IEP INSTITUTIONAL
EVALUATION
PROGRAMME

WARSAW UNIVERSITY OF TECHNOLOGY

EVALUATION REPORT

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This report is the result of the evaluation of the Warsaw University of Technology. The evaluation taking place in 2023 was the first IEP evaluation that the Warsaw University of Technology participated in. The evaluation has a special focus on management of research and use of research results.

1.1 Institutional Evaluation Programme

The Institutional Evaluation Programme (IEP) is an independent membership service of the European University Association (EUA) that offers evaluations to support the participating institutions in the continuing development of their strategic management and internal quality culture. IEP is a full member of the European Association for Quality Assurance in Higher Education (ENQA) and is listed in the European Quality Assurance Register for Higher Education (EQAR).

The distinctive features of IEP are:

- A strong emphasis on the self-evaluation phase
- A European and international perspective
- A peer-review approach
- A support to improvement

The focus of IEP is the institution as a whole and not the individual study programmes or units. It focuses upon:

- Decision-making processes and institutional structures and effectiveness of strategic management
- Relevance of internal quality processes and the degree to which their outcomes are used in decision-making and strategic management as well as perceived gaps in these internal mechanisms.

All aspects of the evaluation are guided by four key questions, which are based on a "fitness for (and of) purpose" approach:

- What is the institution trying to do?
- How is the institution trying to do it?
- How does the institution know it works?
- How does the institution change in order to improve?

1.2 The Warsaw University of Technology's profile

Warsaw University of Technology (WUT) was established in 1826 as a Preparatory School for the Polytechnic Institute and is the oldest technical university in Poland. It offers education in pure and applied sciences, engineering and business studies. The university is located on two campuses in the capital of Poland, Warsaw, with a branch campus located in the city of Płock.

In 2021, 23 000 students were enrolled in WUT bachelor's and master's programmes, as well as approximately 1000 doctoral students studying either in the WUT doctoral school or, following the old model of doctoral education, in individual faculties. The university hosts 19 faculties and a

College of Administration and Social Sciences. Additionally, WUT hosts eight research centres, a Business School and a Distance-Learning Centre (OKNO PW). WUT structures also include several libraries as well as units supporting education, research, and technology transfer.   The university personnel amounts to approximately 2500 academic and 2600 administrative and technical staff members. With over 5000 staff members, the university is the second biggest employer in Warsaw, and through its knowledge and technology transfer and collaborations, contributes greatly to the local and national economy.

WUT is one of the most prestigious universities in Poland. In the national ranking of universities prepared by the "Perspektywy" Foundation, WUT has consistently been ranked as the best technical university in the country. In the previous QS World University ranking, WUT was placed in the rank 521-530; it was the third most highly ranked university in Poland. Furthermore, WUT was classified in the 901-1000th rank of the Academic Ranking of World Universities.

In 2019, WUT was selected amongst the 10 Polish universities that were able to achieve a prestigious national research university status in Poland's Excellence Initiative - Research University programme (Polish acronym IDUB). In the context of the research university programme, WUT received additional 10% funding directed for research activities for the term 2020-2026. WUT is an internationally recognised partner with a large number of international collaboration agreements and international research grants and is a member of the European university alliance ENHANCE.

The operations of the university take place within the framework set by Polish legislation, which sets certain constraints for the university, as does the competitive international environment. For example, the Law on Higher Education and Science, in force since 2018, mandates that the university establish disciplines as organisational units in addition to the traditional faculty structure, creating a superstructure the university cannot change. The regulatory environment on fiscal matters imposes constraints on the university's operations. The representatives of the university interviewed by the team, however, perceived the lack of adequate research funding to be the most significant external constraint.

The university also faces internal constraints. For example, the large size and diversity of the university challenges internal communication and cohesion. The number of students in the first two cycles has declined from 28 000 in 2018 to 23 000 in 2021, with a significant decline especially in the number of students in master's degree programmes. Given that university salaries cannot compete with those of private sector employers in the field of engineering, recruiting students to master's and doctoral degrees, as well as recruiting and retaining competent employees, is also a challenge.

However, despite these external and internal challenges, WUT is an institution on the move, prepared for change in order to continuously improve its standing. It excels with strong national and international partnerships and committed staff and students. WUT aims to seek qualitative answers to both internal and external challenges and changes.

1.3 The evaluation process

The self-evaluation process was undertaken by a self-evaluation team appointed by the rector of WUT, Professor Krzysztof Zaremba.

The self-evaluation team was chaired by:

Professor Zbigniew Pakieła, Faculty of Materials Science and Engineering.

The other members of the team included:

Professor Zbigniew Brzózka, Faculty of Chemistry;

Dominika Frąk-Dudzińska, MA, Secretary, Centre for International Cooperation;

Gabriela Hołdanowicz, Centre for Innovation and Technology Transfer Management;

Krzysztof Kalinowski, MSc, representative of doctoral students;

Patrycja Kluź, Centre for International Cooperation;

Professor Andrzej Kraśniewski, Faculty of Electronics and Information Technology;

Urszula Lis, representative of students;

Professor Katarzyna Szczepańska, Faculty of Management;

Dr Aleksandra Wycisk, Centre for Innovation and Technology Transfer Management.

Furthermore, the self-evaluation team was supervised by the Vice-Rector for Research, Professor Mariusz Malinowski.

The self-evaluation report (SER) was prepared between June 2022 and March 2023. The report was drafted by the self-evaluation team, based on the analysis of the university's key documents and activities requested to be reported as part of the SER, and supported by a round of consultations with various stakeholders in the university. The most important points and key challenges are identified in the SWOT analysis included in the SER.

The draft version of the report was commented on by the rector, senate, the senate's committees for research, education, and international cooperation, as well as the University Council for Education Quality. Additionally, according to the SER, open workshops were organised for the broader university community to comment on the SER. Comments were considered when drafting the final version of the SER. However, many of the people met by the IEP team seemed unfamiliar with the SER or had not been part of the consultations. The team also heard of some instances where the draft SER had only been discussed amongst the faculty leadership but not amongst staff or students. The team was also told that the SER is not published on the university website.

Although the IEP team was left with many open questions after reading the SER and its appendices, the two evaluation visits, the first online and the second on site, as well as the additional material requested by the team and expediently supplied by the university, gave the team a good understanding of the university's strengths and challenges.

The SER of WUT, together with the appendices, was sent to the evaluation team on 20 March 2023. The visits of the evaluation team to WUT took place online from 18 to 19 April 2023; and on site from 13 to 16 June 2023. Between the visits WUT provided the evaluation team with some additional documentation.

