

EVALUATION AND ACCREDITATION DOCUMENTS

Lodz University of Technology (TUL)

Poland

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EVALUATION REPORT

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Poland

OCTOBER 2019



Lodz University of Technology(TUL) has mandated the Hcéres to perform the evaluation of the establishment. The evaluation is based on the “External Evaluation Standards” of foreign study programs, adopted by the Hcéres Board on October 4th, 2016. These standards are available on the Hcéres website (hceres.fr).

For the Hcéres¹ :

Mme Nelly Dupin, Acting President

On behalf of the experts committee² :

Mr. Cyrille van Effenterre, President of the committee

In accordance with the decree n°2014-1365, November 14th, 2014,

¹ The president of Hcéres "contresigne les rapports d'évaluation établis par les comités d'experts et signés par leur président." (Article 8, paragraph 5) – « countersigns the assessment reports made by the experts' committees and signed by their presidents » (article8, paragraph 5)

² Evaluation reports "sont signés par le président du comité". (Article 11, paragraph 2) – « are signed by the president of the committee » (article11, paragraph 2)

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I. INSTITUTION IDENTITY SHEET

General context^{1,2,3,4,5}

Restored as a nation after the First World War, Poland tremendously suffered from the Second World War. Indeed, its population dropped from about 35 million people in 1939 down to 24 million in 1946, due to war losses (amongst them ~ 3 million exterminated Jews) and redefinition of frontiers.

The actual Republic of Poland (~ 320.000 km²) has a population of ~ 38.5 million people (8th largest population in Europe) and is distributed over 16 administrative divisions. Its capital, Warsaw, is the largest city of the country which also comprises as major cities, Krakow, Lodz, Wroclaw, Poznan, Gdansk and Szczecin. It may be noted that Poland's population has recently decreased due to an increase in emigration (mainly within EU) and a decline in the birth rate. In 2017, the human development index of Poland was 0.86 (rank: 36th / 186).

In the early 1990s, industrial output and gross domestic product (GDP) dropped significantly. However, the actual (2017) GDP/hab. of Poland is ~ 29.251 \$ (rank 47th / 192), the private sector's portion of which representing ~ 85 %. Unemployment substantially dropped after the 2010's from about ~13 % by 2010 to about 5.5% by 2019. Inflation also began to drop during the same period to reach an average value of ~ 2.0 %, in 2019.

Poland is well endowed with natural resources, essentially, coal, sulfur, barite, salt, kaolin, limestone, chalk, gypsum, and marble as well as zinc. Poland is a major world producer of copper and silver. Poland is mainly exporting metals, machinery, textiles and clothing, coal, and food mostly to Germany. Russia is, by far, the main provider of energy imports.

Concerning energy, coal's contribution to the energy production has been reduced from 96 % in 1990 to ~ 79 % in 2016 notably decreasing the CO₂ emissions of the country, according to Poland engagements to reduce its greenhouse gas emissions. Renewable energies now represent ~ 10 % of the Polish energy production.

Higher education in Poland

For the 2015-2016 academic year, Poland had 1,405,100 students spread over 415 higher education institutions. Poland registered the 9th consecutive decline in its student population (19-24 years). According to projections of the overall population decline, the number of students enrolled in higher education institutions in Poland should decrease until 2025 with an estimated loss of more than 400,000 students by then. The student population decline affects all institutions, but mainly private ones are concerned. Indeed, the number of students registered in public HEI's dropped from 1.277.000 in 2008 down to 1.075.000 in 2016, whereas for private HEI's, these numbers decreased respectively from 660.000 to 320.000. This trend encourages institutions to undertake large-scale recruitment campaigns and to redouble efforts to imagine innovative and attractive training.

The Polish university system has officially adopted the LMD, Bologna system of higher education in 1999, even if its full application has been progressive. Research and higher education belong to the same ministry, i.e., the Ministry of Science and Higher Education (MNISW). In terms of level of education, Poland ranks better than other Eastern European countries: 28% of 25-64 year olds with tertiary education, and 43% of 25-34 year olds are graduates of higher education. However, the training of skilled labor (especially at the technician level) is considered as not adapted by the companies. The mismatch between the skills required by companies and those provided by the higher education system is often singled out.

The university system is divided into private universities charging tuition fees and public universities, in principle, free. However, public universities also provide paid programs even though they avoid calling them full-time study programs, since free public education is guaranteed by the Polish Constitution.

Polish higher education has initially been governed by the law of 27 July 2005, substantially amended in 2011 and May 2013. More recently, in 2018, the so-called "Law 2.0" or Act 2.0, provided for a new spirit of HE. The effective process of HE modernization has been formulated in the law of 18 March 2011. In 2013, the HEI's have been invited to open their education to continuing education and to reinforcement of the employability of

1 Fiche curie : enseignement supérieur Pologne 2017, French Ministry of Europe and Foreign Affairs
2 International Monetary Fund, Poland
3 The World Bank in Poland
4 Statistics of Poland government
5 Britannica, Poland

graduates. In July 2014, the Parliament and the Polish Senate adopted a new draft amendment which is part of a policy of modernization of higher education. It is based on i) promoting the development of the use of new technologies, ii) introducing e-learning in institutions iii) making compulsory internships periods of at least 3 months during studies, iv) further opening HEI's to international and business world.

One of the main purposes of the Act 2.0 reform of Science and HE was to provide a higher autonomy to HEIs. University Councils (governing boards) comprising representatives of external stakeholders have been introduced, allowing a better closing together of HEIs and their respective socioeconomic environments. In order to reinforce the basic and applied research, the concept of "initiative for Excellence - Research University" was introduced. Concerning the university funding, they are now more integrated and have to be submitted by HEIs rather than their faculties, as previously.

Improving the quality and the relevance of HE was also a goal of the Act 2.0. Indeed, abolishing minimum staffing requirements to run courses, improvement of the education quality assessment, and the obligation of publishing reviews of thesis have been introduced. The doctoral training and the academic career of teachers have also been deeply modified by the Act 2.0 law. Lastly, the assessment of research quality will now (from 2021) no longer be achieved through scientific units, but through HEIs, research institutes of the Polish Academy of Sciences, international scientific institutes or other research institutes in the disciplines in which they conduct research.

TUL and key figures⁶

Thanks to the very fast development of textile industry in the second half of the 19th century, Lodz became the second largest city in the area of Poland.

Lodz University of Technology (TUL) was created in 1945. Originally located in an old textile factory building, it now covers nearly 200,000 sq. meters over 70 separate buildings, the majority of them situated in the main University area.

The university's first faculties were Mechanical Engineering with Textile Engineering Unit, Electrical Engineering and Chemistry. 525 students were initially admitted to the first year of studies. During the 2019-2020 academic year, TUL has 16,726 registered students in bachelor and master programs, and 612 PhD students. The total number of staff is 2705, including 1234 academic staff and 221 professors. 53 fields of study are proposed to students. 3518 students have been graduated in 2018.

TUL Governance

The direction team of TUL is composed by the Rector, supported by 4 vice-rectors respectively for Science, University Innovations and Development, Education and Student Affairs. 9 Deans chair the respective 9 Faculties. Several councils are associated to the overall governance: the University Council, the Senate and the various councils of academic degrees. The organization, the management and the functioning of these authorities as well as all services and departments are regulated by the Statute of TUL.

Positioning, strategy and challenges

TUL targets to be at the highest rank in Poland in terms of research and technology. Currently, TUL claims, according to the Perspektywy magazine university ranking 2019, to be the only university in Lodz to have a place among the national top ten universities. Moreover, TUL presently ranks fifth in the best technical universities category. TUL has recently applied to the "initiative for Excellence - Research University" call (see above).

Internationalization is also a main axis of development of TUL, both in education and in research. This is illustrated by the setting up and development of two interfaculty and international units: the International Faculty of Engineering (IFE) and the International Doctoral School (IDS). The IFE was set up in 1992. Its main target is to train future engineers to professional knowledge, in an international context, since all courses are delivered in English and in French. The IDS welcomes doctoral candidates from all nationalities, and offers innovative and individualized doctoral training.

It must also be noted that, taking advantage of the Lodz's central geographical position in Poland and of its Information Technology Center (ITC), within the ICT Central Poland Cluster, TUL aims to be a key actor for the setting up and future development of the 5G technology in Poland.

In addition to its scientific role, TUL has an important mission and a social role which are expressed through the institution's strong connection with the region and the town of Lodz. Two programs, for the local community, translate this mission into reality. First, in 2008, **Children's University** was established for children 7 to 12 years of age - the first one in Poland. This allows children's natural curiosity for the ins and outs of technology to be encouraged and addressed.

The University also cares for seniors. Since 2006, the **Third Age University** (UTW) has operated at TUL. The aim has been to include older persons in the system of lifelong learning and provide them with an opportunity for further intellectual and psycho-physical growth. 1000 students have already followed these courses.

II. ON-SITE VISIT DESCRIPTION

1- PRESENTATION OF THE INSTITUTION'S SELF-EVALUATION APPROACH

In order to increase its European and international visibility, TUL is committed in a proactive approach aiming at receiving external evaluation and/or accreditation. During the same year 2019, TUL has launched an institutional evaluation by the Hcéres and has also asked for an evaluation, with a special focus on internationalization, by the EUA (European Universities Association) in the framework of its Institutional Evaluation Program. At the same time, TUL applied for a national call for proposal also requiring self-evaluation including a SWOT analysis. Therefore, TUL produced a comprehensive file of elaborate documents: a detailed self-evaluation report, a thorough SWOT analysis, and numerous appendix, giving a lot of information regarding the past, current and future functioning of the university. According to the self-evaluation report itself⁷, it appeared that these documents have been elaborated in a real participatory way, involving 5 teams of several people.

The Hcéres' expert panel was thus given a very complete file of documents (including the EUA evaluation report), allowing it to have a comprehensive overview of the university. Several additional documents have been asked before and during the visit, namely dealing with financial matters, real estate questions, and partnership conventions. The only thing the expert panel didn't get was the TUL's proposal for the national call, because it was still underway at the ministry level.

