# STRATEGIC PLAN AND BROAD LINES OF ACTION U.PORTO 2011-2015



Porto, University, January 2011

# **Table of Contents**

1. Introduction
Part 1 – From the Mission and Vision to Strategic Topics and Broad Lines of Action 4
2. Mission
3. Principles and Values
4. Vision
5. Strategic Themes and Broad Lines of Action
Strategic Theme 1: Excellence in Research
Strategic theme 2: Quality in Training
Strategic theme 3: Social and Economic Development
6. Transversal Areas
6.1. Internationalisation
6.2. Management and Government Model 19
6.3. Physical Infrastructures and Equipment 21
6.4. Technological infrastructures and Information Systems
6.5. Quality Management Systems
6.6. Communication
6.7. Human Resource Management
6.8. Welfare Policies and Social Support
6.9. Environmental Sustainability
6.10. Financial Resource Management
Part 2 – From Strategy to Action
7. Action Plans and the Balanced Scorecard 25
Part 3 – Monitoring and Evaluation of the Strategy 29
Part 4 – Final Notes

## **1. Introduction**

This documents sets out the Strategic Plan and Broad Lines of Action of the U.Porto for the period 2011-2015. For the most part, this period coincides with the term of office of the Rector of the U.Porto, who began his term in late June 2010. This plan is therefore a strategy and policy document that naturally builds on the candidacy programme of the elected Rector.

The method used to prepare this strategic plan complies with the best international practices, notwithstanding the fact that it is tailored to the situation of the U.Porto and the community around it. Accordingly, we sought to take into consideration not only the principles preferred by the best international universities, but also the many contributions of agents who directly interact with the University, in order to provide a set of strategic themes to enhance the qualification of the U.Porto, bearing in mind the overarching and stringent assessment standards.

In an initial phase, we reflected subjectively on the current context of the University, and it soon became clear that while the U.Porto is increasingly recognised, both in Portugal and abroad, it must fully acknowledge its intention to become one of the best universities in the world. We therefore prepared a renewed Vision for the U.Porto. In a second phase, the development of the Strategic Plan was marked by a prospective analysis, where we identified the strategic aims leading to the U.Porto Vision and the guidelines required for its effective operation.

However, this plan is not limited to identifying the actions that must be carried out by the players within the U.Porto. Indeed, we are dealing with a dynamic document, open to the community, which we hope will enhance a culture of responsible participation, fostering a sustainable dynamics in the development of the University.

# 2. Mission

The Mission of the University of Porto is to create scientific, cultural and artistic knowledge, high quality education strongly anchored in research, social and economic value of knowledge and the active participation in the advancement of the communities around it.

The U.Porto is an education, research and development institution committed to the full training of citizens, respecting their rights and actively involved in the progress of their communities.

The U.Porto is today a national cultural, artistic, technological and scientific reference, and known also for the production and dissemination of knowledge. The U.Porto is, therefore, a mobiliser and a driver of the socio-economic and cultural development of the country.

#### Facts

The U.Porto is a Portuguese higher education institution founded in 1911, with origins dating back to the 18<sup>th</sup> century. It is currently the largest University in Portugal (in number of students, courses and scientific areas) and one of the most prestigious teaching and scientific research institutions in the country.

In the academic year 2009/2010, a total of 30 640 students attended classes at the U.Porto, 4% of which were foreign students seeking to obtain a degree and nearly the same percentage in mobility.

In the same academic year, the U.Porto totalled 1 562 PhDs (1 460.2 FTEs – Full time equivalents), representing 76% of its teaching and research staff. The U.Porto houses 14 faculties and about 70 research units – 74% of which scored Excellent and Very Good.

In 2008, the U.Porto published about 2 000 papers indexed in the *Web of Science*, representing 21% of Portuguese indexed scientific papers.

The Open Repository includes, to date, 14 351 documents, representing about 30% of documents registered in the Open Access Scientific Repository of Portugal (RCAAP).

As part of the awareness actions towards the economic value of knowledge set in motion, 70 active patents have already been registered and 61 technology-based companies have been set up until December 2009. The U.Porto has signed 1 073 cooperation agreements with various entities, and its collaborative activity has spread to 80 countries.

Besides Portugal, the U.Porto also stands out in specific fields abroad. This growth is due mostly to the continued and focused efforts of students, teachers and researchers who, having contributed to achieving significant competitive potential, have also ensured the gradual integration of the U.Porto in international academic and scientific cooperation networks.

This integration is materialised as challenges and decisive opportunities for the University, encouraging it to strengthen its attractiveness even further, and to invest more in the internationalisation of its production of quality knowledge, assessed according to international standards and preferably steered to the qualified and innovative development of the region, the country and Europe.

In the wake of the progress made in recent years and the reputation and recognition already achieved, this strategic plan seeks to consolidate the position within the best European universities and to strengthen, in the medium and long terms, its position among the top world universities.

#### Main strengths

- Reach and size of the U.Porto;
- Good reputation and prestige in the region, country and abroad;
- Good guality of infrastructures, facilities and equipment;
- Broad range of programmes offered according to market needs;
- Commitment to quality;
- Peaceful academic environment with the increasing integration of students, teachers and international researchers;
- High level of employability;
- Excellent environment for ICTs, in particular the U.Porto information system (SIGARRA) and excellent access to scientific and cultural documents;
- Language, as part of the cooperation between Portuguese speaking countries and Latin-American countries;
- Ability to integrate different cultures
- The growing trend in the number of scientific publications and the ability to attract young doctoral students
- Solid and consolidated R&D network, with high growth potential and excellent results in various areas;
- The role of R&D of the U.Porto in the corporate world;
- Quality of the teaching staff;
- Ability to generate own revenues (in addition to direct State funding);
- Strong investment in technology transfer and valorisation of research results (UPIN, UPTEC and offices in some Organic Units, such as the Cooperation Office of FEUP);
- Growing integration in global science networks of excellence, simplifying the transfer of research outcomes at transnational level.

#### Main opportunities

New legal framework (functional model);

 Bologna process (student mobility, employment mobility, curricular multidisciplinarity, teaching/Learning process focused on the student);

- Increased competitiveness in higher education institutions, in
  Portugal and Europe
- Emergence of an innovation culture boosted by the "Lisbon Strategy;
- Change in the Portuguese economic structure, focusing on the production of tradable goods with increased knowledge-based added value;

 A tendency to clustering of certain activities in the Northern Region, strengthening the clustering and network economies and articulating the National Scientific and Technological System with the corporate network;

 Availability of funding sources other than the State Budget (e.g., the EU programmes for research, innovation and cooperation in Higher Education, QREN);

Magnitude and reputation of U.Porto Alumni;

 Development strategy in the Northern Region (Região Norte 2015), including the possible regionalisation process;

- Increased demand for higher education in Portuguese speaking countries and Latin-American countries;
- Creation of the Agency for the Assessment and Accreditation in Higher Education;
- Growing demand for distance learning through e-learning;

• Large number of students from less developed countries without sufficient local offers who wish to study in higher education.

#### Items needing improvement (weaknesses)

 Insufficient alignment between strategic goals of the U.Porto and those of faculties;

- Sense of belonging to Faculties and not in relation to the U.Porto;
- Difficulty in coordinating the organizational structure of the U.Porto dispersed over many decision centers;
- The quality system of the U.Porto is still not consolidated enough;
- Internal discrepancies in the quality of R&D units (as regards international standards);
- Excessively fragmented R&D units, deteriorating the desirable gains in clustering;
- Shortage of funds, in the Rectorate, to promote a long term R&D policy;
- Insufficiently developed policies to promote the mobility of top researchers
- Limited offer of training programmes in partnership with internationally renowned universities;
- Limited offer of programmes in English;
- Limited offer of programmes online;
- Lack of practices in human resource management;
- Dispersed administrative and management services;
- Insufficient availability of quality accommodation for researchers, teachers and students;
- Lack of sports facilities.