The evaluation team (hereafter named the team) consisted of:

- Jürgen Kohler, former Rector, Greifswald University, Germany, Chair;
- Lučka Lorber, former Vice-Rector, University of Maribor, Slovenia;

- Luís Filipe Castro, former Vice-rector, University of Aveiro, Portugal;

- Antonio Ramos Vázquez, bachelor's student, Industrial Technologies Engineering, University of Vigo, Spain;

- Terhi Nokkala, Senior Researcher, University of Jyväskylä, Finland, team coordinator.

The team thanks the rector and his team, the self-evaluation team, and the entire university community for their warm welcome during the two visits. The openness and warmth of the university community made the team's task not only easy, but also enjoyable.

2 Governance and institutional decision-making

2.1 Norms, values, mission, goals: What is the institution trying to do?

Warsaw University of Technology (WUT) wants to be an internationally recognised attractive research university. WUT's Institutional Development Strategy was adopted in 2021 and covers the period 2021 to 2030. The plan is based on input from all university's stakeholders, internal and external: students, staff, alumni, graduates and industry, and comprises a large set of goals and objectives for the future development of the university.

The university's self-evaluation report outlines WUT's mission developed in the strategy as being

> *"an internationally recognised technical university, an attractive research and teaching centre in Europe, developing technology trends and responding to global civilisation threats by providing solutions for both local and international industry. Our MISSION is creative participation in building the future not only through creating new knowledge and technologies but also through shaping the next generations of specialists and scientists.*
>
> *Acting with a sense of social responsibility, the University focuses research on areas related to the greatest challenges of today's world, such as climate change, environmental pollution, depletion of non-renewable resources, lifestyle diseases, epidemiological threats, and the problems of an ageing population. Strategy 2030 defines four strategic fields of impact: 1) Scientific foundations: focus on nature and its description, 2) Information and digital environment, 3) Healthy, sustainable living environment, and 4) Sustainable industry, materials, and manufacturing processes. "*

Discussions with the university leadership support WUT's aspiration to be an international university that excels in research and educates nationally and internationally competent and competitive graduates in the context of international collaboration, while continuously striving to raise the quality of all its functions. The team believes that both WUT's track record as well as its staff, infrastructure and prominent position in the Polish system of higher education fully justify WUT's aspirations as formulated. The team is also convinced that the assigned research focus areas make sense against the background of WUT's research activities and in view of world-wide challenges. The team recognises that WUT's search for its own niches in these areas is designed to avoid overlap with similar activities of other research institutions active in the same fields. The team is satisfied that the university recognises the challenges arising from the current structural inflexibilities and the need to remedy those. The university strives to meet the expectations of its stakeholders and achieve societal relevance; its overarching quality parameters are stakeholder expectations and excellence.

2.2 Governance or activities: How is the institution trying to do it?

Decision making and organisational structure

According to the SER, the significant legislative framework of the university comprises the following documents: 1) Law on Higher Education and Science, in force since 2018; 2) the Statutes and the Organisational Regulations.

WUT is a public university. Its highest decision-making body, the senate, has 58 members who represent the different faculties and comprise the representatives of academic and non-academic staff, students, and PhD students. The senate is responsible for: approving the report on the implementation of the university's strategy; appointing members of the University Council; assessing the functioning of the institution; formulating recommendations for the University Council and the rector; conferring academic degrees; defining the curricula for degree and doctoral programmes, and methods of confirming learning outcomes; and appointing standing and ad hoc senate committees relating to a specific area of the university's activity. The senate comprises nine committees that are tasked with preparing issues for the final decision by the senate, in their respective areas: science, education, foreign relations, property and finance, ethics, history and tradition, human resources, university organisation, and university council elections. Ad hoc committees can be established with a more limited mandate if a need arises.

The daily running of the university lies in the hands of the rectorate, which comprises the rector and the vice-rectors. The rector is elected by the university community, with 20% of the vote comprising of the student vote.

The six vice-rectors (Vice-Rector for Development; Vice-Rector for Research; Vice-Rector for General Affairs; Vice-Rector for Academic Affairs; Vice-Rector for Student Affairs; and Vice-Rector for the Branch Campus in Płock) are appointed by the rector. While their number and remits are not regulated by the law but are the rector's decision, the team was told that there have been no changes in recent years regarding these. The previous change in terms of the number and tasks of vice-rectors took place approximately a decade ago, when the position of the Vice-Rector for Development was established.

The rector and vice-rectors hold weekly meetings, with the chancellor attending. Once per month the representatives of the students and PhD students are also invited to this meeting. The rector also holds monthly meetings with the deans.

The central administration is led by the chancellor, but the vice-rectors, too, lead a significant number of the offices in the administrative branch of the university. It seems to the team that there is thus a significant amount of academic influence in the operations of the administration, which is, as was repeatedly and sometimes emphatically stated in meetings, characterised by bureaucracy, with little support for strategic management and development. The recently created Strategic Analysis Department is a step towards professionalising the strategic development and analysis functions in the organisation. The university has also established an "optimisation task force" to help revise its management processes.

The organisational structure of this large university is characterised by fragmentation and complexity. Below the institutional level, there are parallel structures of faculties and disciplines. The faculties are mainly responsible for education and infrastructure, while the disciplines are responsible for research and for conferring academic degrees such as doctoral degrees and habilitations. While the faculty structure is an old one, a change in the Law on Higher Education and

Science in 2018 mandated that the university establish disciplines for the purposes of evaluating research quality. WUT has 15 disciplines which typically span several faculties, although disciplines may also be primarily focused on one faculty.

The university has highly independent faculties. The faculties are led by the dean and the faculty councils advising the dean. The 19 faculties comprise the following: Faculty of Administration and Social Sciences; Faculty of Architecture; Faculty of Chemistry; Faculty of Electronics and Information Technology; Faculty of Electrical Engineering; Faculty of Physics; Faculty of Geodesy and Cartography; Faculty of Building Services, Hydro and Environmental Engineering; Faculty of Chemical and Process Engineering; Faculty of Civil Engineering; Faculty of Materials Science and Engineering; Faculty of Mathematics and Information Science; Faculty of Power and Aeronautical Engineering; Faculty of Mechanical and Industrial Engineering; Faculty of Mechatronics; Faculty of Automotive and Construction Machinery Engineering; Faculty of Transport; Faculty of Management; Faculty of Civil Engineering, Mechanics and Petrochemistry; as well as a College of Economic and Social Sciences. The last two are located in a branch campus in Płock. In this document,"faculties" are taken to also include the College of Economic and Social Sciences, unless stated otherwise.

The disciplines are led by the scientific councils of disciplines, whose responsibility is to confer and recognise scientific degrees and to define the strategy for the development of the discipline. They decide on the nomination of professors and the careers of researchers, as well as define the procedure for the distribution of research funding allocated by the rector.

Most of WUT's governing bodies comprise only the university's own academic and administrative staff and students. The voice of the external stakeholders, such as representatives of employers, companies and society at large, is heard through the University Council. The members of the University Council are selected by the senate and are tasked with overseeing the management of the university. Additionally, the team was told that some faculties have advisory councils comprising representatives of external stakeholders.

