

## STRATEGIC DEVELOPMENT PLAN for

### "POLITEHNICA" UNIVERSITY OF TIMIŞOARA

# 2008 - 2012

### TABLE OF CONTENTS

- 1. General goals
- 2. Specific goals and targeted actions
  - 2.1 Underlying premises
  - 2.2 Educational process-related goals and targeted actions

2.3 Research-related goals and targeted actions

2.4 Academic staff-related goals and targeted actions

2.5 Goals and targeted actions related to the management of financial resources

2.6 Goals and targeted actions related to the management of real estate and technical patrimony

2.7 IT infrastructure-related goals and targeted actions

2.8 Goals and targeted actions related to the management of national relations

2.9 Goals and targeted actions related to the management of international relations

2.10 Student-related goals and targeted actions

2.11 Goals and targeted actions related to UPT's image and recognition for academic excellence

- 3. Management practices
- 4. Final remarks

#### 1. GENERAL GOALS

• Further enhancement and reinforcement of UPT's recognition as provider of nationally and internationally-recognised professionals and as generator and synthesizer of scientific knowledge, meeting the currently-emerging needs of the Romanian society and showcasing a healthy working environment beneficial for students and academic staff's professional and personal development.

#### 2. SPECIFIC GOALS AND TARGETED ACTIONS

#### 2.1. Underlying premises

Throughout 2008, "Politehnica" University of Timişoara has featured optimum performance in terms of operational parameters and core university-specific benchmarks.

2.1.1. The number of enrolled students has been high, marked by a fairly continuous increase from one year to another (see figure 1), whereas its distribution mapped to study cycles and forms has shown **positive** shifting. In this respect, it is to be noted that master programmes and full-time doctoral programmes have systematically increased in absolute figures as well as in the ratio of the university's educational goals (see figure 2).



Fig. 1.

	2003 / 2004	2004 / 2005	2005 / 2006	2006 / 2007	2007 / 2008	Multiplying factor 2007 / 2008 vs. 2003 / 2004	Increase in percentage 2007 / 2008 vs. 2003 / 2004
Bachelor	12.734	13.067	13.215	12.928	12.679	1,00	0 %
Master	517	597	746	818	1.583	3,06	+206 %
Doctorate	951	1.066	862	790	736	0,77	-23 %
- full-time study	120	140	163	163	175	1,46	+46 %
- non full-time study	831	926	699	627	561	0,68	-32 %
Total	14.202	14.730	14.823	14.536	14.998	1,06	+6 %

#### Fig. 2.

2.1.2. The educational process has been conceived on modern principles while demonstrating consistent compliance with the current and emerging needs of the society.

2.1.3. The research activity is ranked high although the university's potential in this area is by far properly harnessed.

2.1.4. The academic staff is outstanding in terms of professional achievements and of the number of permanently-employed academics. Its configuration mapped to age groups and academic titles has witnessed positive evolutions over the last years.

2.1.5. The real estate and technical patrimony is solid after numerous rehabilitations, renewals and substantial development undertaken over the last years.

2.1.6. The intra-institutional relations are generally pleasant and amiable, shaping a proper working environment; It is likewise true that the occurrence of isolated conflicts in an organization with approximately 17 000 employees, of which around 15 000 are students and around 1700 are employees, might be, statistically viewed, normal.

In light of the assertions 2.1.1 - 2.1.6, it follows that the time span 2008 - 2012 features premises proper for accomplishing high performance both in teaching and research activities which, obviously, entails responsibility, i.e. responsibility for the management team and, equally important, for the other members of UPT's academic community: students, academics and administrative staff.

#### 2.2. Educational process-related goals and targeted actions

With referece to the educational process, for the time span 2008 – 2012, the top priority for "Politehnica" University of Timişoara will be to bring the educational process to <u>the quality and efficiency level</u> that ensures <u>competitiveness</u> in the European higher education space.

Considering that one of the genuine values of the Romanian technical higher education has been ensuring a complex training with a two-fold focus, both on formative aspects, on transmitting solid and broad fundamental knowledge, and on informative aspects, on transmitting updated knowledge intended to develop concrete competences aligned with the needs of the workforce market, UPT will further preserve this value and regard it as indispensable. Narrow specialisms will be advanced to the master programme level or assimilated by lifelong learning programmes which will acquire increasing importance.

