



“POLITEHNICA” UNIVERSITY OF TIMISOARA

SELF EVALUATION REPORT

PREPARED FOR THE

**EUROPEAN UNIVERSITY
ASSOCIATION**

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FOREWORD

“Politehnica” University of Timisoara welcomes this opportunity to be included in the EUA’s Institutional Evaluation Programme, and is aware of the importance and the benefits of an evaluation process carried out by an international agency.

“Politehnica” University of Timisoara occupies a recognized and honourable position among other Romanian peers ranked as advanced research and teaching universities. This achievement is, at the same time, very demanding, and induces us the need to acquire a better self-understanding in order to face the upcoming challenges. We believe that “Politehnica” University of Timisoara has the capacity and the resources to progress as a provider of advanced research and higher education services. Therefore, we would very much appreciate the views of our EUA colleagues on our efforts for further developments.

I wish to transmit my warmest welcome to the EUA evaluation team, and I look forward to discussing this report with you in detail.

Viorel Aurel Serban

Rector

“Politehnica” University of Timisoara



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ABBREVIATIONS

- ANC – Agenția Națională pentru Calificări (National Agency for Qualifications)
- ANUMU – Agenția Națională de Informatizare a Managementului Universitar (The National Agency for Computerization of University Management)
- ANOSR – Alianța Națională a Organizațiilor Studentești din România (National Alliance of Student Organizations of Romania)
- ARACIS – Agenția Română pentru Asigurarea Calității în Învățământul Superior (National Agency for Quality Assurance in Higher Education)
- AUDEM – Alliance of Universities for Democracy
- AUF – Agence Universitaire de la Francophonie (The Association of Francophone Universities)
- AUPELF – Association des Universités Partiellement ou Entièrement de Langue Française (Association of Partially or Wholly French Language Universities)
- CA – Consiliul de Administrație (Council of Administration)
- CCCICSE – Centrul de Cercetări în Controlul Inteligent al Conversiei și Stocării Energiei (Research Centre in Smart Energy Conversion and Storage)
- CCIM – Centrul de Cercetare în Inginerie Medicală (Medical Engineering Research Centre)
- CCM – Centrul de Cercetări Multimedia (Multimedia Research Centre)
- CD – Consiliul Departamentului (Council of Department)
- CEAC – Comisia pentru Evaluarea și Asigurarea Calității (Commission for Evaluation and Quality Assurance)
- CEMSIG – Centrul de Cercetare pentru Mecanica Materialelor și Siguranța Structurilor (Research Center for Mechanics of Materials and Structural Safety)
- CEP – Centrul de Educație Permanentă (Centre for Continuing Education)
- CF – Consiliul Facultății (Council of Faculty)
- CICS – Centrul de Informare și Consiliere al Studenților (Centre for Students' Counselling and Information)
- CNATDCU – Consiliul Național de Atestare a Titlurilor, Diplomelor și Certificatelor Universitare (National Council for Titles, Diplomas and Certificates)
- CNCS – Consiliul Național al Cercetării Științifice (National Scientific Research Council)
- CNFIS – Consiliul Național de Finanțare a Învățământului Superior (National Council for Higher Education Funding)
- CNR – Consiliul Național al Rectorilor (National Council of Rectors)
- CNUT – Consorțiul Național al Universităților Tehnice (The National Consortium of Technical Universities)
- COBUT – Catalogul Online al Bibliotecii Universitare Timișoara (The Online Catalogue of the University Library)
- CSD – Consiliul Școlii Doctorale (Council of the Doctoral School)
- CSID – Centrul de Studii în Învățământ la Distanță (E-learning Centre)
- CSUD – Consiliul pentru Studiile Universitare de Doctorat (Council for Doctoral Studies)
- CTE – Centrul pentru Tehnologii Educaționale (Centre for Learning Technologies)
- DGA – Direcția General-Administrativă (General Administrative Directorate)
- DGAC – Direcția Generală de Asigurare a Calității (Directorate for Quality Assurance)
- DKMT – Danube - Kris - Mures - Tisa Euroregion
- DOCIS – Dezvoltarea unui Sistem Operațional al Calificărilor din Învățământul Superior (Developing an operational system of higher education qualifications in Romania Project)
- DPPEMP – Departamentul de Promovare a Programelor și Evidență și Monitorizare a Proiectelor (Department for Program Promotion and Project Recording and Monitoring)
- ECTS – European Credit Transfer and Accumulation System
- ENQA – European Association for Quality Assurance in Higher Education
- EQAR – European Quality Assurance Register for Higher Education
- ESG – Standards and Guidelines for Quality Assurance in European Higher Education Area
- ESU – European Students' Union
- EUA – European University Association

- GISC – Program de Gestiune a Școlărității (School Management Application)
- ICER-TM – Institutul de Cercetări pentru Energii Regenerabile Timișoara (Research Institute for Renewable Energy - Timișoara)
- IEP – Institutional Evaluation Programme
- INSPEC – Indexing database of scientific and technical literature, published by the Institution of Engineering and Technology
- MECTS – Ministerul Educației, Cercetării, Tineretului și Sportului (Ministry of Education, Research, Youth and Sports)
- OICS – Oficiul de Informare și Consiliere a Studenților (Office for Students' Counselling and Information)
- PDCA – Plan-Do-Check-Act
- PIB – Produsul Intern Brut (Gross Domestic Product)
- POR – Programul Operațional Regional (Regional Operational Program)
- POSCCE – Programul Operațional Sectorial Creșterea Competitivității Economice (Sectoral Operational Programme Increase of Economic Competitiveness)
- POSDRU – Programul Operațional Sectorial de Dezvoltare a Resurselor Umane (Sectoral Operational Programme Human Resources Development)
- PUT – “Politehnica” University of Timișoara
- RODSD – Regulamentul de Organizare și Desfășurare a Studiilor Doctorale (Organisational and Operational Guidelines for PhD Studies)
- ROFCA – Regulamentul de Organizare și Funcționare a Consiliului de Administrație (Organisational and Operational Guidelines of the Council of Administration)
- SCD – Serviciul pentru Cercetare și Dezvoltare (Research and Development Division)
- UEFISCDI – Unitatea Executivă pentru Finanțarea Învățământului Superior, a Cercetării, Dezvoltării și Inovării (Executive Agency for Higher Education, Research Development and Innovation Funding)

1. Introduction

1.1. Participation of “Politehnica” University of Timișoara in the Institutional Evaluation Programme of the European University Association

“Politehnica” University of Timișoara, for which the acronym PUT is further on used, stated its intention of being institutionally evaluated by the European University Association (EUA) on the 27th of March 2012, when it signed the document entitled the *Memorandum of Understanding*. PUT is fully aware of the fact that the Institutional Evaluation Programme (IEP) is an independent service offered by the European University Association to the international academic community in order to support the higher education institutions to evaluate their institutional processes and procedures in comparison with the international practices. Moreover, PUT is also knowledgeable of the fact that IEP focuses on the decision-making institutional processes and structures, offering support in order to increase the efficiency of the university strategic management.

In this context, PUT has greeted the opportunity of participating in the programme *Performance in Research, Performance in Teaching – Quality, Diversity and Innovation in Romanian Universities* conducted by the Executive Agency for Higher Education, Research Development & Innovation Funding (UEFISCDI) and the European University Association (EUA). This programme fulfils the need to reform higher education in accordance with the provisions of the National Education Law (1/2011).

Before stating its intention of being evaluated institutionally by the EUA, PUT took part, in 2011, in a programme which ranked the Romanian universities. The main objective of the programme was to classify the Romanian universities into three categories: advanced research and teaching universities; teaching and scientific research universities; teaching and learning universities. As a result of this national evaluation programme, PUT was ranked as one of the twelve advanced research and teaching universities in Romania (Appendix A1.1.-1¹).

PUT considers that the institutional evaluation of EUA is a good opportunity of evaluating the institutional objectives, the fulfilment of the assumed mission, the decision-making processes, the institutional structures, the significance of the internal quality assurance processes and the strategic management efficiency. Moreover, it offers PUT the opportunity of reflecting on the changes that have to be made in order to determine the development of the strategic management at an institutional level and to improve the quality assurance mechanisms.

1.2. Self-evaluation process within “Politehnica” University of Timișoara

The institutional self-evaluation process has developed in accordance with the provisions stipulated in the *Guidelines for Institutions* (January 2012). The self-evaluation committee was established by the Decision of the Rector of “Politehnica” University of Timișoara on account of the *Administration Committee Decision No. 3/ 26.03.2012* concerning the institutional evaluation of PUT by EUA.

The twelve members of the self-evaluation committee represent the academic fields and the administrative structures of PUT. They are not directly subordinated to each other and they are highly experienced in all the basic processes of the university. The self-evaluation committee has consisted of the following members:

- Coordinator:* Prof.Dr.Eng. Toma L. Dragomir (Automation and Applied Informatics Department) – Director of the General Directorate of Quality Assurance;
- Assistant* Prof.Dr.Eng. Marius Crisan (Department of Computer and Software Engineering)
- Coordinator:* - Quality Assurance Director at the Faculty of Automation and Computers;
- Secretary* Lect.Dr. Mirela Pop (Department of Communication and Foreign Languages) – Vice-dean of the Faculty of Communication Sciences;
- Members:* Prof.Dr.Eng. Mircea Popa – Vice-rector of PUT in charge of the educational issues;
- Prof. Dr. Eng. Dan Lascu (Head of the Applied Electronics Department);
- Lect. Dr. Mugurel Gabriel Dragomir (Head of the Department for Teaching Staff Training)
- Prof. Dr. Eng. Valeriu Dolga (Department of Mechatronics) – member of the PUT

¹ The appendix is taken out of the existing online document of MERYS. In addition to this document, we have added further information regarding the 2010-2011 academic year. This information has been included on columns and is coloured in grey.

Senate;

Eng. Cristian Vladimir Telescu (General Administrative Directorate) – PUT Technical Director;

Eng. Vasile Rușeț - Director of the PUT Entrepreneurship Department;

Lect. Dr. Eng. Daniel Hădărugă (Department of Applied Chemistry and Organic-Natural Compound Engineering) - member of the PUT Senate;

Lect. Dr. Liviu Cădariu-Brăiloiu (Department of Mathematics) - member of the PUT Senate;

Norbert Kazamer (student) – member of the CA of PUT

The general coordination of the self-evaluation process has been ensured by the vice-rector Prof. Dr. Eng. Corneliu Davidescu. The university management has closely monitored the entire self-evaluation process and has supported the committee during this activity. In this laborious self-evaluation process, a large number of members of the university community have been involved: teaching and administrative staff, students, members of the Faculty Councils and of the Departments, members of the Senate and the university management. The main activities that have been carried out are listed below:

- planning and distribution of the tasks and responsibilities among the members of the self-evaluation committee, scheduling of the work meetings;
- information sessions for the members of the PUT community with respect to the procedures, objective and opportunity of the institutional evaluation made by the EUA;
- coordination of the activities of the self-evaluation committee and of the work groups, coordination of the meetings, mediation of the communication among the members of the committee;
- collection of the data and information necessary for writing the report;
- elaboration of the questionnaires for the teaching and administrative staff, for the students, on the one hand and on the other, of a questionnaire for the SWOT analysis of PUT in order to evaluate the perception of the members of the PUT community with respect to the management, the organization and the functioning of the university;
- questionnaire distribution, processing, centralization and analysis of the evaluation results;
- work meetings held to discuss the strengths and weaknesses of the university;
- elaboration of the report and its presentation to the university management.

The main positive outcomes of the self-evaluation process are the following: the completion of an institutional self-evaluation which is different from the one done by the National Agency for Quality Assurance in Higher Education (ARACIS) or from the one done on the occasion of the universities ranking. This new kind of self-evaluation refers to the strategy of PUT with respect to the management of the university basic and support processes. The SWOT analysis (Appendix A1.2.-1) has exceeded the size of the consulting procedures normally used in the university. The gathered information has been discussed with the PUT management and will be used in the new PUT strategic plan and in the internal policy regarding the quality assurance. The importance of the institutional self-evaluation process has motivated the members of the self-evaluation committee. The group discussions have had a dynamic and responsible character, based on good fellowship, communication and analytic debate. The data collection, the preparation of the documents and of the work materials have been done responsibly. All the members of PUT community have constructively reacted to this challenge.

The main difficulty encountered during the self-evaluation process have been primarily determined by the overlapping of the elections calendar of the PUT management and governance structures with the deadline for the self-evaluation report completion. This explains, on the one hand, the constant reference to the previous legislature and not to the management activities of the newly elected management structures and, on the other, the delayed delivery of the document entitled *Memorandum of Understanding*.

1.3. Objective and structure of the self-evaluation report

The objective of the report is the completion of an institutional self-evaluation that shows:

- i) the state of the university regarding its mission and objectives in order to make the university processes and management more efficient by adopting an adequate quality policy;
- ii) the manner in which the strong points should be further developed, the weak points should be corrected and eliminated, the opportunities should be materialised and the external threats should be foreseen.
- iii) the vision of the entire PUT community (management, researchers, teaching and administrative staff, students), rendered objectively by the self-evaluation committee, with respect to the institutional norms, values, mission and objectives, to the institutional management, organisation and functioning, to the efficiency



of the internal mechanisms of evaluation and quality assurance, to the capacity of the institution to face the external changes and challenges;

The present self-evaluation report has been conceived and structured in accordance with the *Guidelines for Institutions* stipulated in IEP of EUA. The self-evaluation report is made up of four chapters. Chapter 1 consists of a short analysis of the self-evaluation process. Chapter 2 presents a brief overview of the Romanian educational system, focussing mainly on the technical higher education system, of the institution and of the local, regional and national opportunities in the labour market. Chapter 3 answers four key-questions: *What is the institution trying to do?*, *How is the institution trying to do it?*, *How does the institution know it works?*, *How does the institution change in order to improve?* This part of the report points to the balance between the collected data and information regarding the processes and structures of PUT and to the analysis of the strong and weak points of the institutional processes: management processes, basic processes (educational and scientific research processes) and administrative processes. The conclusions are summarised in chapter 4 and they emphasise the strengths, weaknesses, opportunities and threats and offer an action plan to remedy weaknesses and to further develop strengths. The report is accompanied by a set of appendices to which the text makes reference to.

2. Institutional context

2.1. Brief overview of the educational context

2.1.1. Romanian education system

The Romanian education system is managed, at a national level, by the Ministry of Education, Research, Youth and Sports (MECTS). In order to fulfil its specific responsibilities, the Ministry cooperates with other ministries and institutional structures subordinated to the Government.

The general legal framework for the organisation, administration and provision of education is established by the Constitution, the Education Law (1/2011), ordinary laws and a number of governmental and ministry ordinances.