After reading all these documents, the expert panel decided during its preparation meeting:

- to strictly follow the Hcéres processes and guidelines for external institutional evaluation, without taking into account the report of the EUA's institutional evaluation and its recommendations,
- to particularly focus during its in-site visit, in addition to the 6 domains of standards Hcéres' framework, on four several points:
 - the elaboration mode and monitoring of TUL's strategy,
 - the research priorities,
 - the international strategy and the partnership development,
 - the budget mechanisms, division, and validation.

2- COMPOSITION OF THE PANEL OF EXPERTS

The expert panel brings together:

Mrs. Marie Erard, Professor at Paris-Saclay University, Orsay, France

Mrs. Olga Battaia, Professor at Kedge Business School, Bordeaux, France,

Mrs. Edwige Helmer-Laurent, CNRS regional delegate, Nancy, France,

Mr. Blazej Skoczen, Prof. dr hab. inz. Polytechnic School of Krakow, Poland,

Mr. Mohamed Maamir, PhD student at University of Lyon, France

Mr. Cyrille van Effenterre, honorary general engineer, former chairman of Paris Institute of Technology, France, chair of the panel of experts.

During the visit, the Hcéres was represented by Prof. Pierre Sebban, science advisor.

PKA, which accompanies Hcéres along the present evaluation process, was represented by its Secretary General, Prof. Maria Próchnicka.

3- ON-SITE VISIT DESCRIPTION

The on-site visit took place in Lodz from October 7th to 10th, 2019.

During the first day, the opening session was chaired by the Rector of the University, Prof. Slawomir Wiak, with members of the SWOT Analysis team. Then the panel of experts met successively, all together or split into three different groups:

- the members of the University Council,
- a panel of members of the Senate,
- a panel of members of councils of academic degrees,
- the vice-rectors in charge of science and education, and the directors of faculties and centers.

In the evening, a visit of the International Faculty of Engineering has been organized.

The second day, the panel of experts held twelve meetings with administrative staff, faculty members, students, and partners. In the afternoon, two visits were organized:

- one visit of the campus, facilities, students accommodation, library,...
- one visit of some research laboratories.

The third day, twelve meetings were also held in the morning, with administrative staff, students PhD students and alumni, and partners (foreign universities, economic partners, representatives of the City of Lodz and Lodz Voivodeship).

The fourth day in the morning before leaving Lodz, the whole panel of experts met the Rector for a last series of questions.

During the on-site visit, the expert panel have had the opportunity to meet around 150 people from or linked with the university. The panel of experts has highly appreciated the quality of the welcome, the practical organization of the meetings, and the full collaboration of all the people met throughout the visit.

III. EVALUATION REPORT

1- STRATEGY AND GOVERNANCE

Field 1: The institution's missions and its strategic positioning

A shared and ambitious strategy to become a research intensive technological university

TUL has a clear and shared vision, follows a detailed strategic plan (2015-2020) and targets very ambitious objectives according to the strategic plan established for the period 2020-2025.

The committee recommends to break down the general strategy and ambition of TUL into operational and concrete goals, depending on the available resources, with an appropriate timeline, milestones and indicators.

While sticking to its historical regional and industrial "raison d'être", the current TUL Development strategy for the years 2015-2020⁸, aims at becoming "*an innovative university of technology with a recognised brand in Poland and abroad*". This plan is rather detailed, and sets up five strategic objectives, a precise list of operational objectives and specific actions, a scale of importance and emergency, a designation of responsibilities, as well as an identification of indicators and sources of financing.

Based on the outcomes and weaknesses of this strategic plan, TUL recently achieved a thorough SWOT analysis. This very deep, detailed and uncompromising exercise⁹ is quite impressive, and it certainly greatly helped TUL to build a new strategic plan for the next coming years.

There was also a need to take into account an important change induced in 2018 by the "*New Act on Higher Education and Science provided by the Polish government*"¹⁰. According to this new Act 2.0, TUL, which had to change its statute, benefits from a greater freedom to adapt its organisation, management and functioning.

TUL has thus undergone the establishment of a new strategic plan for 2020-2025, named with the acronym SAIL¹¹, which aims to transform TUL in a world-class research oriented university in technology, still emphasizing the local context and its socio-economical needs¹². Taking into account the drawbacks of the planning approach of the too detailed previous plan, this new strategic plan seems to be less detailed and less compelling. It presents four main objectives, divided into numerous sub-objectives. Such a general approach, resource oriented, promotes flexibility and is more dedicated to create momentum within the university and to gather its people and energies towards common goals. This plan has been established through a real participatory manner involving a strategic team bringing together representatives of the management staff and the faculty. Moreover, this plan seems to be really shared by most of the staff met by the expert panel.

In parallel, TUL recently responded to the governmental *Initiative of Excellence – Research University* program call¹³, under the supervision of the MNIŚW¹⁴. TUL aims to be part of the 10 research universities that will be selected under this program. Based on the prospect of a new additional state funding, this document will probably be translated into a specific contract with the State, and thus be really engaging, with operational means foreseen in order to reach the research outcomes that TUL has set up as strategic goals. Unfortunately, the expert panel didn't have the opportunity to have a look at this document, as the call was still under processing.

According to the committee understanding, the final result of this call should not affect the strategy of TUL but could somehow boost or slow down its setting up. The committee therefore recommends that in both cases TUL proceeds in developing operational plans dedicated to address the weaknesses identified in the SWOT analysis, with clear actions and means, milestones and indicators.

⁸ Self-evaluation report, Appendix 9a, extract from the development strategy (2013) for the years 2015-2020

⁹ Self-evaluation report, Appendix 10, SWOT analysis for Lodz University of Technology

¹⁰ Act on Higher Education on Science, also named "Constitution for Science", or "Act 2.0", Self-evaluation report, page 4.

¹¹ Self-evaluation report, Appendix 9b, Lodz university of technology strategic plan 2020-2025

¹² Self-evaluation report, page 10

¹³ Self-evaluation report, appendix 1

¹⁴ MNIŚW : Polish Ministry of Science and Higher Education

Field 2: internal organization and strategy implementation

An historical organization, due to evolve

The internal organization of TUL in several autonomous faculties inherited from history is now evolving due to the new Polish law. The current disciplinary refocusing and the reinforcement of a more centralized management should increase the effectiveness of the university's management and its flexibility, once in the steady state functioning.

The expert panel recommends to pay attention to some drawbacks of this evolution, i.e.: align the old and the new entities of the historical faculties to better support the strategy and the management, develop interdisciplinary axes in teaching and research, take care of the commitment of all faculty members to this new organization.

Like most of European universities, TUL has been so far organized as an addition of rather autonomous faculties, each one mainly dedicated to a specific field of engineering and getting its own subsidies for research activity from the Ministry. Each faculty is subdivided into units, in charge of courses and research projects. All faculty members are attached to one specific faculty, even if delivering courses in several faculties. Academic staff may also be additionally attached to the TUL Language Centre, the Centre of Mathematics and Physics, and the Sports Centre. At variance, there are no academic staff attached to International Cooperation Centre.

The current Hcéres evaluation process takes place at a time when the new statute has just been approved and the management has changed, due to the new Act 2.0. It is therefore rather delicate to give a feedback on the new organization and its adaptation to the new strategy. The expert panel was nevertheless really impressed by different organizational features: i) the current functioning of the Senate (about one hundred people meeting monthly, organized in commissions, and discussing all topics), ii) the involvement of the members of the University Council (in charge of the implementation of the statute and the supervision of the Rector's appointments), iii) the personal commitment of all the people met during the visit.

The new statute promotes the existence of disciplinary groups with heads and disciplinary councils. However, the expert panel didn't understand precisely how this new scheme will fit with the current organization of faculties, as many of them are mono-disciplinary (Mechanical Engineering, Chemistry, Electrical Electronics Engineering and Computer, Food Sciences,...) while some others are connected to several disciplines (Civil Engineering and Architecture, Technical Physics Information Technology and Applied Maths,...). Moreover, the expert panel understood that several colleges dedicated to multidisciplinary courses (Spatial Economy College, Logistic College, and Commodity Science College) will be removed in the next coming years. Therefore, the expert panel really expresses some concerns that the new organization may not ease the necessary development of multidisciplinary courses (see below chapter 2.2 Teaching policy), and could drastically limit the TUL's ability for engaging in European calls for proposal on research dealing with societal challenges (see below chapter 2.1 Research policy).

With the new statute, the management is supposed to be more centralized, whether it deals with human resource and staff appointments, or with financial matters. The expert panel strongly recommends the implementation by the direction of TUL of new tools (incentives, common structures, calls of proposals,...) in order to encourage different faculties or research units to work together in common courses or research projects. The Rector is nevertheless invited to pay a specific attention on some drawbacks of this new organisation, namely regarding the necessary internal adhesion of faculty communities.

Field 3: The institution's identity and communication

A professional communication, which could be more strategic

Communication tools are professional, but mostly dedicated to students' recruitment and institution's identity. A communication strategy could be more powerful with a defined action plan in accordance with the research international ambitions of TUL.

The expert panel suggests that the communication policy better support TUL's ambitions and highlight its values.

TUL's vision of its brand is seen as strength in the SWOT analysis, according to its popularity among students population. Some communication tools (such as Youtube Channel, social networks) for external communication are efficient and professionally implemented. However, the committee suggests that the communication strategy be more integrated as part of the global strategic lines for TUL, with goals, lines of actions and evaluation.

An important part of the communication staff is devoted to the recruitment and the institutional communication. Given TUL's ambition in research, the communication plan should also support research activities at the European and international levels by implementing new tools and addressing new targets. It will need dedicated means and a strategic line for the brand's communication defined and based on the values and vision of the university. For example, inclusion could be such a value for the strategic line of TUL's brand, considering the fact that TUL is inclusive, organized to build individual programs, and welcomes students with specific needs (disabled students or top athletes).

Since TUL's strategy targets high levels in the university rankings, the center for strategic analysis could be involved in the development of the brand strategy and especially the international communication strategy. With a better definition of targets and agenda, the resources devoted to communication tools could be more efficient and their actions more easily assessable.

Internal communication is supported by an internal platform: WIKAMP. WIKAMP is an important part of the development of new technologies for teaching. However, WIKAMP is not an internal social network. According to the students, some external networks, such as Whatsapp or Facebook groups, are more helpful for students' integration and for sharing information among groups. The expert panel recommends to ensure a good articulation between WIKAMP and external tools, as it will be a key point for improving internal communication among students.