On a microlevel, the main targeted goals for the time span 2008 – 2012 will be:

- Consolidating the **credit transfer system**, mainly, in the current manner, and, additionally, with openness to possible corrections and adjustments (at this point, it must be highlighted that the current formula is 100% compatible with the European Credit Transfer System, widely adopted in the European Union within the Bologna System implementation);
- Continuous customization of the study programme offer in line with the needs of the socio-economic environment and its harmonization with the future *Framework of Higher Education Qualifications*, currently in the process of adoption by Romania, and with the European acquis as well;
- Examining permanently curricula and syllabi against the Latin question "Cui prodest?";
- Maximized maintenance of the common core among related study areas for the 1<sup>st</sup> and 2<sup>nd</sup> years (only the 1<sup>st</sup> year in the case of three-year bachelor programmes) and their curricular overlapping as broadly and wisely as possible in the 3<sup>rd</sup> and 4<sup>th</sup> years (2<sup>nd</sup> and 3<sup>rd</sup> in the case of three-year bachelor programmes);

- Substantializing the offer of electives in a *crescendo* manner, starting with the 3<sup>rd</sup> year (the 2<sup>nd</sup> year in the case of three-year bachelor programmes), and enforcing the principle according to which, in UPT, the student is allowed to contribute to the development of his/her own career;
- relating *curricula* to the needs of the socio-economic environment, within partnerships profitable both for students, academics (access to "*know–what*" and "*know-how*", international internships, jobs, etc.), as well as for the university in terms of prestige and financial resources and, obviously, for our partners;
- changing the approach to the project classes by turning them into activities in which the teacher's role as step-by-step supervisor ends or happens randomly, consisting mainly in assigning project specifications or drafting paper planning, in providing students with expertise, and, eventually, in receiving and evaluating assignments; UPT will further consider to include project classes in the students' schedules, similarly with the way they have been included so far, to stress out, without a shadow of doubt, that students' access to the university's working/study spaces and technical equipment and facilities is ensured and, more importantly, to have them accustomed to working in **an organised, steady and disciplined manner**.;
- Approaching laboratory classes in a more flexible manner by promoting the above-described vision where, obviously, such a perspective is feasible;
- Organizing specific laboratory classes at the premises of different companies that offer proper conditions and state-of-the-art technologies ensuring, thus, students' access to technical equipment and technologies whose acquisition would have been impossible or unjustified for UPT, or, although available in UPT, their maintenance and consumable costs are very high or uneconomic;
- Providing proper conditions for internships by sensitizing and involving the main beneficiaries of UPT's 'brain output', by supporting legislative initiatives that offer employers incentives for internship partnerships as well; additionally, UPT will take action to support, at least, one study trip abroad or throughout Romania for each generation of graduates;
- Promoting the concept of **computer-assisted teaching and learning** in the educational process, which entails:
  - > Equipping **all** lecture auditoriums with computers and video-projectors;
  - Developing multimedia materials to support the teaching and learning process (UPT has the technical infrastructure, at the highest level, and the human expertise needed to put into practice such an idea since it has already demonstrated practically this capability on a pilot scale);
  - Extending the meaning of the phrase "technical endowment of laboratories" so as to designate, where possible, not just equipment but **simulation programs**, preserving a keen concern to have engineering students anchored in the real, physical world, since the engineering profession becomes meaningless without it;
  - > Uploading course materials and laboratory supports in the virtual campus and providing them online.
- maintaining at an important level the number of state-budgeted places;
- maintaining at an important level the number of fee-based places (obviously, in strict correlation with the demand the specializations in question will have at entrance and at graduation and with the university's training capacity);
- Increasing the number of foreign students; to achieve this goal, UPT will make efforts to extend the offer of foreign language-taught programmes (the foreign languages to be considered are English, French and German), particularly of master programmes; additionally, UPT will make more substantial, following the "TASK FORCE" model, the activity of the coordination and initiative-generating team;
- Intensifying UPT's involvement in international master programmes;
- Carrying on and developing agreements with foreign universities on mutual recognition of degrees and granting **double degrees**;
- Enabling and reinforcing the offer of optional courses for all UPT students with a view to improving and developing their IT-related knowledge by involving the Department for Complementary IT Training, set up for this purpose;
- Promoting, within as many disciplines as possible, the use of computers, particularly for **computer-assisted** design and experimental data processing, for simulations, papers, presentations, etc.;
- Continuing the pedagogical training offer provided by UPT's specialised department in the flexible format successfully practised so far;
- Developing **distance learning** by transforming it into web-oriented and internationalised learning;
- Developing the **lifelong learning** component of the educational process, considering that this learning style