In Romania, the compulsory education (ages 6-16) may be followed by post-secondary education (ages 16-18/19) and by higher education.

2.1.2. Romanian higher education system

In Romania, the higher education institutions (universities, academies and postgraduate schools) include faculties, university colleges, departments and units for scientific research, design and micro-production. The mission of the higher education institutions is either education and research or only education.

Since the 2005/06 academic year, all the higher education institutions, private and public, have been obliged by the Law no. 288/2004 to implement the Bologna Agreement, i.e. to offer one or more educational programmes having a three-cycle structure: bachelor, master and doctorate.

In order to complete the bachelor's studies, the graduates have to sit a final exam. The content of the exam and the specific criteria are established by the University Senate. The graduates passing the exam are awarded a diploma specifying the competences acquired in that particular profile and specialisation. The successful students can attend the second cycle of higher education, namely the master's one. By passing a final exam, the graduates complete the master's studies and are awarded a diploma that specifies the competences acquired in that particular profile and specialisation. The doctoral studies are completed by a thesis publicly defended in front of a committee of specialists approved by the University Senate.

In Romania, the academic evaluation has been performed since 1997, and the quality assurance since 2005, when ARACIS was created. ARACIS is a full member of the European Association for Quality Assurance in Higher Education (ENQA), as of September 2009, and registered in the European Quality Assurance Register for Higher Education (EQAR). The ARACIS *External Evaluation Methodology* regarding quality assurance, provisional functioning, license and accreditation of higher education institutions and study programmes are established by the government *Emergency Ordinances No. 75/2005* and *No. 75/2011* regarding the quality assurance in education, in compliance with the European Standards and Guidelines for Quality Assurance in Higher Education (ESG). A new methodology is still being developed.

2.1.3. Romanian technical higher education system

The technical higher education is one of the main values of the Romanian educational system. Four of the accredited public universities ("Politehnica" University of Bucharest, Technical University of Cluj-Napoca, Technical University "Gh. Asachi" of Iași and "Politehnica" University of Timișoara) form a group of technical universities organised in a National Consortium. They are in continuous sharing of ideas and dissemination of experience.

In the field of the engineering sciences, the academic quality of the university study programmes are defined by standards, reference standards and lists of performance indicators applied according to the *Specific Standards of Academic Evaluation for Engineering Sciences* approved by ARACIS in 2006.

The Romanian technical universities develop mainly study programmes in the engineering field, but they may also offer study programmes in other scientific fields of national interest, complementary to the engineering sciences. This is also the case of PUT (Appendix 2.1.3.-1). The bachelor's degree includes 180, 240 or 360 transferable study credits compatible with ECTS and lasts three, four or, respectively, six years, depending on the field and area of the specialisations. The master's degree includes 90 or 120 transferable

study credits and lasts for one or two years, respectively. Doctoral studies are organised in doctoral schools and correspond to three years of full time work.

2.2. Current regional and national labour market context

The investments done in the last 10 years in various regions of Romania have led to an increased demand of work force that is specialised in industry (4.8%), constructions (3.9%), transportation, storage and communication (2.1%). In this part of the country, the West Region², the economic results are superior to the national average. In terms of the gross domestic product (GDP), the West Region is usually on the second place after the region to which the capital of the country belongs. Analysing the regional GDP in terms of resource categories, it comes out that the most important contributions to the GDP are generated by the following sectors: industry, real estate, rentals and service delivery mainly to the production, transportation, storage and communication fields (http://www.adrvest.ro/attach_files/RIS_2009_2013.pdf (pp. 24-25)).

The universities have tried to fulfil the demand existing in the labour market. From this perspective, PUT has developed programmes both in the technical and in the complementary fields. In the last 5 years, about 2400 students have graduated from PUT each year. The students enrolling at PUT usually come from the West Region and represent about a third of the total number of admitted students (in 2011 they represented 30.91%). In Timișoara and in the region, there are many foreign companies capable of absorbing a large number of graduates (particularly in the IT field). Their decision to start a business here has been taken after analysing the quality of the existing work force and the capacity of the universities to constantly provide highly qualified work force. Moreover, the service delivery system has also developed lately due to the high demand in the labour market.

The universities have a constant dialogue and partnership with the economic milieu in order to adapt to their demands by developing new curricula or by adjusting the old ones, by developing post university courses, master's or even bachelor's programmes. Nevertheless, at a local, regional and national level, there are still some situations in which the universities provide too many or too few graduates to the labour market. This is actually the result of the fact that the demand in the labour market is not always transparent and it is constantly changing. At the present moment, PUT has a balanced educational offer illustrated by the fact that, in some cases, the absorption rate of the graduates is greater than 80% (in the economic crisis year 2010: Architecture - 98%, Mechanics - 88%, Management - 86 %, Automatics and Computer Sciences - 80%).

2.3. Brief description of PUT

2.3.1. History

PUT is a higher education and scientific research institution, of national interest, that belongs to the Romanian national education system and contributes through its activities to the global education strategy, integrating itself in the tradition of the Romanian university education and contributing to the scientific, professional and civic formation of the young people, to their integration in the economic and social life, to the permanent education of university graduates, and to the production of science and technology.

PUT was founded in 1920 through the *Decrees No. 2521/ 10.06.1920* and *4822/11.11.1920*, under the name “Școala Politehnică din Timișoara” (“The Polytechnic School of Timișoara”). The current name of the university has been established by the *Government Ordinance No. 568/1995* and confirmed by the *Government Ordinance No. 294/ 1997* and *No. 535/1999*, respectively the *Government Ordinance No. 676/2007* and *No. 635/2008*. The university was founded shortly after the 1918 union in one state of all the Romanian territories. In 2010, PUT celebrated 90 years of existence.

During its continuous existence and functioning, the university had the following names: Școala Politehnică din Timișoara (The Polytechnic School of Timișoara) (1920-1948), Institutul Politehnic Timișoara (The Polytechnic Institute of Timișoara) (1948-1970), Institutul Politehnic “Traian Vuia” din Timișoara (The “Traian Vuia” Polytechnic Institute of Timișoara) (1970-1991), Universitatea Tehnică din Timișoara “Traian Vuia” (The “Traian Vuia” Technical University of Timișoara) (1991-1995). At present, the name of the university is “Politehnica” University of Timișoara.

2.3.2. Geographical position

² The West Region is situated on the border shared by Romania with Hungary and Serbia. From an administrative-territorial viewpoint, it consists of four counties: Arad, Caras-Severin, Hunedoara and Timis. The West Region has a surface of 32.034 km², which represents 13,4% of the entire Romanian territory.

PUT is placed in the Western part of Romania and has locations in Timișoara and Hunedoara.

Timișoara is one of the largest Romanian cities, with a population of 301,761 inhabitants (the third most populous city in the country, according to the National Institute of Statistics, after the census of 2011) and the most important city in Western Romania. It is considered the capital city of the historical region of Banat and is located on the Banat Plain, along the Bega River. Timișoara is an important academic and cultural city with four public universities: “Politehnica” University of Timișoara, West University of Timișoara, University of Medicine and Pharmacy and University of Agricultural Sciences of Banat.

Hunedoara is located at about 200 km East of Timisoara in an important industrial area with a long tradition in metal processing.

2.3.3. Legal status

PUT, located at 300006 Timișoara, Piața Victoriei 2, is a legal person and has university autonomy according to the *Law of Education 1/2011* and to its own new *University Charter* (2011). In its relations with the society, the university identifies itself through: name, seal, logo and flag, established through the Senate’s decision and it also has a public online image at www.upt.ro.

The PUT activity concurs with the principles of the Magna Charta of the European Universities –in September 2005, PUT was one of the universities which signed the Magna Charta Universitatum– and with the ideals of the Romanian education system, aiming at a free, complete and harmonious development of the human individuality and at the formation of competent, autonomous and creative professional personalities.

2.3.4. Institutional accreditation and positioning of PUT in the 2011 classification exercise

PUT has attained, as a result of the institutional evaluation taking place in 2009 (Appendix A2.3.4-1.1), a “*High Confidence rating*”, as attested by the *Certificate No.31/2009* (Appendix A2.3.4.-1.2) delivered on July 30, 2009 by ARACIS.

The European University Association has classified PUT in the category of advanced research and education universities according to the *MECTS Order No. 5262/05.09.2011*. This grade has resulted from the classification exercise on the data reported by the Romanian accredited higher education institutions. PUT was included in Category A with 6 study programmes in Category A, 7 in Category B, and 4 in Category C (Appendix A2.3.4.-2).

2.3.5. Institutional affiliation

The university is affiliated to: The National Council of Rectors in Romania (CNR), The European University Association (EUA), The European Conference of Technology Universities Rectors, The University Alliance for Democracy (AUDEM), The Association of Francophone Universities (AUF), The Association of Universities with Partial or Integral Teaching in French (AUPELF), The National Association for Computerization of University Management (ANIMU) and The National Consortium of Technical Universities (CNUT).

2.3.6. University institutional structure

In Romania, the university structure is regulated by the *Law of National Education No. 1/2011*. Each university has two types of distinct academic entities: faculties and departments. PUT is composed of academic and administrative units.

The structural pattern of PUT is based on its specific mission and objectives formulated in accordance with the University Charter (2011) and consists of: departments, faculties, a Continuous Education Centre, an E-learning Centre, research institutes, research centres, a Teaching Staff Training Centre, "Know-how transfer" Centre, a library, a publishing house, a printing house, a production unit and a TV studio. The administrative units are: directorates, services, offices, compartments, workshops, etc. Their position and interrelations are highlighted in the organisational chart of the university (Appendices A2.3.6.-1.1 and A2.3.6.-1.2).

The departments are basic structural and functional academic units directly subordinated to the university that ensure the production and synthesis of knowledge in one or more areas by advanced research, research-development-innovation, and the transfer of know-how to the society through initial and continuous education activities at graduate and post-graduate level. PUT has actually 25 autonomous departments.

The faculties elaborate and manage the university study programmes, by forms and degrees, in one or more related fields and/or interdisciplinary study programmes. PUT has actually 10 faculties that coordinate 159 study programmes (70 accredited bachelor's degree programmes out of which 51 are active and 89 accredited master's degree programmes out of which 67 are active). PUT also offers 2 distance learning study programmes.

Research Institutes and Research Centres: PUT considers that the scientific research is a priority of the university mission, conferring personality and distinction to the university, and that reaching excellence in scientific research is a target on medium and long term. The research is managed and monitored according to the Regulation on the Organisation and the Process of the Scientific Research in Research Institutes and Centres. Regarding our research centres, one of them is accredited at a research excellence level, three of them as national research centres, and 21 more have obtained accreditation by the National Scientific Research Council (CNCS). Starting with 2012, PUT has a new research institute: *Institute of Research for Renewable Energy ICER-TM*.

Laboratories: There are four types of laboratories in PUT: testing laboratories, research laboratories, research and didactic laboratories and didactic laboratories. A number of 314 laboratories of the total number of 411 are described in a volume published in 2009.

The University Library, founded in 1921, is organised as a main entity with 6 subsidiaries (5 in Timisoara and one in Hunedoara). The surface area of the main library is ~1800 m², from which 150 m² are occupied by lecture rooms, with a capacity of 50 seats. The University Library holds about 427 000 volumes and offers access to specialised databases and full text online magazines. Its activity is fully computerized, the online catalogue (COBUT) stores all the volumes acquired since 1983 (meaning 216000 volumes) and may be consulted both at the library buildings and on the Internet. The University Library will move in the near future to a new location with a surface area of 7180 m² and 1720 m² reading halls, for 600 readers, and will be the largest university library in Romania.

The Publishing House and the Printing House: The university has its own Publishing house - Editura „Politehnica” -, accredited by CNCS. The „Politehnica” Publishing House publishes principally teaching materials, books in specialised fields, seminar and laboratory guides, doctoral theses and 13 periodicals (Scientific Bulletin of “Politehnica” University of Timișoara). The university publishing house has published 556 titles in the last 5 years.

The PUT TV Studio – “Teleuniversitatea Timișoara” - has obtained the licence in 1994. It is an academic non-profit TV program with educational scope. It broadcasts for two hours a day.

Other important institutional structures are: the Department for Mobility and International Cooperation, the Centre for Students' Counselling and Information (CICS) that offers guidance to students, the Educational Technologies Centre (CTE), the Multimedia Learning Centre Open Source (CIMAD), the Distance Learning Centre (CSID) and the Directorate for Quality Assurance (DGAC).

2.3.7. Physical infrastructure

At present, PUT administers a surface of 56047.64 m² own spaces for academic activities, 64770.27 m² student foyers in Timisoara and 2448.51 m² student foyers in Hunedoara, 6409.11 m² student restaurants in Timisoara and a 412.84 m² student restaurant in Hunedoara and 62401.96 m² sport bases in Timisoara. The space allotted to each faculty (at the end of the 2010-2011 academic year, that is before the new PUT Charter has been adopted) is included in Appendix A2.3.7.-1.

According to the Rector's Report (2012), during April 2004 - March 2012, the university has invested approximately 55 million euro from its own sources in infrastructure development, rehabilitation of the academic and research spaces, administrative, social and open sport facilities. There were rehabilitated 50 buildings and 300 laboratories (equipped with over 4000 computers). There were rehabilitated and modernised most of the university classrooms. New lecture halls were created, one of them with 380 seats. Eight new buildings were constructed (University Library, Research Institute for Renewable Energy, Hydraulic Machineries Building of the Faculty of Mechanics, Science and Engineering of Materials Building of the Faculty of Mechanics – not finished yet, Swimming Pool Complex, Polyvalent Sports Hall, “Politehnica” Park).

2.3.8. Social, dining, sport facilities and health services

Accommodation: For student's accommodation, PUT has, in Timișoara, 16 student foyers (64770.27 m²), with approximately 5500 beds, and, in Hunedoara, one student foyer (2448.51 m²).

Dining Facilities: There are three restaurants and a Fast Food (6409.11 m²) for students and academic staff, located in Timișoara, in the university student campus, and a restaurant (412.84 m²) in Hunedoara.

Sport facilities: In Timișoara, the university has 3 sport bases covering a surface area of 62401.96 m² (football, tennis, handball, basket, fields, sport halls, multifunctional hall, locker-rooms, storage-rooms). In Hunedoara, PUT has a sport hall of 597.22 m². Since 2008, the university has also had an enclosed semi-olympic swimming-pool.

Health services: Health services are ensured by a student day clinic and a student hospital, located in the student campus.