2 – RESEARCH AND TEACHING

Field 1: Research policy

A major effort to boost an already sound research activity, which still needs to be better defined

TUL's ambition is to become a research-intensive university, and has identified five priority research areas. However, these areas are defined in a relatively large scope, lacking visibility and not focusing support to promising emerging projects.

The expert panel recommends to focus efforts and means (financial and human resources) on the development of a few most promising themes within the identified priority research areas. The committee also encourages TUL to achieve swiftly and coordinate its various tools related with the technology transfer and the entrepreneurship.

TUL conducts research activities in several fields of technology and engineering. About 87% of scientific publications of the university are in science (49.8%) and engineering and technology (37.2%). TUL puts an increasing effort onto the improvement of research quality and visibility of research results.

TUL has defined **5** priority research areas:

1. innovative applications of artificial intelligence
2. intelligent and secure infrastructure
3. systems and materials from nano- to macro-scale
4. closed-circuit bio-economy
5. chemistry for industry and medicine.

The selection of these priority research areas has been based on the SWOT analysis and a bibliometric study. It is supposed to be a crossing between the "top 20 topics of prominence" and emerging research areas. This approach has partially been motivated by the willingness to facilitate the emergence of interdisciplinary projects. The ambition of TUL is to become a visible partner in these areas for international research projects, and especially for European grants. The research staff is encouraged to develop international collaborations, but without a general framework at the university's level¹⁵.

These priority domains are defined in a relatively large scope including almost all research activities conducted by the university. Such a complex and high level organization offers less visibility and support to promising emerging projects.

In the framework of the *Research Initiative* call, TUL has launched several "Centers of Excellence & Innovative Labs" (CIEL) aimed at developing a cross-faculty collaboration with business environment, and concentrating on challenges emerging problems, "not on strict thematic subdivision of disciplines"¹⁶.

The expert panel didn't get a precise description of these centers, their number and their level of implementation. But the expert panel thinks that, with or without succeeding to be selected at the national call, the university should effectively develop such a mechanism, in order to be able to allocate if needed extra budget and human resources to the development of few most promising themes within the identified priority research areas. This concentration should provide a required support to these themes having the potential to become internationally recognized at leading positions. In particular, the themes related to the emerging societal challenges should be considered as potentially promising.

In parallel to the 5 main research priority areas, 12 scientific disciplines have been identified at TUL (among 47 disciplines within 8 fields according to the new Act 2.0):

- in the field of technology and engineering: (1) architecture and urban planning, (2) automatic control, electronic and electrical engineering, (3) computer science and telecommunications, (4) chemical engineering, (5) civil engineering and transport, (6) materials engineering, (7) mechanical engineering,
- in the field of science and natural sciences: (8) mathematics, (9) physical sciences, (10) chemical sciences,
- in the field of agricultural sciences: (11) food and nutrition technology,
- in the field of social sciences: (12) management¹⁷.

For each of them, the implementation of the research strategy is under the responsibility of the head of the discipline (together with the discipline councils recently created) and each faculty member is necessarily connected with one of these 12 disciplines. From now on, the national evaluation process will be done collectively at the level of the disciplines, and TUL's aim is to be rated an A or A+ level for all disciplines.

Two categories of permanent staff conduct research activities: research-teaching staff allocating 40% of their work time to research and research staff whose implication is up to 90%. These employees are evaluated on the basis of their scientific achievements including publications, grants, patents registrations and technological transfer including the creation of spin-off companies. This evaluation is an important driver force for improving research quality and alignment with the general research strategy. The evaluation of these achievements is also the basis for the funds distribution among the faculties and research groups according to the Polish law. Specific scholarships are also offered by the university to support the staff promotion (preparation for professor title or postdoctoral degree) and outstanding researchers.

TUL is actively seeking for being selected in national and international grant competitions in order to support its research projects. In 2018, TUL received grants from the National Science Center (24 projects), the National Center for Research and Development (6 projects), the European Regional Development Fund under the Operational Program Smart Growth (7 projects) and other domestic and foreign funds (18 projects). The University itself also funds projects from the budget of the MNiSW under the statutory activity of the University: 513 projects were funded in 2018 including 280 young scientist projects and 233 projects for maintaining the

15 Meetings with TUL's responsables for Science

16 Rector's powerpoint presentation Lodz University of Technology Excellence Initiative - Research University

17 Self-evaluation report, page 17

research potential. Among them, 53 projects can be qualified as interdisciplinary ones. In 2015-2018, TUL also participated as a partner in 6 research projects funded under the European Horizon 2020¹⁸.

The University has established a Technology Transfer Section (STT) as well as a Center for Cooperation with Economy, Innovation and Technology Transfer. The activities of the Technology Transfer Section are supported by the commercial company Technology Transfer Center of TUL. In 2013-2018, TUL registered 518 inventions and utility models for protection, obtained 474 patents and protection rights. The highest number of patents was recorded in chemical sciences (227) and environmental protection and bioeconomy (117). TUL received a number of international awards and distinctions: in 2018 - 3 gold medals, including 1 Grand Prix at the 16th International Exhibition of Scientific Research, Innovation and Inventions PROINVENT 2018 (Cluj-Napoca, Romania), 12 gold and 2 silver medals at the International Fair *Seoul International Invention Fair 2018*. The university conducts training and workshops on the commercialization of research results and academic entrepreneurship. An incubator for start-ups and spin-offs is under development. Actually, TUL will soon have at its disposal the whole range of tools dealing with valorization, technology transfer and entrepreneurship. All these structures will have to work together. The expert panel recommends that these various offices be efficiently articulated and strongly coordinated through a central level of governance, namely under the supervision of the Vice-Rector for University Innovation and Development.

Field 2: Teaching policy

A remarkable investment on new pedagogical methods

The university has made remarkable efforts to set up, test and promote innovative methods of teaching that are being implemented, thanks to teacher training and through mandatory implementation in teaching programs. These actions deserve to be continued and generalized.

The expert panel also recommends to reinforce the individualization of the education pathways and to develop more efficiently the apprenticeship.

TUL has approximately 15 000 students enrolled in 1st and 2nd cycles programs (~10 000 in the 1st cycle and ~5 000 in the 2nd cycle in 2018). 620 students are enrolled in doctorate studies. TUL has a very rich offer of programs on 53 fields of study in the 1st and 2nd cycles¹⁹ that goes beyond the expected topics for a technological university (Automatic Control and Robotics, Material Engineering, Civil Engineering...). TUL proposes also innovative programs such as Urban Revitalization or Paper and Printing Technology. The programs are adapted to the needs of the socioeconomic environment: around 77 % of the students find a job within a year after graduation and a low proportion of graduates experienced an unemployment period (<10% at bachelor level and <20% at master level after a year of graduation between 2014 and 2016²⁰).

TUL is a popular university as it is the 6th most frequently selected university by applicants according to the Ministry of Science and Higher Education²¹. Nevertheless, the number of students²² is continuously decreasing as in every Polish university due to demographic decline in the country. TUL is aware of this evolution, which is rather seen as an opportunity to improve the quality of teaching and of graduates.

Since 2012-13, teaching programs are designed in terms of learning outcomes based on knowledge, abilities and soft skills that students should be able to display upon graduation. Curricula are evaluated and reviewed periodically according to stakeholders including students (Students' Self-Government is actively participating), teachers, graduates, employers and the global needs of the labor market (some faculties have an advisory board comprising representatives of the industry). The processes of evaluation, remodeling or creation and validation of the programs are clearly defined and shared by all stakeholders. In addition, all programs are also periodically under accreditation by the Polish Accreditation Committee.

As a consequence of the new Act 2.0, programs were entirely rebuilt during the last academic year (2018-19). This gave TUL the opportunity to implement new processes either concerning mandatory courses or teaching modalities. These new features are based on the experience gathered by a few flagship programs taught in foreign language (in particular at the International Faculty of Engineering (IFE) but not only, mostly in English or

18 Self-evaluation report, page 20
19 Self-evaluation report, page 24
20 Self-evaluation report, Appendix 6
21 Self-evaluation report, page 5
22 Self-evaluation report, Appendix 16b

French) or co-organized with another institution (double diploma programs in Polish with partners in Lodz or in Poland). This evolution is in line with TUL main objectives for the next years *i.e.* offering a high level of education and modern teaching policy to the largest population of students.

The IFE was launched more than 20 years ago. It proposes programs mostly in English and one program in French, in cooperation with several faculties of the university. An outbound mobility semester in a foreign university is mandatory in all IFE I-cycle programs. Part of the study program is based on problem-based learning (PBL), design thinking (DT) and e-learning methods. The building hosting the IFE is fully adapted to such modalities (classrooms with modular furniture, self-service computers equipped with professional software, ...). The IFE building also includes places dedicated to the well-being of the students and to improve their learning capabilities, quiet places to work in small groups, room for resting,...). The teaching staff at IFE comes from all faculties of the university. IFE can be seen as an experimental laboratory which applies new teaching methods. Those practices, all of them placing the student at the center of the education process, already start to spread in all faculties.

TUL develops considerable efforts to implement new pedagogical methods in all its faculties. Classrooms dedicated to new didactic approaches and spaces to improve the working environment of the students have been implemented in each faculty. The university provides the necessary training on many topics to all volunteers. Training courses are proposed either using e-learning (Didactic 2.0 project) or face-to-face session on specific subjects. Foreign lecturers were also invited to help to the implementation of the new practices.

Several specific actions are also launched at the level of the university to impulse changes²³.

For example:

- TUL plans to adapt 60 courses in flipped education from September 2019 and June 2022 based on voluntary basis.
- TUL supports e-learning and blended learning that include e-learning using WIKAMP such as e-mathematic and e-physics websites projects that aim to homogenize the knowledge of students on these subjects.
- A proportion of problem-based learning will be introduced in all curricula of TUL.
- Since 2019, TUL offers the possibility to volunteer staff teachers to fully dedicate their working time to didactic tasks. Those teachers could constitute an important relay in defusing new pedagogical methods.
- Learning foreign languages is also a central concern for most programs. This is highly supported by the Language Center of TUL.

The expert panel recommends continuing the actions started to implement modern teaching methods throughout all the University. The next step for TUL might be monitoring the consequences of such new pedagogical methods on the learning capabilities of the students, their results and their insertion in the job market. This may open new fields of research at the university.

