing the number and dimension of the collective bodies with decision-making capacity and improving the connection between the centre and the Faculties;
- to facilitate the participation of the academic community and the external stakeholders in the decision-making process;
- to reorganize the structure of the U.Porto by reducing the number of centres of decision, without losing established local identities, in order to improve the capacity to build multidisciplinary and to increase the efficient use of resources;
- to follow the subsidiarity principle, maintaining a large decentralization of decisions;
- to improve quality and productivity;
- to simplify processes and to reduce bureaucracy;
- to enlarge internal and external accountability.

A new juridical regime for the Portuguese higher education institutions was approved by the Portuguese parliament and published in September 2007 (RJIES). This new law, although it could have gone further, introduced some positive reforms in the system: for instance, larger participation of external stakeholders; “professionalization” of some university management positions (including full-time jobs and evaluation only by managerial performance); ensure real separation between who manages and who is managed. Simultaneously, it also created the juridical model of public foundation with a regime of private law. Under this model, a university, while maintaining its status as a public entity, is managed under private laws in what concerns personnel, finance and patrimony, which means a great reduction in bureaucracy together with the possibility of having access to new management tools, such as financial management and real estate management.

As a consequence of this law, new statutes of U.Porto have been approved by a special elected body (Statutory Assembly) and published in May 2009.

The New Governance Model (after September 2009)

The new governance model, deriving from the new statutes, will be implemented during the second half of 2009. The new model was designed taking into account both efficiency and participation, and it is expected that it can enhance internal coherence, promote better articulation between the centre and the faculties, and support quality improvement and productivity.

This governance model has the following main characteristics:

- A central body, the General Council, with strategic and supervision functions:
 - of a relatively small size (23 members), expected to have an higher decision-making efficiency;
 - participation of internal stakeholders (elected representatives of teaching/research staff (twelve), of students (four) and of non-teaching/research staff (one) and of external stakeholders (six members chosen by the elected members), the president being one of the external members;
 - elects and dismisses the Rector;
 - supervises the action of the Rector;
 - approves alterations to the statutes of U.Porto;
 - approves strategic plans of U.Porto and of each organic unit, under proposal of the Rector;
 - approves the plan and budget of annual consolidated activities, as well as annual reports and accounts of U.Porto, under proposal of the Rector;
 - approves the structure of U.Porto (creation, fusion and extinction of organic units), under proposal of the Rector.
- A Rector, elected by the General Council, with reinforced decision-making capacity for the operational management of the University, including distribution/alteration of the budget attributed to each organic unit;
- A Management Council to conduct the personnel, finance and patrimonial management of the University;
- A Senate, with consultative functions (compulsory in some cases), which includes representatives of all organic units, as well as of the academic community (teaching staff, research staff, students and non-teaching/research staff). It has the main function of promoting the cohesion of the U.Porto and of assuring the participation of all organic units;
- Organic Units, entities of the structure of U.Porto, with an hierarchical direct relationship with central government of the University, having a Director as main executive body, either elected locally (self-governance type of organic unit) or nominated by the rector (without self-governance type of organic unit).

The Statutory Assembly has also approved the U.Porto's adoption of the model of public foundation with a regime of private law since it was believed that this new model could bring several advantages, namely the following:

- the University owns its real estate;
- opens up the possibility of a true strategic management, since financing of the university by the government is subject to 5 year contract programs attached to specific objectives and is placed outside the public economic discipline, with higher freedom to have multiannual budgets;
- reduction of bureaucracy for contracting and management of staff while opening the possibility to define a specific policy for hiring, promoting and rewarding personnel;
- reduction of bureaucracy in finance and property management, including the possibility of managing the University real estate;
- possibility of using diversified financial sources, including borrowed funds, mainly for investment projects and as start-up funding of financed projects to allow an early start;
- opens up the possibility of integrating the interfacing research institutes into U.Porto as organic units, that presently are private not-for-profit associations, which can be a good contribution to increasing the cohesion of U.Porto and to a more efficient use of the human and material resources available;
- enlarged capacity for fund-raising, particularly by action of the Board of Trustees of the foundation, increasing the amount of financing by own funds and the diversification of its sources;
- increased public visibility, resulting from being one of the first Portuguese universities willing to adopt the new regime of a foundation, showing a willingness for innovation and no fear to face change.

Meanwhile, the General Council shall approve, following a proposal by the Rector and within six months of the publication of the new U.Porto statutes, those of the new Doctoral School, the new Centre of Shared Resources and Services and the Student Support Services.

According to the new statutes, the General Council shall approve the organic regulation of U.Porto, within 18 months after starting its functions, and following a proposal by the Rector. This organic regulation must define the structure of the university, namely the number, designation, type of government and autonomies of the organic units and autonomous services incorporated by U.Porto. During this 18-month transitional period, the structure of U.Porto will be maintained as it is now, although adapted to the new governance model and with the new Doctoral School and Centre of Shared Resources and Services.

The Doctoral School will manage the doctoral programs offered by U.Porto through its Faculties. It is believed it will significantly contribute to improving the dissemination, quality and internationalisation of doctoral programs. The Centre of Shared Resources and Services will offer highly specialised and high quality services to the whole University, avoiding the overlap of the same type of services installed in all Faculties, often without the required quality.

The definition of the new structure of U.Porto is an excellent opportunity for rethinking the present model and to define a new one that is able to increase the cohesion of the University - a model that may take more advantage of the diversity of the university; that may build multidisciplinary in a much easier and efficient way; that may use the resources available with much more efficiency; that may lead to enhanced quality and to increase individual accountability and the inherent responsibility for insufficient results. That is to say, to make of U.Porto a single and united institution, preserving and respecting diversity and decentralization of decisions, and not a federation of almost independent institutions.

It is believed that the new governance model is a step forward, even though some time will be required to test the quality and effectiveness of the relationship between the different governance bodies, and if it really permits a faster and more efficient decision-making process. Nevertheless, a good use of these new instruments (new governance model, new structure of the university and foundation model) will certainly permit the implementation of the governance policy presented above, allowing U.Porto to be in a much better position to compete globally. One also expects that the foundation model will result in a greater autonomy of the University from the government, particularly by reducing its micromanagement interventions.

Section III: Activities

Teaching/Learning

From the teaching and learning point of view, the last years at U.Porto have been strongly conditioned by the pressure to complete the transition from the old programmes to the new legal system for degrees and diplomas following the Bologna process. In these programmes a *licenciado* degree (bachelor) is awarded after the completion of the first 180 ECTS (in some cases, 240 ECTS). In addition to the three usual education cycles, there are also *Mestrado Integrado* (Integrated Master) programmes (300 to 360 ECTS) in medicine, dentistry, veterinary medicine, pharmacy, architecture, engineering and psychology. In 2009/10 U.Porto offers 275 programmes: 34 first cycles, 18 integrated masters, 151 second cycles and 72 third cycles. All are adapted to the Bologna model.

The objective of reinforcing the offer and the quality of post-graduate education led to the raise of multidisciplinary education. Although Faculties still need to work more on this topic, currently U.Porto offers 33 programmes involving more than one Faculty and 20 programmes organized in cooperation with other Portuguese or foreign universities: for example, the joint programmes with the Massachusetts Institute of Technology (MIT), the Carnegie Mellon University (CMU), the University of Texas Austin (UTA) under agreements with the Portuguese government.

Even though the 14 faculties are very distinct and heterogeneous, all education programmes are organised under common general rules, based on similar generic descriptors for each cycle and on a set of similar organisational principles regarding direction and coordination. The education programmes must be managed by a Programme Director, a Scientific Commission and by an Overseeing Commission (see Section IV, Monitoring and Improving Practices - Teaching and Learning) which integrates students of the different programme years.