2.3.9. Guidance to students

CICS offers the university students information and counselling regarding the teaching process, facilities, career guidance, competence evaluation, etc. CICS organises periodic trainings, workshops and seminars for students, focusing on communication, leadership, time management, organisational management, CV editing, job interview preparation, etc. CICS also publishes informational materials for students (the Student's Guide, Information and Career Guide, brochures and leaflets), it monitors the absorption rate of the university students by the labour-market. Moreover, it organises study or information trips or visits.

2.3.10. Academic and administrative staff, students

PUT has a total of 699 permanent teaching staff members (127 full professors, 132 associate professors, 219 lecturers and 221 assistant professors) (1st of October 2011). The total number of academic staff members is 806 (699 teaching staff + 107 research assistants).

There are 16651 students (13719 undergraduate students, 2932 graduate students) studying in undergraduate and graduate programmes. According to the Rector's Report (2012), 74% of the students are enrolled in the bachelor's degree, 21% in the master's degree, 3% are doctoral students of part-time work and 2% are doctoral students of full time work.

PUT has a total of 566 administrative staff members.

3. Self-Evaluation Results

3.1. Mission, goals, norms and values: What is the University trying to do?

3.1.1. Mission and objectives of the institution

PUT is one of the biggest public universities in the Western part of Romania. It is among the institutions with great potential, which are responsible for the development of higher education and science in Romania. It is an institution with a strong aim: to serve and improve the Romanian economy, culture and society as a whole.

The specification and the execution of the PUT mission, goals and activities declared in art.10 of the University Charter (2011) are based on applying the principles of the university autonomy and academic freedom. PUT missions, defined along the lines of the current and future individual and societal needs, are the following:

- a) to generate and transfer knowledge to society through advanced scientific research, development and innovation by disseminating the results through publication and/or implementation;
- b) to provide superior training both at university-level within the Bologna paradigm, on all three cycles (bachelor, master, doctoral studies), or within a specially-regulated system, and at postgraduate level, in accordance with the concept of lifelong learning, in order to enhance one's personal development, employability and to meet the competences required by the social environment;
- c) to contribute by setting directions for social development at a local, regional, national and international level;
- d) to foster, promote and defend some fundamental values crystallized during the evolution of humanity: freedom of thought, speech and action, equity, truth, fairness and honesty.

PUT overall strategic objectives have been outlined in the strategic plans of the university. The current ones are specified in PUT's Strategic Development Plan 2008-2012, which is presented in Appendix A3.1.1.-1. In short, these objectives concern:

- a) *scientific research and technological development, design, consultancy, technical assistance, expertise, production, etc. in the global context of the European Research Area;*
- b) *training of highly qualified specialists:*
 - *at graduate and postgraduate level*, according to the levels agreed upon in the Bologna process (bachelor, master, doctoral) or to their equivalents in the structure prior to the Bologna system;
 - *at postgraduate level*, in the global context of the European Space for Higher Education (specialization, improvement, lifelong learning, etc.);
- c) *improvement of scientific research, education and services, accomplished by:*
 - granting PUT members a professional and social status according to the social importance of the assumed mission;
 - the development of the university's infrastructure;
 - the adaptation of the educational content, teaching technologies and evaluation methods, scientific research and technological development, production and services to the global technological and scientific progress tendencies and to the social and economic development dynamics of the country;
 - the subordination of all the university processes to the principles of quality management systems, corroborated with transparency and honesty;
- d) *cooperation with national and foreign universities to develop a modern and efficient education system;*
- e) *integration in global, European and national informational circuits through scientific, technological, teaching, cultural and general information - including online - activities and publications.*

The objectives of PUT will be further discussed in paragraph 3.3 in light of their achievement through management and quality assurance.

3.1.2. Governance and management

3.1.2.1. Institutional form

In Romania, all state universities are subordinated to MECS, which determines the general rules and regulations and establishes the number of students for all universities.

PUT autonomy is stipulated in PUT Charter (art. 12): “University autonomy, granted and guaranteed by the Romanian Constitution and regulated by law, includes defining the educational and scientific offer, financial governance and management, setting up the internal organization, the employment policies, the selection of students, the appointment of the rector, of the chair of the Senate, of the vice-rectors, of the deans, of the vice-deans, of the heads of department and of the senior administrative staff, the exercise of management rights and the constitution and management of university heritage.”

The University aims to be a unitary, functionally and territorially distributed institution. Its unitary character is given by the fact that it integrates multiple technical domains with complementary nontechnical areas of teaching and research. The implications of this approach are the common, unitary procedures, matched with distributed delivery.

According to the Organizational Chart in the University Charter (Appendix A2.3.6.-1.1), PUT has two types of structures:

- *Academic* structures: the department, the faculty, the Centre for Lifelong Learning, the E-learning Centre, the Research Institute, the Research Centre, the Teacher Training Centre, the Know-How Transfer Centre, the library, the publishing house, the printing house, the production unit and the TV station;

- *Administrative* structures: departments, services, offices, divisions, workshops.

The effective cooperation between the academic and the administrative structures builds on establishing clearly delineated tasks, on minimizing arbitrariness and redundancy in both educational and research activities, as well as on enhancing administrative support.

The aim is to achieve the best possible coordination of all activities. The extent and the level of centralization and decentralization are determined by:

- the domain-based decentralization of the educational process into faculties with domain-specific, yet structurally uniform curricula;
- the domain-based decentralization of the research process, with special emphasis on the importance of research tasks and responsibilities both within and across the university departments and research institutes/centres;
- the faculty-based decentralization of student practice programs;
- the centralization of education marketing programs, of social and administrative services, of public acquisitions, of the know-how transfer and of student councils.

3.1.2.2. Human Resources

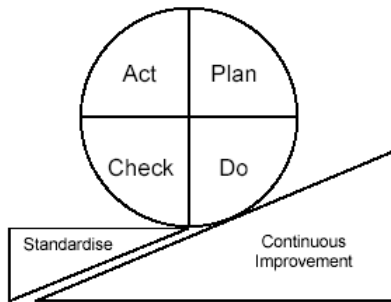
The University has comprehensive human resources policies. The university staff comprises all the people who are engaged in a legal labour relation with the university. The staff members may hold: teaching positions, research positions, auxiliary teaching positions, and non-teaching positions. Teaching and research positions may be held by full staff members, associate staff members, and guest staff members within legal limitations. Additionally, PUT may also rely on external human resources to cover teaching positions, as well as on master and PhD students to participate in academic research projects.

PUT’s policy on academic staff is fully autonomous. In line with its Charter and national standards, it is open and transparent, observes the PUT development strategy and is consistent with the teacher evaluation results.

The staff being the most valuable asset, PUT aims to ensure a proper internal climate and appropriate work conditions, based on mutual respect, comity and cooperation between the community members, irrespective of their category or hierarchic position. The PUT head management is constantly interested both in increasing staff income and in applying a balanced policy regarding staff promotion within PUT’s academic hierarchy.

3.1.2.3. Quality Assurance

The concern for the quality of the activities and of the products made - mainly graduates and research- has always characterized PUT. PUT was among the few universities in Romania which took part at the pro quality and pro Bologna actions initiated by MECS between 1999-2000 (introduction of the ECTS system in the university and elaboration of quality management system documents for the departments, within TEMPUS programmes). Starting from 2005, PUT has been fully enrolled in activities developed at national level. PUT implements the European orientation, particularly the “Standards and Guidelines for Quality Assurance in the European Higher Education Area” (ESG), adopted by ministers in Bergen (2005), and disseminated them within the university.



The problem of quality assurance is extensively presented in Section 3.3 of the current self-evaluation report. The PUT management is mainly made according to the plan-do-check-act principle, planning being made according to strategic plans, implemented through operational plans, as well as through sector action plans. The basic processes, such as – didactic, research and management - as well as the support processes and the associated activities are managed through regulations and procedures. They are monitored, analysed and evaluated at different levels (senate, administration councils, faculty councils, departments). The continuous

improvement is made both by applying higher and higher standards imposed by the national and European standards, as well as by using own university standards, together with corrective and preventive measures at different levels.

Once the university elections ended, these structures are to be reanalyzed according to the new PUT Charter.

3.1.3. Academic Profile

3.1.3.1. Balance among teaching, research and service to society

According to the 2011 national university ranking, PUT is *an advanced research and education university*. Consequently, the balance among teaching, research and service to society is in compliance with this positioning.

Thus, the key goal is to develop high-level research activities that will have a positive impact both on teaching, by facilitating research-driven learning, and on the quality of the services to society. Special attention is paid, in this context, to the goal of providing high-quality education during all the three Bologna cycles within the technical field, in particular. Equally important is the university's contribution to society through technical and marketing activities in professional, civic and business organisations, as well as through charity and promotion of genuine local and regional values.

3.1.3.2. Academic priorities

In order to achieve its teaching goal, the prioritisation of study programs and research domains is carried out according to the global level of development and to the worldwide top priority fields, as well as to the local, regional and European labour market needs.

In the context of diversifying its academic programs, priority is given to those developed in foreign languages (organized through "Politecnica International" program), those with a high number of available student places, and those developed in the distance education system, which are convenient to the companies in the area. At the same time, the still actual traditional technical programs are consolidated.

The high priority research domains reflect both national and European trends such as interdisciplinary researches (e.g. renewable energies, IT and nanotechnologies). Such domains are to be connected more closely to doctoral, postdoctoral and postgraduate programs, and are to promote the transfer of know-how to society.

3.1.3.3. The student-centred approach

Being consistent with its mission and applying the student-centred approach, PUT aims to provide professional undergraduate and postgraduate higher education. In this respect, the article 127 of the PUT Charter states: "PUT considers that its educational activities must be organized and carried out by placing the student, and the future graduate, respectively, at the core of all its endeavours related to curriculum and syllabus design, to student projects and practice placements, to establishing competencies for the future graduate, to access to the university's infrastructure, and to the destination of funds."

According to the 2008-2012 Strategic Plan (Appendix A3.1.1.-1), in relation to its students, PUT aims to promote a fair and transparent admission system, to offer international study programs, optimal training, access to technical equipment and books, scholarships, to ensure the right to build their own career, respect towards one's own person and personality, a functional tutorial system, responsiveness to students' opinions, communication and cooperation with student organisations, decent living conditions.

The student-teacher relation is based on partnership and each party takes responsibility for students' academic results. Also, students are encouraged to participate in all decision-making bodies, at all levels. PUT students are full-right members of the academic community, with representatives in all management bodies.

The study entitled "The Quality System – Student-centered education" (<http://www.PUT.ro/pdf/calitate/REFERAT.pdf>), which was conducted by PUT in 2009, also reflects the interest of the university in the student-centred approach in education.

3.1.4. Academic-related activities

PUT intends to continue its tradition of enhancing its relations with society by promoting a variety of actions through its structures.

Tailoring the educational offer to the needs of the labour market lies at the heart of this endeavour. The activities that serve this purpose include: - gearing the educational process towards the development of qualifications required by the labour market, - establishing the number of student places according to labour market requirements, - raising the awareness of social partners about educational matters.

The technical, demographic and economic developments within the globalization process have led to a limited temporal validity of acquired competences. That is why *lifelong learning activities* have become a key component of PUT strategy with regard to the social environment.

PUT takes into account the enhancement of its relationship with the economic and the socio-cultural environment of Western Romania, in particular, and, additionally, the exploitation of a wider national or international area, by strengthening its ties with the industry and with the companies whose profile matches the university's domains of specialization. These are aimed to be effective by consulting, spin-off, technology transfer, participation to industrial parks and defining its own scientific competence pole. PUT wishes to continue its cooperation with the local, county, regional and national authorities, thus acting as a complex catalyst for development and as a binder for the various social actors.

3.1.5. Funding

Although PUT's funding comes mainly from the MECTS, in accordance with the CNFIS procedures, PUT attracts solid financial revenues from additional funding resources as well. The university's own income is mainly generated by a wide range of research activities developed within competition-based national and international projects, consultancy services, tuition fees, provision of hostels and canteen-related services, rents, sponsorships, donations from research-supporting enterprises and organizations etc. Details of the fund distribution can be found in (Appendix A3.1.5-1).

Demonstrating increased research potential, the university is committed to boost application and implementation of EU-funded projects and to encourage young researchers to apply for related EU grants.

PUT's ranking in Romania's first-category universities, described as *Advanced research and education universities*, should lead to increased budget-based financing, as it is claimed by MECTS. In this context, PUT supports the adjustment of the current basic financing system based on certain performance-related indicators that should accurately quantify the results of each university and assess the quality of processes directly influencing teaching and research activities.

3.1.6. Defined Position. Vision of the Institution with Respect to Its Present and Future Positioning

The first-category position held by PUT following the 2011 national ranking is not only rewarding but challenging as well for the long-term evolution. Consequently, PUT has set three important goals on a national, regional and international level, respectively:

- to reinforce its position within the first-category universities;
- to consolidate its position as the leading technical university in engineering education and scientific research both in the Western part of Romania and in the DKMT geo-strategic area;
- to rank higher in internationally-recognised academic classifications .

3.1.7. Rationale of the Strategic Choices

PUT has solid knowledge of and appreciates the Bologna system-based higher education policy implemented in the European academic space and acknowledges its competitive framework in terms of training services and research output. In light of the mission statement of PUT's Charter, PUT promotes a

positive framework enabling integration in this space and sustainability based on research, advanced teaching and involvement in social issues.

We believe that our vision, as previously described in 3.1.1 to 3.1.10, is fairly realistic and the envisioned mission can be achieved. The present self-evaluation proves helpful in the clarification of certain aspects and in the subsequent refinement of our orientation and activity.

Within the limits of university autonomy, our endeavour also depends on the extent to which Romanian society is interested in higher education, on legislation stability and on the overall development of the Romanian society.