TUL indicates that the student pathways can be adapted to the needs, the interest and the professional objectives of each student. Indeed, students may choose the course language (in Polish or in foreign language), the scientific team for internships and topics for projects-based classes. In the other hand, the expert panel noticed that TUL hasn't highlighted so far the apprenticeship, which fit some student's needs, and could also may be a very efficient mean for tightening links with companies. Therefore, the expert panel recommends encouraging the individualization of education pathways, including a special effort to develop apprenticeship.

38 programs of postgraduate studies are offered in TUL by all the faculties on a fee-paying basis. Topics can be either chosen by the teaching staff or asked by the companies to meet their specific needs. Two programs are already registered and labeled in the Polish Integrated Qualification System²⁴. Two other programs are being prepared for registration. This will strongly increase the recognition of those programs. The committee strongly recommends maintaining the efforts towards this direction.

23 Self-evaluation report, page 27, 29
24 Meeting with persons in charge of continuing education

Field 3: The link between research and teaching

A will to develop a research-based teaching in cycles I and II and a new international doctoral school in cycle III

There is a clear desire to develop research-based learning activities apart from internships. The University has also taken advantage of the new Act 2.0 to strongly improve the doctoral studies by settling an international and interdisciplinary doctoral school.

The committee recommends to support interdisciplinary PhD projects and to promote PhD studies by recruiting more foreign PhD students.

The link between teaching and research is a formal requirement for every program in Poland in cycles II²⁵. At TUL, the competences developed through any research activities are present in the learning outcomes of all programs. Students are strongly encouraged to work in the laboratories of the university before the doctoral studies. The outcome of research-based teaching depends on the year of study and the program. It includes the ability for the students to formulate and test hypothesis, possibly design, run and interpret the experiments, develop their critical spirit and scientific curiosity. These outcomes can also be reached during "classical" courses by using research-related activities during the class.

Internships and courses may lead students to the laboratories. Mandatory internships and diploma theses performed within scientific teams of TUL directly involve students into the lab work. Courses using problem-based learning or project courses based on research "problems" or topics also drive students to the labs. Interactions between young students and PhD are therefore facilitated, the latter supervising the former ones. Problem-based learning teaching units are now proposed in all programs of TUL, therefore multiplying such interactions. The students' work in research in cycle I and II is recognized:

- Many master students are co-authors of TUL publications (~200 publications per year)²⁶.
- Rector's prize awards every year the youngest first author of a scientific publication.
- In the past 2 years, 6 students received a grant from the Minister of Science and Higher Education for their achievement in research.

Before September 2019, each faculty organized its own doctoral studies leading to a strong heterogeneity from one unit to another. Since September 2019, PhD studies (4 years) have much evolved. All doctoral students now belong to a unique IDS and thus will be treated identically (fellowship, supervisor duties, teaching program...). As there is a single doctoral school for the whole University, it is therefore *de facto* interdisciplinary.

The main changes are the following²⁷:

- All courses and documents (communication inside and outside the doctoral school) are in English. This will facilitate the recruitment of foreign candidates.
- Every student belonging to the doctoral school will receive a minimum stipend, which covers the cost of living. This avoids students to work outside and will improve the percentage of PhD students, who indeed defend their thesis in due time.
- PhD students will also have to follow courses that cover a wide range of topics including soft skills and disciplinary topics.
- The duties of the supervisors are strengthened. Each PhD student has now to prepare and submit an individual research plan within 12 months after the beginning of his PhD. The progress of this plan will be assessed at mid-term.
- Teaching is no longer compulsory. Teaching is however still possible during 60 h during the 3rd year of the thesis.

TUL has taken the opportunities proposed by the new Act 2.0 to reorganize completely the doctoral studies. Its aim is to train future qualified scientific and research staff²⁸. The panel estimates that this doctoral school is also a useful lever to build an international research university, in particular through the recruitment of foreign PhD students. Its interdisciplinarity could be an advantage to promote projects involving different research fields and in the future the panel recommends to dedicate a subset of fellowships to run such projects.

25 Self-evaluation report, page 37

26 Self-evaluation report, page 37

27 Self-evaluation report, page 40

28 Self-evaluation report, page 40

3 – STUDENT ACADEMIC PATHWAYS

Field 1: Academic pathways, from career guidance to employment

Students' organizations fully involved in a student-centered university

Students representatives and organizations manage with great autonomy all questions and decisions regarding student life policies for the university. They are also considered as stakeholders in the university policies and take part into the decision process of TUL's policies regarding all the topics and insure the interface with other students. However, the link seems to break by the end of their training, as the university does not maintain a strong link with its alumni.

The expert panel recommends to support the commitment of Alumni in the activity of the university, and namely in the definition of study pathways in faculties, according to the ongoing endeavour at IFE.

Students of TUL have representatives at all levels of governance as well as self-governed parliaments in faculties and at the university level. The student parliaments manage autonomously the issues and policies regarding student life at TUL – e.g. the financial assistance regulation²⁹. A budget is defined (200k PLN) and given to the self-governed parliament to fund projects and student organizations³⁰.

Furthermore, student representatives are also involved in building the university policies as, for example, the implementation of the new reform and the creation and modification of teaching programs. Students' feedback is taken into account on various matters, not only on the teaching evaluation, as they are considered as fully-fledged stakeholders in the university management and policies³¹.

Students at TUL are supported by various services dealing with training and career choice. The Career Office has 7 staff members, a number relatively superior to other universities, and is able to offer individual counselling, co-organize job fairs (the largest in Poland, involving on average 130 companies and 18 000 visitors) and training for job search. The university also promotes entrepreneurship and helps students to develop their ideas by providing training and mentoring.

The Career Office carries out employment statistics, based on data received from Poland social security office and on voluntary surveys among the alumni. The Career Office also promotes TUL's training and career possibilities to secondary pupils of the city, in collaboration with local stakeholders. As well, partnerships with companies exist to promote the students and help them with future employment³².

Field 2: Learning resources

A state-of-the-art digital platform, which use still needs to be extended

The university has deployed tools and a digital platform for teaching (WIKAMP). However, the use of this tool is still dependent on the teaching staff decision.

The expert panel recommends expanding the use of digital tools such as WIKAMP platform in all faculties, and be aware of the increasing needs for new-look learning spaces.

The library network includes the main library, as well as 14 affiliated libraries, from faculties, departments and institutes. The learning resources policy is up to the standards. Students have access to physical documents as well as electronic versions. The main library is accessible to student with disabilities and has suitable places for courses and exam preparation (677 places and 58 computers)³³. The IFE offers co-working equipment usable by students outside the teaching hours. Computers labs with software licences are accessible for the students³⁴.

29 Self-evaluation report, page 46

30 Meeting with senate student representatives

31 Meeting with Vice-Rector for Student Affairs

32 Self-evaluation report, page 42 and meeting with the staff of the Career Office

33 Library visit and self-evaluation report, page 47

34 IFE visits

An online learning management system (WIKAMP) has been developed and maintained by the university staff. The platform is usable by the teaching staff and allows students to access to the course materials, as well as for teachers to follow each student progress. However, the use of the platform is mainly decided upon the teacher's initiative. Some teachers don't use the platform and continue to rely on mailing lists to send information and teaching materials to the students³⁵.

The committee recommends continuing the promotion and the development of WIKAMP as it is a strong tool suitable for the type of innovative teaching delivered at TUL. Furthermore, non-users of the platform should be encouraged and helped to switching to it.

With regards to learning spaces, considering the development of innovative teaching and problem-based learning, the university should be aware about the possible rise in demand for such places where students can meet and work on their projects. This should concern the libraries as generally their use tends toward becoming more of a learning center offering general student life services.

Field 3: Learning environment

A vibrant student life with top infrastructures

The university benefits from exceptional facilities and collaboration with local communities regarding the learning environment. Student's organizations and initiatives are well supported by the university and faculties.

The expert panel suggests to encourage the gathering of students initiatives, organizations and support services into a dedicated university-level place.

Student life is well organized and numerous students clubs and associations are active on different fields (80 scientific clubs and 19 student organization). Those organizations are funded and supported by the university as, for example TUL scientific clubs which participate in diverse national and international challenges. The students taking on responsibilities or participating in cultural and sports initiatives can benefit from individualized learning paths³⁶.

Students in collaboration with other stakeholders organize various events regarding career guidance, job fairs, sport or cultural activities. Furthermore, access to sport and cultural infrastructure is well developed, with 36 academic sport sections. TUL works with the local communities and the region on the topics. The Sports Bay is an example of that sort of fruitful collaboration³⁷ as of which TUL will host the 2022 EUSA Games, a large international academic sports event. This kind of infrastructure is of a great importance to welcome high level athletes as students and, in general, for student life.

TUL's student dormitories count 3000 beds, with various accommodations (gyms, laundries, leisure equipment...) ³⁸The number of places is sufficient regarding the demand.. New students are welcomed at the beginning of each year by the staff and the student organizations. The social policy is permitting the allocation of grants to the maximum number allowed by Polish education laws³⁹. Other scholarships granted by foundations and by TUL have been created to help more students. An important focus has been given to students with temporary or permanent disabilities. An office with a dedicated building and a dedicated student committee is in place and offers help and consulting for students and staff on that matter. The office help around 250 students each year, proposing didactic assistance (individual classes, sign language translation...), as well as health and psychological assistance.⁴⁰. The office publishes twice a year with the participation of students with disabilities a national magazine on the topic⁴¹.

The committee has found very satisfying the importance given to the student life quality in the university policies. The amount of work done to integrate students with disabilities and the collaboration with local stakeholders must be noted as well. However, the student life is faculty-centered. A dedicated central place for students

35 Meeting with students

36 Meeting with Vice-rector for student affairs and student representatives, self-evaluation report, page 45

37 Campus Visit and meeting with local communities representatives

38 Self-evaluation report, page 49

39 Self-evaluation report, page 48, and Students representatives meeting

40 Visit of the office for Student with Disabilities, self-evaluation report page 44

41 AION – Academic Information Magazine for Persons with Disabilities

could be investigated. That central place could host student services infrastructure as well as offices for the different student organizations and clubs. This would help to develop the university esprit de corps and boost, furthermore, the interdisciplinary initiatives.