is highly-demanded and can be a significant source of **extra-budgetary income** both **for the university** and for **the academic staff**;

- Developing and reinforcing the quality assurance system of the educational process;
- Carrying on the evaluation of disciplines and academic staff using online technology;
- **Substantializing** student counselling and documentation services by making fully operational the Center for Student Counselling and Documentation (CSCD) in line with its new regulations;
- Availability of electronic materials and documentation (ENCARTA, BRITANICA, ART GALLERY, etc.) in internet rooms for all students so as to develop and consolidate their background knowledge;
- Organizing together with students' associations professional contests and providing support for UPT's students to participate in student contests organized by other universities or by various companies;
- Organizing together with students' associations annual student symposia on technical and scientific topics;
- Attracting in UPT as many high-school graduates as possible by organizing career orientation campaigns in high-schools, including web-based campaigns;
- Ensuring the selection of the best candidates at the university-entrance examination through a selection process as relevant as possible and anchored in the realities with which UPT will have to face;
- Facilitating contacts between **students / graduates** and **employers**, through "*face-to-face*" actions such as "*JobShop*", as well as through a specialised site administered by the Centre for Student Counselling and Documentation;
- Facilitating *start-up* companies for students/graduates in *"UBIT" Business Incubator*, set up on the undersigned's initiative in partnership with Timişoara Local Council, Timiş County Council and the German Government's Agency for Economic Development in Romania (IBD GTZ);
- Consolidating the independent operation of the departments for general training which had already been assigned this status: the Department of Mathematics, the Department of Physical Foundation of Engineering, the Department of Communication and Foreign Languages, the Department of Physical Education and Sports, the Department for Teacher Training.

#### 2.3. Research-related goals and targeted actions

From the outset, it must be stated that, if the didactic activity is characterized by a complex system of rules and implies multiple directions to follow, the research activity is completely different. UPT regards as sufficient the following goals:

- Sensitizing researchers to orient their work predominantly on fundamental and application-oriented topics that are more likely to be financed (see the EU-funded projects, GR programs, and the researchdevelopment-innovation programmes of various companies);
- Perpetuating the system in which the funds attracted through research shall be returned **quasi-totally** to the researcher after covering all costs, obviously, this return shall be done in reasonable and stimulating proportions for the researcher but also for the laboratory in which s/he develops research and/or didactic activities;
- Proliferating and making substantial the activity of the **research centres** and of the **excellence research centres** within the stimulating framework described above;
- Creating powerful research institutes by uniting forces traditionally disparate or reluctant to cooperation (it is to be noted that, under the supervision of the undersigned, in the following weeks, UPT will apply for EU structural funds-based funding (approximately 18 million Euros) for the establishment of the Renewable Energy Research Institute, coordinated by the undersigned);
- Involving PhD students in the research activities of the research centres, of the excellence research centres and of the research institutes;
- Introducing the responsibility, at the scientific secretary's level, of maintaining and updating a specialised site that displays the university's research offer as well as a record of the research opportunities and various calls for research funding available in Romania or abroad;
- Increasing the prestige of the scientific events organised by UPT's faculties by having them under the aegis
  of outstanding professional organization and by a rigorous selection of the co-organizing partners;
- Extending UPT's involvement in the international networks of scientific events both as organizer/coorganizer as well as participant through its representatives;
- Involving Bachelor students in the research activity not only for the ideational contribution that might come from them, which can also be made accountable, but for the inoculation of the research interest and the revelation of the research secrets;

- Involving Master students in the research activity and supervising master programmes and related dissertations so that at least 50% of the students, at graduation, can have at least one published paper or one paper accepted for publishing;
- Encouraging co-supervision of PhD theses in partnership with prestigious universities, chiefly from European Union member states but also from other states;
- Qualitative increase of the Scientific and Technical Bulletin of UPT by internationalizing Editorial and Scientific Boards, by internationalizing the authors and by editing and promoting it in the electronic format;
- Encouraging UPT's academic staff and researchers to publish their research results in the most prestigious and best-ranked journals and in the Scientific and Technical Bulletin of UPT;
- Continuing the financial support of PhD students' conference participations from UPT's own extra-budgetary funds;
- Creating a special fund at the level of each faculty to support financially conference participation.