3.2. Governance and Activities: How is the University trying to do it?

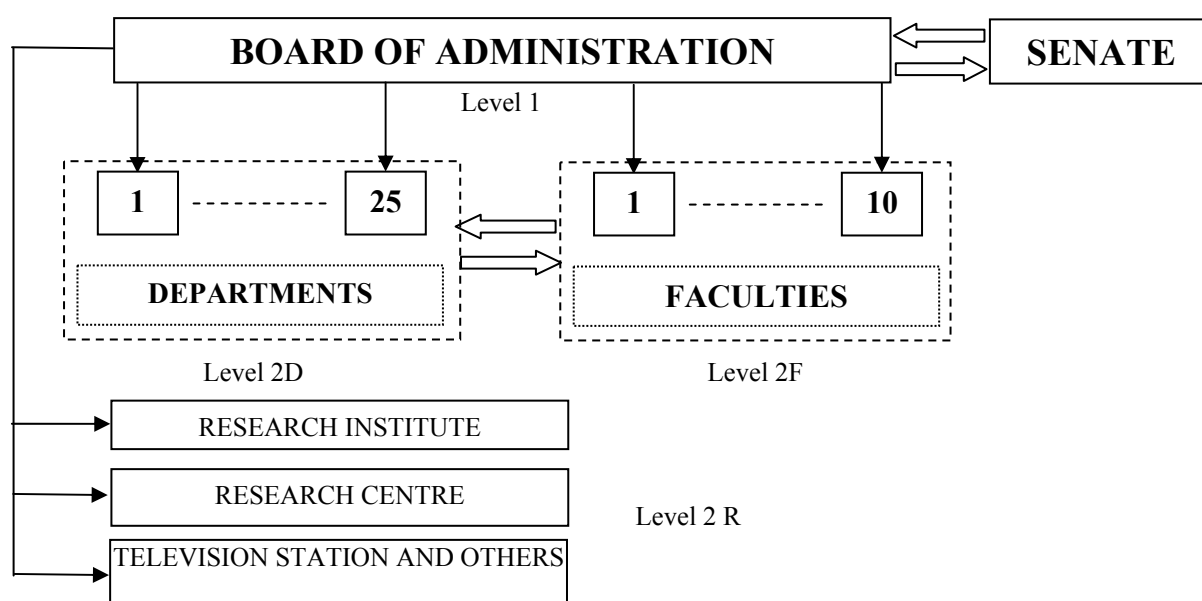
3.2.1. Formal Governance and Management Practice

In view of achieving its mission and objectives, PUT manages the planned activities (of teaching, of research and services for the society) taking into account the emerging opportunities, restrictions and constraints.

3.2.1.1. Analysis of Management Practice in PUT

a) Decision making process within PUT

PUT structures and the connections between them are presented in the flow chart of Appendix A2.3.6.-1.2. The structural academic elements within PUT are synthesized as follows:



The organizational structures and the decision making processes within PUT observe the legislation in force and the academic autonomy attributes of chapter IV of PUT Charter. The decision making is structured on several levels marked as „Level 1”, „Level 2 F”, „Level 2D” and „Level 2R”. Levels 2 are subordinated to level 1. Between levels 2 there are interactions in educational and research processes. The figure highlights only the link Level 2F – Level 2D.

We appreciate the internal organizational structure of PUT to be coherent, flexible, balanced, offering the possibility of efficient implementation of the strategic and operational plans. The flexibility and balance unfold, for example, in the number and size of the faculties and departments making the university. The coherence appears through the harmonization of the academic and administrative personnel’s role within this structure with a vertical subordination to the BA of PUT and a collaborative dependency on levels 2.

In detail, with reference to the above mentioned, we retain:

- *The university level (Level 1): the Senate, the Council of Administration (CA), the Board for PhD studies (CSUD) and the Board of the doctoral school (CSD) are the managing structures at the university level.*
- *Senate, the highest forum of regulation, decision and debate within the university, it has its tasks stipulated in art. 164 paragraph (7) of PUT Charter. It takes decisions by compulsory decisions for the*

whole academic community and the organizational structures of PUT and coordinates the university's activity by approving the strategic plan of institutional development and the operational plans at the Rector's proposal.

- *The Council of Administration (CA)* provides, under the leadership of the Rector, the executive management of the university, based on the Organizational and Operational Guidelines of the Board of Administration (ROFCA) and by following the regulations, methodologies and any other rules established by the Senate, as well as the strategic decisions of the Senate; the Board of Administration includes the deans of the faculties.
- *The Council for PhD Studies (CSUD) and the Council of the Doctoral School (CSD)* within PUT are established, organized and function in accordance with the Organizational and Operational Guidelines for PhD Studies (ROSD) and they are liable for the strategy and management of the Doctoral School;
- *The level of faculties (Level 2F)* – the management structure is the *Council of Faculty (CF)* with duties of debate and decision in accordance with art. 168 in PUT Charter; The Council of Faculty sets the mission and objectives of the faculty; the directors of departments are members of the Board of Faculty;
- *The level of departments (Level 2D)* – the management structure is the *Council of Department (CD)* with tasks of debate and decision in accordance with art. 170 of the Charter.

SWOT-S: The academic environment appreciates as strength the existence of well-structured strategic and operational plans for the university and faculties and the fact that the academic and administrative entities implement their objectives by using proper regulations and procedures. Another strong point is represented by the involvement of the academic community, trade unions and student organizations in drawing up regulations.

- *The level of research institutes and centres and of the other structures mentioned at point 2.3.7 in this report* (the Centre for Continuing Education, the e-Learning Centre, the Research Institute, the Research Centre, the Teaching Staff Training Department, the „know-how” Transfer Centre, the Library, the Publishing House, the Printing House, the Production Unit, PUT television station) (Level 2R): their attributions are mentioned in chapter V of PUT Charter and in the flow chart in Appendix A 2.3.6.-1.2.

All the people in the decisional bodies of PUT are elected in accordance with the laws in force. Also, all the managing structures of the university are validly convened if and only if the meeting is attended by at least two thirds of the total number of their members and the decisions are taken with the favourable vote of over 50% of the present members.

In the context of university autonomy, PUT exercises, through its collective and individual management bodies, established by law, the management prerogatives, exclusively and free of any interferences. Thus, in the field of patrimony management, PUT maintains, uses, expands/reduces and manages its patrimony, free of any interference. We remember from the SWOT analysis:

SWOT-S: PUT provides a very good management of the patrimony and takes action to increase it by investments in infrastructure (e.g. building a modern sports facility free of charge for employees and university students, a new building for library and technology transfer centre, and the establishment of an institute for renewable energies).

b) Co-ordination among faculties/institutes

According to the scheme in the previous paragraph, the faculties and departments are directly subordinated to the Board of Administration, the faculties having mainly attributions related to the study programmes and student management, while the departments have attributions related to performing research and using high qualification in offering study disciplines for all the study cycles in Bologna system.

Within PUT, study programmes are managed by faculties. At the faculty level, the university-student relationship is regulated on an annual basis through the study contract which stipulates the rights and obligations of the parties. In terms of management, the issue of study programmes is approached through collaboration/hierarchical subordination between the Board of Administration of PUT and the faculty.

The means of cooperation – coordination is further exemplified.

The Faculty elaborates the study programmes on forms and cycles of study in one or several related fields and/or study programmes with interdisciplinary character through the boards (see 3.3.2) and manages these university study programmes, respectively the students who are attending the study programmes in its jurisdiction. The PhD students and postdoctoral students are ascribed by the faculty to carry out research courses in a department or, if necessary, in several departments consecutively. In order to cover the disciplines in the study programmes, the faculty contracts the different disciplines based on a teaching services agreement or an order form against payment at the relevant departments and, if necessary, at the e-Learning Centre.

c) Institutional Leadership Control and Decision

The Senate constitutes specialized commissions which generate proposals of methodologies, regulations, procedures and amendments and which perform studies, analyses, audits and other actions meant to control the activities within the university and its entities. The Senate monitors the activity of the Rector and the Board of Administration, approves the institutional development strategic plan and the operational plans, the structure and organisation of the university, the budget draft and budget execution, the quality assurance code and the ethics and deontology code, setting up study programmes, the norms for sizing study groups, the norms for setting up the function chart for the teaching staff/ research staff, the criteria and methodologies for occupying teaching positions and research positions, the results of the contests for occupying the teaching and research positions, the projects of national and international cooperation and association, the affiliation of the university to national and international academic and professional bodies, the formation of consortia, respectively the fusion with other universities.

The Board of Administration provides, under the Rector's management, the executive management of the university, the implementation of the institutional development strategic plan, the operational plans and other long term and medium term strategies. It develops global and sectorial policies, including regarding the structure and organisation of the university, organises admission exams, elaborates the budget draft, provides budgetary execution and makes the annual statement of accounts, designs the norms for sizing the study groups and the norms for setting up the function chart for the teaching staff, research staff, support teaching staff and non-teaching staff, proposes criteria for filling teaching positions and research positions, observes the financial situation of faculties, departments, doctoral schools and other structures of the university. The Board of Administration also approves: the tender for teaching and research positions of departments and doctoral schools, the function chart and proposals of faculties to confer/suspend/withdraw the quality of student, the financial conditions of studies, and the yearly acquisition plan.

The Board of Faculty sets up specialized commissions. It analyses, debates and makes decisions at the faculty level. It formulates the mission and the objectives of the faculty and elaborates its strategies and policies, provides the educational marketing and proposes the setting up of new study programmes, new curricula, it controls the syllabuses of disciplines, it observes the covering of study disciplines with teaching staff, evaluates the quality of the learning process, the ethics and deontology in the faculty. The Board of Faculty also approves: the internal organisation and functioning rules of the faculty, employing/ dismissal at the faculty level, granting scholarships and income support to students, yearly reports of the dean and proposes cooperation projects, national and international affiliation and/or association of the faculty.

The Board of Department, as an authority of debate and decision, approves the internal organisation and functioning rules of the department, employing/dismissal at the level of the department for all categories of staff: teaching staff, support teaching staff, non-teaching staff, the research plan of the department, granting merit pay for the employees of the department and proposes national and international cooperation, affiliation and/or association of the department.

The above presentation reveals the fact that the educational decisional responsibilities within PUT are assigned at the level of faculties and they are controlled by the Board of Administration and the Board of Faculty. The decisions regarding research and educational services are made at the level of the department by the head of the department and the Board of Department.

According to PUT Charter (Art. 172), PUT Rector is the credit coordinator of the university, of all its funds, budgetary or income, except the funds originated from projects, whose management is exclusively ensured by the project manager. All support processes are provided by the General Administrative Director (DGA). Due to undersized administrative staff, a series of support processes are provided by the teaching staff.

In the above mentioned context, the following aspects stressed in the SWOT analysis should be considered:

SWOT-S: Transparency in the decision making process at the level of structures and employees, by consulting with and considering the notifications made by the academic community.

SWOT-W: A significant level of bureaucracy, particular to the higher education system. A slow financial records system of the research activity and time-consuming for the researchers involved in research programs and research contracts, all due to the high level of bureaucracy of the financial-accounting activities at national level.

SWOT-W: Suspension and temporization of communication between university entities, which impacts the efficiency of certain activities.

Teaching staff policy within PUT is completely autonomous, complies with national standards, is open and transparent, follows the development strategy of PUT and is correlated with the evaluation activity of the academic staff. It was decentralized at faculties and departments level whose role is to form a uniform staff structure, for the present and on medium-term, without putting any pressure on other collectives.

The employment of permanent teachers, both for an undetermined and a determined period, is made only through contest and materializes in an employment agreement. Both Romanian citizens and foreign citizens

are eligible, without any discrimination. The employment for didactic positions and research positions is made according to the legislation in force and through methodology adopted by the Senate. The requirements for the didactic positions and research positions are public and stipulated in professional criteria grids, characteristic to every position. They reflect PUT strategy for attracting competitive human resources in education and research.

Auxiliary teaching positions and non-teaching positions of the university correspond to the national occupational framework. The necessary of administrative personnel is correlated with the fields of activity and with the number of students of the faculties. The employment of administrative staff is made through contest. The employment restrictions introduced by the government determined the reduction of administrative staff members and the orientation of the university management toward outsourcing services. The lack of realistic governmental principles can be seen as a threat of the „legislative fluctuations” type for public universities.

Student recruitment within PUT is made according to the admission methodologies created for each of the three Bologna cycles. They are public and contain no discrimination. The citizens of the member states of the European Union, of the member states of the European Economic Area and of the Swiss Confederation can apply for admission at PUT under the same conditions as Romanian citizens, including the financial aspects. Based on the CA proposal, PUT Senate approves the number of available places established within the limits of places allowed by the government. The suggestions are made according to the faculties' offer, resources, PUT development strategy and according to the demand registered at the admission in the previous academic year. The faculties have the autonomy to choose the configuration of the admission exam.

Although the geographical area represents a favourable economic environment for candidates' recruitment (see 2.3.2 in the report), due to the competition framework offered by the methodologies, most successful candidates are from other parts of the country. For that matter, PUT management is concerned with the recruitment of candidates that demonstrate high learning (bachelor studies and master's degree) and research (PhD and master's degree) potential. The educational offer of the university, the admission requirements and the students' places, the study conditions and the related ones are made public by the university every year, at least 6 months prior to the admission exam.

The SWOT analysis points out the following in terms of students' recruitment:

SWOT-S: Academic marketing actions conceived for informing high-school undergraduates about choosing the occupation of engineer and other qualifications (organizing actions like „Open Doors days” and the “PUT Caravan”).

SWOT-W: The relatively reduced coherence of the academic marketing actions, which should describe the internal competition between domains and specializations in a constructive manner. There is no Visual Identity Manual.

SWOT-W: The quality of the students after admission is sometimes defective due to the low selection rigour on some study programs (file-based admission).

SWOT-S: The University offers free of charge professional support to the first year students, of alignment to the professional academic requirements.

The start and development of services for society is accomplished at all structural levels, mostly at the initiative of the departments, faculties and students' leagues. The large range of services concentrates on development/research/expertise services. A representation of the services can be found in Appendix A2.3.6.-1.2. The initiatives are endorsed by the Board of Administration and are approved by the Senate.

SWOT-S: Initiating collaborations/partnerships with companies in the field. PUT makes efforts, supported by local authorities, to attract industrial partners in Timișoara's metropolitan area (e.g. Alcatel-Lucent, Continental Automotive/Contitech, Flextronics, Hella).

SWOT-S: Initiating and participating in the dissemination of science through “Politehnica” Foundation, through its own television station Teleuniversitatea, or the local, regional and national television stations.

SWOT-W: The insufficient structuring of PUT policy regarding the services for society (e.g.: the lack of a marketing policy for the consultancy/development/research offer - including an appropriate database) which should better promote the expertise offered by the faculties and the university offer for the economic environment.

SWOT-S: The academic environment regards as positive the possibility to motivate the groups and persons who coordinate research/development/expertise projects, irrespective of the beneficiary, by making available for the research project leader 70% of the project budget.

SWOT-W: Not using certain internal resources efficient for directing the research on interdisciplinary domains and stimulating the cooperation between researchers.

SWOT-W: The lack of an updated database with scientific research results that would help to develop new research and development/expertise activities in cooperation with the economic environment.

3.2.1.1. Involvement of students and the external environment in the institutional administration

Due to the mission adopted, PUT regards itself simultaneously as a university of the citadel, of the country and of Europe. This is possible only by the constructive involvement in the process of synthesizing of its strategy and institutional administration, of a large number of stakeholders, within or beyond university, be they students or entities from the regional, national or international environments. This is PUT's approach.