Although the more formal stage is already completed and some cultural changes in education are implemented, further work is needed in order to internalize the change of paradigm brought by Bologna and to ensure excellence in education. U.Porto is trying to deepen the reform process in its most important component: to place the student at the centre of the teaching/learning process, including the development of skills and life-long learning capabilities. It is clear that awareness has been growing among U.Porto's academy about the importance of modernising the teaching and learning methods, namely the need for developing scientific, technical and also transversal abilities and skills. Almost all programmes include optional components. In Science and Arts some programmes are organised into majors and minors. In other fields it is common to have optional specialisation profiles. In the integrated master programmes students have the option to choose a final project or a professional internship. With regard to second cycles, the majority require a scientific dissertation. There are very few vocational masters.

Concerning the enhancement tools of the European higher education area – ECTS, diploma supplement, mobility programmes – it is reasonable to say that the U.Porto is performing well (Annex VI).

The self-evaluation of the faculties showed that in the teaching/learning area the opportunities more often mentioned are related to the Bologna process, which is seen as a restructuring opportunity. Faculties recognize that this reform opened the possibility of attracting non-traditional students to the second and third cycles, and allows mobility between cycles, viewed as an alternative to traditional mobility schemes. The priority now is to properly define learning outcomes, to implement and assess correctly the number of ECTS in each course, to reinforce multidisciplinary, and to adapt teaching/learning methods so as to strengthen students' critical spirit, autonomous work and research skills.

Faculties pointed out some threats endangering the teaching/learning area: the current unpredictability of the labour market; the downturn in the search for scientific jobs; the lack of attractiveness of the technical areas; and the technological and scientific illiteracy of higher education students. The negative evolution of the economy in the northern region of Portugal, leading to limited job opportunities (in strategic and management areas), is also threatening students' enrolment (the best students, in particular). Also indicated is the danger that the raise of *numerus clausus* might present to the teaching/learning quality if not followed by an equivalent investment in human and material resources (Annex III).

According to Faculties, the most common strengths in teaching/learning are related to the human resources' qualification and to the corresponding capacity of implementing the Bologna process. Also mentioned are the facility of process monitoring through the U.Porto's information system, SIGARRA (see pg 14 - Information and Communication Technologies, ICT); the good relationships between students and teachers; and the expanding use of ICT, particularly in libraries. Notice that, currently, all course syllabuses of all education cycles are available at SIGARRA, together with the objectives, bibliography, expected skills and outcomes, assessment methods and final classification formula. Another positive trend is the growing offer of non-diploma programmes, some in cooperation with enterprises and entities of the region and the increasing use of e-learning

platforms - particularly in blended learning – by teachers and students (see Table 4). However, U.Porto still needs to increase the number of e-learning infrastructures, to make significant efforts in the recognition of professional and non-formal education, and in refining the criteria for attributing credits to prior education in distinct areas.

Table 4: Use of e-learning platforms¹⁹

Type of e-learning users	2006/2007	2007/2008	2008/2009	TOTAL
Teacher profile	336	433	580	1349
Student profile	8970	8828	16220	34018
Programme/Course	219	304	327	850

Among the weaknesses, Faculties often state the low impact of teacher and programme assessment by students and the lack of some equipment. They also identify as weaknesses the absence of accurate indicators to support decision-making on the design of new courses, the absence of regular programme assessment, and unsatisfactory coordination between structures.

Together with a new procedure to monitor and assess all first and second cycles of U.Porto, which will be implemented in the academic year of 2009/10 (see Section IV, Monitoring and Improving Practices - Teaching and Learning), the recent publication of the Portuguese Framework for Higher Education Qualifications by the MCTES (Ministry of Science, Technology and Higher Education) seems to be an important complementary tool to support teaching/learning reforms.

The changes already made, together with the consciousness that improvements still need to be done or deepened, proved to be unique opportunities – even if not always fully seized – for promoting and modernising the U.Porto educational offer. The greatest difficulties come, on the one hand, from organisational inertia and resistance to cultural and behavioural changes. On the other hand, financial constraints complicate the creation of material conditions and the deployment of resources suited to a profound change in the work habits of the role-players in the education process.

Research and Development

U.Porto aims to promote an R&D of excellence in most of the knowledge areas, challenging their members to integrate the creation of knowledge into their learning processes. As a multidisciplinary university, U.Porto aims to promote multidisciplinary research practices as a model to prepare their students to recognize and combine different perspectives on addressing problems, and to get used to working in multidisciplinary teams.

R&D activities in the U.Porto have significantly expanded over the last years, mainly as a result of academic qualification and increased funding through competitive programmes evaluated by independent international peer review committees.

R&D Units and Research Institutes vary noticeably in dimension, aims and structure - from small to large units, conducting specialised or interdisciplinary work, faculty integrated or independent. They are present in almost every field of knowledge sharing the same vision to build a modern research university. A part of the U.Porto's R&D units are hosted in institutes autonomous from U.Porto (interface institutions), in spite of the majority of their researchers being U.Porto's staff.

The autonomy of the interface institutions was stimulated in the past because they offer a more flexible and less formal management, seen as requirements to promote the development of the hosted R&D units. However, evolution of the EU research-funding model to a full cost model is raising some concerns about the adequacy and sustainability of institutionally autonomous R&D interface institutes. Because these institutions are entities legally distinct from U.Porto, they will face problems of incorporating in their costs those supported by U.Porto (salaries, common facilities, etc) and thus limited possibilities in justifying the share not supported by the funding entity. R&D interface institutions had the advantage of allowing building stronger ties within R&D units from different faculties of U.Porto and with external entities, public or private, such as governmental organizations and companies (particularly SMEs). According to the faculties, this is still one of the strengths of R&D at U.Porto.

Several research units and institutes perform at international level. However, there are still internal discrepancies in terms of reaching internationally recognized high standards of quality. Some R&D groups still have a very low rate of publication in international peer review journals, while results of research done by others (mainly

¹⁹These numbers are only for the e-learning platforms offered centrally by the University. The total number of courses that offer online pedagogical contents is about 2000, taking into consideration the local support offered by Faculties.

from the humanities and social sciences area) make their acceptance more difficult in indexed international journals, not because of the quality of work produced, but because they are oriented to topics of very local interest and/or, because of their characteristics, have to be written in Portuguese. However, some R&D units still have to perform better. Promotion of weaker units is a priority, namely by opening opportunities for their involvement in collaborative multidisciplinary programs with R&D units that at present show better performance.

According to Faculties, other reasons for the weaknesses at the R&D level are still the reduced size of the R&D groups, the teaching workload that some researchers have to carry out and the shortage and irregularity of financial support. This occurs particularly in areas which FCT does not consider a priority, and in which groups do not have conditions to compete for EU funds. Another point raised by faculties is the lack of incentives to stimulate the involvement of all teaching staff in R&D activities or to reward, in terms of career progression, those scientifically more productive. An attempt to find a balance in curricula evaluation was made by including scientific productivity as a major item in the evaluation of candidates for positions open at U.Porto. It is also hoped that the new *Estatutos da Carreira Docente* (ECDU – academic staff statutes) issued by the Government in August 2009, by making mandatory the continuous evaluation of teachers' activity may also contribute to responding to this (general) weakness.

There is a lack of mechanisms to develop an R&D strategy at U.Porto. Funding (and consequently the definition of strategies and priorities) is centralised by FCT. Therefore, the lack of significant financial resources has hampered the development of U.Porto's own strategy, namely through identification and promotion of new strategic research areas. The actions that U.Porto has been taking to promote R&D are limited by the resources available and, therefore, not sufficient to launch a strategic medium-term R&D project, a limitation recognized by the faculties as a weakness.

