

Important message to institutions:

Site Visits: All HRS4R in-house audits planned for 2021 will be conducted remotely with the consent of the host institution. Should your institution be at renewal stage, once you submit your self-assessment online via the e-tool, the EC will be in contact with you to set a date for the remote visit together with a panel of independent experts. Should the institution prefer a classic on-site visit, the audit will be postponed. Meanwhile, institutions involved in the process can continue using the HR Excellence in research award.

GAP Analysis (Charter and Code Checklist)

Case number: 2020SK574179

Name Organisation under review: Slovak University of Technology

Organisation's contact details: Vazovova 5, Bratislava, 812 43

Date endorsement charter and code: 04/11/2020

GAP Analysis overview

The Charter and Code provides the basis for the Gap analysis. In order to aid cohesion, the 40 articles have been renumbered under the following headings. Please provide the outcome of your organisation's GAP analysis below. If your organisation currently does not fully meet the criteria, please list whether national or organisational legislation may be limiting the Charter's implementation, initiatives that have already been taken to improve the situation or new proposals that could remedy the current situation. In order to help the organisation's recruitment strategy, a specific self-assessment checklist is provided for Open, Transparent and Merit-Based Recruitment.

European Charter for Researchers and Code of Conduct for the Recruitment of Researchers : GAP analysis overview

- **Status** : to what extent does this organisation meet the following principles?
- **Implementation (++, +/-, -/+, --)** :
 - 🔘 ++ fully implemented
 - 🔘 +/- almost but not fully implemented
 - 🔘 -/+ partially implemented
 - 🔘 -- insufficiently implemented
- **GAP** : In case of --, -/+, or +/-, please **indicate the actual "gap"** between the principle and the current practice in your organisation.
- **Implementation impediments** : If relevant, please list any national/regional legislation or organisational regulation currently impeding implementation.
- **Initiatives undertaken/new proposals** : If relevant, please list any initiatives that have already been taken to improve the situation and/or new proposals that could remedy the current situation.

Ethical and Professional Aspects

1. Research freedom

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
++ fully implemented	<p>At the Slovak University of Technology (STU), the research freedom is implemented in compliance with the European Charter for Researchers. Full freedom is guaranteed by law but limited by the low financial level of state support for research, which causes different conditions for researchers in individual EU countries. In practice this means, in Slovakia research is mainly done as part of research projects and not efficiently linked to nationwide economic strategies and/or preparing students for professions currently in demand. Regulation: - Article 43(1) of the Constitution of the SR states that 'Freedom of scientific research and freedom of artistic expression shall be guaranteed. Intellectual property rights shall be protected by a law'. - Section 4(1)(a) Academic Freedoms and Academic Rights of the Act No. 131/2002 Coll. on Higher Education guarantees 'freedom of scientific investigation, research, development of artistic and other creative activities and publicising their achievements'.</p>	<p>Initiatives: - Ethics Committee - Improved awareness and more concise instructions Recommendations: Lobbying to improve the systemic support of education according to the real needs of profession in demand on the labor market, rather than funding education according to the number of people studying in the field.</p>

2. Ethical principles

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>In general, these principles are adhered to, however there can be occasional individual oversights. The Code of Ethics is not up to date and not all researches have been familiarized with it. The rights, obligations and the statutes of the Ethics Committee have not been clearly defined yet and are not sufficiently adapted to individual parts of STU. There is no institutional approach to training and courses. Leading by example and best practice examples are insufficient. Documents in English are missing. The ethical principles and standards are not clearly defined and procedures in case of a violation are vague. There are no explicit ethical rules on how experiments involving human participants should be conducted and how the collected data should be published (e.g., data anonymization). Regulation: - Working Regulations of the Slovak University of Technology in Bratislava, Art. 3a - Ethics committee https://www.stuba.sk/buxus/docs//stu/pracoviska/rektorat/odd_pravne_organizacne/Pracovny%20poriadok%20uplne%20znenie.pdf#page=6 - Working Regulations of the Slovak University of Technology in Bratislava, Annex 6 - Code of ethics of the employee of the Slovak University of Technology https://www.stuba.sk/buxus/docs//stu/pracoviska/rektorat/odd_pravne_organizacne/Pracovny%20poriadok%20uplne%20znenie.pdf#page=40 - The Code of Ethics of the Slovak Chamber of Civil Engineers (SvF): https://www.sksi.sk/eticky-poriadok-sksi - Department of the Head Controller – Whistleblowing</p>	<p>Potential ethical issues are being resolved on a case-by-case basis by direct superiors, however dismissals or similar can also be discussed by the Faculty Management or the University Ethics Committee. Initiatives: -</p>

Status		How do you know?
Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
		Ethics Committee of the Slovak University of Technology in Bratislava - Updated Code of Ethics for employees of the Slovak University of Technology in Bratislava Suggestions: - STU Ethics Portal - The development of an accessible set of information, examples, best practice procedures and trainings (in individual situations depending on the faculties and institutions). - 'train the trainer' activities - regular training and courses (including at faculties) - Update and specify policies for individual components of STU - Raise

Implementation

GAP / Implementation impediments

**Initiatives
undertaken/new
proposals**

awareness about the unacceptable level of (self-)plagiarism and clearly define what it means to co-author a scientific publication - In particular we should educate and appeal to the individuals to behave in a diligent and responsible manner; even the best regulation will not ensure 100% ethical conduct. After the Code of Ethics is updated, new Ethics Committee regulations should be issued so that the committee can efficiently investigate all complaints (amendment to the Work Regulations of STU). In case of ethical and professional

Implementation

GAP / Implementation impediments

**Initiatives
undertaken/new
proposals**

violations, sanctions must be applied, and personal responsibility taken. The managers at various levels of the organization should then pay increased attention to the observance of ethical principles by their subordinates.