Students are represented at all PUT's decision-making levels in compliance with the enforced laws, i.e. in the Faculty Boards (25%), the Senate (25%), the Board of Administration (CA) (the students' representative is designated after a competition organised by the students' organizations, legally constituted). Students have, at least, one representative in the following commissions: quality assurance, ethics, scholarships, accommodation and other social services, Senate commissions, etc.

Students play an active role in PUT's life stipulated by a set of regulations for the student rights and obligations which is monitored to ensure its proper application. Students' associations elaborate a public annual report on the compliance with these regulations. Each student has the possibility to express his/her opinion regarding the quality of the teaching activity through the quality bodies developed within the university. Students' feedback is a direct measure of the way in which the objectives related to PUT's strategy on the teaching axis are actually achieved.

The societal environment is present in defining and designing PUT's educational offer and, more importantly, in providing student support and student professional motivation. The representatives of the economic and research environments are included in the boards of domains and specialities, and, consequently, in the evaluation and design of curricula. They are also members in audit teams, in setting up and equipping different laboratories (Alcatel, Siemens/Continental Automotive, Haas, and recently Hella). PUT has initiated master programmes in cooperation with several companies (the latest being: Methods and Statistical Techniques in Health and Clinical Research set up in collaboration with the Anglo-Romania company: Cmed). The economic environment is also active within "Politehnica" Foundation. The Foundation Director Committee is, according to PUT Charter, a consultative body of the rector institution and is made up of prominent personalities from different environments: academic - academicians, e.g. rectors, etc. - economic, cultural, professional, administrative, etc.

3.2.1.3. The adequacy of the institution's human resources, human resource policy and practice for current and future needs

The human resource adequacy for PUT mission and objectives is a permanent concern of the university and of the leadership teams, at all PUT levels. Therefore, PUT has developed policies and practices to ensure the human resource necessary in compliance with the non discriminative laws and norms enforced in Europe.

PUT top management has shown a particular interest in increasing the income of its staff. Gradually, the income of the whole staff of PUT – but especially, by percentage, of young teaching staff and intramural doctoral students – have increased considerably in the timeframe 2005 - 2009.

With reference to staff advancement in the didactical hierarchy, PUT has led a balanced policy which considered both the needs of the institution – immediate, short term and long term – and the individual interest of each person. This approach, accompanied by the unyielding enforcement of the proven value criteria, has created opportunities for an important number of academic staff to accede – evidently through competition – to higher positions. In this context, it is important to note that, for *the promotion process*, PUT has *its own scale*, containing a set of indicators that quantify, in compliance with the national legislation, teaching and scientific results, management and educational marketing activities, as well as activities developed through national and international research contracts.

As a state university, since 2009, PUT has been allowed to organize contests only for the following degrees: assistant lecturer and lecturer. Thus valuable young people have been employed, mainly with PhD in engineering sciences. The POSDRU postdoctoral programmes offered the PhD holders opportunities for professional development. Academics aspiring to associate professor and professor titles, blocked by MECS's order in the time interval mentioned, have been supported by PUT leadership in consolidating their high-profile through financial support for scientific paper publishing and for accessing research/developing grants based on reimbursing financing.

Ever since 2006 the university has made efforts to attract associate teaching staff, on the one hand to consolidate disciplines with undersized teaching staff, and on the other hand in view of enabling a know-how transfer from practice to education.

In the special cases of oversized teams of teaching staff, as a result of teaching activity reduction, PUT resorted to temporary /permanent redistribution of certain human resources, preserving the education quality parameters and the teaching staff competences, or to increase the research workload.

PUT participation in the national and European academic competitions required the increase of the university teaching staff quality and performance. As stated previously, the recruitment rigour was increased and different forms of result evaluation were carried out, coupled with the financial rewarding of high-profile academics. To our knowledge, PUT is the single university in Romania which differentiates salaries according to academic performance.

The SWOT analysis indicated:

SWOT-S: PUT features highly- trained teaching staff meeting currently-enforced quality standards.

SWOT-W: The teaching staff performance is not homogenous; consequently, there is a need to increase either the research or teaching performance and potential of some members.

SWOT-T: Young researchers/academics predilection for careers in the industrial environment in the detriment of academic or research careers due to financial consideration; the attractive salaries in industry can lead to the decrease of the number of valuable young people employable in universities. The education funding, widely-recognised as insufficient and worsened within the context of the economic crises, can have negative effects on the long term consolidation of the human resources.

3.2.1.4. Inter-institutional cooperation and the position of PUT

A series of inter-institutional collaborations have crucially influenced PUT's ranking in the 2011 classification exercise. It is to be noted two main categories of institutional collaborations: interuniversity collaborations and collaborations with enterprises. Each of them had concrete mutually-shared objectives: mutual support and know-how transfer and cooperation objectives for common output.

The interuniversity partnerships had as objective PhD projects (2009-up to present), elaboration of compatible study programmes, and promotion of different initiatives on the management level and in the relation with MECTS. Numerous initiatives and practices, on the teaching level, have been discussed in specialised professional associations, with university and extra university participation. PUT cooperated with numerous universities in the national project DOCIS to define university qualifications. At the international level, many cooperation agreements and conventions have been concluded, mainly with European universities, but also with universities from: USA, Canada, Japan, Brazil, South Africa, etc. (see map in Appendix A3.2.1.4-1). Many of the partnerships with foreign universities, mainly those from the Western Europe, have resulted in common research, common PhD coordination, PhD training periods, etc.

At the regional and national levels, there were a lot of co-operations/partnerships with companies in the field, many industrial partners from the metropolitan area of Timisoara have been co-opted (Alcatel-Lucent, Continental Automotive/Contitech, Flextronics, Hella, Kuka, Festo, Haas, Cmed). It was created the "Business Incubator and the Software Technological Transfer Centre – Timisoara (2003) meant to support, set up and develop small software firms. The feasibility study "Technological Park for Renewable Energy" was elaborated. PUT has a few accredited testing laboratories and research centres, as well.

SWOT-S: a high number of PUT partnerships and agreements.

3.2.1.5. How the actual management policies reflect the institution mission and goals

The strategic and the operational plans accomplish the provisions of the university mission (see Appendix with Strategic Development Plan, paragraph 3.1.1.)

The management practices reflect the mission and the objectives of the institution formulated in paragraph 3.1.1 as follows:

- Inclusion in the A hierarchy value category of new domains, by intensifying the following activities: research, paper publishing, international visibility.

- Development of partnerships and academic exchanges with prestigious European universities by concluding new bilateral cooperation agreements, enabling performance, in terms of research and teaching activities, and PUT's inclusion in the ranking of internationally recognised universities. In this context, it is important to harness the geo-strategic position at the western border of the country, the multiethnic component of the population of the area, as well as the Euro-region DKMT membership, as premises for the development of cross border collaborations of educational cluster type.

- expansion of the portfolio of foreign language-taught study programs, implemented as "Politehnica International", in most faculties, on the one hand to facilitate student and teacher mobility, and on the other hand to widen the enrolment perspectives of foreign students in UPT, mainly Master and PhD students for

research purposes, in view of international integration; more attention is to be paid to the cooperation with the neighbouring universities as a first step;

- increase of financial and logistic support for high-profile research teams;
- stimulate dissemination of own scientific and technological products by increasing the financing level allotted to the participation at prestigious conferences and invention fairs;
- promotion at international level of the values, image and UPT brand by taking part in educational marketing activities and an academic fairs.

In the timeframe 2010-2011, the National Education Law created the premise for association of universities in consortia and for academic mergers. PUT intends to make a thorough analysis and to consider carefully the current tendency to form this type of university mergers and does not discard the idea to form university consortia (see Art. 26 PUT Charter) and to be part of a metropolitan university.

3.2.2. Academic Profile

3.2.2.1 Research and Educational Approaches

The teaching techniques feature a wide range of domain-customised approaches. One can identify traditional techniques coupled with modern techniques and technologies. The university encourages latest teaching and learning technologies supported by Intranet, the university's Virtual Campus and e-learning platforms in proper teaching environments (lecture halls, modern teaching equipment (video projector, whiteboard, WiFi), laboratories with internet access). A number of laboratories have been equipped via grants and research contracts, or following the participation in competitions financed by PUT. Within its Centre for Teacher Training Staff, PUT ensured the opportunity for the young teaching staff to improve their pedagogical skills; consequently, by 2011, all the assistant lecturers or lecturers benefited from pedagogical training.

The expertise of the staff members of the Center for Learning Technologies and the Center for E-learning is encouraging for the prospects of supporting both the master and doctoral programmes and the professional development programmes of the lifelong learning type.

Scientific research is developed in departments which, in most cases, have research centres where the teaching staff, doctoral and master students are engaged in research, as well as in autonomous scientific research centers. As specified in Chapter 2, PUT has a considerable number of laboratories, the majority for teaching or teaching & research purposes. Consequently, PUT regards as appropriate to increase the number of research-dedicated laboratories and to promote the interdisciplinary research on topics of current interest. An important result is the Research Institute for Renewable Energy, opened in March 2011, as well as the nationally and internationally recognised excellence centres: Research Center for Mechanics of Materials and Structural Safety (CEMSIG), [Research Centre in Smart Energy Conversion and Storage \(CCCICSE\)](#), [Medical Engineering Research Centre \(CCIM\)](#).

SWOT-S: The existence of the above mentioned research centers is seen as a positive aspect by the academic staff of the university.

3.2.2.2. Educational Programme Design and Organisation of Research Activities

Working towards the design and development of study programmes, PUT has specific bodies, called boards of domains or specializations. The board members constantly receive information from the labour market and the educational field. As any university of advanced research and education, PUT focuses particular emphasis on its master and doctoral programmes, as well as on the development and improvement of the bachelor programmes. The curricula are updated regularly; this can be noted in the optional subjects' syllabuses, which are permanently updated in strict compliance with the latest research of the respective field. Student intake and domain/specialism offer meets the demands of the labour market. The foreign language-taught study programmes will be extended to all faculties in order to facilitate the employment of PUT's graduates in multinational companies and to attract foreign students, both goals being favourable for PUT in terms of additional funding and international visibility.

SWOT-S: PUT customizes its study programmes according to the needs of the socio-economic environment, particularly of the regional environment, observing the trends in the international scientific and technologic advancement. Along with the MECTS standards, PUT's syllabi specify, as a mandatory element, peer disciplines from foreign universities, thus ensuring an international compatibility with other universities.

SWOT-S: PUT permanently consolidates its traditional technical fields and develops new or complementary technical fields, offering course support for the study programmes produced at PUT own publishing house.

SWOT-S: The university offers foreign language-taught study programs, similar to those taught in Romania. This enables exchanges and mobilities at a par with numerous European universities and creates opportunities for worldwide students to study in Romania.

SWOT-W: At the university level, there are less coherent mechanisms of applying precedence in the curricula and the curricular routes are not based on prerequisites.

SWOT-W: The students' internship is qualitatively uneven. The absorption of interns by enterprises is insufficient, first and foremost, because of a legal gap in the Romanian legislation regarding internship enforcement and because of fragmented internship over three years of study.

The previous section mentioned that, in PUT, research is decentralized at the department and research institute level. Each structure elaborates and designs its own research plans, cooperation and affiliation projects at national and/or international level. PUT's focus on scientific research project development is acknowledged by the academics as follows.

SWOT-S: PUT ensures proper working conditions for researchers: research laboratories, equipment, offices, library, subscriptions to scientific publications, licenced software, etc.

SWOT-S: PUT stimulates research and acknowledges it by granting financial support to the teaching and research staff to cover costs related to conference and symposia participation (the project „2 million euros for 1000 papers in the ISI index). Consequently, the number of published papers has increased and is currently increasing.

SWOT-S: PUT promotes the research culture as a dynamic factor for the academic community and also in view of their participation to financed research projects, both at national and at international level. PUT organises postdoctoral programmes which attract young researchers and offers financial support for the research activity and for mobilities. PUT grants doctoral students financial support for mobilities and by means of transversal courses quality training in research management, scientific paper design and research deontology.

3.2.2.3. Mission and goals reflected by the study programmes and research activities

Through its learning process-related policy, PUT ensures a student-centred teaching process oriented to achieving real and long term qualifications observing the Bologna system paradigm.

As of 2005, a radical curricular reform has taken place, in a "top-down" approach, and having the future graduate's competences as a starting point, publicly assumed by the university. The university curriculum is continuously updated in all its forms of education and for all study cycles, as well as for all types of courses organised by PUT.

As a result, the level of the graduate absorption is quite high. For 2010, it is to be noted: 98% for Architecture, 88% for Mechanical Engineering, 86 % for Management, 80% for Automation and Computer engineering, etc., while the graduate recruitment pool goes beyond the boundaries of Timis county and its neighbouring counties (in 2011, only 30.91% of the student intake comes from Timis county, see 2.2).

For funding research activity, PUT has harnessed funds won in national and international competitions, and research/ development/expertise contracts with third parties. PUT's research activity and technology transfer focus on fundamental topics or research areas with immediate applicability, for which financial support is highly likely to be granted. Within this context, the university has attracted master and doctoral students in the research teams of various departments and research centres, so that a considerable number of master graduates will have presented at least one scientific paper. Co-tutoring of doctoral theses in partnership with well-known universities has led to the increase of research quality and its international visibility.

SWOT-S: The university has 6 study programmes which have been classified as A category programmes; PUT is currently focusing on upgrading other programs classified in B or C categories. PUT has no D or E category programmes.

SWOT-W: The efficiency of the administrative management, of application, contracting and implementing research/development/expertise projects is impacted by the absence of a department for counselling, writing and implementing projects.

3.2.3 Academic-related activities

3.2.3.1 – Analysis of technological transfer, continuing education and services to community

PUT has always maintained a close relationship with the community, with the external environment, this relationship being its own reason to exist. Beyond the actual research and formal education, *the research accomplished through technological transfer* has been a constant concern for the departments, faculties and management structures. This concern was practically distributed throughout the university. The awareness of the necessity for the creation of some structures for the technological transfer at PUT level, has led so far to the foundation of a business incubator in 2003 (IT Business Incubator) and of PUT's Entrepreneurial Division in 2012. The latter has a Department for Programme Promotion and Project Recording and Monitoring (DPPEMP) and a Research & Development Division (SCD), which will support not only the centres presented at the end of section 3.2.2.1, but also other PUT's research centres as well as the interested academics of the university.

SWOT-S: A strong point concerning the know-how transfer is represented by the foundation and the support of the IT Business Incubator, in association with Timisoara Local Council and Timis County Council, with the support of GTZ Germany.