4 – EXTERNAL RELATIONS

TUL external relations are extended over domestic and international, bilateral and multilateral cooperation's with scientific and industrial partners. The original "textile" profile of TUL, reflected by its national and international cooperation, has been substantially refurbished, to become largely open and ready to absorb new disciplines of science and modern technologies.

Field 1: Partnership policy

An active local partnership policy

The university is well integrated in the local industrial network, and in the platforms offered by the city. There exist many places of exchange and contacts between TUL and industrial and regional partners, as well as numerous common projects. It has to be stressed however, that these mostly very active relationships are too often bilateral, and do not translate into the partners associations combined with strategic thinking.

The expert panel recommends creating a more formal body to involve the university stakeholders, as a follow-up of its long-term vision.

In the *TUL Development Strategy for the years 2015-2020*⁴², the university has defined provisions of partnership in the domains of research, education and cooperation with the regional and national partners. The most important domestic partners of TUL are localized in the following regions: Lodzkie, Mazowieckie and Malopolskie.

One of the good examples of a partnership with an industrial platform is certainly the cooperation with the ICT Central Poland Cluster (CPC), established in 2012 and comprising 29 partners, including such companies like ABB, Ericsson, Fujitsu or Comarch⁴³. The Cluster is coordinated by TUL, and administrated by TUL Foundation, and has been subdivided into several task forces (TF) dedicated to: education, development and promotion strategy, as well as projects. The task forces come up with the proposals of common technological projects, subjects of research and support for education. TUL has the opportunity to be also part of many other clusters, listed in its strategic documents⁴⁴ (Advanced Information Technology Center, BioTechMed, AeroNet, Agro-Tech, E-Health Cluster, Ekoenergia, Lodzistics, Lodz Energy Wave Cluster,...).

In addition, in order to facilitate the relationships with the regional and the national partners, TUL has established the Center for Cooperation with the Economy, Innovation and Technology Transfer, as well as the Technology Transfer Center of TUL Ltd. These two institutions are backed by the Interdisciplinary School of Innovation and the Promotion Office of TUL.

The expert panel recommends relying on these various tools dealing with technology transfer in order to develop a more structured industrial partnership policy.

Cooperation with the central administration has been recently focused on the organization, together with the Ministry of Science and Higher Education, of two editions of the National Science Congress (in the context of new Act 2.0), and development, together with the Ministry of Digital Affairs and the Ministry of Entrepreneurship and Technology, of 5G Competence Center (pilot project).

For what concerns scientific cooperation at the regional and the national level, apart from classical grants and research programs, the International Visibility project and the InterChemMed project (doctoral studies, double-diploma, and cooperation with the secondary schools in the Region) were developed.

Taking into account the example of the ICT Central Poland Cluster, it is highly recommended by the expert panel to adopt more formal platforms for the associations of the university stakeholders, as a follow-up of its long-term vision. This also applies to the local authorities, the alumni, the companies and the industrial partners, as well as the regional and national scientific partners, etc. In particular, initiating a formal platform (advisory

⁴² Self-Evaluation Report

⁴³ Meeting with ICT CPC representatives at TUL premises

⁴⁴ Rector's powerpoint presentation Lodz University of Technology Excellence Initiative - Research University

board) comprising the national (Government), the regional (Marshal's Office), and the local authorities (City) might be beneficial to the university.

Field 2: International relations

A well-established international activity still focused on education

Given the long-term historical context, the international relations (IR) are well established, and are mainly based on bilateral agreements resulting in student's exchange and staff mobility.

The expert panel recommends intensifying efforts to transform the mostly bilateral relations at the European level into an active participation to academic networks and common multi-partner platforms focused on research cooperation in order to be more integrated in the European Research Area. This networking should specifically target partners involved in the domains of TUL's strategic objectives.

TUL Development Strategy for the years 2015-2020 assumes that the university will become an "innovative research university with a technical profile and an established international position".

The international strategic partners of TUL are the University of Strathclyde in Scotland and the Novgorod State University in Russia⁴⁵. The list of other foreign strategic partners of TUL includes: RWTH Aachen (Germany), University of Twente (Netherlands), DTU (Denmark), Universitat Politècnica de Catalunya (Spain), Universidad Politécnica de Valencia, University of Aveiro (Portugal), University of Pavia and University of Padova (Italy) as well as Ecole Polytechnique de Palaiseau, ECAM Cluny and ECAM Lyon, ENSAM Paris, Ecole Centrale de Lyon or INSA Lyon, HTW Saar, etc. TUL has signed numerous bilateral cooperation agreements with these and other institutions. Moreover, TUL belongs to the following organizations: European University Association (EUA), Agence Universitaire de la Francophonie (AUF), Baltic University Program (BUP) or AUTEX (Association of Universities for Textiles). TUL has also approved the Magna Charta Universitatum. The university is very active in the domain of international conferences and congresses, workshops, summer schools, training weeks, etc. However, it is the Erasmus/Erasmus+ mobility that is dominating with some 360 agreements signed. Also, TUL is the leading university in Poland in the exchange of students under the IAESTE program, and has signed some 230 agreements with 190 foreign universities in the form of cooperation contracts, cooperation agreements, and dual diploma agreements.

For what concerns the institutional support of internationalization, the International Cooperation Center (ICC) of TUL has been established in 2017⁴⁶. The Center includes – among others - the International Faculty of Engineering (IFE), which has been successfully operating at TUL for 25 years. In particular, the international rankings and the international accreditation issues are within the scope of the Center competences. Moreover, the ICC is in charge of monitoring the international cooperation by means of the adopted indicators, and in charge of implementing the improvement measures.

Given the majority of bilateral agreements with the foreign partners, the expert panel highly recommends to create an international strategy dedicated to increasing networks with European partners. This networking should be related to the strategic objectives defined by the university management in terms of research (universities, institutes and laboratories), technologies (industries, companies and firms) and education (universities, schools).

⁴⁵ TUL Self-Evaluation Report
⁴⁶ Meeting with director of ICC at TUL premises

5 – MANAGEMENT

Field 1: The institution's finances

Financial support from ministry and partners, together with a strong budget management, leads to a positive situation

With its solid budget, managed by a professional staff in charge of budget and accounting, TUL can build some important investments with a part of self-financing in response to its strategy.

The committee recommends making sure, with adapted instruments, that the long-term financial engagements related to investments and human resources are feasible. The committee suggests that in order to become (as planned in the TUL's strategy) an important research university, new tools should be set up to stimulate faculties and centers to improve the number of European grants.

As a public university, TUL's financial supports rely mainly on public subsidies provided by the ministry of science and higher education. According to the Self-Evaluation Report, they amount to ~ 70% of the institution's revenues⁴⁷. The total amount of the annual budget⁴⁸ is 403 011.5 in thousand PLN dedicated to didactic activities (301 947.5 around 75% of the total budget), research activities (66 599.9 ~ 16% of the total budget) and other operational expenses (33 734.9 ~ 9% of the total budget). An important part of the annual expenses is the payroll and social insurance for TUL's employees for 281 600 thousand PLN (70% of the total budget) which seems to be coherent in comparison with other higher education institutions. TUL's financial situation is stable (thanks to efforts in cost constraints) for several years and benefits from increasing resources from research and investment policies.

TUL's resources for its activities are mainly supporting didactic activities (while the cost for scientific and technical studies is high and the subsidies from the ministry are not sufficient⁴⁹) and payroll expenses. Consequently, research activities are conducted thanks to specific grants (from National Center for Research and Development, National Science Center for international cooperation). As one of the main goals of the new strategy is to become an intensive research university, the strategy to develop new resources for research should lead to obtaining better successes in European Grants (Weakness #3⁵⁰). While the raise of external funds for scientific research is seen as an opportunity by TUL (Opportunity #15⁵¹), the way to obtain more grants is not clearly defined in the strategic line of actions.

Up to now, the ministry has used an algorithm to compute the amount of financial support for the university with some incentives due to specific parameters. Indeed, half is a constant amount, half is variable, based on the number of students (in each cycle), staff members, and research production. Other parameters are taken into account with a lower weight: internationalization, projects and R&D. The application of this algorithm can lead to an evolution in the range -2% to +6% of the ministry subsidies in 2019⁵². The decentralized management system in TUL uses the virtuous circle based on the incentives included in the national algorithm. It is also used to allocate financial resources to faculties and centers rather than focusing on each strategic line of action.

However, as a part of the internal allocation of subsidies, resources for implementing strategic activities are secured in the rector's financial reserve.

Up to now, this way of implementing the algorithm takes into account the scientific results of each faculty as well as the statutory activities⁵³.

The new Act 2.0 favors global budget attribution rather than specific subsidies to faculties. To take into account this new budget centralization, the expert panel recommends that TUL takes great care of the internal allocation system which should lead to a better match between the strategy and the financial support.

47 Self-evaluation report, page 58

48 Appendix 3F Report on the implementation of the material and financial plan for 2018

49 Threat #7 and threat #8 in the SWOT analysis

50 SWOT analysis

51 SWOT analysis

52 According to Appendix 3c_Ministry Scheme_Academic Universities_2019

53 Self-evaluation report P 58

The new Act 2.0 is concomitant with the national excellence initiative. For 10 selected universities, the part of the variable subsidies will grow from 50% to 75%. This will create stronger incentives to become a leader in European consortia, and a high intensive research university⁵⁴.

The annual balance sheet has been positive for some years. In order to cater the ambition of its new strategic plan, one of TUL's projects is to develop other resources such as research grants especially at a European level (Vision 2020, EIT...). In addition, the success at the national call excellence initiative will grant new annual resources up to 10%, from the program. If achieved, this objective will have an important budgetary impact that will make it possible to implement transverse additional measures and therefore to better support the strategy.

Budget decisions are discussed by the Finance Committee and the Senate. Deans and directors have an important responsibility for achieving the strategy's target. The Senate, deans, members of the community can get reliable transparent information about the budget. In fact, all decisions are shared by the community and the changes are widely accepted.

The committee has noticed the professionalism of the staff in charge of the budget construction and implementation, and accountability. Nevertheless, as in many other institutions, the management of multiannual commitments remains manual and the committee recommends developing efficient financial software tools to implement and monitor these multiannual commitments.