There is representation of students and doctoral students in the senate as well as in the faculty councils. According to the SER: *"Students' voices are heard mainly due to the efforts of the WUT Students' Council with representatives at all faculties, and PhD Students' Council of WUT. Representatives of students and doctoral candidates are also engaged in special tasks teams, such as the Team for the Preparation of this Self-evaluation Report. "*

The university statutes mandate that all students belong to the student union. The student union is primarily organised in the form of collective faculty-level student bodies, from amongst whom the students of the given faculty elect representatives to the university-level student parliament. The student union is funded by the university; it does not collect membership fees and does not have a stable income independent from the university.

The university has a participatory culture that includes a strong sense of democratic processes which also include students. However, the team also heard conflicting answers on whether the entire university community feels the same way.

Finances and staffing

As a public university, WUT receives the main part of its operating grant as a lump sum from the Ministry of Education and Science to fund education and research activities. Given that WUT is one of the beneficiaries of the Polish excellence initiative, it receives an additional 10% subsidy annually

between 2020 and 2026. The operating grant amounts to approximately 60% of the annual income of the university. The university additionally receives competitive research funding from national research funding agencies such as National Centre for Research and Development and National Science Centre Poland, as well as from international funders such as the European Commission. Small funding streams comprise income generated from selling services such as education and research services.

While the competitive research funding acquired in the form of research grants go directly to the research projects with some overheads being channelled to the university and the departments, the bulk of the ministerial operating grant is allocated to faculties to cover their costs. The amount of funding received by each faculty is allocated by a formula primarily based on input-based factors, such as numbers of staff and students. The remainder of the operating grant is allocated to university-wide units and specific tasks, as well as the WUT doctoral school and the scientific councils of disciplines. It is noteworthy, however, that the scientific councils of disciplines only receive a very small amount of funding and do not thus have significant financial decision-making power.

WUT is a large university with nearly 5000 staff members, of which approximately half are academic and half administrative, professional, and support staff. In 2020 the university received the European Commission's HR Excellence in Research award in recognition for complying with the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers. The university has an ambition to make use of the opportunities offered by the ENHANCE alliance to foster development and mobility of not just academic but also non-academic staff. Permanent academic staff are employed after an open competition, as per law, although for fixed-term researchers working in research projects different rules may apply. All academic staff undergo regular performance evaluation as per legislation. The evaluation of non-academic staff was piloted in 2018, but further implementation was delayed due to the COVID pandemic.

2.3 Monitoring: How does the institution know it works?

WUT Senate has adopted a strategic plan, the Development Strategy of WUT, covering the period 2021-2030. While the current strategic plan is not the first one the university has drafted, the team was told that it is the first one where a number of quantitative key performance indicators has been designed. The Institutional Development Strategy is fairly detailed, including several activities that are the responsibility of the central level, while other tasks such as changing educational practices are within the remit of the faculties. The faculties are asked to state which of the strategic goals and actions listed in the Institutional Development Strategy they would like to specifically focus on. The team was told that it is understood that not all faculties would be equally interested in or able to fulfil all the strategic goals. An example of such a goal would be, for example, attracting international students, and some faculties may be in a better position to compete for international students than others. The Strategic Analysis Department in central administration will then analyse these action plans submitted by all units, identifying whether all the activities envisaged in the Institutional Development Strategy are covered. The team was told that, based on this process, the university would formulate an action plan to implement the Institutional Development Strategy.

However, while university leadership and various teams, task forces and units take care of designing and implementing strategic priorities, it seems to the team that there is no systematic ownership of the strategic priorities throughout the university, i.e., permeating all levels of the institution. Clearly,

there is scope for improving operationalisation of the follow-up structures, further development of the KPI system and more professional support to enable the university to follow how its strategic priorities are met. The team acknowledges that there are basic elements of action plan concepts in place and that implementing strategic priorities is a complex process which necessarily takes time, but, given these realities, WUT should follow more decisively its aspiration to design and implement a robust action plan scheme. This scheme should define more coherently and in more detail who does what, with whom, and by using which input. All these factors should be focused on the specific definition of expected results, with the identification of specific milestones to be reached on the way towards expected results.

2.4 Strategic management and capacity for change: How does the institution change in order to improve?

The team points to the following strengths regarding governance and management a

the university:

- The university has recognised the complexities related to its organisation and is working towards solving those. Informal yet stable mechanisms for overcoming some of the structural challenges imposed by the legislation and internal structures are applied as pragmatic problem-solving solutions.

- The university has established the Strategic Analysis Department and the "Optimisation task force" to improve its professional management capacity.

- The key performance indicators and action plan concepts are, in essence, being applied to implement and follow up on the university strategy.

- The iterative process between the central and faculty levels in coming up with the institutional development strategy and action plan generates a genuine sense of ownership of the strategy at the level of basic units.

- There is ombuds personnel for staff and students, providing the university a mechanism for tackling potential disadvantages and discrimination.

At the same time, however, the team feels that the university governance shows certain

weaknesses:

- The KPI concept is still only under development, and the action line concept is yet to be further elaborated.

- While there is a large administrative staff, there is an imbalance in the distribution of that staff between bureaucratic and professional roles.

- The balance of task assignments between academic and professionalised administrative units and their personnel may need to be reviewed to optimise in favour of the latter.

- The distribution of roles between university, faculty and discipline levels is unclear.

- The complex organisational structure and lines of reporting lead to communication silos, making it challenging to build conviction and a shared view on institutional development.

- While WUT is fully engaged in surveying and addressing staff-related matters, establishing holistic concepts and regular practices of surveying and other ways of identifying weaknesses will further develop the institution.

- Addressing administration staff development is at a relatively early stage.

To help the university improve its governance and management capacity, the team would like to offer the following recommendations for the university's consideration:

- The team recommends that the university finalise a comprehensive and fit-for-purpose KPI concept and complete its work on holistic action plan concepts, meeting the criteria of SMARTness. Annual strategic negotiations between faculties and the rectorate on how to implement the university strategy may be effective in helping the university achieve its strategic goals. Similarly, continuing the development of digitalised administrative processes for ease of access, visibility, and usability of the information systems by the academic community would be beneficial.

- The team recommends that the university consider whether it should rebalance its technical managerial staff and professional managerial staff to support strategic and quality enhancement processes more vigorously.

- The team invites the university to reconsider whether assignment of tasks between academic units and administrative units is fit for purpose.

- The team further recommends that the university consider optimising the roles assigned to the central university level, faculties and disciplines.

- The team advises the university to consider improvement of communication especially by defining an internal and external communication strategy, and by introducing a corresponding communication plan, making use of a professionally supported process as well as the introduction of a personal information cascade. Also, introducing professional leadership training to enhance interpersonal management capacity and improve communication skills is advisable.