The actions that U.Porto has been implementing are more long-term oriented, aiming to:

- mobilize more people for R&D activities, through a project designed for stimulating the integration of students in multidisciplinary research teams (“IJUP” program);
- improve young researchers' skills in writing scientific papers (courses of scientific writing);
- equip researchers to carry out research in specific areas (i.e., animal experimentation);
- support the acquisition of strategic equipment or facilities used by different R&D units;
- support preparation and submission of projects to European agencies and to integrate U.Porto's R&D groups in international networks (through the UPIN office);
- increase the visibility of science (by supporting the organization of scientific meetings and by giving more visibility to what occurs inside U.Porto through the online TV channel²⁰);
- promoting open access, by creating an Open Access Repository and an Open Access Mandate and integrating the national Open Access Repository and the Project DRIVER directory;
- collect and spread information about public and private funding opportunities for R&D;
- offer a comprehensive collection of e-journals and other electronic information sources in all areas of knowledge²¹;
- support knowledge valorisation by helping researchers in the protection and commercialization of IP (intellectual property) by the UPIN office and by offering premises for the incubation of start-ups and spin-offs at the Park of Science and Technology of U.Porto (UPTEC)²² to explore technologies and knowledge available in U.Porto;
- promote a sustainable development of R&D in strategic areas, such as health and biotechnology, communication and information, marine and maritime, and in environment and energy science and technologies, by improving and expanding the facilities available to host the R&D units with specific infrastructure.

External Relations and Internationalisation

Internationalisation is a strategic goal for U.Porto clearly stated in the Strategic Plan 2009-2013 (Annex VII). In the last years and in accordance to the challenge of achieving 10% of foreign students in 2011 – the year of U.Porto's first centenary – the number of students coming from abroad increased considerably.

²⁰ <http://tv.up.pt>

²¹ <http://biblioteca.up.pt>

²² <http://www.uptec.up.pt>

U.Porto is attracting foreign students to the three cycles (see Annex VIII), with the awareness that increasing their number represents an opportunity, not only within the Bologna framework, but also in the scope of the growing relations with the Portuguese speaking/Latin-American countries (Annex VI). In 2008/2009, 2423 foreign students were enrolled or studying at U.Porto (50.6% within a mobility scheme), already representing 8.1% of the total number of U.Porto's students. Regarding the previous year, the number of foreign students enrolled in a degree at U.Porto increased 6.6%, due to a considerable boost in demand in the second and third cycles (see table 5).

Table 5 – Foreign students at U.Porto (2007/08 and 2008/09)

	2007/08	2008/09	Variation
Foreign students (total)	2264	2423	+7.0%
1st cycle	1652	1731	+4.8%
2st cycle	332	394	+18.7%
3st cycle	215	283	+31.6%
Post Grad. Specialisations	65	15	-46.7%
Mobility	1075	1225	+13.9%
Degree	1124	1198	+6.6%
Total foreign st. / Total U.Porto	7.8%	8.1%	

With regard to Erasmus mobility, according to the EC official numbers²³, U.Porto is among the top 40 in-going mobility European universities (2004/05: 40th place; 2005/06: 33rd place; 2006/07: 37th place), and is among the top 50 in out-going mobility (2004/05: 30th; 2005/06: 40th; 2006/07: 48th).

Regarding academic staff mobility, in 2007/08 eighty-seven persons from 64 HEIs (belonging to 16 European countries) came to U.Porto under mobility programmes. Taking the opposite direction, seventy-six U.Porto teaching staff participated in mobility programmes from 64 HEIs of 17 European countries. Data from CE regarding academic staff mobility²⁴, shows that U.Porto is currently among the top 100 European universities (mobility IN – 2004/05: 24th; 2005/06: 16th; 2006/07: 18th. Mobility OUT – 2004/05: 27th; 2005/06: 43rd; 2006/07: 57th). Furthermore, in 2007/08 sixty-six foreign teaching staff and researchers from 23 countries developed their work at U.Porto on a regular basis not under any mobility programme.

By the end of 2007/08, U.Porto had 553 cooperation agreements with foreign universities, 393 being Erasmus agreements (signed with HEIs from 26 European countries), 136 bilateral agreements (HEIs belonging to 38 countries of the five continents), and 24 co-tutelage, European PhD or double-degree diploma agreements. It must be recognized that, out of those 553 cooperation agreements, only 28 were signed with universities in the top 100 world ranking.

U.Porto is currently engaged in 20 joint double/multiple degree doctoral and post-graduate programmes with foreign prestigious universities. Some programmes are organized on the basis of protocols celebrated by the Portuguese Government with the MIT, the CMU and the UTA (these protocols also involve other Portuguese universities: Minho, Aveiro, Lisboa, Técnica de Lisboa and Nova de Lisboa). Other programmes are initiatives of the Faculties: the Faculty of Sport shares a multiple degree doctoral programme with Universidade de São Paulo and with the Universidade Federal de Rio Grande do Sul, Brazil; the Faculty of Engineering has a double degree (integrated masters) with the École Nationale de Ponts et Chaussées, France; the Faculty of Medicine organizes one master programme together with the Universidad de Barcelona; the Faculty of Arts and Faculty of Medicine participate in post-graduation/specialisation programmes with foreign universities; the Faculty of Psychology and Education Science participates in two international masters programmes.

During the last years, a negative trend concerning the public funding of Portuguese universities hampered the implementation of a sound internationalisation strategy. Even though internationalisation is not yet regarded as a strategic priority by all Faculties, that difficulty constitutes, at the same time, a weakness and a threat. Nevertheless, a huge effort is being made centrally, at the Rectorate, to obtain extra resources to strengthen the international network in which U.Porto is involved.

In 2008, U.Porto submitted 15 applications to important European programmes. Six of these applications were successful, with three as a consortia coordinator (one EM-ECW, one ALFA III and one EDULINK) with a total funding of 6.1 million Euros. In the first months of 2009, U.Porto, together with partner universities in Europe, Latin-America and Asia, completed seven new applications to the programme EM-Action 2. The results of these

²³ http://ec.europa.eu/education/erasmus/doc920_en.htm

²⁴ http://ec.europa.eu/education/erasmus/doc920_en.htm

applications were recently announced and U.Porto will coordinate two new university consortia – one for Brazil and the other for Brazil, Paraguay and Uruguay - managing funds of 6.2 million Euros.

Under the Erasmus Mundus Action 1A, two projects were recently approved: the European Master GLITEMA – German Literature in the European Middle Ages – coordinated by U.Porto with the participation of the Universität Bremen, the Università degli Studi di Palermo, the Universidad de Santiago de Compostela, the Freie Universität Berlin, the University of North Carolina at Chapel Hill, the Univerzita Palackého v Olomuci, the Lomonosov Moscow State University, the Universiteit van Amsterdam, the Univerza v Ljubljani, the Ernst-Moritz-Arndt-Universität Greifswald and the Universität Zürich – and the European Master in Theoretical Chemistry and Computational Modelling (TCCM) – coordinated by the Universidad Autonoma de Madrid with the participation of U.Porto and the Universitat de València, the Rijksuniversiteit Groningen, the Katholieke Universiteit Leuven, the Università degli Studi di Perugia, and the Université Paul Sabatier, Toulouse III.

The international cooperation with Portuguese speaking/Latin-American countries (which include some of the emergent economies, and where many HEIs are trying to affirm themselves among the best of the world) is a strategic opportunity for U.Porto. Moreover, some of the Portuguese speaking/Latin-American countries (particularly Brazil) are heavily investing in higher education and in internationalisation, and Portugal is linked to them by strong cultural and linguistic ties.