Field 2: The institution's human resources

A dynamic HR management, which includes specific encouragements to reach the research and education strategic goals

TUL's HRS4R⁵⁵ label has main positive effects onto the program of professional training to new pedagogical methods and in terms of transparency for recruitment. Criteria for job creations and teacher or staff hiring are well known and accepted. Attractiveness is a key point for the international strategy especially for research.

The expert panel recommends implementing a specific HR policy focused on the internationalization of its faculty, while producing new tools and rules dedicated to increase its attractiveness abroad.

With around 2700⁵⁶ academic and non-academic permanent staff, TUL's tends to balance academic and non-academic staff. TUL's HR management is a very important part of the institution's strategy: it is an asset to improve rankings in research activities and the capacity to change pedagogical methods.

During the last ten years, the number of staff members decreased from more than 3000 persons in 2009 (1503 academic and 1501 nonacademic) to 2682 staff members in 2018⁵⁷ in response to the decrease of the student number in the country. Indeed, the academic staff members drastically decreased at TUL (~17%). This can be seen as the HR adaptability of the institution. Salaries still represent 70% of the total amount of expenses.

Conversely, TUL hasn't managed so far to increase significantly the percentage of foreign faculty members: although the number is slightly increasing since 2009, only 18 academic staff members are non-Polish. This situation is identified as a weakness by TUL (weakness #8⁵⁸).

As a consequence of the strategy of implementing good practices in HR, TUL commits in different labels and quality insurance processes at the European level. This is reflected in terms of recruitment which follows the OTM-R principle (Open Transparent and Merit based recruitment), applied for both academic and non-academic staff.

Teachers are recruited for a 4-year contract at first; then they may become permanent full-time professor. The decision to hire a new staff member still depends on the Rector, but each faculty defines the needs for new recruitment, and this recruitment directly impacts the budget of the related faculty. This decentralized system can provide a relevant adaptation of the HR to the respective needs of the different disciplines. In fact, the long

54 See appendix 3e_Ministry Scheme_Academic Universities - Research Initiative from 2025
55 Human Resources Strategy for Researchers Award, delivered by the European Commission
56 According to the self-evaluation report, page 60
57 Self-evaluation report page 61 table 1
58 See SWOT analysis

term financial impact of those recruitments are secured in the rector's financial reserve or by various project funds.

According to the will to improve staff capacity to lead research programs or new courses, TUL's HR strategy is based on an individual annual evaluation. A specific process is implemented combining quantitative self-evaluation method and monitoring. If weak, this monitoring phase can lead to professional training or a change in activities, or even in the worst cases, to the end of the contact.

In the research area, encouragements for a higher level of publication are set up: the Rector's award for the highest level⁵⁹ of citation for example, as well as awards granted by the deans of faculties for scientific publications and didactic achievements, or a specific salary bonus for publication are levers to motivate academic staff members. Academic staff broadly accepts this "evaluation-correction" system. The same process is also applied for non-academic staff.

In order to further spread the innovative teaching methods, academic staff may now choose to dedicate 100 % of their activity to teaching and thus abandon research for some time⁶⁰, therefore supporting the pedagogical changes, as a priority of the institution's strategy for the next years. Conversely, the committee has not identified a clear strategy to recruit academic members in the research top priority topics.

All job offers for academic and non-academic staff recruitment are widely published and a competition process is organized for each position according to a decision of the Rector. TUL also provides some support for PhD students training or visiting professors⁶¹. TUL has been granted the HRS4R label⁶² by the European Commission. It is a guarantee of quality in the recruitment process. The successful setting up of this HRS4R label was initially namely intending to favor the obtaining of European grants, but it has also increased TUL's position in the Polish rankings, and is thus supposed to have had some side effects, like improving the level of post-doctoral fellows hiring and PhD students applications, and increasing TUL's international visibility. Therefore, the expert panel recommends monitoring and evaluating the effects of the HR strategy, and namely the HRS4R label, in the improvement of its international attractiveness (quality and figures of foreign recruitment).

More generally, internationalization is an important part of TUL's strategy, but the expert panel didn't see any dedicated HR tools and specific rules for attracting foreign faculty members. Therefore, the expert panel also recommends expressing concrete milestones for this internationalization of the academic staff and implementing operational tools in order to achieve those objectives. As another ambition is to develop international partnerships, the expert panel also suggests implementing specific incentives to encourage staff mobility and thus overcome the insufficient international experience of some part of the academic staff (weakness #12).

The new Act 2.0 also induced a recent change of the HR office organization. It is now divided into two units: a unit for hard HR (recruitment, contract) and a unit for soft HR (development of staff, funding for training). This new organization can provide for a better service especially for professional training and new pedagogical methods.

Field 3: IT system

An already efficient IT system, being rebuilt for higher strategic objectives

TUL's IT System provides some professional databases and operational links for the management. However, the production of some strategical ratios and indicators is still manual.

The expert panel recommends pursuing the efforts undertaken for developing the new integrated IT system connected to the strategic dashboard, in order to monitor the strategic line with specific indicators.

The institution is managed with the support of a full and consistent IT system with applications dedicated to new pedagogical methods (based on the MOODLE platform WIKAMP) and to resources management, deployed

⁵⁹ See self-evaluation report page 63

⁶⁰ Meeting with persons in charge of pedagogical engineering

⁶¹ <https://www.p.lodz.pl/en/hr/logo>

⁶² Human Resources Strategy for Researchers Award, delivered by the European Commission

by a numerous and professional staff. According to the IT direction, 7 applications are connected to each other in order to manage data for education, human resources and budget management.

The financial part of the information system is of commercial origin while all others have been developed by TUL's IT staff. Databases, applications, infrastructures, and safety and security rules are at the common international standards.

The available budgetary software doesn't allow to follow multi-annual financial commitments. The expert panel therefore recommends the development and insertion of an additional brick to this end that could be of major interest for TUL.

The information system is also connected to services for academic and nonacademic staff, and to the virtual office for students. A specific brick of the information system is dedicated to the projects management (starting from the idea of the project or partnership until the electronic signature by the Rector). However, the information system for research is not yet implemented and should be a part of the new IT system.

According to the SWOT analysis, this IT system is not allowing to collect and integrate data to serve the strategy management. This weakness (weakness #19) and the insufficiently effective quality management system (weakness #20) must be treated together, in order to build a more integrated IT system to support the ambitions of the SAIL strategy. This system is already thought as the production center of data for the strategic dashboard. The development of this software is only at its starting point, but this is clearly promising, according to the demonstration seen during the visit. The expert panel recommends to boost the integration of the IT system, as it is consistent with the creation of the strategic center.

Field 4: Real estate owned by the institution

A testimony of the city's industrial past finely adapted to the needs of a modern university

The real estate is remarkable by the diversity of historical, industrial and modern buildings. The program to maintain it in a proper technical condition and the program for new buildings are multi-annual and managed by a professional staff. Yet, the year-based budget must be cautious with regards to the long term commitments.

The committee recommends paying specific attention to multi-annual financial commitments especially at the level of the real estate investments even if they are secured by the subsidy and university own revenues

TUL now covers nearly 200,000 sq. meters over 70 separate buildings, the majority of them situated in the main University area. TUL's real estate is remarkable by its numerous historical components inherited from the industrial past of the city and by its modern transformation enriched with new buildings. Both allow TUL to meet its new needs for teaching and research, and also taking care of some specific activities, as the disabled students' office or the sport center for students and staff (the latter is not yet achieved according to the SWOT analysis – weakness #16). In case of increasing needs for room, it may be possible to have a better use of the resources through an optimization of classrooms and education buildings using the WIKAMP platform data.

The new Act 2.0 has a consequence in terms of subsidies devoted to real estate management and improvement. As the subsidies are now allocated to universities as a unique budget, TUL will have the capacity to re-allocate the non-used part of the subsidies for each project. According to the service in charge of the procedures and management of the real estate possessions, this change represents a great opportunity for a better use of public subsidies⁶³. It may be noted that the decision concerning new investment is based on the resources available from the investment subsidy (for which university applies) and, to a small extent, from university own resources. Funds secured for the investment are activated in the years of the investment.

The maintenance and repairing of buildings are managed yearly⁶⁴. In 2019, TUL's relative budget is around 8 million zlotys, allocated to 19 projects. Among them, 4,5 million zlotys are coming from external funding. TUL is able to manage the annual renovation plan using the ministry subsidies and its own resources. Such renovations

⁶³ Meetings with Chancellor and Vice-Chancellors
⁶⁴ See annex 2B renovation plan

can be internally managed by TUL's administration up to 2 million zlotys. Larger projects are managed by other external professional staff under the supervision of TUL's Chancellor.

A specific focus is made on the renovation of historical buildings: 9 palaces are maintained by the administration of TUL; 7 of them need specific investments in respect with historical buildings law.

Considering new buildings, TUL succeeded in managing some remarkable projects such as the multi-sports complex, or the new faculty of chemistry.

However, the real estate assets need a specific program for repairs and maintenance. This program may have an important impact on TUL's budget. Some industrial partners, as well as local authorities already provide specific subsidies for targeted projects (for example: the new faculty of chemistry or the program to improve the energetic performance of older buildings). Yet, the program could be implemented in the budget on a multiannual range.

6 – QUALITY AND ETHICS

Field 1: Quality and continuous improvement policy

A centralized quality management, slowly diffusing

TUL has implemented a centralized policy for continuous improvement using tools and indicators in order to identify the risks and elaborate corrective actions.

The committee recommends verifying that this approach is also followed at lower levels on the basis of the defined values, and that the spirit of quality insurance disseminates for all staff members, namely teachers.

The data for the quality management is collected in an electronic and manual manner and not in a systematic way. TUL also submits annual reports to the POL-on system⁶⁵. The documents prepared for the Polish Ministry of Science and Higher Education are also used for internal purposes.

TUL has an Internal Audit Office. The audit is oriented to evaluate different risk areas and may cover any area of the University's operations. The audit plans for 2018 included, among others, the following areas: education of academic staff, intellectual capital management, and strategic management. The year 2019 covered *inter alia* the following areas: student education, lifelong learning, scientific cooperation, material support system and insurance for students and doctoral students. An audit of the following areas is planned for 2020: remuneration policy and non-salary benefits, scientific research, and resource planning and employment policy.