## Main threats

 Impact of the international economic crisis, particularly in Portugal (unemployment, funding cutbacks, serious deterioration of the corporate structure, a drop in mobility ...);

- Strong competition from other universities in large emerging economies, who hold privileged positions in terms of centrality, costs and human capital, primarily in the second and third cycles
- Loss of highly qualified teaching staff, attracted by the conditions offered in reputed universities;
- Maintenance of the higher education structure in Portugal (inadequate and insufficient);
- Expected drop in public aids, following the cutback in Structural Funds, which may further hinder the frail production structure of the region, and the young qualified entrepreneurs.
- Limited recognition of the importance of education / lifelong learning

# **3.** Principles and Values

The Strategic Plan of the U.Porto supports a set of principles and values, many of which enshrined in the statutes of the University, intended to be assumed throughout the University and generally known by the entire community.

1. Respecting subsidiarity as the norm and standard of operation, ensuring that each task is performed and each decision is made where they are most efficient and effective;

2. Independence from the powers, governing the institution based on University autonomy, resistant to external pressures and free to pursue constructive critique and measures;

3. Respecting high ethical standards in all its activities;

4. Promoting strictness, transparency, and quality and merit recognition;

5. Freedom to teach and research, naturally respecting the strategic and operational purposes defined by the institution;

6. Ensuring that all members of the U.Porto are supported and encouraged to develop their careers, are considered and appreciated for their achievements;

7. Caring about the personal achievement of all those who are part of the U.Porto;

8. Promoting innovation, creativity and entrepreneurship as the core values of the academic community;

9. Caring particularly about disabled citizens, providing the conditions needed for their integration and success;

10. Ensuring equal access and treatment, regardless of gender, social, political ethnic or religious background;

11. Striving for an environmental, economic and socially sustainable environment.

# 4. Vision

The Strategic Plan and Broad Lines of Action of the U.Porto 2011-2015 introduces a renewed Vision for the University, which aims to leverage its position worldwide, building on the consolidation of a national and international standing and reputation already achieved,.

The U.Porto will be a research university, considered a benchmark in Portugal and abroad for the excellence of its activities, able to attract students in  $2^{nd}$  and  $3^{rd}$  cycle studies, teachers and top-quality researchers from all over the world, and to enter into strategic partnerships with universities of excellence. In 2020, it will rank among the top 100 universities in the world.

# **Baseline facts**

The U.Porto ranks among the best universities and higher education institutions, scoring in the majority of international rankings of reference as the best Portuguese university. The U.Porto is also the only Portuguese University in all the best known international rankings.

Academic Ranking of World Universities (Shangai Jiao Tong University)					
	2007	2008	2009	2010	
Portugal	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	
Europe	$\textbf{173}^{\text{rd}}\textbf{-208}^{\text{th}}$	$169^{\text{th}} - 210^{\text{th}}$	$\textbf{171}^{\text{st}}\textbf{-208}^{\text{th}}$	$169^{th} - 204^{th}$	
World	$403^{rd} - 510^{th}$	402 <sup>nd</sup> - 503 <sup>rd</sup>	402 <sup>nd</sup> - 501 <sup>st</sup>	$401^{st}$ - $500^{th}$	

# **Times Higher Education**

(QS World University rankings)					
	2008	2009			
Portugal	4 <sup>th</sup>	3 <sup>rd</sup>			
Europe	+500 <sup>th</sup>	220 <sup>th</sup>			
World	$501^{\text{st}}\text{-}600^{\text{th}}$	$501^{\text{st}}\text{-}600^{\text{th}}$			

Times Higher Education - World University Rankings

	2010
Portugal	1 <sup>st</sup>
Europe	108 <sup>th</sup>
World	250 <sup>th</sup>

#### QS World University Rankings

	2010
Portugal	3 <sup>rd</sup>
World	$455^{\text{th}} - 500^{\text{th}}$

#### Performance Ranking of Scientific Papers for World Universities (Taiwan)

	2007	2008	2009
Portugal	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>
Europe	195 <sup>th</sup>	161 <sup>st</sup>	140 <sup>th</sup>
World	459 <sup>th</sup>	375 <sup>th</sup>	332 <sup>nd</sup>

## Webometrics (CSIC, Madrid)

	2007	2008	2009	2010
Portugal	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>
Europe	87 <sup>th</sup>	99 <sup>th</sup>	40 <sup>th</sup>	79 <sup>th</sup>
World	251 <sup>st</sup>	267 <sup>th</sup>	149 <sup>th</sup>	230 <sup>th</sup>

# Ranking Iberoamericano de Instituciones de Investigación (Grupo SCImago, Granada)

	2007
Portugal	1 <sup>st</sup>
America	11 <sup>th</sup>

#### SCImago Institutions Rankings (SIR)

	2009
Portugal	2 <sup>nd</sup>
Europe	$109^{th}$
World	327 <sup>th</sup>

#### The Leiden Ranking

	2009	2010
Portugal	1 <sup>st</sup>	1 <sup>st</sup>
Europe	136 <sup>th</sup>	112 <sup>th</sup>
World	-	280 <sup>th</sup>

#### 5. Strategic Themes and Broad Lines of Action

To pursue the strategic plan embodied in the Vision for the U.Porto we will build on three major strategic themes, which can be seen as the cornerstones of the strategy of the U.Porto:

- Research
- Training
- The social and economic development of the region and of the country

The first two themes are central areas of intervention in any top level university. The third theme highlights the willingness and openness of the U.Porto to society, and the conviction that a university of excellence can only be created if it is established in a socially and economically robust ecosystem, based on a knowledge-based development model.

Although these three themes are independent in respect of goals and methodology, they are interdependent in that they have to be successful in order to achieve the Vision and Mission of the U.Porto.

#### Notes on methodology

The development of the Strategic Plan of the U.Porto builds on the methodology created by *Kaplan & Norton* in their vast work dedicated to strategic operation and embodied in the *Balanced Scorecard* and the development of Strategic Maps.

So, first we defined the Mission and Vision of the U.Porto, which served to identify the areas that due to their importance in achieving the Vision must assume a central role in the strategy: the *Strategic themes* (Research, Training and Social and Economic Development of the Region and the Country).

Having identified the *Strategic Themes*, we scrutinised each in a three-pronged perspective:

- the perspective of the *Stakeholders*, or *Public*, central to the Strategic Team, for whom we tried to find answers to the following question: *how will the U.Porto overcome the expectations of its stakeholders*?

- the perspective of *Skills and Competences*, i.e., the skills and processes that the U.Porto should master in order to answer the question above, building a direct relationship between the skills and expectations of *stakeholders*: any skill or competence not helping towards overcoming a desire of a *stakeholder* is a waste of resources, and is not strategic; moreover, an expectation not met through Skills and Competences leads to loss of competitiveness.

- the perspective of *Development, Learning and Infrastructures*, which looks into the basic resources (tangible and intangible) that must be available or be obtained so that Skills and Competences can be developed.

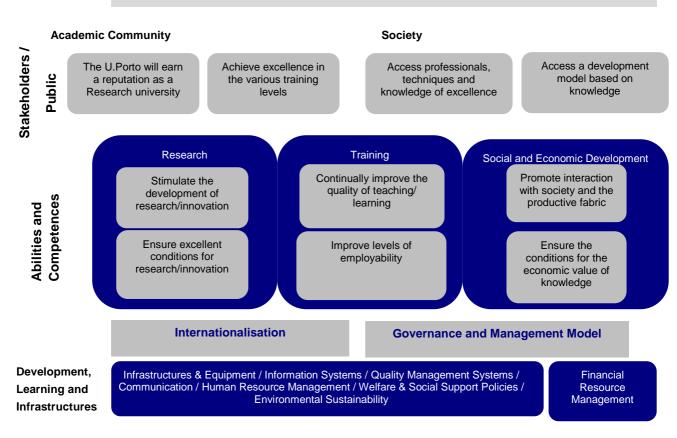
Having outlined the Strategic Maps and, consequently, the goals for each Strategic Theme, we can then identify the indicators and metrics that will enable the assessment the current situation of the U.Porto and, later, measure the progress achieved after the implementation of the Action Plans defined in the meantime.

The cycle of the strategic operation will be complete with the implementation of the Action Plans, and their monitoring and control through a *Balanced Scorecard*<sup>1</sup>. The overall process will result in rewards, penalties and, where applicable, corrective actions that will make the implementation of the Strategy and its Action Plans a process of continuing improvement of the U.Porto, associated to the actual assessment of performance.