In order to implement the *continuing education* component of the second component of the assumed mission, PUT has created and has intensively used the Centre for Continuing Education (CEP), which works with all the interested departments, as well as independently. CEP has organised numerous continuing professional training courses tailored to the economic environment needs. As it has been presented in the above sections, the continuing education was carried out through post-doctoral and training programmes, supported by EU non-refundable funds, through various Romanian operational projects (POSDRU – Sectoral Operational Programme for Human Resources Development, POR – Regional Operational Programme, POSCCE - Sectoral Operational Programme for Increase of Economic Competitiveness). Within these programmes, specific and advanced training courses for the teaching and auxiliary staff were organised, necessary as a result of modernising the means used in the research and teaching processes, as well as complex training actions of the human resource in the Romanian society.

The interface of the community-related services is ensured by other university structures, among which: "Politehnica" Publishing House, "Politehnica" Foundation, PUT's television station, "Teleuniversitatea TV", and the "Experimentarium" Experimental Centre. High school students-targeted actions to clarify their professional choices and career plans, such as the ones presented at the end of section 3.2.1.1.c, have become permanent.

SWOT-S: PUT provides opportunities to interface with the community that exceed the limits of the formal processes.

SWOT-W: PUT's policy on the community-related services is not fully shaped, being sometimes declarative.

3.2.3.2 Mission and goals reflected by various academic-related activities

The research and technological transfer, the continuing education and the community-related services were assessed in PUT qualitatively and quantitatively, in 2011, through two consultative actions in which participated 532 teaching staff ("PUT Seen by Teaching Staff") and 1,099 students ("PUT Seen by Students"). The purpose was to know the perception on PUT's mission and objectives. The following were the conclusions related to the aspects in the paragraph:

- The accomplishment of PUT mission and objectives concerning *the knowledge transfer* was generally materialised through a transfer of new ideas and *know-how*. The above-mentioned IT business incubator achieved its purpose offering logistics and consultancy to the young graduates.
- During 2007-2011, the number of provided professional training courses and the number of their beneficiaries increased, thus accomplishing PUT mission on the continuing education.
- The number of actions promoting humankind fundamental values within the community increased and diversified, "Politehnica" Foundation having an important contribution in this respect.

SWOT-S: The foundation of the IT business incubator and the support it offers are perceived as positive by the academic community; the same can be said about the involvement in the feasibility study "Technological Park for Renewable Energies".

SWOT-W: The underuse of the maximum capacity of PUT structures in order to ensure the "academic-related activities" and the limited promotion of the "Politehnica" brand.

3.2.4. Student Support Services

3.2.4.1. Organisation and Content of Student Support Services

In PUT, students are provided with a series of services through which they are supported in their integration in the university, in their development on different levels and in their formation as citizens and specialists. The main aspects that the university takes into account are the following: study conditions and support in the professional orientation, accommodation conditions in hostels, canteens and sports and leisure facilities, administrative services concerning scholarships, taxes, study documents, etc. provided through PUT General Secretariat, facilitation of the organisation of extracurricular activities and student associations.

The issue of student services is considered of major importance by PUT leadership. It is also approached, in terms of quality assurance, in section 3.3.2. For this purpose, the General Administrative Directorate including its Social Service Office and the Centre for Students' Counselling and Information (CICS) (see sections 2.3.8 and 2.3.9) are responsible for the management of all student-related services.

In addition to outstanding equipment of study spaces, PUT provides students with quality study/ working facilities in the library and the faculties' lecture/seminar rooms and laboratories. Through its offices in each faculty, CICS supports students in establishing their curricular trajectory and, more generally, provides career counselling. At university level, it offers psychological counselling and competence assessment, internship/technical placement-related guidance. Simultaneously, CICS makes public for PUT's students via its website (<http://www.cics.upt.ro/>) and informative materials various items of information concerning regulations, Senate decisions, guiding towards different offices in the university, study programmes, tutoring, taxes, etc. Furthermore, CICS informs students about PUT's facilities including hostels, canteens and student clinics. Additionally, CICS monitors students' insertion in the labour market.

Accommodation in the university's hostels and canteen services (see 3.3.2) are actually provided for all PUT's students interested in these services. Space administration is done by involving students at all the decision-making levels, including hostel administration.

3.2.4.2. Student Support Services Effectiveness

Regarding the effectiveness of student support services, we consider as relevant the next synthetic compilation made by students themselves (see also Appendix A1.3.-4 and A3.2.4.2.-1):

- The services are varied, cover basic social needs and harmoniously help the development of a future intellectual mind;
- Students are provided with free medical services (for general medicine and dentistry);
- The sports complex is very good and modern; it comprises tennis courts, football, basketball, volleyball and handball grounds, two swimming pools; the access of students, academics and administrative staff to these sports facilities is free and permanent;
- The university canteens provide diverse and healthy menus; the services are affordable for students and employees; their locations are very close to the faculties or within students' campus; menus are not very expensive (50% of the menu cost is covered by university's own financial resources);
- The hostels provided for the students of the three study cycles are modern and have been fully renovated over the last decade;
- All non-Timișoara-based students can be accommodated in PUT's hostels with the risk of slight overseating, admitted by PUT leadership and the student organisations; it is, however, considered the best measure in the current economic context of Romania;
- By founding CICS, PUT has adapted to the European orientations; students appreciate as very useful the activities of the Office for Piloting Students' Counselling and Information Services, of the Office for Mediating the Relation with Civil Society and the Laboratory for Students' Competence Assessment within CICS;
- Monitoring PUT graduates' insertion in the labour market is useful not only for students' orientation, but also for PUT's curricular policy;
- PUT provides very good conditions (spaces and equipment provision) for students' organisations, considering that they play an essential role in students' personal development through the activities they organize, through the input they give on students' representation, by facilitating improvement of the social and educational conditions, by developing educational and cultural projects; (remark: all PUT students' organisations are founding members of the National Union of the Romanian Student Organisations (ANOSR), which in its turn, is a full right member of the European Students' Union (ESU));
- The construction of the new PUT library is highly appreciated by all students.

All these favourable viewpoints can be found as strong points, in a synthetic manner, in the SWOT analysis (see Appendix A1.2.-1). Consequently, the following weak points are summarised below:

SWOT-W: Lack of incentives for the members of OICS (Offices for Students' Counselling and Information), who work as volunteers; the insufficient development, at the faculty level, of medical care services, of psychological counselling and professional orientation services;

SWOT-W: Students' misunderstanding or incomplete understanding of the university mechanisms;

SWOT-W: PUT has deficiencies in ensuring the unitary character of students' mentoring activities and in meeting students' expectations related to personal development and individual professional insertion;

SWOT-W: Insufficient monitoring of the student-teacher relation impacting the efficiency and quality of communication.

SWOT-W: Students' insufficient involvement in the activities related to the analysis of the teaching process content because of the emphasis on formal communication and limited use of informal communication-supporting means for concrete and punctual discussions.

3.3. Quality assessment practices: How does the institution know it works?

3.3.1. PUT's internal quality assurance policy

The university has an internal policy regarding the quality. It targets not only the basic managerial, research and teaching processes, but also the support processes, mainly the administrative ones. The quality policy is explained in the "Rector's statement regarding the quality assurance policy of the University 'Politehnica' of Timișoara" (1) (Appendix A3.3.1.-1), and in the accompanying documents, i.e. "Quality objectives", "University's mission, values and core principles" (2) and others. The policy has been implemented by the UPT Senate through the PUT Senate Decision No. 05/16.02.2006 regarding the quality assurance policy on the teaching process in UPT (3) (Appendix A3.3.1.-2). All the documents can be found on the UPT website (the first at http://www.upt.ro/pdf/calitate/Declaratia_Rectorului.pdf).

The implementation of the quality policy is carried out through a series of regulations and procedures covering all the processes and the most important activities taking place in the university. The regulations mainly cover the first three basic cycles, concerning the beginning of the study programmes, the students' examination and practice, the organisation of the evaluations and the admission to study programmes. The procedures, drawn up in accordance with the ISO 9000 standards on the quality management, are system procedures (auditing, drawing up of quality system documents, documents management, corrective and preventive actions, etc) as well as operational procedures (concerning activities related to the basic and support processes).

The coordination of the activities concerning the quality management was carried out by the Committee of Quality Assessment and Assurance (CEAC) and by the Directorate of Quality Assurance (DGAC), which are directly subordinated to the Rector. Within the university, there is a structure managing the tasks in the field of the quality assurance, comprising quality assurance committees at the level of the faculties and of the departments. The structure is used for gathering data, carrying out auditing activities, preparing information concerning the requirements of the teaching process. The university is represented in ARACIS by more teachers and students. It is also represented in ANC (National Qualifications Authority) and in other evaluation bodies on the national level.

The following ideas, extracted from the above-mentioned (1), (2) and (3) documents present an overview of the approach manner of the quality management assurance issues in PUT:

(1) PUT's quality assurance policy comprises 6 axes: *i) educational and research offers based on the identification and compliance with the local, regional and national society's requirements and expectations and on cultivating a strong relationship with this society; ii) strengthening and developing PUT's international status concerning the alignment and compliance of its activities with the established academic standards and practices within the European Union; iii) satisfying the university's own staff's requirements and expectations so that it might grow and become more and more efficient; iv) satisfying the students' requirements and expectations concerning the educational services quality –formative and informative- and tailoring them to the labour market demands as well as the manner in which these services are offered; v) assuming the responsibility for the contribution brought to the carrying out of the PUT's objectives by all the community members, starting with the top management; vi) continuously improving the processes of the organisation and carrying out of the activities, prioritising those concerning the basic processes: education, scientific research and social insertion.* This approach, drawn up in 2005, has been followed by the PUT management even during the economic crisis period, which started in the autumn of 2009. The educational and scientific research offer has been continuously updated

(point 1.4), having as a model the Bologna process. Efforts have been made to advertise the obtained results and the PUT's technical and teaching staff potential and to create relationships with the alumni (point 1.5). The PUT's website has been reorganised twice. Annually, within the university, over 100 meetings of the alumni take place. The strong points of axis 2 of the statement were 2.1, 2.2 and 2.3. Point 2.4. was carried out mainly by acquiring computer technology. The personnel policy followed the personnel's permanent stimulation, improving at the same time, its training level. On the one hand, demanding promotion grids were implemented, having as a result the validation of all the promotion files by the ministry, on the other hand, autonomy, not always very well understood, as well as individual responsibility were granted.

- The communication from the university management towards the teaching staff was mainly carried out through periodic messages sent by the rector. Likewise, the university management had various meetings with the students, mainly those in the bachelor and doctoral studies, concerning their interests. Upon the students' request, auditing activities were carried out (e.g. concerning the readiness of the foyers at the beginning of the academic year, the secretaries' behaviour towards the students, and the student practice placement).

- The university management was constantly interested in obtaining very good results adhering to a continuous improvement of the results by lifting the reference thresholds to levels that would give the university a favourable position in the national competition (promotion grids) and by awarding funds to participate in prestigious events (e.g. 1,000 Euros to publish in ISI journals and to participate in ISI conferences as well as other doctoral students mobilities).

- The university shall have to look into the issue of university marketing more carefully even if the Romanian market demands, including the labour market, are continuously changing.

(2) A. Values: *the personnel, the students, the facilities, the product* (the updated and strengthened competence in specific fields constitutes the product that the university is offering to the society as an academic process, scientific research and involvement in the community life), *the funds*.

B. Core principles: *quality – the main priority, orientation towards the community needs, social and national responsibility, international dimension, adequate working and life conditions and involvement of the academic community*.

(3) In order to align to the international performance requirements and standards, PUT has implemented the following performance indexes for the internal self assessment of the quality processes in the university: *recruiting the students based on a selection process, publicly advertised in an admission methodology, making the human and material resources adequate, graduates' professional accomplishment, visibility of the research and technological transfer, financial results of the research and technological transfer, degree of internationalisation, reputation within the local and international environment*.

3.3.2. Internal evaluations of the programmes, departments, research

The aspects concerning the internal evaluations of the programmes, departments, research, etc. shall be presented as follows, continuing the ideas expressed in part 1 of the "Standards and Guidelines for Quality Assurance in the European Higher Education Area" (ESG), adopted by ministers in Bergen (2005)". The presentation emphasises the extension of these activities, too.

▪ *The policy and procedures for quality assurance* have been presented above. The teaching activity is analysed systematically at the level of the faculties and, annually, in the Senate. Sometimes, the evaluations were only confirmatory. The scientific activity was analysed not only at the level of the scientific research centres by comparing them to their research plans and to the faculties' operational plans, but also at the level of the Senate. In 2007, the Senate established the guidelines for the research activity and emphasised the importance of the research carried out through the cooperation with the companies. Annually, in the rector's report, the research results as well as their evaluation are presented. Taking into account the fact that all the study programmes were externally evaluated by ARACIS (PUT was institutionally accredited in 2009), and by MCTS (the classification exercise in 2011 at the university level of the research and study fields), a series of internal evaluations and self-evaluations were carried out. To these, PUT has also added other internal evaluations of some results, such as the ones concerning the results obtained from publishing articles in journals and from participating in conferences ranked in international databases. The state of the accredited study programs in the time span 2008-2011 can be found in the Appendix A3.3.2.-1.

▪ *The approval, monitoring and periodic review of programmes and awards* is based upon the "Regulation concerning the initiation, approval, implementation, monitoring and periodic review of the PUT study programmes". The curricula are designed by structures named *boards of the fields or specialisations*. The boards are subordinated to the faculties' councils and are made up of representatives of the teaching staff,

of students, of graduates and of employers. They act on the basis of an operational procedure and of some regulations related to each faculty. Such a structure has the responsibility to obtain as much information as it can on the labour market needs and on the global research-development trends (for the master's degree) and to ensure well-defined qualifications that should function on the basis of adequate study programmes. The university participated in the national project concerning the drawing up of the National Qualifications Framework, named DOCIS, and presently, is registering its different qualifications in the National Qualification Register. The boards represented a national premiere when they were created (2006).

- *The assessment of students* is managed not only through the regulation regarding the students' examination and grading, but also through the regulations to organise and develop the teaching process for the bachelor's and master's degrees, and the regulation to organise and develop the study programmes for the doctoral degree (in 2005 and recently reviewed in 2011). The evaluations of the teaching process are based upon the university's current practice. The faculties' councils analyse the students' results every semester and use, when it is the case, the evaluation of the disciplines by the students. The University Senate analyses the students' results annually. In this respect, the own school management application (GISC) is used, which contains all the students' results from all the study cycles. Each PUT student can see his/her grade situation through GISC. Likewise, the university has a doctoral students' database. The doctoral students enrolled during 2008-2010 had a special evaluation regime through the Doctoral Scholarship Programme, financed through European structural funds. Their monitoring was permanent; the results were remarkable so that the awarding of scholarships was justified. All the regulations concerning the teaching process are public.