Nowadays Brazil is the first strategic partner of U.Porto in international cooperation: 1030 Brazilian students (42.5% of all foreign students) studied at U.Porto in 2008/09 coming from 62 Brazilian HEIs; 142 U.Porto students currently study at 32 Brazilian HEIs; U.Porto has 58 cooperation agreements with Brazilian HEIs; 18 academic staff from 12 Brazilian HEIs undertook a mobility programme at U.Porto and 10 U.Porto academic staff at 6 Brazilian HEIs; U.Porto coordinates 1 EM-ECW and 2 EM Action 2 consortia with Brazil.

Special attention is also being paid to the former Portuguese colonies, given the long-established good relationship with their HEIs, and the current level of development of these countries.

In order to strengthen its competitiveness at an international level, U.Porto needs to attract academic staff and researchers from internationally renowned universities. For the time being, that number is still low. Confirming this statement, Faculties identified as weaknesses: (i) the difficulty in attracting renowned foreign academic staff; (ii) the insufficient integration of foreign academic staff working on a regular basis at U.Porto; and (iii) the lacking tradition of hosting post-doc researchers at U.Porto. Accordingly, U.Porto is trying to attract good students, academic staff and researchers, through the establishment of networks, partnerships and joint programmes with renowned universities, and also through the coordination/participation in international university consortia for European programmes. Notice that enlarging and strengthening participation in networks and consortia with the best European and other international universities are seen by the Faculties as an opportunity and a mechanism for promoting excellence in education and research. Moreover, Faculties believe that they have competent and qualified teaching and non-teaching staff, developing a strong non-institutionalized international activity, allowing the development of joint doctoral programmes in strategic areas and increasing post-doc demand. Faculties also feel that, at the central level and at (some) local level, U.Porto has good internationalisation supporting staff and organizational structures.

The strategic plan of U.Porto has already defined objectives and action plans in order to enhance the bilingual (Portuguese and English) teaching offer (Annex VII). However, the language policy should be established carefully. On the one hand, it is necessary to increase the number of programmes offered in English to encourage foreigner students to study at U.Porto. On the other hand, this can hamper the flow of Portuguese-speaking/Latin-American students to U.Porto, who are benefiting from a familiar language. Notice that Portuguese is spoken by 250 million people all over the world and understood by approximately 450 million Spanish speakers. It should also be considered that, in spite of the progress made in recent years, Faculties consider that linguistic and cultural factors are weaknesses slowing down the introduction of English as a second teaching language, which, in turn, impedes the attraction of international students coming from outside the Portuguese speaking/Latin-American countries. Accordingly, the current U.Porto policy regarding the adoption of English as a teaching language is to encourage and support local (Faculties) experiences or initiatives, but not to impose a common rule to all of U.Porto.

Information and Communication Technologies (ICT)

U.Porto recognizes the relevance of Information and Communication Technologies (ICT) for the overall performance of the institution.

In 2003 a department dedicated to ICT was created centrally, managed by a Pro-Rector, called *Universidade Digital* (DUD; Digital University Department). DUD mission is to promote and extend the use of ICT to all the activities of U.Porto, as well as to induce the development and adoption of innovative services in this area. DUD is thus responsible for the management of a large number of resources and services, including technological

infrastructure, ICT for teaching and learning, information systems and applications. This department is also responsible for information management at U.Porto and gives support and advice to the ICT offices or centres installed in Faculties and in other U.Porto units. Also, in 2003 a project was launched aiming at implementing a new generation campus network, connected to a comprehensive and effective information system. The information system project, called SIGARRA, was based on a very successful information system developed in-house at FEUP (the Faculty of Engineering) since 1996 and called SiFEUP.

At that time, SiFEUP was already a reference not only within U.Porto but also in national and international terms. The system received a national award given by the Portuguese Informatics Institute (the Descartes Award) and also a European Award, the EUNIS Elite Award, given by the European University Information Systems Association. SiFEUP became a common patrimony for the academic community at FEUP and an important tool to support the major processes of the faculty, namely the pedagogical and research processes, as well as the administrative and management processes. The credibility of SiFEUP was a key factor to open the system to the other faculties of U.Porto and to give rise to SIGARRA.

SIGARRA, which is now fully implemented in U.Porto, was designed in order to be a tool/infrastructure that encourages best practices and facilitates compliance with procedures. At the end of 2004, twelve faculties were using the system and nowadays SIGARRA is used by all Faculties²⁵, by the Rectorate and the Social Services, as well as by the University as a whole through an aggregated instance that collects and processes the information of all the other system instances.

SIGARRA is well-known both nationally and internationally (see ECAR Case Study 4, 2009 in Annex IX). Accordingly, it is not surprising that SIGARRA has been identified by the Faculties as a strength. However, Faculties recognize that the system is not yet fully explored in all its potential and call for more flexibility, in order to better respond to specific issues and to allow the local management of the system.

Due to the distributed geographical organization of U.Porto, the existence of an excellent campus communication network is centrally considered as a priority. Again Faculties recognized this communication infrastructure as a strong point. In fact, all U.Porto faculties are connected through a high speed connection network (using optic fibres) at a rate of 1Gbit/s. This network is connected to *Rede de Ciência Tecnologia e Sociedade* (RCTS, the national network) which is managed by FCCN (National Foundation for Scientific Computation; the Portuguese NREN) at a rate of 10 Gbit/s. Each faculty has a local network connected to the campus network. These local networks are managed by the local computing services, and offer both fixed connections as well as wireless connections, available through the e-U network, which is part of the “eduroam” European network. The policy of interfacing with the technical teams at the Faculties in order to guarantee the capacities of the local networks proved to be quite successful and is being applied to other projects like IPv6, Multicast and VoIP. The network is also able to offer end-to-end quality of service connections to support high demanding projects, for instance grid computing projects.

Concerning e-Science, U.Porto is offering a campus grid which is part of the EGEE (Enabling Grid for e-Science - the largest grid infrastructure in the world), and many other facilities within or interconnected with SIGARRA, like the registering and management of scientific productivity and the automatic registering in the U.Porto Open Access Repository of papers not protected by publishers’ copyright. Master and Ph.D. theses may also be automatically transferred from SIGARRA to the U.Porto Open Access Repository. The U.Porto Open Access Repository is integrated with the National Open Access Repository and is also part of the DRIVER (Digital Repository Infrastructure Vision for European Research) directory.

Support and management of the U.Porto Repository is done in close cooperation with the U.Porto libraries. SIGARRA is connected to the library application (Aleph) providing automation of tasks, for instance, the possibility to directly collect the bibliography for the units of all study programs offered by U.Porto. from SIGARRA to the library catalogues.

Support to teaching and learning is another key activity of DUD. The number of course units that currently offer on-line contents exceeds 2.000 and each year about 50 new course units adhere to the e-learning project²⁶.

To disseminate good practices and foster innovation, an annual workshop and an elite award for e-learning are also managed by the e-Learning Office of DUD, which offers pedagogical and technical support in the use of ICT for education to all teaching staff of U.Porto.

The Learning Management System in use at U.Porto (Moodle) is also interconnected with SIGARRA, and besides single-sign-on, the course units summaries and student grades may be automatically transferred between these platforms. Due to the high number of digital contents for e-learning already available, efforts are now being directed towards the continuous education courses.

²⁵ The Faculty of Sciences is now using SIGARRA in connection with its own Information system (*InfoCiências*)

²⁶ <http://elearning.up.pt>

In order to better respond to the Bologna paradigm of teaching and learning, new learning ICT-based spaces had also called the attention of DUD, with a special emphasis on the e-learning café of U.Porto. It is a new environment strongly supported by an ICT structure, where social and learning activities are combined and where the whole academic community can meet, exchange knowledge, share experiences, and work in groups to solve problems, thus promoting interdisciplinarity and innovation.