<sup>&</sup>lt;sup>1</sup> Targets have been set for most indicators for which we know the current situation. The collection of information needed to quantify the indicators for which we do not know the current situation was made, for the first time, in 2010.

Creation of scientific, cultural and artistic knowledge, higher education training strongly anchored in research, social and economic value of knowledge produced and active participation in the advancement of communities in which it is established.

The U.Porto will be a research university, considered a benchmark in Portugal and abroad for the excellence of its activities, able to attract students in 2<sup>nd</sup> and 3<sup>rd</sup> cycle studies, teachers and top-quality researchers from all over the world, and to enter into strategic partnerships with universities of excellence. In 2020, it will rank among the top 100 universities in the world



# Strategic Theme 1: Excellence in Research

The U.Porto will earn a reputation as a Research University, increasing the number and quality of research projects.

# **Baseline facts**

Vision

Scientific productions stemming from the U.Porto (indexed in the *ISI-Web of Science*) represents 20% of the national total in the last ten years. According to the information available for the last year (2008), the U.Porto was responsible for 21.3% of the national scientific production indexed in the *ISI-Web of Science* (2 077 publications in 2008, compared to 677 in 1998), meaning that it ranks first in Portugal.

The Open Repository contains, to date, 14 351 documents, representing about 30% of documents registered in the Open Access Scientific Repository of Portugal (RCAAP).

The U.Porto has participated actively in national and international research projects, proposing and participating, between 2006 and 2008, in 22.4% of the total number of funded projects, taking the lead in most of these (leading in 16.9% of national projects, in competitions promoted by the FCT between 2006 and 2008). The U.Porto and its R&D centres have participated also in about 30 co-funded international projects under the 7<sup>th</sup> Framework Programme for Research and Development.

#### Strategic goals

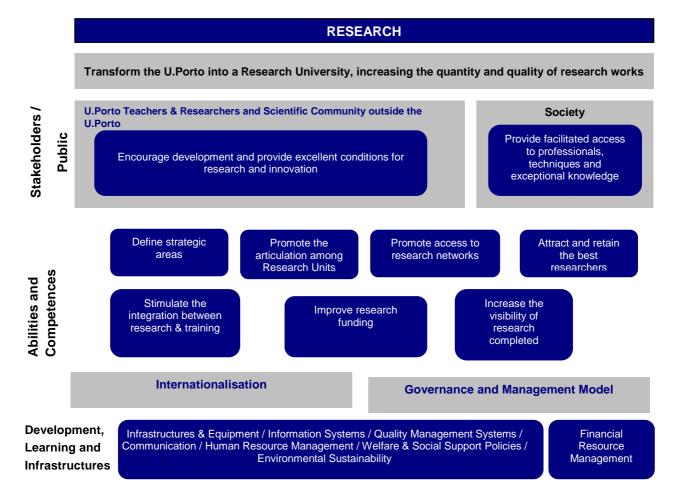
The purpose of U.Porto earning a reputation as a research university will have to materialise not only as an effective increase in the amount of research produced, but also, and above all, in the quality of that research, to be assessed by the Portuguese academic community and, especially, the international community. This is done through publications in high impact journals, through the application and economic value of research findings, and by being steered into solving major social issues. Moreover, particular focus should be given to the fast track publication of works, and to the benefits of enabling open access to the publications for visibility, accessibility and dissemination of research findings, with the subsequent impact on the international scientific community and expected implications in the number of citations of publications.

The U.Porto will therefore have to find ways to stimulate its teachers and researchers into research, development and innovation activities (R&D+i), by providing the proper settings for research and knowledge creation.

To achieve this, the U.Porto aims to meet the expectations of researchers and society by developing the following competences:

- Define strategic areas built on the actual needs of the community around the U.Porto and on the major worldwide scientific and technological challenges;
- Promote the articulation between U.Porto research units, exploring the synergies resulting from a concerted strategy and, where possible, integrating interventions and resources;
- Promote the access to international research networks, tools effective for both the transfer of relevant knowledge and the timely identification of international development trends;
- Attract and retain the best researchers who excel in scientific research, cultural creation and technological development, and in the dissemination of science and economic value of knowledge;
- Encourage and value the integration and articulation with training, exploring technological surveillance activities by constantly maintaining a dialogue with the various audiences of the University;
- Improve research funding, taking into account in particular the new funding sources based on the international assessment of projects and institutions;
- Increase the visibility of research developed at the U.Porto, in particular by developing specific activities for dissemination and demonstration.

By mastering these skills, competences and processes, and investing on its development, the U.Porto will be able to create an environment conducive to the development of research and the allocation of resources to projects with visibility and high potential to be economically valued at a later stage, which will bring additional reputation to the University, creating a virtuous cycle of scientific development. The *Strategic Plan* for Research shows the skills and competences needed to be mastered so that research can be encouraged, have the proper resources and be valued, thus helping society access the knowledge of excellence developed at the U.Porto.



The U.Porto proposes to develop an action plan, the effect of which will materialise only with the definition of a limited number of indicators, shown in Part 2, aiming to ensure that research and development at the U.Porto translate into added value in Portugal and abroad.

#### Strategic theme 2: Quality in Training

Continually improve quality in the various training levels offered by the U.Porto, in compliance with international assessment standards.

# **Baseline facts**

In 2009, the U.Porto adapted the courses offered in all its Organic Units (OU) to the new structure of degrees and diplomas, as a result of the implementation of the Bologna Declaration guidelines. At the end of the year, data was organised to assist in the preliminary accreditation of the study cycles by the Agency for the Assessment and Accreditation of Higher Education.

The U.Porto is a higher education institution with competences in all major areas of knowledge.

In the academic year 2009/2010, the U.Porto offered 273 degree-awarding courses, all organised according to the new structure, split into 35 first cycles (Undergraduate degrees), 18 Integrated Masters, 135 second cycles (Masters) and 85 third cycles (PhDs). To this was added a wider and very diverse number of courses in the area of Continuing Education, including post-graduate courses, offered by the various schools of the U.Porto, totaling more than 400 courses/course units. Note also that the University Study Programme for Seniors with 12 course units, and Summer Courses with a total of 8 course units taught in the academic year 2008/2009.

The U.Porto continues to be the Portuguese University with the largest number of student registrations (30 898), the largest number of vacancies (4 050) and with all places filled in the first round of national exams. The number of candidates applying to the U.Porto was also very high (13 933), particularly in the 1<sup>st</sup> option (7 238), corresponding to 3.8% of options at national level.

The total number of students enrolled in the various study cycles increased, in 2009/2010, to 30 640 (31.48% in the 1<sup>st</sup> cycle, 41.6% in Integrated Masters, 17.6% in the 2<sup>nd</sup> cycle, and 9.23% in the 3<sup>rd</sup> cycle). The students enrolled in masters degrees totalled 5 406, corresponding to an increase of 194% compared to 2004. The number of students enrolled in PhD programmes totalled 2 829, representing an increase of 91.6% compared to 2004.

Of the 6 878 graduates in 2009, 3 603 obtained the Undergraduate degree, 3 039 a Masters' degree (of which 1 523 in Integrated Masters and 1 516 in 2<sup>nd</sup> Cycle schemes) and 236 a PhD degree. The remainder 338 students obtained a post-graduate specialisation diploma.

As regards faculty, in 2009 there were 2 366 teachers and researchers (1 920.8 FTEs), of which 4% were foreign; 66% have doctorates and 10% have masters degrees. Of all the teachers and researchers, 240 were Full Professors (including 34 Visiting Full Professors), 488 Associate Professors (of which 80 are visiting professors) and 936 Assistant Professors (of which 219 are invited professors).

In September 2009, a multi-annual programme-contract was signed to obtain additional funding for the University Foundation of the University of Porto with the Ministry of Science, Technology and Higher Education (MCTES) and the Ministry of Finance. The purpose of this programme-contract is, among others, to strengthen the infrastructures and equipment, scientific and educational, strengthen the qualified human resources, and measures to support students and promote the quality of education, as well as management support activities.