#### 2.4. Academic staff-related goals and targeted actions

UPT's academic staff is undoubtedly its most valuable asset. The following goals are envisioned to maintain and consolidate academic staff:

- Generalised salary increase from funds obtained by:
  - Boosting budgetary funds by increasing the number of students and by improving the performance benchmarks used by the Ministry of Education and Research in university funding;
  - Increased harnessing of UPT's potential for research, development, innovation, consultancy, expertise, certification;
  - Increased harnessing of UPT's real estate patrimony;
  - Reducing educational process-related costs by a more rational curricula design and management;
  - Reducing utilities-related costs by utility self-generation, building rehabilitation and latest technology deployment;
  - Reducing unjustified staff-related costs;
  - Showcasing the opportunity of significant financial revenues through research funds or extra-workload activities for those who attract such funds;
- Shaping a working environment and conditions favourable for professional development including opportunities for career advancement thorough harmonious blending of UPT's interests and academic staff's interests based on criteria of demonstrated professional expertise and human values;
- Introducing annual financial incentives and honorary awards for the most competitive academics of all hierarchy levels;
- Organizing conference series and cultural/artistic events with outstanding guests (novelists, historians) in all UPT's faculties;
- Organizing, at least once a year, an entertaining event for all UPT's academics, administrative staff and students to showcase positive and friendly relations among all employees.

#### 2.5. Goals and targeted actions related to the management of financial resources

The following are the goals and actions suggested for the management of financial resources:

- Strict application of all legally-enforced regulations including UPT Charter's stipulations regarding financial resources;
- consolidating, in the financial resource management, the decentralization principle down to the department level;
- attracting as many funds as possible from complementary funding, overseas funding respectively, through a keen concern for elaborating convincing project proposals with high winning chances in competitions characteristic of these funding types;
- encouraging higher generation of own revenues; for this purpose, UPT will continue the same policy of making 80% of own revenues available for the departments attracting them and will offer financial incentives

to the persons that excel in attracting such revenues;

- differential treatment of the three types of funding obtained by UPT: core budgetary funding, complementary funding and extra-budgetary funding:
  - core budgetary funding is distributed to departments, faculties and functional services according to the algorithm enforced by UPT's Senate;
  - complementary funding is rigorously used for already-targeted objectives;
  - UPT's centralised extra-budgetary funds, including revenues from rented spaces (in the Rectorate's jurisdiction) are distributed to specific objectives following the Senate's approval.