- *The quality assurance of teaching staff* is seen from different perspectives, the main being the research and the teaching activity. From a quantitative point of view, the research is evaluated according to the published articles for which the university requires a level of international visibility as high as possible. The university has adopted the standard of the articles ranked in the international databases, first of all ISI, subsequently and currently agreed upon by the Ministry of Education. The university management monitors the research results, namely the publishing activity. It is made public through the published yearbooks and in various other ways. The teaching process quality assurance is realised through monitoring activities carried out by the faculties, through the students' evaluation of the subjects, through evaluations made during promotions and awarding of merit salaries. Appendix A3.3.2.-2 presents the questionnaire named "Student perceptions and opinions", one of the questionnaire filled in by the students. The opinion of the majority of the teaching staff in the university is that through the teachers' promotion grids used by the Ministry of Education, the quality of the teaching process and the teaching effort of many teachers are not valued at their best level. This fact may have negative consequences on the long term. It is known that very good results in research do not automatically ensure very good results in the teaching process, especially in the mass education, such as the one promoted through the Bologna process.

- *Learning resources and student support* represent a problem monitored and evaluated not only globally, but also specifically, according to specialisations during all the evaluation activities. The university was and is still concerned by this matter. The university modernised buildings, teaching spaces, teaching classes and laboratories and it cooperated in this respect with important companies in the area: Siemens Automotive, Automotive Continental, Alcatel, Hella (see for example the relevant aspects in the institutional self-evaluation report of 2009 – Appendix A.2.3.4.-1.1). The University's own funds were allocated, having as a basis an internal contest, to create new teaching and research laboratories; the university contributed with its own resources to attract competition funds by different financing bodies, such as the National Research Council. The Photocopying Centre and "Politechnica" Publishing House permanently ensure a rich book inventory while the PUT Library ensures a satisfying book inventory and subscriptions for teaching and research purposes. The PUT foyers ensure accommodation places for approximately 50% of the students (actually, for all those requesting accommodation) and the canteen (student restaurants) accommodates all the students. The problem of students' learning and assistance resources was the subject of an auditing activity in 2008. The Administrative Directorate effectively administers the services offered to the students. Unfortunately, the university campus, located in the city's central area, is not enough protected by the local authorities in order to offer the students the necessary peace and quiet.

- *The information system*, which ensures the gathering, the analysis and the use of relevant data for the programmes management and for other activities, uses the information available on paper, electronic databases and records of different types. It is usually gathered from the faculties' and departments' secretarial offices, from the competent compartments of the Administrative Directorate, through data synthesis resulted from different types of questionnaires found within the records of the Quality Assurance Directorate. The university management thoroughly applies the principle of proof-based approach. The importance of the documents management and, implicitly, of the information, is communicated in the university through system

procedures such as the “Documents control” and “Records Control”. The university management decisions concerning the basic processes were made based on the above-mentioned context and on the formal and informal periodic discussions of the management with the students enrolled in the three study cycles. The information concerning the curricula, the tutoring activities and other activities in this field are made public and detailed on the faculties’ websites. It is used by the university management in the management process.

- *The public information* issued by the university is rich. The main means is represented by the PUT website, found at <http://www.upt.ro/>, with a shorter version in English. On the other hand, each faculty has its own website. Here there can be found reports of the university management comprising evaluations and results on all the basic processes, procedures, information on doctorates and grants, Senate decisions, University Chart, etc. Depending on each situation, the information is made public through mass-media, press conferences, during various events in the university or outside the university to which PUT members are invited or through interviews. The PUT website contains a contact address and information on how to request information. All the teaching staff competitions are advertised through the website and in the mass-media. We consider that the PUT’s public image and representation may be continuously improved through coherence within the university, through continuity (newsletters) and especially by enlarging the English version of the university website.

3.3.3. The extent of European Guidelines implementation in PUT

The university was continuously concerned about the implementation of the European approaches. In 2007, the documents of the Bologna process and other European guidelines were printed in a volume and disseminated within the University. The electronic version of the volume can be found on the PUT website, at the address http://www.upt.ro/pagina_secundara.php?cat=nu_pagini&id=rrPSo. Some provisions of the European approaches have been implemented in the university, to the extent of the university autonomy, before being implemented in the national legislation (ECTS system, quality management in some departments, defining competences according to specialisations, students’ being represented in the university’s bodies). Other approaches have been applied immediately after their implementation in the Romanian legislation: study cycles, design of the study programmes with an emphasis on qualifications based on competences, targeting the education on students, opening towards the European space of research and higher education, developing some effective administrative processes. At the same time, it should be taken into account the fact that the obtained progress must be continued and that the processes underlying them must be improved.

The university is aware of the fact that even a bigger number of bachelor and master degrees students must be mobilised in outgoing and incoming mobilities and welcomes the recent Bucharest Statement on the Students’ Mobilities in the hope that this, under the governmental regulations brought by the Order of the Minister 8223/2012, shall give the possibility to the Romanian Government to operatively orient the necessary funds for these mobilities. The University offers, under the doctorate regulation, from its own funds, complete or partial support for the PhD students’ mobilities. Likewise, the university is aware of the fact that, in the field of the society services, a lot could have been done, by continuously promoting a university marketing policy.

In Romania, until 2005, there was a delayed reaction of the Ministry of Education concerning the implementation of the Bologna approaches. Subsequently, the delay was recovered in a formal manner. As it has been shown, PUT has been in many ways one of the first universities to implement the European approaches. Starting with 2005, UPT has been involved nationally in all the undertakings to implement the European approaches, e.g. as regards the quality assurance, defining the qualifications, and through its former rector, Nicolae Robu, senator in the Romanian Parliament, in the drawing up of the current Law on Education. There are more aspects in which the European approaches did not have the expected results. Such a case is the training of the labour market to assimilate differently the Bachelor and Master of Science degree graduates. In our opinion, the training must target not only the academic plan, but also the labour market plan. Nevertheless, PUT has managed to organise master degree programmes through partnerships with various companies, such as Siemens VDO, Continental and Alcatel, which might prove of interest to these companies.

3.3.4. Impact of the data gathering and evaluation results on activities

The implementation of the Bologna process has brought into the higher education in Romania, a growing concern regarding the evaluation processes, due to a tradition lacking the self-evaluation exigencies. This concern was mainly seen in the multiplication of the evaluation activities and, at the same time, of the associated bureaucratic activities. This can be felt by the institutions and by the teaching staff. In this context,

data gathering and the different evaluations had, also within PUT, various effects. The main effect was the growth of the self-exigency of the university management, of the faculties and departments concerning the processes they were responsible for and the adjustment of the teaching staff and of the administration to the evaluation standards, such as those of ARACIS and CNATDCU (National Council for Titles, Diplomas and Certificates). Another important effect was represented by the awareness of a European framework of research and higher education, of the idea of competition and of the necessity to excel. From an institutional point of view, data gathering emphasises the importance of working with records and the necessity to create databases for different activities. It must be stressed that, in the last two years, the university had to submit many reports to the Ministry of Education and to its related institutions. For the same types of problems, different bodies requested different manners of reporting. The lack of unity within the Ministry of Education led to a lot of waste of time and a state of irritation.

Except for some problems that were corrected along the way, the results of the different external evaluations were very good. Beyond the satisfaction that was felt, making people responsible is very important. Gaining a high degree of trust due to the institutional accreditation by ARACIS, the place obtained by PUT in 2011 in the ranking exercise of universities as an advanced research and education university as well as the differentiated ranking of its different fields of study have imposed an increased exigency concerning the results of the self-evaluation of the different study programmes. The analyses made by the PUT Senate and the PUT Senate Executive Bureau have been documented and brought to the attention of the academic community through information activities, direct discussions in the faculties and departments and by posting information on the university's website.

3.3.5. Link between the results and the institutional planning and development

The institutional planning and development are carried out for periods of approximately 4 years through strategic plans, and, annually, through operational plans. These guidelines, drawn up by the university's and faculties' management teams, are discussed and adopted, as the case may be, by the University Senate or by the faculties' councils. All the documents are made public (on the pages

http://www.upt.ro/pagina_princ.php?cat=nu_pagini&id=sRrol

and

http://www.upt.ro/pagina_princ.php?cat=nu_pagini&id=987Wt).

After the ending of the election process for 2012-2016, the plans shall be updated, the existent ones having as a deadline the year 2012.

Analysing the managing manner, it can be observed that, in the management process, the university management followed the PDCA (plan-do-check-act) concept. The strategic plans, detailed according to the basic processes and to the component sub-processes, served as a tool for the drawing up of the operational, action plans, detailed according to the activities, and they have led to actions controlled by the Senate Bureau, by the faculties' councils' bureaus and departments' councils. The different activities took place within all the university entities, with continuous or intermittent guiding, and the results were recorded in specific forms and records. According to the strategic plan, the principle of the participative management was implemented, the managerial act having as main characteristics the following: honesty, loyalty to the institution, respect to the law, collegiality, sensitivity to people's problems –be they employees or students-, transparency, democratic spirit. At all the levels, the analysis and the self-analysis of the results and the establishment of measures to continue and improve the activity were carried out. In case some deficiencies in the operational plans were noticed, measures to correct the situation from the previous year were taken. Nevertheless, we observe the fact that the strategic plans, which usually comprise the qualitative approaches, were not always transposed into quantitative operational plans that have made the self-evaluation, in some situations, confirmatory and qualitative.

As regards the educational process, the strategic plan stipulates as a general objective: "improving the educational act to such a level of quality and effectiveness that it could ensure its competitiveness in the European higher education" and which "could create concrete competences in agreement with the market demands", the place of narrow specialisations being "at the master's degree, but also within the continuous education whose role will become increasingly important". This objective is then detailed through 32 measures targeting component sub-processes and related sub-processes to the educational process.

In the strategic plan, the scientific research process is detailed through 15 objectives concerning the research orientation and its internationalisation, the trained human resources, with a stress on the doctoral students, and the research leveraging. Despite the fact that the university took into account all these objectives, two of them still require annotations. Therefore, "the qualitative improvement of the *UPT Scientific and Technical Bulletin* through the internationalisation of the Editorial Boards and of the authors, etc. and its

publishing and advertising in an electronic format” has been an objective taken into account systematically. Each of the 15 series has made some progress, more of them being ranked in various international databases. The university has a series ranked in INSPEC, three series in B+ category; therefore, in international databases, too. Nevertheless, keeping these series alive represents an unclear matter today. On the one hand, through the financing criteria at the governmental level and through the ARACIS external evaluation criteria, it is claimed that these publications must be kept alive, on the other hand, through the promotion policy of the teaching staff and of the ranking of the universities, the importance of these publications is minimised. In this context, the university management has no longer focused so much on this subject, but the publications were kept alive, supporting the older ones and the ones targeting a higher ranking (http://www.upt.ro/pagina_princ.php?cat=nu_pagini&id=PQOsq). The strategic plan also stipulates the objective: “involving the master's degree students in the research activity and coaching the master studies and the master degree theses so that minimum 50 % of the students should have at the time of graduation at least one scientific paper published or in print”, which can be correlated to the possibilities offered by the 15 series, through workshops and roundtables with the master’s degree students.

The strategic plan comprises 5 objectives and actions concerning the teaching staff, one of the most appreciated being the awarding of some honour and monetary prizes, annually, through contest, for the excelling teaching staff on each hierarchic level, 5 objectives and actions concerning the finances, 7 objectives and actions concerning the real estate, covering a large area of domains (teaching, research, social, leisure, sports) whose accomplishment represents one of the university’s strong points, 10 objectives and actions concerning computerisation, 8 concerning the internal relationships, 5 concerning the external international relationships and 5 concerning marketing the university’s image. The PUT policy on students is stipulated in 17 objectives and activities, the strong points being: “ensuring a correct treatment of all the PUT students, respecting their person and personality and in accordance with the institution's regulations and customs in order to ensure the best students-teaching staff relationships” and “ensuring good life conditions – including learning conditions - for the students living in foyers”. The objective “encouraging the PUT students to be involved in as many international relations as possible, by informing them about the opportunities and by co-opting them in various programmes (ERASMUS, CEEPUS, LEONARDO DA VINCI, etc.)” was carried out only partially, also due to the students’ limited financial resources.

3.3.6. Current practices related to the strategic choices presented in Section 3.1 of the report

The PUT management practices and quality assurance policy are related and correspond to the strategic choices mentioned in Section 3.1. All the components of the assumed mission are present in the PUT policy. The issues discussed in the sections 3.3.1-3.3.5 prove the coherence of mission – policies-management-quality assurance ensemble.

The PUT management approaches the completion of and the accomplishment of the objectives taking into account the present PUT classification at the national level and the necessity to be in line with European orientations.

Anticipating the above mentioned classification and applying the National Education Law, PUT drew up in 2011 its new Chart. Its provisions contain the necessary premises to implement the European orientations. The new education law, the new chart and the new structures of the university constrain the new management structures, elected or to be elected, to update some of the regulations and procedures. The fact the departments are no longer subordinated to the faculties, but to the university structures will take some time to adapt to the new organisation. The elimination of the simultan inclusion of the same person in more decision-making bodies (e.g. the head of the departments are no longer members of the Senate, etc.) has lead to a substantial increase of the number of persons involved in the decision-making bodies; this will also take a period of time to adapt and to gain experience.

In this context, a first important challenge for CA and Senate till the beginning of the new academic year will be: to activate all the structures contained in the Chart, to review and to complete all the regulations and procedures. This will have to take into account the results of the SWOT analysis (Appendix A1.2.-1).

3.4. Strategic management and ability to change

The SWOT analysis, which is presented in Appendix **A1.2.-1**, has revealed a number of threats and opportunities that PUT should consider in the future. At the same time, the close relationships with the external environment and the feedback received from it, have outlined the set of demands and challenges which PUT has to face. The following sections focus on PUT’s ability to change and to adapt to the above-mentioned external factors.

3.4.1. PUT receptiveness to external demands, threats and opportunities

As of the year 1990, PUT has carried out strategic actions so as to develop its ability to change and to adapt to social needs. To that end, various interested parties (e.g. the academic community including both teachers and students, various types of employers, former graduates, officials, professional associations, and outstanding members of society) have contributed to the elaboration of several strategic documents. The targeted impact area has expanded from a local / national level to a regional / European one. As a result, the strategic plans for the years 1999-2003, 2004-2008, 2008-2012 have envisaged increasingly complex objectives. These objectives reflect PUT's proactive attitude in terms of the changes in the socio-economic and internal environment (see the strategic plan for 2008-2012 in Appendix A3.1.1.-1).