3 Quality culture

3.1 Norms, values, mission, goals: What is the institution trying to do?

According to WUT's self-evaluation report, the university does not have a single quality assurance policy but instead:

"a collection of distributed activities. We see QUALITY as the degree to which WUT systems and their components meet the requirements of internal and external stakeholders. Quality culture is understood as shared values, beliefs, expectations and commitments to quality supported by structural and management elements with specific quality-oriented processes. Out of the values

described in our Strategy, it is excellence and responsibility that are closest to the academic community, and this is a good basis for all pro-quality activities. "

The university recognises that developing a quality culture is an ongoing process that is currently in early stages at the university. According to the SER: "*Experience gained in ensuring the quality of education policies is being redirected to the areas of research and administration. The main challenges include the coordination of tasks between units at different levels of management (departmental, university) and building a quality culture in the organisation.*"

Discussions with the representatives of the university confirm the team's understanding that the quality concept of the university comprises elements of both catering for stakeholder satisfaction, especially in terms of education, as well as striving for excellence, especially in terms of research. The team appreciates this double definition of quality, which is often advocated for by European universities; however, the team notes that quality concepts such as 'fitness of and for purpose' were not mentioned explicitly, albeit the team assumes that this was understood implicitly. The team noted that broader educational objectives which are, among others, suggested by the Council of Europe and in the Bologna Process documents, such as fostering personal development not only of staff, but also of students, and education for democratic citizenship, have not explicitly been included or highlighted in WUT's quality concept. The team assumes that these educational objectives are implicitly shared and followed by WUT.

3.2 *Governance or activities: How is the institution trying to do it?*

The quality assurance system in the university is built of two main pillars, external and internal. In terms of the external quality assurance, the Polish Accreditation Committee carries out a mandatory reaccreditation of all study programmes every six years. In addition to the mandatory accreditation by the Polish Accreditation Committee, the programmes can also undergo voluntary accreditation carried out by the Accreditation Commission of Universities of Technology in Poland (KAUT). In addition to national certificates, KAUT may award a university with the European quality certificate EUR-ACE® Label. The university seems to hold in high regard its consistently high performance in the national "Perspektywy" ranking.

WUT also collects various feedback data based on KPIs, which cover the education, research and knowledge transfer functions of the university. The Strategic Analysis Department has a key role in analysing all this data, and the team was told that the results are discussed both on the faculty level as well as in the senate and its committees, and that the relevant authorities, such as deans and the respective vice-rectors, address any potential quality improvement needs.

However, what the depth of analysis is, remains an open question. WUT does not yet have a robust system of professional administrative input to support quality development, which also ontributes to unbalanced involvement of different groups in the quality processes. There is insufficient coherence in the monitoring of the collected data, as well as ineffective task coordination between units at different levels of management. Quality culture would encompass all of the following: linking the university's strategic goals and its self-defined institutional hallmark to the quality of its education, research and service to society; continuously collecting information on the quality of all these elements through various means; allocating clear responsibility for quality control and enhancement to relevant bodies and persons; systematically analysing this information; and continuously improving

the performance in all these areas. Thus, it is the team's understanding that a systematic quality culture is still at an early stage of development and leaves scope for maturing.

3.3 Monitoring: How does the institution know it works?

The quality culture at the university is influenced by the national, accreditation-based quality assurance, and some of the data collection that WUT collects is intended to inform and contribute to the regular accreditation rounds. The faculties, for example, regularly provide a set of quantitative and qualitative information concerning their courses and facilities.

WUT makes use of both the externally collected data, such as ranking data, as well as internal monitoring of a set of KPIs pertaining to research, education and knowledge transfer. Furthermore, the university administers various surveys to students and staff, collects feedback from alumni upon their graduation, and, more sporadically, collects employer feedback.

One of the key input factors for quality assurance of the education provided by WUT is the student satisfaction survey, which is administered to the students at the end of each semester for each course. The surveys are primarily distributed through an online service portal. The response rates are fairly low, ranging from 2% to 25%. The student satisfaction surveys comprise questions related to teacher performance, but also to teaching contents and methods as well as, for example, facilities. The university has adopted the online system for distributing the surveys only in the last couple of years but looks toward collecting long-term trends and following individual satisfaction on a longer term, aided by the possibilities of the online survey.

The collected feedback is synthesised by a dedicated quality assurance office in central administration. The deans receive the feedback concerning all faculty members in their faculty, as well as the overall scores, while an individual faculty member can access the feedback they personally received, as well as their own score in relation to the average score of the entire university. The team was told that the feedback is discussed with different stakeholders, such as the faculty quality committee and the faculty board, as well as between the dean and the faculty's student representatives.

If the results of the survey cause concern in terms of an individual faculty member's performance, and the number of surveys received is sufficient to give statistically relevant information, the dean or head of department is expected to have a conversation with that faculty member. Their course may also be observed by a panel of colleagues, and a written report on remedial action taken can be requested. In most extreme situations, the faculty member may be removed from teaching a course.

The team was told that, if the feedback highlights problems in terms of more structural issues such as sequencing of courses in a programme, the action is first and foremost taken at the faculty level, either by the course coordinator, faculty board or other relevant body.

The team heard that some faculty members may also collect additional, more qualitative feedback on their courses.

3.4 Strategic management and capacity for change: How does the institution change in order to improve?

The team identified the following strengths in terms of the quality culture:

- The university makes use of a broad set of internal and external inputs to evaluate its quality.

- The university has taken first steps in linking the quality assurance system and the strategic management.

- The move to an online system for collecting student feedback allows the university to see longer-term trends.

- There are steps taken to discuss with those faculty members who consistently receive poor feedback on student feedback surveys measures to remedy the situation.

The team also identified some weaknesses:

- The dedicated professional help for quality improvement is very limited in terms of capacity.

- The low response rates to the student feedback surveys suggests a potential survey overload.

- The fact that some faculty members feel the need to prepare additional surveys suggests that the current survey with a quantitative focus may not best serve their information needs.

- There is insufficient information available on the quality improvements that have resulted from student feedback, which lowers motivation to fill the feedback surveys.

The team would like to offer the following recommendations for the university to consider with regards to quality culture:

- The university would benefit from an open discussion on quality culture with broad participation and transparency. The Self Evaluation Report, and especially the SWOT analysis, are useful starting points for such a discission.

- The university is invited to consider strengthening the professionalisation of quality support, also with introducing more elements of proactive teacher upport, for example, through training schemes. Similarly, aligning the quality assurance of education even more closely with the European Standards and Guidelines for Quality Assurance in Higher Education (ESG) might be beneficial.

- The policy and timing of circulating the student feedback surveys could be reconsidered to avoid survey overload, and an increase in the number of open questions could be considered. WUT should also take steps to ensure that

students understand that the results of their questionnaires are used for improvement and that, by providing feedback, they are engaged in quality work.