The Head of the Internal Audit Office prepares an annual report on the implementation of the audit plan and submits it to the Rector. In 2016-2018, the reports of the Internal Audit Office identified significant risks and weaknesses in the following areas:

- the need to update internal legal acts in the field of planning, commissioning and settlement of teaching classes and teaching hours,
- the need to formulate rules for the conclusion of contracts with external experts carrying out teaching assignments,
- the need to formulate and sanction the manner of activity and forms of financing student organizations,
- the need to update internal legislation on social scholarships, IT management and personal data protection.

In 2017, a certified external auditor⁶⁶ assessed positively the internal audit activities at TUL. The following label was obtained: *Compliant with the International Standards of Professional Practice for Internal Audit*.

The Internal System for Quality of Education Assurance (WSZJK) is focused on the quality assessment of learning outcomes and programs, organization and conditions of education, quality of conducted classes and staff development in the field of teaching, etc. In addition, in cooperation with the Student Self-Government and

⁶⁵POL-on is an integrated information system on science and higher education, which supports the work of the Ministry of Science and Higher Education, the Central Statistical Office and the Central Commission for Degrees and Titles. It is a global database (registers of higher education institutions, information on faculties and profiles of education, aggregated numerical data on students, researchers and many others) about scientific institutions, universities and Polish science. The information gathered in supports the decision-making processes of the Ministry of Science and Higher Education. POL-on makes it easier to make decisions on the direction of expenditure on education and material support for universities. Some information collected in the system is publicly available.

representatives of the social and economic environment, the following set of evaluation questionnaires has been developed: course evaluation questionnaire, questionnaire for the evaluation of teaching, study program evaluation questionnaire, questionnaire to assess the conditions of studying, questionnaire for the evaluation of doctoral studies. The results of the survey are an element of periodical assessment of academic teachers according to the rules defined by the TUL Senate.

The University Authorities have decided to establish the Center for Strategic Analyses, which will allow analyzing the data in the different fields of the University activities and conduct the corrective action if needed. The expert panel suggests closely articulating the missions, processes and activities of these diverse structures (Center for Strategic Analyses, IT system team, Audit Office).

The expert panel suggests that the quality assurance is not only a management tool, but also a common tool for improvement. Therefore, the committee recommends disseminating this tool among the whole university community in order to be progressively adopted for each process. The panel expert therefore suggests proceeding in investing, sensitizing and training all staff in that domain.

Field 2: Ethic and Deontology

A well-defined vision, values and good practice

The institution has defined clear values shared by all staff. The processes adapted to ensure a good academic practice are in place.

The expert panel suggests that the Senate Committee for Good Academical Practice to stimulate more prevention actions and training.

The mission and the vision for the new strategic plan 2020-2025 have been summarized in the acronym: "S.A.I.L.". The committee noticed that these objectives are well known and shared by the staff of the university.

TUL promotes access to the university for everyone in the best studying conditions. For example, students with disabilities or health problems may benefit from the support of a dedicated office to study, in the best environment.

TUL also promotes the respect of strong values for the entire academic community. In 2007 and 2013 TUL adopted documents ("Code of good practices in higher education institutions" and "*Magna Charta universitatum*" respectively⁶⁷) that explicit fundamental academic values and ethics. Efforts were performed to translate regulations and codes adopted on behalf of the University into concrete actions in different fields. Rules are clear and everyone should act in accordance with those professional standards and ethical principles⁶⁸. In case of frauds or misconducts, there are disciplinary committees and disciplinary committees of appeal for all levels of University staff, in accordance to the New Act 2.0.

TUL was awarded for his good practices in the recruitment of employees by the logo HR Excellence in Research of the EC in 2016 and its extension in 2019.

Every education program has learning outcomes related to ethics and professional standards as well as courses dedicated to specific points such as intellectual property and plagiarism. An anti-plagiarism procedure exists for any diploma theses. The staff is trained to such practices.

The *Senate Committee for Good Academical Practice* is an official body created among the Senate. It expresses general motions and specific advice dealing with individual cases⁶⁹. According to the members met, there are no structural, cultural or recurrent issues (like nepotism, sexual or moral harassment, alcoholism, scientific fraud,...). Rather, few times a year the Committee is called for a mediation in conflicts between academics.

The expert panel considers that TUL's organization and processes fit with international standards. It appreciates the existence and the role of the *Senate Committee for Good Academical Practice*, but suggests it could contribute to stimulate more prevention actions and training sessions.

⁶⁷ Self-evaluation report, page 77

⁶⁸ Meeting with members of the Senate Committee for Good Academical Practice

⁶⁹ idem

IV. CONCLUSION

1 – PAST ACHIEVEMENTS

TUL is actually a relatively young technical university, built after World War Two, mostly in order to meet the needs of the local textile industries, and mainly focused on mechanical and electrical engineering, civil engineering and chemistry. Since then, TUL has managed to go through the difficulties of the last decades, and succeeded to accompany the dramatic changes of its regional socioeconomic environment while becoming a technological university nationally ranked and successfully involved in new fields of engineering, like material engineering, computer science, robotics and electronics.

Above all, due to a dynamic management, it has created a real collective spirit, has invested in new pedagogical methods, has developed research products, increased the numbers of its PhD students, and has launched international activities, at first with students exchange, and then in research cooperation.

2 – SUCCEEDING TODAY

In the framework of the new government Act 2.0, TUL is now committed to dramatic changes regarding its statute, management, new internal structure and financial functioning. In addition, TUL has applied for the Polish call for proposal "Excellence Initiative – Research University".

Taking into account the dynamism of the institution and its current situation, the expert panel is rather confident that the implementation of the regulation and financial new framework will allow TUL to achieve its new ambition to swiftly become one of the main Polish technological universities, and an important European player. At the end of its expertise, the committee notes that its analysis broadly matches that have been carried out shortly before by the EUA and of which TUL has already partially implemented some recommendations.

3 – LOOKING FORWARD

Becoming an innovative research university won't be an easy path. The future of TUL will obviously firstly depend on the support it will get from the State and other stakeholders during the next coming years.

However, in order to fulfill its objectives, TUL has also to make some tough investment choices, namely regarding its research top priorities, as TUL's current priorities areas cover large fields of new technologies (innovative applications of artificial intelligence, infrastructure and technologies of communication, nano- and bio-materials, eco-technologies.).

In parallel, TUL has to thoroughly select, reinforce its academic partnerships, and invest in them, especially in Europe. It has also to strengthen its links with its industrial partners, in order to build long term partnerships.

STRENGTHS:

- The university activities is based on transparency, democracy and dynamism, and relies on a general commitment of dedicated and involved staff, faculty, students and stakeholders
- The university has developed a clear vision and ambition, which is shared by all the community
- TUL is a university widely open to the city and a student-centered and inclusive university (foreign students, disable students or with specific needs) with an open-minded staff
- The academic research is backed by a homogeneous and coherent ecosystem mixing industrial companies and local community expressed needs
- TUL has a financially comfortable situation, a carrying job market, involved stakeholders, expressed societal needs, and has developed a real capacity to seize these current opportunities

- The International Faculty of Engineering (IFE) gives the university a remarkable flagship for good practices in internationalization, new pedagogical methods, promotion, and helps TUL to make the difference
- Modern didactic methods are spreading quickly throughout the academic staff, with a proactive approach
- Special and open link between teaching and research operates and is increasing
- TUL benefits from a rich, diverse, historical as well as modern, and well maintained real estate.

WEAKNESSES:

- There is still a gap between the general development strategies and the implementation plans and tools
- The way to reach the expected international dimension for being a research university is not yet clearly defined (tools, milestones, reporting)
- TUL's research policy has not yet well defined very specific priorities to focus on, among its major areas of excellence
- The university is short in dedicated support for developing interdisciplinarity in research and education of associated structures
- The communication is not yet sufficiently aligned with the ambitious strategy and values of the university, namely at the research and international levels
- The whole range of tools and offices for technological transfer is not yet fully implemented, articulated and exploited at the scale of the university
- The management lacks of a pluri-annual approach for objectives, indicators and budget
- The relationships with alumni associations and their involvement remain to be developed

SUMMARY LIST OF RECOMMENDATIONS TO THE INSTITUTION PER DOMAIN

Domain	<ul style="list-style-type: none"> Recommendations
Strategy & Governance & Communication	<p>Translate the general strategy and ambition of TUL in operational and concrete goals with an appropriate timeline, milestones and indicators</p> <p>Better coordinate the old and the new entities (disciplines groups and historical faculties) and drive the forthcoming evolution to better serve the strategy</p> <p>Build the strategic line of communication on the values and vision of TUL, in order to support its ambition, especially in research</p>
Research & Teaching	<p>Concentrate efforts and means (financial and human resources) onto the development of a few most promising themes within the identified priority research areas</p> <p>Align the technological transfer supporting structures (including the forthcoming incubator to be set up) in order to develop a more structured industrial partnership policy</p> <p>Proceed in implementing the individualization of student paths and develop actions to support the apprenticeship</p> <p>Develop the interdisciplinary character of the new Doctoral school and increase its size to attract more international and/or excellent PhD students</p> <p>Promote the research based-learning for a larger number of students</p>
Student Academic Pathway	<p>Support the implication of Alumni in the definition of study pathway in faculties according to the ongoing endeavor at IFE</p> <p>Generalize the use of digital tools such as WIKAMP platform in all faculties by encouraging academic staff</p> <p>Get student activities into one dedicated place at the level of the university</p>
External Relations	<p>Adopt a more formal platform for the association of the university's stakeholders in the follow up of its long-term vision (local authorities, alumni, companies, scientific partners, international partners etc.)</p> <p>Create an international strategy based on identified strong partners in order to develop a European research network associated with the strategic areas of TUL</p>
Management	<p>Make sure that the long term engagements related to investments and human resources are feasible with adapted tools</p> <p>Align the HR tools towards the international ambitions of TUL</p> <p>Develop the new integrated IT system and connect it to the strategic dashboard</p>
Quality & Ethics	<p>Verify that the spirit of quality insurance disseminates in the main processes for all staff members</p> <p>Stimulate the proactive action of good academical practice Committee in order to develop education and prevention among students and staff.</p>

GENERAL RECOMMENDATIONS TO THE INSTITUTION:

The five main recommendations provided by the expert panel to TUL in order to help it to achieve the ambition expressed in its new strategy are the following:

- to translate its vision and general strategy into operational objectives with an appropriate timeline, milestones and indicators,
- to implement a more formal pluri-annual approach, namely regarding investments and human resources, taking into account all the subsidies actually granted by the government and the expected own resources.
- to concentrate efforts and means (financial and human resource) onto a few most promising themes within the identified priority research areas, while strengthening strong research partnerships and networking at the European level, namely in the scope of addressing societal challenges,
- to develop the new doctoral school as a real international and interdisciplinary tool.
- to more formally associate the university's stakeholders (local authorities, alumni, companies, scientific partners, international partners, etc.) in the follow up of TUL's long-term vision.