In June 2010, the University signed a specific development programme with the MCTES, under the Trust Agreement between the MCTES and Higher Education Institutions, providing for the development of measures aiming to strengthen initial training, extending it to new audiences, and to promote school achievement and enhance post-graduate training, leading or not to a degree, aiming to improve the qualifications of the Portuguese population and the conditions for lifelong learning. The development programme identifies a series of measures and quantified targets to be reached by 2014, which this action plan will naturally seek to achieve.

# Strategic goals

The aim of the U.Porto is to continually improve the quality of teaching / learning provided to its students, helping potential employers obtain exceptional professionals, technical know-how and knowledge.

To achieve the above goals, the U.Porto must focus on a set of *key-skills* in the coming years: it must be able to attract and retain more and better students, ensuring more effective graduates and the link to employers and to society in which it operates, by making the region and the country globally more competitive. Without this, society could not have access to experts in the fields of knowledge and in the desired quantity. Conditions are therefore established that will enable to assess the quality of education at the U.Porto: the number of students that the U.Porto will be able to attract and retain until the end of their training, the quality of these students and the actual relation to the needs of society, as measured by the employability of its students.

# What must the U.Porto do to develop the abilities?

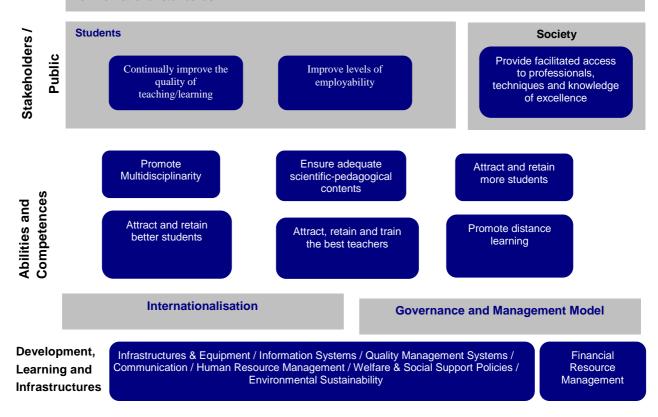
It must master the following *competences* and *processes*:

- Promote effective multidisciplinarity, ensuring the effective connection to the economic and social community by preparing professionals with unique and overarching skills;
- Ensure adequate scientific and pedagogical contents, promoting new and better educational practices and methods, in line with the teaching-learning paradigm advocated;
- Attract and retain more and better students, stimulating partnerships capable of generating synergies and multiplier effects in the process of attracting new audiences;
- Attract and retain the best teachers, promoting a common core learning for teachers through the transfer of methodologies applied successfully in other educational contexts, with possible adaptations;
- Promote distance teaching/learning, taking into account, in particular, the new teaching materials that promote knowledge through entertainment and socialising.

The *Strategic Map* for training shows how the U.Porto will have to respond to students and society in order to ensure Quality in Training and the skills and competences it will have to master to achieve this.

# TRAINING

Continually improve quality in the various levels of Training at the U.Porto, in accordance with according to international standards



Having identified the strategic goals for Training, these will be achievable through activities carried out by the U.Porto. To harmonise the goal of training quality with Vision, in terms visibility in the main international rankings, the definition of targets and subsequent assessment of compliance with the action plan will be based on the indicators identified in Part 2.

# Strategic theme 3: Social and Economic Development

Participate actively in the social and economic development of the region and country by interacting with society, in general, and with the productive fabric in particular.

#### **Baseline facts**

The U.Porto has favoured an innovative, systematic and disciplined approach, by assessing and strengthening the processes conducive to the value of knowledge generated in its community. It disseminates knowledge through technological surveillance activities, co-promoting projects and disseminating findings, providing technological services and support to the creation and development of technology-based companies, with a view to supporting the promotion of knowledge-based economic activities and, consequently, strengthening the role of the University as a core element in a society that recognises knowledge as a structuring factor to sustainable and balanced development. Some of the activities developed include:

- Partnership with the promoter of the Science and Technology park of the U.Porto (UPTEC) for the recovery of the U.Porto heritage and construction of new buildings intended to house incubation projects and R&D+i technology-based corporate centres propitious to the economic value of knowledge, and also taking into account the best practices in entrepreneurship. Currently, the UPTEC houses 61 corporate projects (pre-incubated, spin-offs, start-ups, innovation centres), 18 of which were accepted in 2009.

- Partnership with the Leixões Port Administration (APDL), involving the construction of a building for the New Cruise terminal for the Port of Leixões, a facility that will house the new office of CIIMAR, and the recovery of the building Sanidade, which will be part of the Marine Science and technology park of the U.Porto.

- Active collaboration in the Porto Digital Project, in particular with regard to the fibre optic infrastructure in the city of Porto.

- Investment projects under the Support System for Scientific and Technological Infrastructures of the Northern Regional Operational Programme. The purpose of the various R&D+i infrastructures of the U.Porto is to invest in the consolidation and development of their scientific and technological competences.

The total additional funds for research obtained through national, international projects and services provided by the U.Porto amounted to about 19 million Euros in 2009, of which about 6.8 million Euros are from services provided.

To help students contact with the methods involved in creating and transferring knowledge and to enhance their training through new teaching/learning methods, the following initiatives were in place: YES (*Young European Scientist Meeting*) for students of the areas of health; IJUP, a research induction course, which groups a series of initiatives to foster the creation of a more participating university education model; and SPIE UP – Week to Promote Innovation and Entrepreneurship of the University of Porto, an international event that promotes innovative and entrepreneurship attitudes in students, Alumni and staff of the U.Porto – organized by the Entrepreneurial Club of the U.Porto.

Moreover, to promote contacts with the surrounding community, more specifically with secondary education students, the U.Porto also has a prolonged contact programme, called Junior University (U.Jr), which in 2010 had 5 300 students. This phenomenon of "universities for children and young people" is one of the novelties in the relationship between European higher education institutions with the youth community – in the network EUCU.NET (*European Children's Universities Network*), to which the U.Jr belongs. In 2009, the university organised and hosted the 7<sup>th</sup> edition of the "Mostra da U.Porto – Science, Education and innovation" a four-day open event with about 14 thousand visitors.

# Strategic goals

The increase in quality, of both the R&D+i activities, by promoting the integration of findings in the social and economic fabric, and training activities, by promoting qualification and employability, inevitably leads to creating value in society.

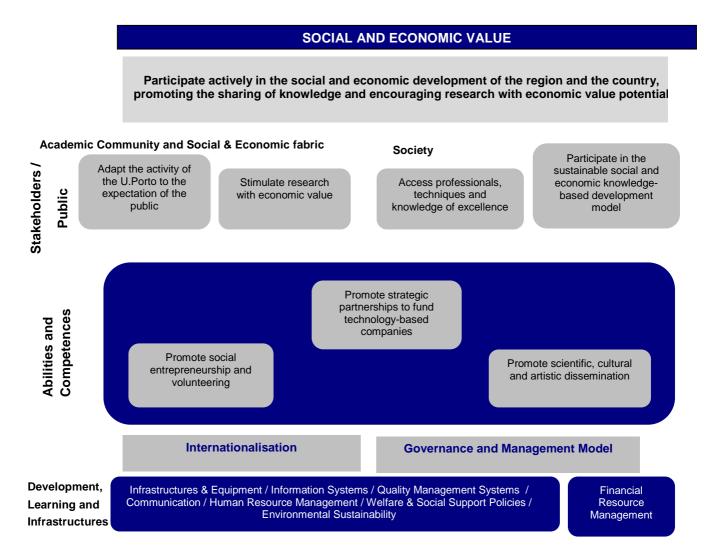
The U.Porto intends to continue to participate actively in the sustainable development of nations, satisfying the most demanding expectations of its public, primarily investing in the development of integrated partnerships with institutions that share the same strategic vision: the development of added value activities with strong international orientation and visibility.

The University will continue to focus on stimulating economically valuable research, emphasising the areas that will reap more social benefits and economic externalities, bearing in mind their relevance for the University's target audiences.

The U.Porto will therefore develop the *ability* to:

- Promote strategic partnerships to fund technology-based or socially differentiating companies, streamlining the start-up processes of new companies as soon as a business opportunity appears;
- Promote social entrepreneurship and volunteering work, since bringing greater well-being and more quality of life to society is, in itself, important for personal achievement and social development;
- Promote scientific, cultural and artistic dissemination, by stimulating a culturally and technologically wealthy society.