The comparison between the 2003 operational plans and the 2011 ones, on the one hand, and between the 2004-2008 strategic plans to the 2008-2012 ones, on the other hand, emphasizes a change in approach, from a quantitative-descriptive one to a synthetic - analytic one. PUT's vision has thus become more concrete and more connected to the European context. More precisely, the 2008-2012 strategic plan shows a change in approach, which has materialized in the outline both of a general objective and of more specific ones related to education, research, human resources, finance, technical and real estate patrimony, computerization, internal relations, international relations, students and visibility processes.

The above-mentioned aspects attest our institution's ability to change in what concerns PUT's approach to higher-education strategic management. The same ability will also be manifest in the 2012-2016 strategic plan which is currently being developed.

According to the 2011 university ranking, PUT is an advanced research and education university. Given that the domain-based ranking is updated every year, efforts should be taken to maintain PUT among the top-class universities. The new strategic and operational plans for 2012 should therefore focus on this particular objective.

To this end, starting from the national legislation (OMECTS 5212/ 26.08.2011) and from PUT's organizational culture and traditions, the PUT management has identified the development directions according to their impact on university ranking. Scientific research has the biggest impact (0.40 – 0.60, depending on the domain), and is followed by the teaching-learning process (0.25 – 0.30), the relation with the environment (0.10 – 0.20) and the institutional capacity (0.05 – 0.15). The most important contributions to scientific research are: triadic patents, international patents, ISI-indexed scientific papers and other publications indexed in top international databases. As for the teaching-learning process, of major importance are the following: the high-performance teaching staff, the student-centered approach to teaching, the number of academic books published by prestigious printing houses. The most important aspects regarding PUT's relations with the external environment comprise the services provided and the innovative products developed by PUT, which can be seen in revenues, in the considerable number of (permanent) partnerships in the business and the non-profit sector, as well as with public organizations, and in the participation in extensive national and metropolitan projects. In terms of institutional capacity, the full-impact indicators are the total revenues and the ability to adapt to European standards, which will subsequently ensure PUT's top position in the university ranking.

From a strategic perspective, PUT has enhanced its relation with the external environment by setting up the General Direction for Entrepreneurship, which will rely on the expertise of the teaching staff and of the doctoral students. A department for the monitoring of patents is to be created. Also, PUT has activated funds to support the dissemination of research outcomes in high-impact publications - a strategic initiative aimed to promote high quality scientific research.

Other strategic initiatives, which the SWOT analysis has revealed as strengths, and which simultaneously result from the opportunities and threats outlined in previous management analyses, are:

- to diversify the educational offer of each education cycle
- to include representatives of the socio-economic environment in each domain-specific board so as to adjust the curricula to their needs;
- to reconsider the university structure (e.g. to set up or to disband faculties and departments, to reconsider the PUT Charter as mentioned at the beginning of section 3.1);
- to promote co-financing of the European projects developed within various priority axes;
- to develop top medical and sports facilities to support the good health of both employees and students.

Consequently, the adjustment of the PUT strategic plan for 2012-2016 according to the opportunities and threats identified in the SWOT analysis is a certain fact.

3.4.2. Involvement of external representatives

PUT has been open to the cooperation with the external environment, mainly with local economic agents, which is reflected in the number of contracts with private companies. In addition, the external environment has influenced PUT's strategic plans by promoting the setting up of new master's study fields, designed to meet labour market requirements (e.g. *Methods and statistical techniques in healthcare and clinic research* - C-med company, *Advanced Techniques in Electronics* – Flextronics Company, *Automotive Embedded Software* – Continental Automotive company). A number of companies (e.g. Contilab, Hella) have also allocated funds for upgrading existing laboratories.

Moreover, PUT and the external environment cooperate within domain and specialization boards in the updating and the design of curricula. External representatives may also be board members or associate teachers.

The university may set up consultative bodies, in parallel with management bodies. For example, „The Advisory Committee” - a consultative body within the Rector's institution – provides advice on major management decisions concerning the education strategy, the research strategy, the strategy for entrepreneurial activities, the investments strategy, the institutional development strategy, the budget strategy, etc. „The Advisory Committee” is made up of prominent academic personalities (e.g. former rectors, academics, etc.) and personalities from the economic, cultural, professional and administrative environment who are designated by the Rector.

Personalities from the economic, university and cultural environment often deliver conference presentations and participate in round tables on strategic impact topics, for instance, on sustainability policies and the university's role in this context.

3.4.3. Advantages of the PUT Autonomy

PUT has made the most of the autonomy conferred by the Constitution and by law, and has established, free from any influence, its mission, institutional strategy, structure, activities, organization, management rules, as well as the way in which its patrimony and human resources are managed.

Consequently, in what concerns the education and research offer, the university has tailored its study programs to the needs of the society, and designed the curricula, the syllabuses, the number of transfer credits, and the study groups in compliance with the national and international standards. It has also developed and put into practice its own research programs with/or in cooperation with other institutions or with different agents from various sectors: economic, social, etc., at national and international levels. PUT has signed contracts with universities from abroad, which allow double degrees at bachelor's, master's, or doctoral levels.

As far as the employment and the promotion of the teaching and research staff are concerned, PUT has established its own criteria and procedures. Accordingly, PUT has enhanced the value of the teaching staff by raising the standards (both during and after the recruiting process), on the one hand, and by promoting a sustained policy to stimulate performance, by public recognition and financial rewarding, on the other hand. PUT has encouraged the academic staff by introducing, within legal limits, sliding pay scales according to tasks and results.

3.4.4. Changes expected to be made towards the aims of the institution

Each PUT strategic plan has established objectives adapted to the challenges specific to the corresponding periods of time. Given the higher performance of human resources, it is necessary to establish certain long-term overall strategic objectives (e.g. doctoral research sustainability). These objectives should be further divided into more specific short-term and medium-term objectives. In the latter case, these should meet the criteria for S.M.A.R.T. goals, i.e. extremely specific, measurable, attainable, realistic, and time-bound. Hence, PUT aims:

- to set up an Advisory Centre for the Accession and Implementation of Projects in 2012;
- to convert the Department for teacher training into an authorized and self-sustained Teacher Training Centre;
- to set up certain consortia/ mergers with regional institutes/ research centres starting from 2012;
- to set up a “Fraunhofer Project Centre at PUT” within the university, which would enhance research development in the Banat region;
- to set up the Image and Communication Office and the Spokesperson's Office.

3.4.5. A Better Match between Current and Future Mission and Activities

A better correlation between activities and the targeted mission can be obtained through:

- Steady update of qualifications and curricula based on the feedback received from the regional and national labour market as well as on the permanent comparison with the offers of various Romanian and foreign universities;
- Making more efficient the student-driven evaluation process of disciplines and teaching staff, using dedicated software. This will motivate teaching staff to initiate themselves the evaluation process and deploy questionnaire-based feedback for rapid improvement of disciplines; Starting from this year, the evaluation will be done electronically, allowing increased responsiveness in case of aspects that need corrections;
- Continuous specialised training of the academic staff through exchange of experience with experts from our country and abroad, attendance of continuous professional trainings, conferences, etc.
- Funding research activities that match performance indicators maintaining PUT in the A category and research activities with significant impact;
- Creating an inventory of the domain-specific offers provided by PUT and their promotion simultaneously with the reinforcement of PUT's public image.

3.4.6. Quality monitoring and quality management

Quality management is essential for PUT's smooth functioning; it is implemented through a set of regulations and procedures that cover the majority of the processes and activities in the university.

There is a permanent monitoring of the application of the regulations and procedures. Thus, the university leadership ensures the continuous improvement of activities by raising quality standards at levels that enable PUT's ranking in the highest positions and international recognition.

With reference to the educational process, there is a systematic monitoring of the quality of the study programmes at the department and faculty levels, and annual senate-driven monitoring.

PUT will further increase the role of the quality monitoring procedures by extending the procedures to all institutional processes.

The university regards as highly important the periodic update of the evaluation and quality assurance instruments as well as enhanced harnessing of the results obtained from monitoring processes and activities. Defining measurable and objective quality indicators, their evaluation through well-driven actions and prior discussions and the use of results in management analyses must characterise all attempts and actions undertaken in the quality area. It is equally important, immediately after the election of the new leadership and the newly-elected Rector's statement regarding the quality policy, to reunite and integrate all university regulations and procedures in a quality handbook.

4. Conclusions

The self-evaluation commission named by the Decision of the PUT Rector took into account, during the process of self-evaluation, the EUA / IEP recommendations contained in the Guidelines for institutions. The self-evaluation commission has designed an action plan which included a SWOT analysis from which have emerged a number of strengths and weaknesses related to the institutional processes and procedures in PUT. The SWOT analysis is summarized in Appendix A1.2.-1 and was referred to repeatedly in this report. Aware of the purpose of the evaluation, the commission was concerned to produce an honest and self-reflexive report.

Briefly, we highlight the following *strengths*:

- ranking of the university in the category of advanced research and education;
- existence of well-structured strategic plans and operational plans at university and faculty levels;
- involvement in developing regulations of the academic community, trade unions and student organizations;
- a very good property management and actions taken to increase it;
- consultation of the academic community and transparency for the decisions taken for specific actions;
- university marketing activities directed toward high school students, prospective PUT students;
- significant number of collaborations / partnerships with companies in the metropolitan area of Timisoara;
- scientific, cultural, educational and social-themed activities organized through “Politehnica Foundation”, Teleuniversitatea (the university’s own TV station), or local, regional and national television stations;
- motivation of teams / individuals who coordinate research / development / expertise projects;
- teaching staff with very good professional training;
- existence of research centers in different areas;
- establishment and functioning of boards of study programs as advisory bodies in view of adapting continually the curriculum to the market requirements;
- continuous adaptation of the study programs, especially those at the master’s level, in accordance with the requirements of the socio-economic environment and according to the worldwide scientific and technological development trends;
- consolidation of the traditional technical fields and development of new or complementary technical fields, required at regional, national and international levels;
- development of study programs in English, German or French;
- PUT stimulates research and its recognition by providing financial support to its teaching and research staff, to facilitate participation in conferences and symposia (the “1 million Euro for 1000 ISI scientific articles”);
- consistent promotion of a culture of quality and research in the academic community;
- university classification in the category of advanced research and education;
- PUT has 6 programs ranked in Category A, and is concerned to rank other programs in superior categories. PUT does not have any programs in the D or E category;
- creation and support of the IT Business Incubator to support transfer of know-how;
- opportunities for interfacing with society, which go beyond formal processes;
- PUT has a Directorate for General Administration, which manages efficiently a large number of student services, with a centralized Social service and a CICS center aimed at counseling and informing students at various levels;
- all students wishing so, are offered access to the university’s dormitories and cafeterias (see also section 3.3.2 – *Learning resources and student support*);
- construction of the new PUT library is welcomed and appreciated by students.

Weaknesses can be summarized as follows:

- considerable level of bureaucracy with unwanted effects on research;
- syncopated and delayed communication processes between university entities;
- relatively low coherence of university marketing actions and lack of a visual identity manual;
- insufficient structuring of the PUT policy regarding services to society;
- insufficient use of the existing research potential on interdisciplinary areas;
- lack of a coherent and easily accessible database containing the results of research from university;

- incipient involvement of teaching staff in international research programs and relatively modest integration of the university in the European research area;
- less coherent mechanisms of application of precedence in the curriculum, and the curricular trajectories are not based on prerequisites;
- absorption of students in internships in the economic environment is poor and often formal;
- low efficiency of activities related to the administrative management, submission, contracting and implementation of research / development / expertise projects;
- PUT's policy on services for society is poorly shaped, being sometimes declarative in nature, and insufficient promotion of the "Politehnica" brand;
- lack of stimulation of OICS members who work as volunteers;
- gaps on the unitary character of mentoring activities for students, insufficient satisfaction of students' expectation level regarding personal development;
- poor participation of the students in activities dedicated to analyzing teaching-content, due to emphasis on formal aspects and lack of use of informal means for specific and precise discussions.

The identified *opportunities* are:

- the attractiveness of the education and research fields of the university for a large segment of the public interested in the technical profile;
- the economic potential of the West Region which favours the absorption of our university graduates in the labour market;
- the top scientific and technological fields (i.e. renewable resources, nanotechnology, applications in the medical field) in which the specialised human resources of the PUT are needed to carry out research and development activities;
- the big companies' extension from production to research-development activities;
- the existence of European non-repayable funds;
- the geographic-strategic position of the city, on the Western border of the country, the multi-ethnic character of the local population and the membership to the DKMT Euroregion.

The identified *threats* are:

- the career choices made by young talented persons, that could be good teachers or researchers, to work in the industrial sector, mainly for financial reasons, which has actually generated the ageing of the teaching staff of PUT;
- the acknowledged deficitary financing of the educational sector which has been worsened by the economic crisis and thus has had a negative effect on the human resources;
- the existing competition between the study programmes offered by PUT and the similar ones offered by other universities at a similar tuition fee;
- the unfair competition of some Romanian private universities that have much lower educational standards and extremely advantageous financial conditions;
- the legislative instability in the educational field;
- the declining birth rates.

In order to remedy the weak points, to counteract threats, to materialise opportunities and to develop the strong points, the following action plan is proposed:

- the computerization and simplification of the entire document route, the adaptation of the infrastructure and of the communication plan to the actual needs of the PUT;
- the promotion of the „Politehnica” University of Timișoara brand, both nationally and internationally, on the one hand and on the other, the creation of a visual identity booklet;
- the formation of a department for the counselling, opportunity identification, conception, implementation and monitoring of projects aimed at attracting external research/ development/ expertise funds that should contribute to the PUT research database;
- the continuation of the policy supporting the qualitative scientific activity of the academic staff;
- the use of prerequisites for curricular routes;
- the introduction of some alternative possibilities for the student practical stage by tightening the partnerships with the socio-economic milieu;
- the attractiveness enhancement of the educational offers for all the Bologna cycles through specific means;
- the reevaluation of the CICS functions and of the status of the staff working there;



- the CICS involvement in making the students aware of the responsibility they have to correctly evaluate the didactic act;
- the efficiency enhancement of the activity of the General Directorate for Entrepreneurship in terms of services for society.

The PUT management is ready to adapt the action plan whenever the results of the future self-evaluation activities point out to some positive changes or steps that have to be made.



LIST OF APPENDIXES

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- A3.3.1.-1_ Rector's statement regarding the quality assurance policy
- A3.3.1.-2_ PUT's Senate decision regarding the politics of quality assurance
- A3.3.2.-2_ Student perception and opinion questionnaire
- A3.3.3.2.-1_ PUT Study Programs accredited by ARACIS in the last 4 years