V. COMMENTS OF THE INSTITUTION



Lodz University of Technology

Rector
Professor Sławomir Wiak Ph.D., D.Sc.



March 11th, 2020

Professor Françoise Pernot
Director of the Europe and International Department
HCERES

Dear Professor,

we would like to express our sincere appreciation to the evaluation team of experts appointed by HCERES. We gratefully acknowledge your efforts, expertise and professionalism. We would like to extend our deepest gratitude to the panel of experts team for their friendly and open attitude during the interviews and the whole evaluation process. We also wish to thank for the relentless support and advice throughout the process of preparing and submitting self-evaluation report.

The need to undergo institutional evaluation resulted from TUL's care for self-improvement and the strategic objectives adopted in the Development Strategy. We find evaluation to be a tool supporting continuous improvement, change management, building quality culture and the implementation of our mission. The academic community of the University is aware of the fact that the greatest value related to the whole evaluation process is not the moment of meeting the criteria and being awarded with the accreditation certificate but the benefits resulting from the report-writing process, implementation of recommendations and sustaining the achieved result.

We very much appreciate the opportunity granted to Lodz University of Technology to take part in the process of evaluation and bringing education and research in TUL to international standards. We consider HCERES institutional evaluation as a milestone in the process of balanced development of three areas on which the TUL mission focuses: education, research and service to society. The experience of the evaluation of our University is of utmost relevance in the process of continuous improvement, in our capacity to strengthen scientific output, and in the internationalization. The self-evaluation process and the report preparation stage provided an opportunity for in-depth reflection on the management of the University and on the procedures and mechanisms binding in TUL. We very much appreciate HCERES feedback. We are mindful about the comments and recommendations included in the evaluation report. Your insightful opinion encourages us to do our utmost in order to develop and implement improvement plan.

We hope that for our partners the fact that TUL underwent a non-compulsory evaluation will be a confirmation of its credibility and the willingness of the academic community to go beyond the necessary minimum. It will strengthen TUL to operate with world-class standards,

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improve indicators of international institutional positioning and will make TUL more attractive and reliable for international academic collaboration and for mobility. It will improve visibility of TUL at regional, national and international levels.

With respect to the evaluation report issued by the HCERES panel of experts, we would like to point out the following aspects:

1. We are pleased with the strong points identified in the evaluation report including commitment of dedicated and open-minded staff, students and stakeholders, our openness to the City, development of a clear mission shared by all the community, a remarkable IFE flagship in internationalization, and our capacity to seize opportunities we face. Although we have a similar feedback from our external stakeholders and the Polish Accreditation Committee, your opinion is a significant confirmation of our strengths.
2. With regard to the weaknesses indicated by the HCERES panel of experts, we recognize and share your findings in the areas of defining very specific priorities in the research policy, shortage of dedicated support for developing interdisciplinarity in research, unsatisfactory alumni association involvement or communication being insufficiently aligned with the ambitious TUL strategy on the international level. These weaknesses mostly coincide with our findings expressed in the SWOT analysis. We will review the weak areas and they will be seriously considered for improvement in our plans and actions.
3. With regard to the recommendations mentioned in the evaluation report, we very much appreciate HCERES feedback. Your insightful opinion is of great significance to us. The recommendations are very useful guidance for further improvement and development. We truly believe their implementation will prove beneficial not only to the University but also to its stakeholders.

Acknowledging the weaknesses indicated in the evaluation report but also certain of our commitment to the development of the improvement plan we request the Council of HCERES to approve the accreditation of our University.

Once again, we would like to express our heartfelt gratitude to the President of HCERES, the panel of experts and Europe and International Department Office for their dedication and professionalism. The participation of TUL as a pioneer Polish institution in the process of HCERES evaluation provides the opportunity to gain unparalleled experience to all stakeholders involved in the process, including our staff and students, socio-economic and industrial partners, national and international academic partners and local social actors.

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International evaluation and accreditation

ACCREDITATION DECISION

LODZ UNIVERSITY OF TECHNOLOGY (TUL)

Poland

APRIL 2020

SCOPE OF THE ACCREDITATION GRANTED BY HCÉRES

HCERES has built its evaluation process based on a set of objectives that Higher Education Institution must pursue to ensure recognised quality within France and Europe. These objectives are divided up into six fields among which are the accreditation criteria.

As for the "External Evaluation Standards", the accreditation criteria have been specifically designed for foreign HEI. The accreditation criteria were adopted by the Board on June 2016 and are available on the HCERES website (hceres.fr).

The accreditation committee, meeting his accreditation decision, has wholly taken into account the final evaluation report of the HEI. This accreditation decision is the result of a collegial and reasoned process.

The accreditation decision issued by HCERES shall not grant any rights whatsoever, whether in France or abroad. The decision to accredit an institution confers an accreditation label and does not infer recognition in France of the qualifications issued by the accredited institution. The HCERES accreditation process therefore has no impact on the qualifications recognition process in France.

ANALYSIS OF THE ACCREDITATION CRITERIA

AREA 1: STRATEGY AND GOVERNANCE

Accreditation Criterion

The institution is governed based on a strategy adapted to its environment and identity. The internal organisational structure is clearly defined and allows the institution to fulfil its missions. The institution's stakeholders participate in its governance.

Criterion Assessment

The whole community of TUL shares a common vision of its strategy. TUL had a detailed strategy for 2015-2020 and is underway to build in a participatory way a new one for the next period.

TUL is organized in a decentralized manner and all its activities are well monitored. The mix between a historical internal organization in faculties, the evolution generated by the new governmental act, and a partially project based management allows TUL to fulfill all its missions in an agile manner.

The main stakeholders are regularly involved in all TUL's activities. However, a more formal association at the strategic level of TUL should be sought.

AREA 2: RESEARCH AND TEACHING

Accreditation Criterion

The institution develops research and teaching policies adapted to its strategy and the needs of the socio-economic and cultural environment.

Study programmes are coordinated with the institution's research activities.

The programme offering is clear. Student admission, progress and qualification procedures are defined and implemented.

Criterion Assessment

TUL has a rich education program in science and technology, covering most of the needs of the local market, and is committed in a constant improvement of its programs, namely through new pedagogical methods. TUL should anticipate on new specific needs for pluridisciplinary multi-faculties programs.

TUL has the ambition to become an intensive research technological university. It is on the track thanks to a voluntary strategy of identification comprising scientific priority areas and leaders, incentives for human resources, research based learning, and a new doctoral school. It remains to implement operational tools in order to reach the defined goals, including the development of interdisciplinary projects.

AREA 3: STUDENT ACADEMIC PATHWAY

Accreditation Criterion

The institution is attentive to learning resources and the quality of life of students. It ensures that students are well-informed and provided with student services throughout their academic careers. Students must be able to participate in governance structures.

Criterion Assessment

TUL is organized in order to provide conditions for successful student pathways through modern student life infrastructures, supporting staff, learning resources and modern pedagogical methods.

Students are fully involved in the TUL's governance structures and in charge of governing student life resources and activities in full autonomy.

AREA 4: EXTERNAL RELATIONS

Accreditation Criterion

The partnership policy is designed and established to provide added value for the institution. The institution has structured its cross-border relations and developed internationalisation mechanisms that are adapted to its strategy.

Criterion Assessment

TUL has built clear partnerships with its local, political and economic environment and has developed with all its stakeholders a fruitful relationship.

TUL has a various international network essentially built for successful students exchanges. It has not yet developed an explicit international policy, namely at the European level, aligned to its ambition in research.

AREA 5: MANAGEMENT

Accreditation Criterion

Financial, budgetary and human resources are managed and organised in a defined and well-controlled manner. They are adapted to the strategy defined by the institution and involve multi-year planning. The institution has an IT system adapted to its strategy and objectives. The institution's assets are well-known and managed.

Criterion Assessment

TUL's resources and assets management is well controlled and organized with very professional support services. It still lacks a clear formal multi-year financial planning on all topics, especially on HR. There is already a HR, Financial and student connected IT system. It is about to be rebuilt in order to become a more modern support for the strategic lines of TUL.

It remains to be seen how the interplay between the new tools (audit department, centre for strategic analysis, and the new IT system) will support the strategy management.

AREA 6: QUALITY AND ETHICS

Accreditation Criterion

The institution has defined a quality policy for all its missions and strives towards continuous improvement. It upholds ethical values and professional standards, and applies them in its day-to-day operations

Criterion Assessment

TUL is fully engaged for some years in a quality culture which is gradually spreading through all activities.

With an objective of transparency, everyone is aware of clearly defined and shared internal rules at the time of many structural changes. Students and staff are also trained for professional's ethical principles.

FINAL DECISION

Considering the accreditation criteria analysis detailed above, the accreditation committee issues the following decision:

“Five-year unreserved accreditation decision”

and draws attention to the five main recommendations provided by the expert panel to TUL in order to help it to achieve the ambition expressed in its new strategy are the following:

- to translate its vision and general strategy into operational objectives with an appropriate timeline, milestones and indicators,
- to implement a more formal pluri-annual approach, namely regarding investments and human resources, taking into account all the subsidies actually granted by the government and the expected own resources.
- to concentrate efforts and means (financial and human resource) onto a few most promising themes within the identified priority research areas, while strengthening strong research partnerships and networking at the European level, namely in the scope of addressing societal challenges,
- to develop the new doctoral school as a real international and interdisciplinary tool.
- to more formally associate the university's stakeholders (local authorities, alumni, companies, scientific partners, international partners, etc.) in the follow up of TUL's long-term vision.

SIGNATURE

For HCERES and on behalf of



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Nelly DUPIN,

Acting President

Date: Paris, April 15th, 2020



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