#### 2.6. Goals and targeted actions related to the management of real estate and technical patrimony

- Rehabilitation of UPT's critical real estate patrimony representing study and research spaces through a forceful complementary funding-attracting policy for overall repairs, consolidations etc.;
- Introducing modern technology to minimize waste of energy, water and heat;
- Completion of the new buildings started in the 2004-2008 term as follows:
  - > in 2008:
    - 1. The Swimming Pool Complex comprising an indoor swimming pool and an outdoor swimming pool
    - 2. The new wing of MH Department
  - ≻ in 2009:
    - 1. UPT's Library (Centre for Documentation, Technological Transfer and Continuing Education)
- completion, **in 2008**, of consolidation / overall repairs / rehabilitation / fitting out / upgrades of the objectives started in the 2004-2008 term, namely:
  - 1. The Big Hall of the Senate
  - 2. The Small Hall of the Senate, to be further used as an auditorium
  - 3. Canteen 1C to become a multifunctional complex comprising a university restaurant, a hall for conferences, events, reading and a space configurable, according to various needs, in 1 up to 3 rooms for conferences, different events, all fitted out properly.
  - 4. Politehnica House 2
  - 5. "Electro" building complex
  - 6. The 380 seat-auditorium in wing D Electro complex
  - 7. "Politehnica" Park
  - 8. Fitting out the stadium, the running track of Sports Complex 1
  - 9. The building of the Faculty of Management
  - 10. The building of the Faculty of Civil Engineering
  - 11. Student hostel 19 C
  - 12. Administrative complex located on Porumbescu St. (central warehouse, workshops, etc.)
- construction, within the **2008 2012** time span, of new buildings:
  - 1. The building of the Faculty of Architecture, study and research spaces
  - 2. The new wing of the Faculty of Chemical Engineering
  - 3. Polyvalent Hall
  - 4. The Research Institute for Renewable Energy (to be built from EU structural funds)
  - 5. 2 additional floors in wing D Electro complex (thus 8 auditoriums with 250 seats and 8 auditoriums with 158 seats will be created)
  - 6. 1 additional floor in the wing of Research Institute for Mechanical Engineering
  - 7. 1 additional floor in the wing housing the heating system of the Faculty of Chemical Engineering
  - 8. 2 additional floors in Students Hospital building

- within the **2008 2012** time span, consolidation / overall repairs / rehabilitation / fitting out / upgrades of the following objectives:
  - 1. Rectorate building
  - 2. Wing A "Traian Lalescu" Faculty of Mechanical Engineering
  - 3. Wing B Faculty of Mechanical Engineering
  - 4. Wing C Horology Faculty of Mechanical Engineering
  - 5. Old Wing Faculty of Hydrotechnical Engineering
  - 6. Technological Hall Faculty of Hydrotechnical Engineering
  - 7. Wing located on Bocşei St. Faculty of Chemical Engineering
  - 8. Sports Complex 2 (synthetic fields for football, basketball, handball, tennis equipped with night lighting and self-covering facilities)
  - 9. Politehnica House 1
  - 10. One-room Hostels G23, G25
  - 11. Interior repair works in hostels 1C, 2C, 4C, 7C, 8C, 9C, 11C, 14C
- upgrading, within the 2008 2012 time span, all laboratories and academics' offices that were not modernised during the 2004 – 2008 term, by investing at least 12 million Euros for this purpose.

#### 2.7. IT infrastructure-related goals and targeted actions

- Acquisition and implementation of a professional integrated information system;
- Updating UPT's site and equipping it with an online tool for reporting and collating different items of information in standardised databases, with a topic-oriented forum and a stock of downloadable electronic forms, etc.;
- Creating a specialised site, at the university level, that will display UPT's research offer as well as a record of the demand or research opportunities identified via open campaigns **throughout Romania** and **abroad**;
- Creating multifunctional sites at the faculty level, with distinct sections for various faculty departments meant to ensure facile informing of academics and students on various internal and external aspects, to provide public information related to various activities and actions undertaken by UPT's faculties, to report and collate online different items of information in standardised databases, etc.;
- Uploading courses, laboratory supports, projects supports, solutions and problem-solving models, models of exam topics, class attendance, etc. on the web;
- Extending internal e-mail-based communication;
- Promoting internet-based access and use of library services, extending electronic library services in view of the new building that will house UPT's library;
- Support for further electronic publishing of students' journal;
- Improving UPT's internet system in all aspects.

#### 2.8. Goals and targeted actions related to the management of national relations

- Cherishing good relations with other Timişoara-based universities and with other Romanian universities;
- Promoting good relations with Timişoara Chamber of Commerce, Industry and Agriculture as well as with companies operating in Timişoara, in Timiş county, in the western region or in Romania;
- involving UPT in establishing local, county, regional and national strategies and policies with reference to its expertise area;
- Cherishing good relations with Timişoara-based high schools and with Timiş County School Inspectorate;
- Cherishing good relations with Timiş County Council, Timişoara Local Council, Timişoara City Hall, Timiş County Prefecture;
- Cherishing good relations with the Romanian Minister of Education, Research and Youth and with other related bodies;
- Enabling and harnessing the immense potential of "Politehnica" Alumni Association in terms of support and networking.