By mastering these abilities, the U.Porto will be ready to contribute to a knowledge-based ecosystem and the stronger the University the greater its ability to strengthen the ecosystem.



Since the goal is to contribute to social and economic development, the U.Porto intends to develop a political stance which will take into consideration the indicators identified in Part 2.

#### 6. Transversal Areas

All Strategic Themes and subsequent Strategic Maps include a group of abilities, processes and infrastructures that are considered to be the cornerstones of the U.Porto structure and, naturally, essential for the implementation of its Strategic Plan, identified in in previous paragraphs, which depend on the ability to manage, develop and, if applicable, acquire these skills and processes.

Among these essential abilities, two stand out due to their importance for the continuation of the strategy presented in this document, and to achieve the Vision: the Internationalisation of the U.Porto and the Management and Governance Model. Although these two areas are not strategic themes at this stage of the U.Porto, they should however, continue to play a pivotal role in the infrastructure processes, because the results achieved in this area will influence the implementation of the U.Porto strategy. The Strategic Plan has practical actions for these two areas to be developed in the period 2011-2015.

 
 Internationalisation
 Governance and Management Model

 Development, Learning and Infrastructures
 Infrastructures & Equipment / Information Systems / Quality Management Systems / Communication / Human Resource Management / Welfare & Social Support Policies / Environmental Sustainability
 Financial Resource Management

Briefly, these are the cornerstone processes that the U.Porto intends to master:

- Expand the internationalisation of the U.Porto, by placing members of the U.Porto community in contact with foreign universities and attracting foreign students and teachers to the U.Porto;
- The development and implementation of an efficient and effective Management and Governance Model, ensuring the streamlining of decisions, the appropriate decentralisation and accountability and a greater financial autonomy from direct State funding;
- The management of infrastructures and equipment, in terms of both quality and suitability, and efficient use;
- The integrated management of Information Systems at the U.Porto;
- The implementation and dissemination of the Quality Assurance Policy as part of the development of a quality culture in the entire organisation;
- Managing the Communication Policy at the U.Porto, institutional or between OUs, and between these and the community;
- Human Resource management, seeking to ensure its quality, contributing to the reputation and recognition of the U.Porto;
- The implementation of welfare policies and social support to the academic community, contributing to strengthen the institutional spirit;

Environmental sustainability as a reflection of social responsibility of the U.Porto.

Moreover, the ability of the U.Porto to continually improve the management of its financial resources is emphasised, not only in terms of attracting funds, but also in terms of allocation, which should prioritise actions and projects within the Strategic Plan.

# 6.1. Internationalisation

# **Baseline facts**

The U.Porto has made significant progress in terms of internationalization, as the following indicators show:

- In 2008/2009, the number of foreign students enrolled at the U.Porto seeking a degree increased by 7%, totaling 1 183 students; the number of students in mobility *in* also increased by 7%, to 1 155; the number of universities to which these students belong also increased by 14% (totaling 296 universities);

- The number of U.Porto students in mobility programmes increased by 21% (883 students), and 54% increase in the number of universities, placement centres and companies (totaling 332 institutions) where these students were placed;

- The U.Porto has established partnerships with some of the best universities in Europe and the world intended for cooperation in strategic training and research areas, namely: (i) in Master and Doctoral programmes: ten universities among the top 100 in the world and fourteen among the top 100 European universities; (ii) in student, teacher and researcher mobility programmes: five universities among the top 100 in the world and eight among the top 100 European universities; and (iii) in research (in particular under the 6<sup>th</sup> and 7<sup>th</sup> Framework Programmes): twelve among the top 100 in the world and thirty two among the top 100 in Europe;

- The U.Porto has organised 128 international meetings, 5 of which "world" meetings, 12 "European", 79 "international", 12 "Lusophone", 7 "Ibero-American" and 13 "Iberian".

- Every year the U.Porto produces a detailed report on the internationalization activities, available in *www.up.pt*, About the U.Porto, Facts and Numbers, Documents.

#### Main activities

In order to facilitate the internationalization of training and research activities, the U.Porto will promote:

- Students in mobility *out* attending the three cycles of study;
- Foreign students in mobility *in*, also from universities outsider Europe, in particular from north America,
   Latin America, CPLP Portuguese-speaking African countries and Asia;
- The mobility *in* and *out* of teacher and researchers in short and medium term programmes from/to prestigious foreign universities;
- The graduation of well-prepared foreign students, in particular those of the 2<sup>nd</sup> and 3<sup>rd</sup> cycles, with special emphasis on the CPLP countries and Latin America;

To that end, the U.Porto will take the following appropriate actions in the period 2011-2015:

 Arrange a kit with basic information – Welcome Guide – to clear the doubts of students, teachers and researchers wishing to come to the U.Porto. Prepare a similar initiative for students, teachers and researchers of the U.Porto wishing to study or do research abroad;

- Define a programme to support the stay of renowned international merit at the U.Porto, for short periods
  of time, and provide for appropriate accommodation;
- Define a programme to enable the hiring of renowned international researchers for long periods of time, to lead projects or research units dedicated to new areas and/or areas of particular strategic relevance for the U.Porto;
- Expand the number of facilities and quality services to accommodate students, teacher and researchers coming to the U.Porto, suiting them to the growth objectives set out;
- Make teachers and researchers aware of the importance of providing classes in English;
- Strengthen training in English for the U.Porto students wishing to join mobility programmes;
- Participate in consortia of foreign universities for the cooperation between European and Third country higher education institutions, particularly in the context of applications to the *Erasmus Mundus* Action 2 – partnerships for the mobility of students, teacher and researchers -, in particular in those involving Latin American and CPLP countries;
- Promote, by actively keeping contacts with the government and other funding Institutions, the creation of
  a National programme for the competitive funding of internationalisation of Portuguese universities;
- Promote the creation of a programme intended to support the mobility of U.Porto students, where mobility grants are insufficient, such as to avoid that financial issues prevent students from applying;
- Develop initiatives to create joint programmes and/or double/multiple Master and Doctoral degree awards with foreign prestigious universities under the applications to the *Erasmus Mundus* Action 1;
- Ensure continued contact with the entities responsible for higher education rankings, better understanding the mechanisms and indicators preferred by those universities, so as to make the potential of the U.Porto clearer;
- Promote the effective international comparability of courses and educational practices;
- Strengthen the visibility of the U.Porto in fairs, exhibitions and other events of a similar nature in the field of international education, in particular in regions and countries suited to the U.Porto strategy;
- Encourage the U.Porto to organize, in conjunction with other regional players, large meetings with international projection, preferably under the concept of MICE (*Meetings, Incentives, Conventions and Exhibitions*), with high impact on the national and international projection of the University and the region.

# 6.2. Management and Government Model

The need to ensure the effective and efficient management and governance of the U.Porto is, in itself, a crosscutting pillar of the three key strategic areas. The intention is to have a management and governance model to ensure that decisions are streamlined and the academic community participates in decision making, the adequate decentralization and accountability, and increased financial autonomy in relation to the direct State funding.

#### **Baseline facts**

In addition to the Rectorate, the current organizational model of the U.Porto includes fourteen OU teaching and research units self-governed and self-managed, and two independent self-managed services. The new statutes also provide for a doctoral school, opening up the possibility of creating self-managed research OUs. Each of these entities can ensure the activities enabling them to achieve their Mission and provide part of the services needed to support these activities.

In this model, the Rectorate is in charge of intervening strategically and ensure that the University Mission is achieved, by developing quality activities and efficiently and effectively using the resources available.

This model, however, has some operational issues due to the high number of independent entities and, in particular, because many of these are self-governed.

It seems a priority to find a new organizational model that streamlines the cooperation and connection between the entities within it, ensures the effective implementation of strategic decisions applicable to the university, maximizes the returns in efficiency and effectiveness in the use of resources, and facilitates interaction between the services of each entity and common services, guaranteeing high levels of quality and productivity.

We have also noted an increases rotation of management heads of OUs as this function is of considered to be of little value for career progress. If these increasingly complex and responsible functions were more valued, there would be more People interested in taking up management functions full time, which is essential for university management nowadays.