Taking into consideration the information collected from the self-evaluation reports of the Faculties, a SWOT analysis for ICT is presented in Table 6.

Table 6 – SWOT analysis for ICT

Strengths	Weaknesses
Availability of SIGARRA	Insufficient capabilities of SIGARRA in terms of local management
Excellent connection to the Internet	Low use of some SIGARRA modules
Wireless coverage	Dependence on the support of ICT central services for SIGARRA
Service automation provided by SIGARRA/Aleph	Insufficient support of SIGARRA for local users
Growing knowledge on how to use SIGARRA	Lack of documentation about procedures
Adequate computer/user ratios	Increasing ICT security risks
Motivation of the different academic actors to use ICT	Lack of investment for ICT renewal
Good interface with the ICT central services	
Opportunities	Threats
ICT being a priority for the top management of U.Porto	High ICT rates of obsolescence
Technological evolution	Insufficient budgets for ICT
	Lack of ICT personnel
	Insufficient ICT training

Section IV: Quality practices

Quality System Pillars

The goal of becoming a European prominent HEI is largely dependent on the U.Porto's capability for establishing a quality culture throughout the entire organisation. Despite the commitment to quality already embedded in the university, in 2006 the Rector set up a new office at the central level (Rectorate), called *Melhoria Contínua* (Continuous Improvement), with the mission of designing and supporting a quality system for the U.Porto and of promoting quality culture.

This small unit (entailing a Pro-Rector and two staff members), envisaged a quality system for the U.Porto based on the following pillars:

- a) the information system, capable to standardise routine procedures, and also to shape and to stabilize good practices;
- b) the collection and dissemination of relevant and detailed information about the U.Porto's performance;
- c) procedures for monitoring, assessing and improving the U.Porto's performance in the main fields of its activity;
- d) an institutional evaluating programme based on the self-evaluation and quality audit principles.

The quality system that U.Porto is trying to put into place entails a vast and diverse collection of activities through which quality should be assured and improved. This means that everyone is responsible for quality, no matter when and where those activities are performed. At the Faculty level, each Dean has the duty to put into practice mechanisms for assessing, improving and assuring quality. Similarly, at the central level, the Rector assigns to the Vice-Rectors and Pro-Rectors the responsibility for taking measures which can assure and improve quality in their own fields of action. It should be stressed that the Continuous Improvement office is not responsible for U.Porto quality. This office supports those activities and, above all, has to assess the adequacy of the quality system and to design and propose corrective actions.

Information System and Self-Knowledge

The need for a global intranet was recognized as a priority tool to enforce quality practices and culture all across the university and at all levels. Accordingly, in 2003 the SIGARRA project was launched (see Section III - Information and Communication Technologies). It was expected that the system could play a fundamental role in promoting quality conscientiousness, easing decision-making processes and improving the organisational quality of the institution.

It is unquestionable that SIGARRA has already pushed U.Porto to step into a higher level of quality awareness and culture. Actually, Faculties share the same basic procedures, bureaucracy was reduced and transparency increased. To a large extent, the implementation of SIGARRA forced the stabilization of administrative procedures and processes, and is now the instrument used to monitor and to regulate them. Students and teaching staff profit from on-line information on timetables, classes, classrooms, wireless coverage, discussion areas (forums), e-mailing, online learning areas (e-learning), an online catalogue of the Library, virtual helpdesk, and many other functions. Currently, U.Porto has a database that provides online information about teaching and learning (e.g. course units' description and reports, learning outcomes, evaluation criteria, bibliography, grades, drop-out rates, etc.), research productivity, and other activities. Communication flow and decision-making is now much easier and stable than it was before SIGARRA.

In spite of the success of SIGARRA, generally recognized by the Faculties, some problems remain. SIGARRA is not performing at the same level (sub-utilization) in all Faculties. A few of them feel that SIGARRA do not respond to their own specificities and others require an upgrading of the helpdesk system or more support from the Rectorate.

Beyond the information gathered and organized in SIGARRA, the Continuous Improvement office regularly produces abundant and detailed information (including performance indicators) about student admissions, enrolments, graduates, research and internationalisation (Annexes X, VIII, XI, XII, XIII, XIV and VI). Another relevant document is the Human Resources report issued every year, including data about the situation of teaching and non-teaching staff at U.Porto (Annex XV). All the reports are accessible without any restraint at SIGARRA²⁷. It is believed that this feature is an important contribution towards the objective of installing a quality culture. In fact, spreading and expanding the awareness about the performance of U.Porto is a basic

²⁷ http://sigarra.up.pt/up/CONTEUDOS_GERAL.CONTEUDOS_VER?pct_pag_id=122350&pct_parametros=p_pagina=122350

condition for improving. Although the self-evaluation exercise has showed that monitoring is under consolidation in many Faculties (basically through the use of SIGARRA), it should be recognised that consolidated information was missing, preventing cross comparisons between Faculties and benchmarking.

The situation has changed now, however, and the U.Porto monitoring and self-knowledge reached a sound level. The benefits of this policy can be illustrated, for instance, by the annual report on U.Porto R&D production (Annex XIV), published since 2002. R&D performance indicators are now closely followed by Faculties, which triggered some measures in order to improve the quality and output of research. The Internationalisation Report is another relevant element that is produced each academic year (see Annex VI, the report on 2007/08). An impressive amount of data, facts and figures concerning student mobility (in and out), foreign students enrolled, post-doctorate researchers, academic and non-academic staff mobility, cooperation agreements with foreign universities, university consortia, scientific papers, international conferences and rankings, are gathered in this report, together with specific recommendations for each internationalisation topic.

Monitoring and Improving Practices

Teaching and Learning

In June 2008, it was decided that a new procedure for the monitoring and assessment of all the 1st and 2nd cycle programmes of U.Porto will be adopted, starting in the academic year of 2009/10. This procedure was approved by all the Faculty Deans and by the Senate. Notice that the new national agency for assessment and accreditation of higher education – A3ES (*Agência de Avaliação e Acreditação do Ensino Superior*), that has to evaluate and accredit the Portuguese higher education institutions and their programmes, will also start its operations in 2009/10. In parallel, it was also decided to provide each first and second cycle programmes with a *Director de Curso* (Programme Director), a *Comissão Científica* (Scientific Commission) and a *Comissão de Acompanhamento* (Overseeing Commission), which integrates students from the different programme years.

The procedure establishes that the Programme Director is formally responsible for the monitoring and the assessment of its “own” programme, having the obligation of hearing the Scientific Commission and the Overseeing Commission. The procedure requires that the Programme Director produces a Programme Report each academic year. Using the information kept in the database, the SIGARRA automatically generates all the relevant statistics, tables, diagrams and performance indicators. The report also includes the results of the pedagogic survey (the students’ assessment of teachers and programmes). Afterwards, the Programme Director completes this semiautomatic report, adding his own commentaries, suggestions or improvement proposals. The structure of the report is predetermined, allowing that results and indicators are comparable all across programmes, facilitating benchmarking and inducing best practices.

The Programme Report must be submitted to the Pedagogic Committee of the Faculty (which includes 50% of student representatives). The Pedagogic Committee of the Faculty also plays a major role in the assessment and improvement of the programmes, since it has the obligation of analysing the reports and, in relation with the Scientific Committee of the Faculty, to propose corrective actions. Finally, the Dean decides which corrective actions will be carried out, who will be responsible and when.