- The university should consider introducing systematic ways of informing the community of the actions taken to improve quality as a response to feedback collected, while still respecting the privacy of the individuals.

- The university is invited to consider whether the system of assessing individual performance could be fine-tuned and calibrated regularly to accommodate diverse academic staff profiles.

- The university is advised to establish a complaints box to collect information about the challenges faced by the community that are not surveyed by other means.

- The university should consider creating a Quality Assurance awareness environment through student representatives, including the Student Union.

4 Teaching and learning

4.1 Norms, values, mission, goals: What is the institution trying to do?

The WUT Institutional development Strategy for 2021-2030 outlines its mission in terms of education thus:

"By shaping new generations, we wish not only to provide knowledge and skills at the highest level, but first of all shape bright people who think creatively and critically, who are intellectually independent and openly present their opinions. We wish to equip them with creative curiosity of the world and professional passions, to teach them the practice of ongoing learning and to shape the feeling of social responsibility and awareness of the impact on the future of the world."

The plan furthermore outlines four specific targets pertaining to education: education taking into account the socio-economic environment; modern teaching methods;effective pro-quality mechanisms in teaching; and Integration into the European academic training system. Each of these targets is further elaborated on in the document. As mentioned above, while the aspect of education for social responsibility does occur in the strategy outline, the team found that this educational objective, along with education for democratic citizenship and personal development, does not feature prominently in discussions which the team had in meetings at WUT.

Discussions with the university representatives support the idea of WUT's aspiration toward a quality education; satisfying the expectations of the various stakeholders, such as employers, students, and graduates; and fostering employability, knowledge and skills, creativity, critical thinking, and intellectual independence in its graduates. The university wants to make use of the ENHANCE alliance for the benefit of their students and to enhance the student experience. In essence, the team believes that these are valid viewpoints for educational orientation, although there may be scope for broadening educational objectives, as mentioned above.

4.2 Governance or activities: How is the institution trying to do it?

Design of a new study programme starts at the sub-faulty level, with the relevant department or division. This is the place where initial proposals are made. Suggestions are reviewed by the dean and the faculty council, and the opinion of student representatives is also heard. The senate commission on education similarly discusses the proposal, and the proposal is finally approved by the WUT senate; who also assigns the programme to one or more of the disciplines. There seems to be little professional pro-active, that is, ex-ante support available to basic units in programme design.

The team was told that, in addition to the accreditation conducted by the relevant national authorities, regular feedback is collected from others, for example, employers as well as students, to assess and adjust the relevance and quality of the educational provision. The team was told that a competence-based approach and learning outcomes are considered in designing and updating programmes. In updating curricula of existing programmes, the university is, however, limited to relatively minor changes lest a new accreditation is required. Teaching methods may be updated by individual teachers based on feedback they receive, but while there has occasionally been pedagogical training available for teachers, the team understands that this is neither systematic nor compulsory. PhD students, however, are offered a compulsory course in didactics.

The team heard mixed messages regarding the extent to which students are integrated into research functions of the university, and to what extent the curricula are aimed at fostering a research mind and critical thinking. There are student research groups that operate on a voluntary basis, and these were generally lauded by those participants the team met. However, there seems to be variation between responses from different programmes. In general, there seems to be scope for further holistic integrating of research elements into all programmes. Furthermore, there is considerable scope for better modularisation of courses that would foster collaboration and efficient use of resources across the different silos formed by the complex organisational structure. The university recognises the challenge posed by there being too few university-wide, cross-sectoral courses available.

The students met by the team were by and large satisfied with the study facilities as well as the availability of information concerning studies. However, the team also heard that sometimes information may be hard to find on the website even if it was there, and that some international students encountered challenges in finding all relevant information in English.

4.3 Monitoring: How does the institution know it works?

According to WUT's Institutional development strategy, the achievement of the educational targets are monitored through, for example, the following indicators: the average number of students per academic staff; the ratio of the total number of second-cycle and doctoral students to the number of first-cycle students; the percentage of students participating in international education (studying in English, participating in exchange programmes, working under the supervision of staff from other universities); the graduates' careers; and the opinions of graduates, employers, university staff and students. Some of these indicators, such as employment rates and salaries of the university graduates, are acquired through national statistics, which are supplemented with more sporadic data collection through alumni events and networks. Additionally, the university is currently developing a scheme by which a more systematic data collection amongst graduates can be implemented. The university also

monitors the student numbers, and the team noted that the declining student numbers, especially in master's degree programmes, have been a cause for concern.

The team was told that the course contents are also monitored to ensure that they are up-to-date, and that the employers' opinion on developments concerning important updates to the curricula and expected learning outcomes are sought. However, the extent to which these activities are regular, systematic, and underpinned by a professional WUT support system which guarantees state-of-the-art continuous quality development, remain somewhat unclear. The team nevertheless recognises the important role of the Strategic Analysis Department in contributing to the professional support in continuous quality development. At the same time, the team realises that this department, or rather WUT as a whole, may profit from developing it into a fully-fledged, sufficiently equipped quality support and enhancement office, with comprehensive responsibilities for all facets of quality along the entire span of the studying process (as well as research and administration).

4.4 Strategic management and capacity for change: How does the institution change in order to improve?

The team observed the following strengths pertaining to the teaching and learning function and activities of the university:

- The ENHANCE alliance experience provides opportunities broadening experiences on teaching methodology.

- The student research groups offer a model that could be applied to broaden the integration of research orientation in all studies.

The team similarly observed some scope for further improvement:

- There is scope for development in following areas: student-centred learning, problem-based learning and research integration.

- There is no professional consistent support available for teachers who wish to improve their teaching methods.

To remedy these weaknesses, the team would like to offer the following recommendations for the university to consider:

- The university could consider embedding more efficient forms of research-led teaching as well as research experience in undergraduate programmes in order to foster research as a more evident component of the curricula. Similarly, promoting the knowledge and implementation of the Student-Centred Learning concept and practices in the community would be beneficial.

- The university could incentivise upgrading teaching competence, for example, by offering faculty members pedagogical training or a short sabbatical for developing their own teaching.

- The university could also consider establishing a unit with professional pedagogical support staff which takes comprehensive responsibilities for steering and overseeing quality aspects along the entire span of the teaching-learning process, i.e., from programme design via teaching practice and examination policies to job success. Pedagogical training opportunities should be expanded, and the entire community could be encouraged to share best practices in teaching methods.

- The team recommends that WUT develop its strategic analysis department into a fully-fledged, sufficiently equipped quality support and enhancement office with comprehensive responsibilities for all facets of quality along the entire span of the studying process (as well as research and administration).