It is imperative to streamline decision-making processes, their implementation, a decentralization policy and the effective division of work, and to encourage a culture of assessment, accountability and a demanding culture, in an environment of a truly participatory management by the academic community and an attentive and fruitful interaction with students' associations.

The U.Porto has been focusing on a strategy underpinned by new funding models, strengthening its funds by attracting own revenue. We believe that the opportunities opened by the new statutes and, in particular, the adoption of the foundational model will undoubtedly contribute to achieving the purpose of the University in obtaining revenue not directly transferred from the State Budget of more than 55% of the total budget.

In respect of this theme, the following activities are expected, in conjunction with the various governing bodies of the U.Porto:

- Reorganise the current organic structure of the U. Porto, setting as targets the rationalisation of activities, efficient and effective gains in the use of human resources and equipment of the University, and the simplification, dematerialization, and efficiency and quality of administrative processes, enhancing, in particular, the activity of the Common Resource and Service Centre of the U.Porto;
- Promote the integration, at the U.Porto, of affiliate R&D institutes, aiming to clarify their institutional framework, and consider the opening of new post-graduate programmes and strengthening the existing ones, rationalise equipment in common use, expand the participation in international projects and increase the ability in obtaining additional funding;
- Implement the doctoral school, established by the new statutes of the U.Porto, aiming to: ensure high quality doctoral training at the U.Porto; substantially increase the participation of high quality foreign students in the doctoral programmes of the U.Porto; increase the ability to attract funds for doctoral scholarships at the school; promote the offer of multidisciplinary courses; promote the professional value of the doctoral degree in companies and society in general; ensure training in cross-cutting skills ("soft

*skills*") for all doctoral programmes, in view of the new type of labour market available for those with a PhD degree;

- Consolidate management practices by defining policies, goals and clear procedures; widespread adoption
  of strategic and operational planning at all levels, with consequent management control to enable
  monitoring its implementation and the introduction of corrective measures as necessary, and the
  appropriate reporting to the general Board;
- Increase the management powers of the responsible heads of OUs, particularly in terms of performance assessment practices and risk analysis, conducive to good management practices and, at the same time, the accountability of all managers and leaders in complying with all legal rules and regulations which govern their activities, and accountability in relation to the duties performed;
- Promote the certification of various services;
- Form a "Long Range Guidance Team" to reflect continuously on the strategic evolution of the U.Porto;
- Ensure the active cooperation with students' associations of the U.Porto and with the Porto Academic Federation;
- Develop a funding model aiming to strengthen access to funds other than those from the State Budget, by stimulating and arranging alternative funding mechanisms, substantially increasing own revenue from other sources;
- Review the economic and financial management model of the U.Porto, in order to cover aspects of a strategic nature, and ensure the proper allocation of funds available to the various entities of the University.

#### 6.3. Physical Infrastructures and Equipment

To be attractive for students, teacher and renowned researchers, the U.Porto must provide sufficient and quality facilities. This includes adequate buildings, modern study places adapted to the new requirements of the teaching and learning process, landscaped areas, sports and leisure facilities, up-to-date and quality research and training equipment, and quality residential areas for students, teachers and visiting researchers.

The U.Porto has over a number of years invested in a number of quality buildings and infrastructures capable of satisfying the demands referred to above. It is now necessary to make them available and ensure the proper maintenance of these infrastructures, in light of the Action plan defined for 2011 and envisaging activities in future years.

# 6.4. Technological Infrastructures and Information Systems

In recent years, the qualitative and quantitative growth of the U.Porto has led to a permanent concern in improving the quality of its technological infrastructures, adapting them to the needs of the university, by

investing in state-of-the-art and high performance information and communication technologies, ensuring great reliability and sustainability. Continuing its efforts in this important area, the U.Porto will still strive to ensure the availability of resources and high quality services in the field of technological infrastructures, maintaining them and keeping them up to date, and investing in the integration of more systems and sharing the existing resources, in order to achieve higher rates of quality, efficacy and efficiency. The U.Porto will continue to pay special attention to the widespread and adequate use of these infrastructures, strengthening training and providing direct support to users, encouraging their use and making them more intuitive and attractive.

#### 6.5. Quality Management Systems

The purpose of the U.Porto in becoming a prominent higher education institution in Europe depends largely on its ability to instil a quality culture throughout the organization.

Although the university's commitment to quality has long been tacitly assumed, in recent years major steps were taken to stabilize and formalize what is commonly known as Quality Assurance System (SGQ). This system involves not only the monitoring procedures and compliance checks, but also promotes the establishment of habits for improvement in key areas of performance of the U.Porto.

# **Baseline facts**

The Continuous improvement System was created in 2006, taking a radical step in establishing a culture of quality at the U.Porto. Its Mission is to design and support an inclusive SGQ, in which all the U.Porto employees are responsible for quality (regardless of where and when they perform their work), which allows the integration of assessment and improvement mechanisms in daily activities through simple procedures. This system is based on the following pillars:

- Information system (SIGARRA), from which the routines and procedures are formatted and standardised, and good practices are stabilised;

- Dissemination of relevant and detailed information on the performance of the U.Porto in its principal activities;

- Procedures to follow-up, assess and improve performance at the U.Porto in its principal activities;

- Institutional evaluation programme (internal and external) based on self-evaluation and the principles of quality auditing.

Moreover, mechanisms have been consolidated and systematised to collect, analyse and disseminate detailed information (including quantitative indicators) on some of the most relevant aspects of the University: education (access, registered students, student assessment, graduates and employability), research (R&D units, FCT projects and *WoS* publications), internationalisation (internationalization reports and rankings), human resources and accounts (consolidated reports and financial statements, balance sheet).

Important steps were also taken towards the monitoring and formal assessment of the 1<sup>st</sup> and 2<sup>nd</sup> cycles and Integrated Masters with the generalisation of the "Director of Study Cycles" (associated to their "Scientific Committee" and "Monitoring Committee") and of a specific procedure (which includes the essential reporting.

Finally, note also the institutional evaluation of the U.Porto recently carried out by the *European University Association* (USA). The results of the evaluation are disclosed in the *University of Porto Evaluation Report* available in <u>http://sigarra.up.pt/up/web base.gera pagina?p pagina=1001375</u>. This evaluation process was based on the self-evaluation of the 14 faculties carried out before and on their external evaluation by a counterparty. After the information was collected and processed, it was used to prepare the Self-Evaluation Report of the U.Porto, which was the basis for the analysis carried out by the USA experts.

The USA Report makes important recommendations for the future of the U.Porto in various areas, such as strategic planning, governance, relationship between central and local governance, information and communication technologies, financial management, development of human resource management, continuing improvement, student assessment, teacher assessment and their workload, research, doctoral studies and internationalisation.

The SGQ is an ongoing process that still cannot be considered as being consolidated. There are still frailties and gaps in various areas and, in particular, the degree of implementation of the proposed measures is not homogeneous within and between the various OUs, and still lacks efficient mechanisms to breakdown the goals over throughout the various management structures, information mechanisms on the level of implementation of these goals.

Moreover, the current University Teaching Career Statute, which established the mandatory evaluation of teachers aiming to improve the quality of their performance (in a context where new areas of activity are being introduced), associated to the establishment of the Agency for the Evaluation and Accreditation of Higher Education (to evaluate and accredit the institutions and their study cycles), put more pressure on the need to enhance the SGQ and deepen the continuity of a culture of quality and continuing improvement at the U.Porto.

Under the Quality Management System, the U.Porto will soon define an Action plan that will necessarily include both the consolidation of procedures to monitor and evaluate the study cycles, and the consolidation of procedures to collect data on the activities developed by the U.Porto, which are essential to follow-up how they evolve and to prepare management indicators.

## 6.6. Communication

However the excellence of activities at the U.Porto in its various areas, their impact will be very small if it does not translate into building a sound and worldwide recognised reputation.

To build this reputation, the U.Porto expects to develop in the period 2011-2015 an integrated set of specific actions which will aim to improve the internal communication with the entire academic community and improve the external, national and international communication, in respect of the achievements of the U.Porto, under the brand "U.Porto".