In general, Faculties believe that teaching and learning is one of the areas in which monitoring is more effective and stable. However, Faculties pointed out some degree of dissatisfaction with the outcomes of the pedagogic survey, and mentioned the need for a better adjustment between programme curricula and labour market demands, and an insufficient follow-up of the graduates’ professional careers.

In order to reduce those gaps, an Employment Observatory of U.Porto was launched in 2008, benefiting from the scientific guidance of professors of the Faculties of Arts and of Psychology and Education Sciences, and the support of the Alumni office of the Rectorate. In 2008 and 2009 this observatory produced extensive reports about the employment situation of the U.Porto graduates who completed their programmes in the academic years of 2005/06 and 2006/07 (Annex XVI²⁸). These reports are available at the U.Porto’s internet site²⁹ and depict relevant information about employability, the labour market situation, job satisfaction, learning outcomes and the adequacy of competencies, mobility, and other topics. These documents are now key elements of the quality assurance and improvement policy of U.Porto.

Another important monitoring tool is the “Survey on higher education students’ satisfaction”, produced by the independent agency CIPES. The last survey (Annex XVII), referring to the academic year 2006/07, reveals a

²⁸ In Portuguese

²⁹ http://sigarra.up.pt/up/conteudos_geral.conteudos_ver?pct_pag_id=1001785&pct_parametros=p_pagina=1001785&pct_disciplina=&pct_grupo=1441&pct_grupo=1262#1262

good or very good level of satisfaction of the students on different aspects of U.Porto (91% would apply to the U.Porto again if they could go back, and 91%, once more, would recommend U.Porto to other people).

Research and Development

The Continuous Improvement office regularly produces three documents – “FCT R&D Units” (Annex XII), “FCT Projects” (Annex XIII) and “Scientific Papers of the University of Porto Indexed in the Web of Science” (Annex XIV) – which are openly available on the U.Porto web page. These documents include evaluation results, indicators, and other relevant information about the performance of U.Porto R&D units and researchers. It should be noticed that all the data presented in those reports is obtained from external sources.

The first document focuses on the evaluation results of the 69 R&D units recognized and funded by FCT belonging to the scientific areas of Arts and Humanities, Engineering and Technology, Sciences, Health Sciences, Exact Sciences and Natural Sciences. Those R&D units are evaluated each 4 to 5-years by international panels of independent experts nominated by FCT. The classification scale used by the panel ranges from “poor” to “excellent” and comprises “fair”, “good” and “very good”. According to the last evaluation, out of those 69 units, 14 were included in Associate Laboratories, 8 were classified as Excellent, 21 Very Good, 14 Good and 6 Fair (another 6 under re-evaluation). The statute of Associate Laboratory is awarded by the Ministry of Science, Technology and Higher Education to research institutions with the highest classifications in the evaluation process carried out by international panels. The Associate Laboratories are organized around thematic areas and may provide assistance to the government when designing public policies.

A similar competitive procedure is adopted regarding the R&D projects launched and funded by FCT. The document “FCT Projects” discloses indicators and statistics about the capacity of the U.Porto researchers to win projects and funds when competing at the national level with other researchers. The third document (mentioned above) – “Scientific Papers of the University of Porto Indexed in the Web of Science” – gathers substantial information about the scientific production of U.Porto researchers: number of scientific papers indexed in the WoS per Faculty, growth in scientific papers (Portugal and U.Porto), evolution of the number of papers/FTE PhD year, citations, Hirsch index (h), etc.

It is believed that the policy adopted – the disclosure and availability of R&D data (in fact, not easy to grasp) – had a positive contribution on the growth of the U.Porto’s scientific productivity. It is clear that R&D self knowledge is now considerably better than it was before, stimulating benchmarking between and within Faculties and boosting the sense of belonging to U.Porto. For instance, the number of papers with correct affiliation, in which U.Porto is included (correctly), increased significantly in the last years.

Human Resources

The area of human resource management (including, planning and control) certainly needs to be improved at the U.Porto. Probably, the major difficulty is the lack of effective mechanisms to recognize and reward merit. Notice that non-academic and academic staff behave within the legal framework of Public Administration (quite rigid and bureaucratic), the last group being ruled by special statutes: the ECDU.

The insufficiencies associated with the management of academic staff were clearly reflected in the self-evaluation of Faculties, which stresses the lack of mechanisms enabling the management of career progression, workload, salaries and incentives. The ECDU, which has been in place for thirty years (new statutes were only issued on 31 August 2009), were seen as a major obstacle. For instance, those statutes do not regard as academic staff tasks activities like management, technological development, economic and social valorisation of knowledge, and artistic creation. To a certain extent, the former ECDU also favoured a considerable level of inbreeding at U.Porto (a universal situation within the Portuguese HEIs), since, for example, it not imposes a majority of external members in the academic examination boards and limits the performance evaluation (and selection) of teaching staff.

At U.Porto all teachers are evaluated by the students at the end of all courses (the pedagogic survey). However, the assessment results still have a moderate impact, largely due to restrictions imposed by ECDU. To a large extent, the new version of ECDU corrected the situation described above by, for example, enlarging and clarifying teaching staff tasks and duties, imposing a majority of external members on all the academic examination boards, and establishing an individual performance assessment (with consequences).

The new legal framework of U.Porto (public foundation following a private law system) together with the new ECDU allows U.Porto to adopt a pro-active academic staff management policy (including clear rules for career differentiation and progression, incentive system, mobility enhancement) and to facilitate the hiring of qualified teaching staff by giving more freedom in the definition of vacant positions (for associate and full professorship).

In what concerns non-academic staff (administrative and technical staff) the situation is different since they are not ruled by special statutes. For many years, a great problem in managing non-academic staff was the lack of an

effective evaluation system, through which one could reward merit and rationalize their career development. In 2004 the government issue of the first version of the *Sistema Integrado de Avaliação do Desempenho da Administração Pública* (SIADAP) appeared, which is the national system for performance evaluation of the Public Administration, inspired by the “management by objectives” philosophy. The system envisaged in the new version (2007) entails three components: the performance evaluation of services, managers, and employees. Within the scope of SIADAP, every Public Administration employee must be annually assessed according to competencies and to results (the degree of compliance with individual, predefined objectives). At U.Porto, these objectives are typically deployed from the service goals, and not so often from Faculty objectives (when they are explicit). Notice that the results of the evaluation have individual consequences in terms of salary and career progression.

The performance evaluation of services (first component of SIADAP) implies the construction of a *Quadro de Avaliação e Responsabilização* (QUAR, assessment and accountability framework), evincing the mission, the strategic objectives, the annual objectives and the performance indicators of the service, as well as the results and causes of deviations. A good example at U.Porto is the QUAR of SASUP³⁰ (student support services) in 2008 and the respective self-evaluation report (see Annex XVIII³¹).

So far, the results obtained with the SIADAP are clearly beyond expectations. There are signs of a mix of frustration and rejection. Although the experience acquired and the dissemination of best practices can enhance the acceptability of the SIADAP model, it needs improvement and more flexibility.

The Institutional Evaluation Programme of U.Porto

The first component of the U.Porto institutional evaluation programme is the self-assessment of the Faculties, planned to be performed on a 4-year cycle. During this exercise, each self-evaluation team tries to assess, in light of explicit or implicit objectives, how the organizational structure, procedures and practices of the Faculty ensure that the standards are met, and also if the improving mechanisms are efficient and well-established. The self-evaluation results and findings are gathered into a report which must include an improvement plan. The evaluation exercise progresses with an “external” audit conducted by the self-evaluation team of another Faculty and the corresponding “external” audit report. At the end of this process, each self-evaluation team carried out the evaluation of its own Faculty and an institutional audit of another Faculty. All together, this is an excellent opportunity for identifying areas for improvement, and for exchanging good practices. Both the self-evaluation and the “external” audit are based on guidelines specially produced for this programme.