5 Research

5.1 Norms, values, mission, goals: What is the institution trying to do?

The research at WUT is nationally and internationally recognised, and the university has an ambition to achieve excellence in research and knowledge transfer. In its self-evaluation report, the university formulates its goal in terms of research management as follows: *"The objective of research management is to achieve scientific excellence and high recognition of the research by providing effective mechanisms to support research work."*

In its institutional development plan, the WUT furthermore sets the following five targets concerning research: *scientific excellence, high visibility of ongoing research, effective mechanisms to support research work, internationalisation and intensive international cooperation*, and, finally, *active and effective cooperation with industry and the economy.* Furthermore, the university formulated four strategic impact areas: 1) scientific foundations: focus on nature and its description, 2) information and digital environment, 3) healthy, sustainable living environment, and 4) sustainable industry, materials, and manufacturing processes. These four strategic impact areas are aimed to foster collaboration and skills development across disciplinary boundaries.

More specific research strength areas have been identified as part of the Excellence Initiative – Research University (Polish acronym IDUB). According to its self-evaluation report, WUT's specific goals for its participation in the IDUB are:

> *"1. Integration of research activities in priority research areas (increasing the scientists' activity, publication quality, quotes quantity, strengthening the technology transfer, increase in research grants);*
>
> *2. Strengthening cooperation with research institutions of high international reputation (international scientific exchange, increasing WUT recognition);*
>
> *3. Improving the quality of education of students and doctoral candidates (involving students and doctoral candidates in conducting research, and acquiring the most talented candidates);*
>
> *4. Preparing and implementing comprehensive solutions for the professional development of university employees, in particular, young scientists (employees' development in the field of modern forms of education and management);*

5. Improving the quality of university management (efficiency and effectiveness of administrative processes). "

<u>*5.2 Governance or activities: How is the institution trying to do it?*</u>

The system of managing and setting priorities for research at the WUT is complex. Some of the research management tasks, such as conferring doctoral and habilitation degrees, is allocated to the scientific councils of disciplines. The disciplines are also the units externally evaluated for their research. The disciplines typically (though not necessarily) comprise researchers from many different faculties. Disciplines do not, however, have a significant independent budget at their disposal. The organisation of practical research work takes place in a multitude of research centres, groups, and projects.

The most important element in fulfilling the research aspirations of the university is its selection as one of the beneficiaries of the Polish excellence initiative, IDUB. The university selected the following seven key research areas: 1) Photonic Technologies; 2) Artificial Intelligence and Robotics; 3) Cybersecurity and Data Science; 4) Biotechnology and Biomedical Engineering; 5) Materials Technologies; 6) High Energy Physics and Experimental Techniques; 7) Energy Conversion and Storage. The selection of these priority areas was based on a combination of a bottom-up process within the institution, while using metrics to show a solid track record of excellence in these areas. The universities selected as IDUB beneficiaries receive an extra 10% research funding for the period, 2020 to 2026. The IDUB funding is allocated to advance the specific goals of the university, such as offering research periods for early career scholars and facilitating international research visits.

The budget for research and research management amounts to approximately 28% of the total revenues of the university. It comprises research funding from the lump sum operating grant received from the ministry; competitive grants from domestic and international research funders; the sale of R&D related services; and the additional funding received from the excellence initiative IDUB. The scale of research conducted at WUT is also evident in the number of research projects. For example, in 2020 WUT implemented 500 projects of which 95 were projects in collaboration with international partners. About half of the research conducted is basic research, and half is applied.

In addition to acquiring the IDUB status and funding, another significant development was the creation of the university-wide doctoral school. Approximately half of WUT's PhD students study in these now, while the other half still pursue their doctoral degrees in the faculties, as had been the traditional model before 2018.

To support the research performance of the university further, WUT has implemented a series of measures. For example, the university has created a mechanism to support writing competitive grant applications, and the team was told that an improvement could already be perceived in the number of successful applications. Similarly, the university has created financial incentives for publishing in prestigious scientific journals and made improvements in research infrastructure. Internally, the university has implemented financial support mechanisms for early-career scholars and international research mobility. Some of these improvements have been made possible by

the IDUB funding. However, some of the interviewees raised the question of whether it might be advantageous to pool more resources to make bigger infrastructure investments rather than allocating smaller resource pools to various programmes and faculties.

5.3 Monitoring: How does the institution know it works?

The university has different ways of monitoring its research productivity. These include, for example, following the number, quality, and impact of publications. Furthermore, the university monitors other research performance indicators such as research grants and patents, while also following the number of international partnerships and the performance of the university in international rankings. The progress of research projects, as well as the research performance parameters of individuals, are regularly reported on and followed up at the level of disciplines, as well as by the senate committee on research. The scientific councils of disciplines as well as the senate committee on research monitor the performance and make recommendations for improving research performance. There is also a possibility for the deans and chairs of the scientific councils of disciplines to discuss with those researchers who seem to be struggling to find solutions to improve research performance. The overall responsibility to take action on research management lies with the Vice-Rector for Research. The university research data base called the Base of Knowledge WUT provides very relevant information about all aspects of the research output of the university. Beyond that, however, the team was not able to identify to what extent there was a systematic professional approach to monitoring, or whether it lay primarily in the hands of academics.

5.4 Strategic management and capacity for change: How does the institution change in order to improve?

The team perceives that the university exhibits the following strengths in terms of research:

- There is a monitoring process regarding the productivity of research, followed by recommendations for improvement.

- There is a possibility for a joint discussion to find solutions in case of underperformance of individual researchers.

- Pay increments are granted for successful research and transfer.

The team would like to point out some weaknesses in terms of the university's research function and activities:

- Due to the structural duality between faculties and disciplines, there is limited scope for effective action taken at discipline level, although the disciplines are the units responsible for the quality of research.

- The quality of research production is assessed primarily in quantitative terms.

The team would like to present the following considerations for the university:

- The university is invited to reconsider the power balance between the different modes of organisational governance, especially faculties and disciplines, in terms of the research function of the university.

- There is scope for external peer review to judge the accomplishment and excellence of research production and activities, especially with a view to strengthening qualitative factors in evaluating research.

- The university may consider making use of the ENHANCERIAE to foster stronger strategic research collaboration with the ENHANCE partners and prepare for upcoming funding calls, transdisciplinary research and funding joint infrastructure for research.

- The university may consider whether establishing a scheme or process could be useful in identifying future research opportunities not yet covered by WUT's current research activities, thus adding an element of foresight to WUT's current focus on track record, which leans towards indicating past and current strengths.

6 Service to society

6.1 Norms, values, mission, goals: What is the institution trying to do?

In addition to aspiring to achieve excellence in basic research, WUT also wants to be a provider of cutting-edge applied research and high-quality service to society. In the Institutional Development Strategy, there are several goals pertaining to service functions of the university, such as:

- increasing the intensity of innovation activities and technology transfer, including development and implementation of a new innovation management policy, optimisation of commercialisation and processes of knowledge and technology transfer, and popularisation of the university's innovative activities;
- developing an innovative entrepreneurship centre for students, doctoral students and employees, including disseminating knowledge and supporting innovative entrepreneurship;
- increasing effectiveness of cooperation with business environment institutions, business representatives, NGOs and local communities, and building a system of cooperation with strategic partners in priority areas.