#### 2.9. Goals and targeted actions related to the management of international relations

- Maintaining the current bilateral and consortium agreements;
- Establishing new bilateral and consortium agreements;
- Involvement in EU-managed programmes or in programmes coordinated by other important bodies;
- Facilitating international mobility for academic staff (scientific and didactic assignments, experience exchanges, scientific event participation);
- Facilitating international mobility for students (course attendance, international placements, experience exchange, diploma/dissertation research and elaboration).

#### 2.10. Student-related goals and targeted actions

Unquestionably, UPT subscribes to the concept of **student-centred university** and asserts that commitment to this vision is enforced by **UPT's mission itself**. From this perspective, UPT has set the following goals and targeted actions:

- Ensuring the most valuable student intake through an appropriate admission system;
- Availability of study programmes observing the highest national and international standards;
- Offering best conditions for professional training and development through the rigorous supervision and continuous improvement of the educational process and its quality;
- Ensuring students' access to the technical equipment, book collections, course supports etc. owned by the university;
- Extending the reading room facilities at the central library premises, in faculties and in student hostels;
- Guaranteeing and enabling students' right to bring their own contribution to their own career development in line with their vocation, interest or simple option – even taking the risk of it not being sufficiently grounded! – via optional disciplines; implementing a student-dedicated assistance system for choosing optional disciplines;
- Providing adequate premises for shaping good relations among students;
- Guaranteeing fair treatment for all UPT's students, from respectful positions, valuing their personalities and observing the institution's regulations and norms so as to ensure the best student-academic staff interaction and relations;
- Implementing a functional student-tutoring system that views students not just as entities intended to assimilate solid knowledge but as young people with possible age-specific vulnerabilities, with personal or family problems;
- Sensitivity to students' views particularly when they are directly involved in the issue under analysis; stimulating students to actually involve themselves in the decision-making process;
- Maintaining good communication and partnerships with students' organizations and students' representatives in the Senate and Faculty Councils;
- Supporting students' initiatives, be they group or individual initiatives;
- Encouraging UPT's students to get involved in as many international exchanges as possible by providing information on such opportunities or programmes (ERASMUS, CEEPUS, LEONARDO DA VINCI, etc.);
- Facilitating or offering students financial discounts to artistic and sports events;
- Ensuring high-quality living and studying conditions for students accommodated in UPT's hostels;
- Taking action to preserve the current scholarship-granting system as it features a two-fold advantage, i.e. it stimulates students' eagerness for studying and it caters for the needs of economically disadvantaged students;
- Creating opportunities for economically disadvantaged students to be employed by UPT in a mutuallyconvenient manner.

#### 2.11. Goals and targeted actions related to UPT's image and recognition for academic excellence

"Politehnica" University of Timişoara activates a positive image both in Romania's public consciousness and in the international academic and industrial environments. It has been built by the excellence demonstrated by its generations of academics and students. Preserving this image entails, first and foremost, an internal wellmanaged and smoothly-operating system coupled with a forceful concern to promote the university via:

- INTERNET
- Promotional brochures
- mass media representations
- conferences hosted by UPT or organized by other universities which UPT's academics attend
- participation in academic exhibitions and fairs

#### **3. MANAGEMENT PRACTICES**

Within the 2008 – 2012 time span, UPT will continue promoting the concept of **participatory management** by:

- intensified decentralization and autonomy;
- substantial delegation of competences and responsibilities;
- systematic involvement of the Senate and Faculty Councils in the decision-making process;
- proper consultations, previous to the decision making, carried out:
- vertically, in both hierarchical directions
  - horizontally
  - with students' representatives
  - > with the employees' trade union
  - with ad-hoc counselling teams
  - > with UPT's outstanding personalities (former rectors, etc.)

Other targeted characteristics of the management practices:

- honesty
- loyalty to the university
- law observance
- genuine fellowship
- sensitivity to people's problems, be they employees or students
- transparency
- democratic spirit

#### 4. FINAL REMARKS

The present strategic plan is based on UPT's previous evolution, the current and emerging trends characterizing the international and national academic environments, the National Pact for Education and envisioned ideas to be included in the National Strategy for Higher Education Development. It will provide the basis for the generation of annual operational plans enabling UPT's leadership team to put it into practice.

APROVED BY UPT'S SENATE IN THE MEETING OF 05.06.2008

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