#### 6.7. Human Resource Management

The quality of people, teacher, researchers and non-teaching staff is a crucial factor for the U.Porto to achieve a threshold of prestige and international recognition.

It is also important to ensure that these people are fully satisfied with the conditions that U.Porto provides them for their personal and professional achievement. To that end, the University intends to develop a human resource management policy based on the principles below, to be reached through specific activities in the period 2011-2015:

- Strong demand in all recruitment processes, in order to ensure that quality is the differentiating factor when recruiting;
- The organisation of more attractive careers for teaching staff, researchers and non-teaching staff, using the autonomous human resource management allowed by the foundational model;
- Performance evaluation as an instrument to improve quality and recognise merit.

#### 6.8. Welfare Policies and Social Support

The U.Porto should be particularly concerned with the welfare and social environment provided to its students in the university campus. This is also beneficial for school achievement and for building a strong and cohesive institutional spirit. Moreover, these conditions are key in attracting the best students from various social and geographical backgrounds, and also contribute to the prestige and overall good image of the institutional. To this end, some activities must be carried out, some of which are a logical follow-on of current activities:

- Intensify a policy for providing differentiated support to needy students;
- Complete and monitor the reorganisation of the medical aid programme to students, as a supplement to the national health service;
- Strengthen the psychological support programme for students in a concerted way with the various OUs, for the sake of prevention;
- Strengthen a policy to extend physical activity and leisure to an ever-larger number of students.

# 6.9. Environmental Sustainability

The U.Porto has been devoting particular attention to issues of environmental sustainability as a reflection of the concern for social responsibility and for the future of the ecosystem in which it operates. Today, the U.Porto offers training programmes in the field of the environment and has internationally known research groups acting in the field of renewable energies and the environment.

To add to and deepen what is already implemented in this field, an Action plan will be developed to accommodate the following activities:

- Estimate the current carbon footprint of the U.Porto and set a realistic target to reduce it, to be reached by 2020, and define the procedures to be adopted to that end;
- Continue with the energy efficiency programme at the University, expanding its scape and producing its own energy, where possible and beneficial, from renewable sources;
- Impose a programme for the collection of hazardous waste, starting from what already exists at the University, and complying with the most advanced standards in force in this field;
- Implement an effective programme of selective collection of non-hazardous solid waste, making sure it is properly disposed of;
- Promote awareness campaigns on environmental sustainability, conducted by U.Porto experts.

# 6.10. Financial Resource Management

The financial sustainability of the University is essential for the implementation of the measures mentioned before, in order to fulfil the Mission and achieve the Vision established.

# **Baseline facts**

Every year, the U.Porto, through its units and entities in which it participates, adds to the funds received from the State Budget (OE) its own revenue obtained from various sources (tuition, competitive funding of research and other activities carried out, services provided, etc.), which currently means about 51.5% of the total budget. The ability to obtain its own revenue proves its initiative capacity and the work of the academic community.

As part of the process to adopt the foundational scheme by the U.Porto, the University signed a five-year programmecontract with the government for the additional transfer of one hundred millio0n euros over that period, in addition to the amount from the State Budget, as a compensation for meeting some contracted goals.

In order to achieve its Vision, given the anticipated stagnation of the amounts from the State Budget, the U.Porto will have to take the measures necessary to increase the ability to generate more own revenue and to diversify its sources.

To achieve this goal, the U.Porto will have to mobilise all the entities and agents of the academic community, and build on the following principles:

- Increase the amounts received through competitive funding programmes, particularly European programmes. To this end, the U.Porto will seek to ensure the concerted action of existing resources in the various bodies of the University, strengthening them where necessary, to support winning applications. It will also create an widespread culture of attracting additional funds, motivating the members of the academic community to submitting applications;
- Strengthen the development office ("fund raising") of the U.Porto in order to substantially increase the ability to attract funds from donations, legacies, sponsorships and patronage, with an emphasis on its activity with former students of the University;
- Strengthen the Foundation's fund and value it through appropriate investments.

# Part 2 – From Strategy to Action

# 7. Action Plans and the Balanced Scorecard

In the wake of the strategic goals described above, we have prepared the Action Plans for the period 2011-2015, organised according to theme and properly articulated according to the strategic maps of the U.Porto. What follows is the Balanced Scorecard, the preferred benchmark to monitor these Action Plans.

# Strategic Plan 2011-2015 - Balanced Scorecard for the Strategic Theme Research

	Balanced Scorecard for the Strategic Theme Research						
Churchania Carala	ludiate a	Formula		Targets			
Strategic Goals	Indicators	Formula	Done in 2009 <sup>.</sup>	2011	2015		
IS1 - Stimulate development and ensure the	Average number of citations per publication in the period n-5 a n-1	-	6.17	6.23	6.50		
best conditions for research and innovation	% Publications cited in the period n-5 a n-1	No. of publications cited in the period n-5 a n-1 / No. of publications ISI-WoS in the period n-5 a n-1 $$	67.0%	68.3%	75.0%		
IP2 – Define strategic areas	% R&D+i groups and units integrated in Associate Laboratories rated by the FCT with at least "Very Good"	R&D+i groups and units integrated in Associate Laboratories rated by the FCT with at least "Very Good " / No. R&D+i groups	74.0%	74.0%	90%		
IP3 - Promote the articulation between R&D+i groups at the U.Porto	% Partnership projects between of R&D+i groups	No. of FCT projects involving two or more R&D+i groups of the U.Porto/ No. of FCT projects of the U.Porto	n.a.	Grow by 10% / year	Grow by 10% / year		
	% FCT projects coordinated by the U.Porto	No. of FCT projects coordinated by the U.Porto / No. of FCT projects	17.6%	18.0%	20,0%		
IP4 - Encourage access to research networks	% international projects coordinated by the U.Porto	No. of international projects coordinated by the U.Porto / No. of international projects of the U.Porto	25.8%	26.5%	30%		
	% U.Porto co-authored papers published and referenced on the ISI-WoS / SCOPUS (with international entities)	No. of U.Porto papers published and referenced on the ISI-WoS /SCOPUS in co-authorship (with national entities) / No. of U.Porto papers published and referenced on the ISI-WoS /SCOPUS	n.a.	To be defined	To be defined		
IP5 - Attract and retain the best researchers	% researchers with a degree from a foreign university or with a post-doc placement of at least two years, in foreign institutions	No. of researchers with a degree from a foreign university or with a post-doc placement of at least two years, in foreign institutions / No. of researchers in the R&D+I groups	24.0%	25.0%	30%		
IP6 - Stimulate the integration between Research and Training	% of 1 <sup>st</sup> and 2 <sup>nd</sup> cycle and IM students participating in R&D+I activities	No. of $1^{st}$ and $2^{nd}$ cycle and IM students participating in R&D+I / No. of $1^{st}$ and $2^{nd}$ cycle and IM students registered in the last two years of those cycles	7.1%	To be defined	25%		
IP7 - Improve the funding conditions for research	% funding obtained via competitive programmes	Amount of funding obtained via national and international programmes / Total Own Revenue	n.a.	Grow by 5% / year	Grow by 5% / year		
IP8 - Increase the visibility of the R&D+i developed in the U.Porto	No. of ISI–WoS documents	-	2 038 *	2 248	3 300		
	Scientific papers with international references, per PhD (FTEI)	-	1.4	1.5	2.0		
	% of publications in the 1 <sup>st</sup> Quartile of the scientific area	No. of ISI-WoS publications in the $1^{st}$ Quartile of the scientific area in the reference period n-4 a n / No. of ISI-WoS publications in the period of reference	62%	To be defined	To be defined		