WUT's aspiration to increase the transfer of research knowledge was a message received consistently from the representatives of the university, disciplines and the external stakeholders alike.

6.2 Governance or activities: How is the institution trying to do it?

In terms of WUT's education function, the team heard that the university has implemented some entrepreneurship courses for students. The university also hosts regular networking events through which it can gauge the opinions of the local employees regarding the programmes offered at WUT as well as the skills and expertise of its graduates.

WUT also offers some micro-credentials and other studies aimed at life-long learning, and has high expectations for these. However, resources sometimes prevent large scale provisions of life-long learning opportunities.

To foster knowledge transfer through R&D, the university has created a business incubator that offers support and mentoring to start-ups. The incubator hosts several start-ups, some of them mature enough to leave the incubator and operate outside of it. Through the Innovation Centre WUT, the university has also introduced a pre-incubation programme for those researchers who are interested in commercialising their research results. The centre offers services for identifying potential products, customers, markets, and partners, as well as developing a business plan. The university also has a specific department that offers support for patenting and licencing of innovation fit for commercialisation.

The team heard from representatives of the start-ups hosted in the incubator that they were very satisfied with its services. Similarly, it is the impression of the team that various companies are very appreciative of being able to benefit from the research infrastructure of the university, as well as from the contributions of many talented graduates.

6.3 Monitoring: How does the institution know it works?

In designing degree programmes, the university considers stakeholder opinion in multiple ways to ensure the relevance of their programmes for the labour market. The university holds regular employer fairs every two years,for example, and various external stakeholders are represented in the University Council. Some of the faculties have established advisory bodies comprising external stakeholders. The university also wants to continue or re-start a regular feedback system for graduates who would be surveyed some years after their graduation, thus following such practices conducted between 2012 and 2021.

As part of the regular data collection on research performance, the university monitors the numbers of patents. Informal opinions regarding the university's R&D performance and services acquired through various networks is also important.

6.4 Strategic management and capacity for change: How does the institution change in order to improve?

The team would like to point out the following strengths in terms of the outreach and service to society:

- The university's external partners are strongly committed and well-disposed to working together with the university and appreciative of its commitment to knowledge transfer.
- The university has created a business incubator and developed pre-incubator services for commercialising research.

The team would like to remark on the following weaknesses in terms of the outreach and service to society:

- Data collection regarding employer views on the expected skills of WUT graduates is sporadic rather than systematic.

To build on the university's strengths and remedy the weaknesses, the team offers the following recommendations:

- The university should consider systematising the mechanisms to collect feedback and inputs from external stakeholders such as employers and local businesses to foster the relevance and quality of the university operations.

- The university could also consider establishing a lifelong learning strategy charting the way toward providing micro-credentials and professional development courses aimed at employers and society at large.

<u>7 Internationalisation</u>

7.1 <u>Norms, values, mission, goals: What is the institution trying to do?</u>

According to its strategy, WUT is *striving to achieve the status of an important European and global research and education centre.* The university's Institutional Development Strategy contains several provisions on internationalisation pertaining to both the research and education functions of the university. The objectives pertaining to internationalisation emphasise, for example, increasing international research collaborations and the visibility of the university's research production,as well as strengthening the internationalisation of the study programmes and international recruitment. Increasing the incoming and outgoing student and teacher mobility and designing more collaborative international study programmes and double degrees were also objectives mentioned by the representatives of the university during the evaluation visit.

The university has not developed a separate elaborate internationalisation policy, nor a policy pertaining to internationalisation at home. However, the ENHANCE alliance work plan and the IDUB goals in terms of internationalisation of research, as well as the measures indicated in those for supporting internationalisation, form such a de facto policy.

7.2 <u>Governance or activities: How is the institution trying to do it?</u>

The university has strong partnerships in international associations, alliances and networks. The ENHANCE alliance is one of the most significant means of enabling the mobility of students and staff, including non-academic staff, and also offers opportunities for virtual mobility. Under the IDUB initiative the university supports short-term international mobility of researchers, such as offering grants for participation in international conferences or acquiring inhouse experience in foreign institutions.

The university has an international office, Centre for International Cooperation, that supports the internationalisation activities at the university, including: coordinating the EU and international educational programmes; setting up bilateral and multilateral agreements with foreign institutions; managing scholarships and internships for academic and non-academic staff and students; dealing with recruitment and registration of international students; and organising practicalities related to international visitors. The centre also coordinates WUT's effort within the ENHANCE consortium. The university already offers support to incoming students, and the international students interviewed by the team were generally appreciative of those. However, the services for international PhD students and staff may not be as well developed as possible, and for this reason WUT it is planning to establish a Welcome Point to provide a one-stop-shop for services to all incoming international students and staff.

Some of the university's courses are offered in English, and the team was told that although the language of administration at the university is primarily Polish, the university has made a conscious effort to provide all relevant information in English as well. Similarly, there are Polish language courses available for international students.

The university has recruited some international staff members and plans to strengthen their numbers. However, there is at present no clear strategy for international staff recruitment. The team was made aware that salary levels are an impediment to attracting foreign staff. In recruiting international students, the university is also making use of international student recruitment agencies.

There are no formal mobility windows in the degree programmes, but the university uses the elective courses as potential mobility windows. According to the opinions and experiences heard by the team, the recognition issues seem to work smoothly in principle and in general practice. However, some challenges related to recognition and learning agreements for incoming students may appear when the learning agreement mandates participation in courses from other faculties.

7.3 *Monitoring: How does the institution know it works?*

The university regularly monitors the numbers on incoming and outgoing mobility and retention, as well as internationalisation research, such as collaborative research projects with international partners. Information about the experiences of international staff and students are also collected through focus groups and questionnaires.

~~However, the information seems to be largely numerical; and the team did not learn of any specific questionnaire being directed at the needs of international student or staff~~.

7.4 *Strategic management and capacity for change: How does the institution change in order to improve?*

The team recognized the following strengths and weaknesses pertaining to the internationalisation at WUT:

Strengths

- The ENHANCE Alliance offers multiple opportunities for mobility for students and staff including, importantly, non-academic personnel.

- The university has recognised and taken steps towards strengthening the English language capacity of staff and providing relevant information in English.

Weaknesses

- While WUT communicates mobility opportunities to the academic community by using in-person meetings, websites (Centre for International Cooperation, Erasmus+, faculties), newsletters and social media, and while funding matters are certainly a major obstacle, there is scope for more vigorously encouraging domestic students and staff to embrace international mobility opportunities, including international internships.

- Learning agreements are not always made in a straightforward manner when they require taking courses from more than one faculty.