Based on the analysis of all the reports, the Continuous Improvement office produces the Summary Report (Annex III). This document should express an interpretation of what seems to be the most relevant trends and frailties of the U.Porto as a whole, while not hiding the substantial diversity that exists inside the university by expressing an “average” of the different views, opinions and stances of the Faculties. On the other hand, the Summary Report also aims to provide good clues and evidence for the management and the decision-making process of U.Porto. Moreover, the Summary Report should depict the “voice” of the faculties, the bottom-up perspective.

Finally, the last component of the institutional evaluation programme is the global self-evaluation of U.Porto, which includes the subsequent report and the external audit. It is expected that the self-evaluation committee, working basically at the level of the Rectorate, produces an analysis and a report assuming not only a top-down approach but also reflecting the bottom-up perspective expressed in the evaluation of the Faculties.

The self-evaluation of the 14 Faculties started in September 2007 and was ended in June 2008. The exercise involved 92 persons (teaching staff, non-teaching staff and students). The teams produced 14 self-evaluation reports and 13 “external” audit reports (the self-evaluation report of one Faculty could only be finished in December). In the beginning of 2009, the summary report (a fundamental input for this institutional report) was prepared. Although the exercise was considered “heavy”, in general the process went smoothly and, for the majority of the Faculties, a prospective and fruitful reflection was carried out. However, the results were somewhat below what was expected. Some self-evaluation teams were not very persuasive in identifying objectives, targets, threats and opportunities. Occasionally, the main problems, their causes and feasible remedies were not thoroughly evaluated. Similarly, some reports were not extensively discussed within the Faculty and the self-evaluation exercise had a limited local impact. Despite these negative features the pay-back of the whole exercise was clearly positive, allowing the conclusion that the institutional evaluation programme is an appropriate tool for enhancing quality culture and shall be repeated.

³⁰ http://sigarra.up.pt/sasup/NOTICIAS_GERAL.ver_noticia?p_nr=452

³¹ In Portuguese

Some Difficulties

In spite of some limitations, a number of U.Porto areas are provided with fairly well-established monitoring and follow-up mechanisms, typically based on the SIGARRA, which are already embedded in Faculties' routine. Nevertheless, beyond what is actually in practice and despite the recent developments, U.Porto does not yet have a comprehensive and robust quality assurance system. The self-evaluation of the Faculties revealed that the existing system is not fully implemented all across the University: U.Porto still needs to develop, systematize and consolidate quality procedures, and to amplify their external visibility.

The self-evaluation also revealed inadequacies in the deployment of strategic goals. In fact, several Faculties do not have explicit objectives or targets clearly aligned with those of U.Porto. Moreover, the self-evaluation showed some fragility of the management bodies of the Faculties in identifying threats and opportunities, in inducing planned changes, and in establishing improvement mechanisms within their own institutions. Due to the absence of observable operational objectives and targets, during the self-evaluation process some teams experienced difficulties in setting up improvement plans really capable of enhancing their Faculty performance.

Part of those problems are a consequence of the highly decentralized organizational structure of U.Porto, together with the prevailing governance scheme, which do not favour internal coherence and complicates the connection between Rectorate and Faculties. Accordingly, it is expected that the new governance model, shaped and supported by the new statutes, can improve governance, decision-making mechanisms and quality practices. The new governance model will be implemented during 2009.

Section V: Strategic management and capacity for change

The New Strategic Plan

After election of the Rector in June 2006, the rectorate team developed a new Strategic Plan (see Annex VII), aligned with the candidacy manifesto of the Rector. In designing the U.Porto Strategic Plan, the rectorate team was inspired on principles typically assumed by the best universities and on the expectations and requirements of the stakeholders directly interacting with the University. The plan was designed not to be a simple list of actions to be led by actors of the U.Porto universe, but to become a lively document, opened to the whole community, desiring the strengthening of a quality culture and for promoting a sustainable dynamic in the University development process.

At a first stage, an introspective reflection on the University's current context was carried out. It becomes clear that U.Porto, although increasing its national and international level of recognition, should assume the ambition of becoming one of the best European universities. This statement turns into the new Vision for U.Porto. At a second stage, the drawing up of the Strategic Plan was guided by a prospective analysis, in which the strategic objectives leading to the U.Porto's Vision were identified, together with the guidelines for implementing them efficiently. From then on, the new Strategic Plan was adopted by the Rector and by the rectorate team, and the respective strategic objectives are being currently used as the guiding principles of their decision-making processes.

Methodology

The development of U.Porto's Strategic plan was based on the Balanced Scorecard methodology. The strategic areas (or themes) were identified according to their importance in achieving the Vision: Education, Research, Internationalisation, and Governance. Once identified, each strategic theme was revised under three different perspectives:

- The Stakeholders' perspective, trying to answer the following question: how can U.Porto satisfy its stakeholders' expectations?
- The perspective of Capacities and Competencies, that is, the set of abilities and processes that U.Porto must control in order to answer positively to the previous question - on the one hand, whatever capacity or competency that does not lead to satisfying a stakeholder requirement is a waste of resources, not being strategic; on the other hand, an expectation not supported in capacities and competencies leads to a decrease in competitiveness.
- The Development, Learning and Infrastructures' perspective: the basic resources (tangible and intangible) that should exist, or be acquired, in order to develop the required Capacities and Competencies.

Once the Strategic Maps were delineated and the objectives for each strategic theme defined, it became possible to identify indicators and metrics for assessing U.Porto's current situation and for evaluating the progress made when implementing the Action Plans outlined in the meantime. These plans include actions to be taken, identifying the person(s) in charge for its execution, the chronogram and the sequence of actions, as well as the indicators for assessing the actions' success. The strategic implementation cycle is complete when the Action Plans, once executed, are monitored and controlled through a Balanced Scorecard. Notice that the Balanced Scorecard is a tool which allows linking strategic long term objectives with short term goals and actions. Additionally, it is a good instrument for monitoring the performance of the organisation (in an integrated manner) through appropriate quantitative and qualitative indicators.

Implementation of the Strategic Plan and Management Control

Although a strategic plan is an incentive *per se*, it is surely not sufficient for the institution's continuous improvement. Implementing U.Porto's Strategic Plan requires a large consensus and a great emphasis on internal communication. Additionally, the success of the plan depends, largely, on the actual deployment of responsibilities and on making the essential resources available for its fulfilment. These conditions are still not yet satisfied at U.Porto. The two-year period that ended in May 2009 and led to the establishment of the foundation, was too troubled and demanding to allow the execution of all the intended stages of the Strategic Plan. Apparently, those conditions are now assembled and the Rectorate team is willing to submit the Strategic Plan as a proposal for discussion and eventual validation by the recently elected *Conselho Geral* (see Section II).

Accordingly, a new Planning and Management Control unit at the Rectorate was projected, having the following responsibilities:

- to access and monitor the fulfilment of the Action Plans, maintaining permanent contact with people in charge of the outlined actions;
- to periodically evaluate the indicators defined in the plan;
- to prepare periodic reports about the previous points;
- to assist the Rectorate staff in assessing and monitoring the fulfilment of the Strategic Plan;
- to assist the consolidation of the Faculties' Strategic Plans with the U.Porto Strategic Plan;
- to assist the budgeting of U.Porto, ensuring its strategic efficiency: no strategic objective should be forgotten and no action should be budgeted if not connected to at least one of the strategic objectives.