\* Figures for 2008

# Strategic Plan 2011-2015 - Balanced Scorecard for the Strategic Theme Training

Balanced Scorecard for the Strategic theme Training						
			Done in 2009	Targets		
Strategic Goals	Indicators	Formula		2011	2015	
FS1 – Continually improve the quality of teaching/learning	Evaluation index of teachers by students	1 (Weak) to 7 (Very Good)	5.12	5.17	5.40	
FS2 - Improve levels of employability	Overall level of employability of graduates (in the first 5 years after graduating)	-	95.0%	95.8%	100%	
	Mean time for 1 <sup>st</sup> job after graduating	-	3.5 months	3.42 months	3 months	
FP3 - Promote multidisciplinarity and	% of multidisciplinary courses	No. of multidisciplinary courses / No. of courses	14.0%	15.0%	20.0%	
multiculture	% of courses with international double or multiple degree awards	No. of courses with international double or multiple degree awards No. of courses	1.8%	1.8%	8.0%	
FP4 - Ensure adequate scientific- pedagogical contents	Evaluation index of the Course Unit by students	1 (Weak) to 7 (Very Good)	4.60	4.65	4.90	
	Ratio of applicants in 1 <sup>st</sup> option to 1 <sup>st</sup> cycle and IM vacancies offered	No. of applicants in $1^{st}$ option to $1^{st}$ cycle and IM vacancies / No. of $1^{st}$ cycle and IM vacancies	1 <sup>st</sup> C: 1.7 IM: 1.9	1 <sup>st</sup> : 1.7 IM: 1.9	2.00	
	$N^{\circ} 2^{nd}$ and $3^{rd}$ cycle students registered (1 <sup>st</sup> year, 1 <sup>st</sup> time)	-	3 405	3 730	4 500	
FP5 - Attract and retain more students	% of students in mobility in programmes	No. of students in mobility in programmes / No. of students registered	4.0%	4.3%	6.0%	
	% of foreign students obtaining a degree	No. of foreign students obtaining a degree / No. of foreign graduate students	3.2%	3.6%	6.0%	
	% of drop-out 1 <sup>st</sup> cycle and IM students	No. of $1^{\rm st}$ cycle and IM students who did not register in the academic year n / No. of $1^{\rm st}$ cycle and IM students registered in the academic year n-1 who did not complete the degree	10.0%	9.3%	6.0%	
FP6 - Attract and retain better students	% of students of all study cycles who complete the course in n years	-	46.0%	48.3%	60.0%	
	% graduates with a PhD and Master's degree	No. of graduates with a PhD and Master's degree / No. of graduates	25.6%	30.5%	55.0%	
FP7 - Attract, retain and train the best teachers	% teachers with a degree from a foreign university or with a post-doc placement of at least two years, in a foreign institution	No. of teachers with a degree from a foreign university or with a post-doc placement of at least two years, in a foreign institution / No. of teachers	24.0%	25.0%	30.0%	
	% of teachers with a PhD (FTE)	No. of teachers with a PhD (FTE) / No. of hired teachers (FTE)	76.0%	76.7%	80.0%	
FP8 - Promote distance teaching/learning	% of C.Units with e-learning component	No. of C.Units with e-learning component/ No. of C.Units	20% *	25.0%	50.0%	

\* Figures of 2010

# Strategic Plan 2011-2015 - Balanced Scorecard for the Strategic Theme Social and Economic Development

Balanced Scorecard for the Strategic theme Social and Economic Development					
Strategic Goals	Indicators	Formula	Done in 2009	Targets	
				2011	2015
DS1 – Adapt the activity of the U.Porto to the expectations of the public	% of funding obtained via R&D+i projects done with companies and other institutions	Amount of funding obtained via projects with companies and other institutions / Total Own Revenue	n.a.	Grow by 15% /year	Grow by 15% /year
	% of projects done with companies and other institutions	No. of projects done with companies and other institutions / No. of projects done	14.6% *	16.0%	23.0%
	% of funding obtained via donations, sponsorships and legacies	Amount of funding obtained via donations, sponsorships and legacies / Total Own Revenue	0.0%	0.3%	2.0%
	% of funding obtained via services provided	Amount of funding obtained via services provided / Total Own Revenue	9.7%	10.6%	15.0%
DP2 - Stimulate research with economic value potential	% of funding obtained via industrial property rights	Amount of funding obtained via industrial property rights / Total Own Revenue	0.0%	0.1%	0.5%
	No. of \international patents	-	25	29	50
	No. of direct jobs created in incubated companies at UPTEC	-	600	667	1 000
	% of incubated companies at UPTEC that have survived 3 years after set-up	-	n.a.	n.a.	40.0%
DP3 - Promote strategic partnerships for funding technology-based /socially differentiating companies	Amount of funding attracted by technology-based or socially differentiating companies of the UPTEC	-	n.a.	n.a.	To be defined
DP4 - Promote social entrepreneurship and volunteering	% of students, teachers, researchers and non-teaching staff participating in volunteering activities	No. of students, teachers, researchers and non-teaching staff participating in volunteering activities / No. of students, teachers, researchers and non-teaching staff	2.0%	2.5%	5.0%
DP5 - Promote scientific, cultural and artistic dissemination	No. of participants in scientific, cultural and artistic activities organised by the U.Porto	-	30 000	41 667	100 000

\* Figures of 2010

# Part 3 – Monitoring and Evaluation of the Strategy

Although a strategic plan *per se* stimulates the strategic relaunching of an entity, it is nevertheless not enough for the continuing improvement of the institution. In fact, the success of a strategic plan depends especially on the actual undertaking of responsibilities and on the availability of resources essential to its completion.

As such, the U.Porto while being aware of the budget constraints that may affect it due to the budgetary crisis in Portugal, it is committed to setting up favourable conditions to implement the activities identified in this plan. With this in mind, the university intends to create a Planning and Management Control unit, with cross-cutting responsibilities and scope of action, aiming to:

- Assess and monitor compliance of the Action Plan; to do this, it will have to be in permanent contact with those in charge of the actions established;
- Assess, periodically, the indicators defined in the *Balanced Scorecard* and in the action plans in close coordination with the continuing improvement service;
- Prepare and submit periodical reports on the previous items;
- Advise the Rectory Team on the evaluation and monitoring processes used to measure the compliance of the Strategic Plan and *Balanced Scorecard*;
- Provide advice on the integration process of strategic plans and action plans of the Course Units with the cross-cutting objectives described in the Strategic Plan of the U.Porto and with the annual operational objectives;
- Provide advice on the budgeting process at the U.Porto developed by the financial services, ensuring their strategic efficiency: no strategic objective will be left out of the budget, and no action will be estimated if it is not related to at least one of the strategic objectives.

The implementation of the U.Porto Strategic Plan implies that a consensus must be reached as regards the University's Vision, but equally important, it means that the process must be clarified and communicated internally, because the operation of a strategic programme depends invariably on the thorough awareness of such a programme and on the commitment of the academic community with the targets contained therein.

So, to respond to the still insufficient internationalisation and the slow generalization of the guidelines described in the Strategic Plan of the U.Porto, the University will continue to promote its dissemination throughout the community. This involves expediting the intra-University coordination and cooperation, decreasing the amount of inadequate information. We will also seek the constant

commitment of the Management boards of the various units of the U.Porto to the targets established in the *Balanced Scorecard* and Action plans.

In this process, special emphasis will be given to the articulation of the strategic goals of the U.Porto, which, as part of its formal duties, can be implemented and managed by the Rectorate, as well as those in which the Rectorate will have a facilitating, integrating and guiding role, the Course Units being formally in charge of their implementation.

# Part 4 – Final Notes

The U.Porto presents in this document its Strategic Plan and Broad Lines of Action for the period 2011-2015, as well as an appropriate *Balanced Scorecard* with targets quantified until 2015. The document described the Mission, Vision and Strategic Goals of the University for the period, and the main guideline and actions in each of the strategic areas and the indicators that will enable to measure the compliance of goals established. The Strategic Maps summarise the main objectives and strategic areas of intervention.

The U.Porto intends to use the *Balanced Scorecard* as a tool to monitor the operation of its strategy. The *Balanced Scorecard* allows us to relate the strategic goals (long-term) with the short-term goals and actions (strategic operation) and, on the other hand, to monitor the performance (degree of compliance) of the organisation in an integrated manner through appropriate indicators (quantitative and qualitative).

In this context, the strategic operation to be carried out by the U.Porto in the near future will involve monitoring the compliance of 'Action Plans' conducive to achieving the goals set for each of the Strategic Themes of the U.Porto. In addition to the activities to be carried out, this monitoring includes the identification of the person(s) responsible for its implementation, the timeframe and the sequencing of actions, as well as the indicators to be used in assessing the success of the actions.