Finally, the team suggests the following recommendations:

- The university is invited to ensure securing recognition by learning agreement, specifically in the case of incoming students who would like to take courses from more than one faculty. Fully implementing learning outcomes-based course design and ensuring that the concept of learning outcomes is understood by all teachers should be prioritised, given that they are elemental for the recognition of courses completed abroad.

- The university should consider increasing the activities to encourage domestic staff and student to engage in international activities, including international mobility and internships abroad.

- The university should more systematically use staff mobility for staff development purposes, especially that of administrative staff, be it within or outside of the ENHANCE network. It should broaden learning processes so that international experience benefits not only the participant but also broader institutional learning at WUT.

8 Conclusion

Despite the challenges arising mainly from the challenging regulatory environment and resulting organisational complexity, Warsaw University of Technology is a well-performing university, highly reputed by Polish society and its many national and international collaborators. The university is committed to continuous improvement and is therefore well placed to respond to current and future challenges. Furthermore, the university has amply demonstrated its ambition and capacity to overcome difficulties and move forward in achieving its goals.

The overall strengths of the university are the following:

- WUT is a strong player at international and national levels in science and engineering.
- The university aims to seek answers to the numerous changes and challenges confronting it, both in its operational environment and internal structures.
- The university has a strong aspiration to internationalise, both in its research and education functions.
- The strong partnerships with business and other HEIs, especially through the ENHANCE Alliance, allow the university to develop further.
- The university has highly committed staff and students, and highly appreciative external partners.
- There is a strong sense for democratic processes.

The main challenges perceived by the team are the following:

- The large size and organisational complexity, the organisational culture with its deep-rooted tradition of autonomy and independence of organisational units, and a heterogenous degree of development all contribute to a difficulty in communication, which reduces ownership of strategy processes in all levels of the organisation.
- A regulatory environment, especially on fiscal matters, is often restrictive.
- Strategic management thinking, SMARTness of strategy, and comprehensive quality culture are in early stages of development.

The team would like to take this opportunity to thank the university once again for the evaluation and to wish WUT a great deal of success in achieving its goals.

Summary of the recommendations

Governance and institutional decision-making

- The team recommends that the university finalise a comprehensive and fit-for-purpose KPI concept and complete its work on holistic action plan concepts, which meets the criteria of SMARTness. Annual strategic negotiations between faculties and the rectorate on how to implement the university strategy may be effective in helping the university achieve its strategic goals. Similarly, continuing the development of digitalised administrative processes for ease of access, visibility, and usability of the information systems by the academic community would be beneficial.

- The team recommends that the university consider whether it should rebalance its technical managerial staff and professional managerial staff to support strategic and quality enhancement processes more vigorously.

- The team invites the university to reconsider whether assignment of tasks between academic units and administrative units is fit for purpose.

- The team further recommends that the university consider optimising the roles assigned to the central university level, faculties, and disciplines.

- The team advises the university to consider improvement of communication, especially by defining an internal and external communication strategy and introducing a corresponding communication plan, making use of a professionally supported process as well as the introduction of a personal information cascade. Also, introducing professional leadership training to enhance interpersonal management capacity and improve communication skills is advisable.

Quality Culture

- The university would benefit from an open discussion on quality culture with broad participation and transparency. The Self Evaluation Report, and especially the SWOT analysis, are useful starting points for such a discission.

- The university is invited to consider strengthening the professionalisation of quality support, also with introducing more elements of proactive teacher support, for example, through training schemes. Similarly, aligning the quality assurance of education even more closely with the European Standards and Guidelines for Quality Assurance in Higher Education (ESG) might be beneficial.

- The policy and timing of circulating the student feedback surveys could be reconsidered to avoid survey overload, and an increase of open questions could be considered. WUT should also take steps to ensure that students understand that the results of their questionnaires are used for improvement and that, by providing feedback, they are engaged in quality work.

- The university should consider introducing systematic ways of informing the community of the actions taken to improve quality as a response to feedback collected, while still respecting the privacy of the individuals.

- The university is invited to consider whether the system of assessing individual performance could be fine-tuned and calibrated regularly to accommodate diverse academic staff profiles.

- The university is advised to establish a complaints box to collect information about the challenges faced by the community that are not surveyed by other means.

- The university should consider creating a Quality Assurance awareness environment through student representatives, including the Student Union.

Teaching and learning

- The university could consider embedding more efficient forms of research-led teaching as well as research experience in undergraduate programmes in order to foster research as a more evident component of the curricula. Similarly, promoting the knowledge and implementation of the Student-Centred Learning concept and practices in the community would be beneficial.
- The university could incentivise upgrading teaching competence by, for example, offering pedagogical training or short sabbaticals to faculty members for developing their own teaching.

- The university could also consider establishing a unit with professional pedagogical support staff which takes comprehensive responsibilities for steering and overseeing quality aspects along the entire span of the teaching-learning process, i.e., from programme design via teaching practice and examination policies to job success. Pedagogical training opportunities should be expanded, and the entire community could be encouraged to share best practices in teaching methods.

- The team recommends that develop its strategic analysis department into a fully-fledged, sufficiently equipped quality support and enhancement office with comprehensive responsibilities for all facets of quality along the entire span of the studying process (as well as research and administration).

Research

- The university is invited to reconsider the power balance between the different modes of organisational governance, especially faculties and disciplines, in terms of the research function of the university.

- There is scope for external peer review to judge the accomplishment and excellence of research production and activities, especially with a view to strengthening qualitative factors in evaluating research.

- The university may consider making use of the ENHANCERIAE to foster stronger strategic research collaboration with the ENHANCE partners and prepare for

upcoming funding calls, transdisciplinary research and funding joint infrastructure for research.

- ● The university may consider whether establishing a scheme or process could be useful in identifying future research opportunities which are not yet covered by WUT's current research activities, thus adding an element of foresight to WUT's current focus on track record, which leans towards indicating past and current strengths.

Service to Society

- • The university should consider systematising the mechanisms to collect feedback and inputs from external stakeholders such as employers and local businesses to foster the relevance and quality of the university operations.

- • The university could also consider establishing a lifelong learning strategy charting the way toward providing micro-credentials and professional development courses aimed at employers and society at large.

Internationalisation

- ● The university is invited to ensure securing recognition by learning agreement, specifically in the case of incoming students who would like to take courses from more than one faculty. Fully implementing learning outcomes-based course design and ensuring that the concept of learning outcomes is understood by all teachers should be prioritised, given that they are elemental for the recognition of courses completed abroad.

- ● The university should consider increasing the activities to encourage domestic staff and student to engage in international activities, including international mobility and internships abroad.

- ● The university should more systematically use staff mobility for staff development purposes, especially that of administrative staff, be it within or outside of the ENHANCE network. It should broaden learning processes so that international experience benefits not only the participant but also broader institutional learning at WUT.