SWOT Analysis

As already mentioned in Section IV, the SWOT analysis carried out during the self-evaluation of each Faculty revealed some internal weaknesses, showing signs of a lack of strategic thinking. On the one hand, it appears that the adjustment between the Rector's and the Faculties' strategic objectives is far from perfect. On the other hand, the capacity for connecting the mission and the strategic objectives with the threats and the opportunities is feeble. Most of the Faculties do not have explicit strategic objectives and thus they were not able to identify the tendencies and external factors which could enhance or negatively affect such objectives. Threats were not always identified as stemming from outside, but frequently from inside (from the Rectorate or other Faculties) or from the Faculty itself (due to problems associated with internal processes). External factors were also confused with internal issues.

Despite difficulties and inadequacies, the SWOT analysis makes prospective thinking possible, allowing the Faculties to make an extended list of threats, opportunities, strengths and weaknesses, associated with each strategic theme suggested in the guidelines: Governance and Management, Human Resource Management, ICT Management, Teaching/Learning, Research and Development, and External Relations and Internationalisation. Symptomatically, the formulated threats are typically focused on budget restrictions, on the inadequacy of the legislation and of the higher education national policies. Conversely, Faculties feel able to transform some potential threats into opportunities. The Bologna Process is a good example. It tends to be referred to as an opportunity, much more than a threat.

The SWOT analysis depicted in Table 7 was carried out by the Rectorate team during the drawing up of U.Porto's Strategic Plan and reviewed during the self-evaluation exercise. It reflects an image of the university taken from a different perspective of the Faculties: the U.Porto like a single unit, while encompassing considerable cultural and intellectual diversity. On the one hand, the most important features that characterise U.Porto's strategic position were addressed, allowing the identification of opportunities and threats. On the other hand, the analysis of the internal environment revealed strong and weak points (strengths and weaknesses) being directly linked to critical factors for U.Porto's success.

Table 7 – SWOT analysis for U.Porto

Strengths	Weaknesses
<p>The comprehensiveness and dimension of U.Porto; Good reputation and prestige both in the region and country; Good quality of infrastructures, facilities and equipments; The offer of a large range of programmes in line with market needs; Commitment to quality; Peaceful academic environment; High level of graduate employability; U.Porto's information system SIGARRA and excellent access to scientific and cultural documentation; Language, within the framework of Portuguese-speaking and Latin-American countries; Ability to integrate different cultures; The growing trend of scientific publication and attraction of young Ph.D. students;</p>	<p>Mismatches between strategic goals of U.Porto and those of the Faculties; A stronger sense of belonging towards Faculties than towards U.Porto; Difficulties in coordinating the organizational structure scattered in too many decision-making centres; The U.Porto quality system still needs consolidation; Excessive fragmentation of R&D units, not having critical mass; Lack of funds, at rectorate level, for promoting a long-term R&D policy; Internal discrepancies of R&D quality (in terms of international standards); Lack of capacity to establish policies to promote mobility of top researchers; Limited offer of joint degrees with internationally renowned universities; Limited offer of programmes in English;</p>

<p>Solid R&D network, having high research potential and excellent results in several areas;</p> <p>The role of the U.Porto's R&D in the business sector;</p> <p>The quality of the academic staff;</p> <p>Capacity for generating its own revenue (complementing direct state funding);</p> <p>The support of technology transfer and economic valorisation of the research results (UPIN and UPTEC);</p> <p>Considerable international networking in science and education.</p>	<p>Limited offer in online programmes;</p> <p>Lack of human resource management practice;</p> <p>Lack of highly qualified non-academic staff for management and administrative services in some positions;</p> <p>Insufficient availability of residential facilities with the required quality for researchers, teachers and postgraduate students;</p> <p>Limited student access to sport facilities.</p>
<p>Opportunities</p>	<p>Threats</p>
<p>The new legal framework (foundation model);</p> <p>Bologna process (student mobility and curricula multidisciplinary);</p> <p>Increasing competitiveness within the national and European HEI sector;</p> <p>The emergence of an innovation culture driven by the "Lisbon Strategy";</p> <p>The change of the Portuguese economic structure, emphasizing the production of tradable goods with higher added value based on knowledge;</p> <p>Clustering tendency of specific business in the Northern region, reinforcing the cooperation between the National Scientific and Technological System and the business network;</p> <p>Availability of alternative funding sources (other than OE, i.e. EU programmes in the scope of research and innovation);</p> <p>The magnitude and prestige of U.Porto's alumni;</p> <p>The recently stated Northern Region strategy (Norte 2015) including the potential regionalisation process;</p> <p>Increased demand in higher education of Portuguese-speaking and Latin-American countries;</p> <p>The creation of the Portuguese agency for evaluation and accreditation;</p> <p>Increasing demand for e-learning.</p>	<p>The national impact of the international economic crisis (i.e. unemployment, funding cuts, severe deterioration of the business structure, mobility reduction);</p> <p>Fierce competition from prestigious Universities or having privileged conditions regarding centrality and human capital, mainly in the second and third education cycles;</p> <p>Loss of highly qualified teaching staff attracted by better conditions offered by prestigious Universities;</p> <p>The maintenance of the (inadequate and inefficient) structure of the HE system in Portugal;</p> <p>Cuts in public funding resulting from the reduction of Structural Funds (EU);</p> <p>Limited recognition in Portugal of the relevance of lifelong education.</p>

Section VI: Concluding remarks

The self-evaluation of Faculties and the self-evaluation of the University revealed that, in spite of its internal diversity, U.Porto sees itself as a research university (the research universities' rankings support this idea), having the ambition of becoming a high standard and prestigious HEI in Europe. It is also clear that through the last years U.Porto has made a considerable progress towards that objective. However, some difficulties must be overcome in order to keep the pace.

First of all, U.Porto needs to intensify its movement towards the culture of a single institution, discarding the unpromising but still present view of a confederation of Faculties. This change must be done following the principle of subsidiarity, and respecting and encouraging the autonomy and diversity of Faculties. There is a great hope that the new governance model supports internal coherence, improves articulation between Rectorate, Faculties and R&D institutes, increases decision-making efficiency, reinforces the sense of belonging within U.Porto, and contributes to the alignment of individual and institutional objectives. It is not expected that the governance model alone will fix everything. Certainly, leadership, participation and trust are essential ingredients for the success of U.Porto's strategy.

A second direction of enhancement is the strengthening of the quality culture. In addition to the on-going process of reinforcing a continuous improvement culture based on self-knowledge, accountability and assessment, a considerable effort is still needed in order to standardise procedures and good practices, and to implement efficient feed-back mechanisms. In other words, the U.Porto's quality assurance system and practices need improvements and stabilisation.

A third main concern is to surpass Bologna's administrative changes and to fully implement the pedagogic and technologic changes required for a more student-centred education. This step calls for the change of the way of thinking and pedagogic practices of a significant fraction of the teaching staff. Time is needed to accomplish this transformation, but also a firm determination and constancy of purpose. Another input shall come from U.Porto's R&D. Within the framework of the new organizational structure, the insertion of the R&D institutes in U.Porto conveys the expectation of a better articulation capable of enhancing their contribution for the teaching/learning process, particularly in the post-graduate programmes.

Additionally, in order to become a R&D player at the international level, the U.Porto shall promote the creation of the required critical mass and to encourage the improvement of the quality of research in some areas.

Finally, U.Porto shall improve its human resource management. Considering the three priorities previously mentioned, perhaps this is the most difficult to implement and the one that takes more time to show results. However, benefiting from the new legal framework and the new teaching staff statutes, there is a good opportunity for U.Porto to establish a long-term policy of human resource management capable of assuring its performance in times to come.

STATEMENT

I, José Carlos Marques dos Santos, Rector of the Universidade do Porto, declare that I followed the self-evaluation process and read this report.

Porto, October 14th 2009