3. Professional responsibility

Implementation

GAP / Implementation impediments

Initiatives undertaken/new proposals

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>In general, these principles are adhered to, however there can be occasional individual oversights. The rights, obligations and statutes of the Ethics Committee have not been sufficiently defined. There is no institutional approach to training and courses. Leading by example and best practice examples are insufficient. Documents in English are missing. The Code of Ethics is not up to date; there are no consistent and automated processes to verify professional responsibility. We could/should specify the consequences of non-ethical behavior for individuals and/or teams guilty of misconduct. The publication of results in the so-called predatory and low-quality magazines, which can be used to obtain the necessary results quickly, is treated individually. Lack of staff at STU's Technology Transfer Office (TTO) and the setup of national grant agencies (e.g. APVV) often does not really support socially important research. - Lack of information due to the absence or exploration of facts (state of the art verification) prior to the start of research can cause research spanning several years to be the same or very similar to the state of the art and therefore cannot be deemed original or industrially applicable. This failure appears at grant calls of the national agencies as well as at the research site. - Many of the aforementioned failures are caused by an excessive valuation of publications or by the (sometimes existential) necessity to present certain research results which should be achieved with disproportionately low government subsidies as those figures are key to general governmental funding. Regulation: - The Act No. 131/2002 Coll. on Higher Education (Section 62a Special requirements regarding Final, Rigorosa and Habilitation Thesis and Part Eight: University Employees). - Disciplinary Regulations of the Slovak University of Technology in Bratislava for Students - Working Regulations of the Slovak University of Technology in Bratislava</p>	<p>In general, it appears that researchers have reasonable knowledge of intellectual property ownership of research data, of co-authorship and plagiarism. Initiatives: - Technology Transfer Office (TTO) - Legal and Organizational Department - Ethics Committee of the Slovak University of Technology in Bratislava - Code of Ethics for employees of the Slovak University of Technology in Bratislava Suggestions: - STU Ethics Portal - Development of a set of information, examples of best practices and training (e.g. a researcher manual with recommended licenses and their wordings for published data and reproducibility of experiments) - 'train the trainer' activities - 'Lead by example' - Regular training and (online) courses (e.g. on how to create scientific publications in full compliance with ethical principles, on predatory magazines, etc.) focusing on possible legal implications. - Making the necessary scientific databases (e.g. SciFinder) accessible – researchers must have access to libraries, databases and magazines, otherwise it is not possible to avoid duplicate research or incorrectly quoted sources or incorrectly published results - Change of national university evaluation criteria (lobbying) - In case of ethical and professional violations, sanctions must be applied, and personal responsibility taken. - A body should be formed to support systematic transfer of technology (a sufficient number of real-life stimuli may improve the originality of research however we need to differentiate between basic and applied research) - A high-sensitivity centralized verification system (anti-plagiarism software, publication channel quality control,...) (including internet articles, not just for final theses), - Legal aid , which could also be of a consultative nature for the researchers themselves (a set of instructions?), not only in matters of a faculty-wide scope, but also in less important research tasks – smaller projects. - A unified database of research results categorized by fields of science containing both local and international research (also for the needs of reproducibility of experiments), which would also allow for publishing results in compliance with the required licence. - An obligation to check the state of the art prior to the commencement of the research, the possibility to monitor the state of the art during the ongoing research. Cooperation with the TTO if sufficient staff were available.</p>

4. Professional attitude

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>In general, these principles are adhered to, however there can be occasional individual oversights. Not all researchers wish to participate in information events and workshops. They often do not have enough information about different grant schemes (in particular, the international ones). There is no institutional approach to training and courses. Leading by example and best practice examples are insufficient. Documents in English are missing. A university-wide consulting and monitoring system is missing, which would at least provide researchers with the general information mentioned in this section. There is no department or unit capable of proposing a suitable grant scheme according to the requirements of the researchers, such as the topic of the research, the method of funding, expected results, measurable indicators, required paperwork, etc. Researchers are forced to obtain such information individually, which takes a lot of time and effort. Due to this increased administrative burden on staff, there is no room or capacity for a more in-depth analysis of the funding schemes, therefore 'proven' grant agency activities are usually repeated. The Code of Ethics is not up to date Strategic goals of the university have been set relatively vague – which negatively impacts the level of identification and professionalization of work of individual STU employees.</p>	<p>Initiatives: - information and individual consulting are provided to researchers by the Department of Science and International Scientific Cooperation and the Department of International Relations in a newsletter and on a designated website http://www.granty.stuba.sk/ - Consulting is also offered by the University Project Centre and the project centres of individual departments and faculties. Suggestions: - Raise awareness - 'Lead by example' - Development of a set of information, examples of best practices and training should be prepared. Professional responsibility often means the researchers need to know that a specific procedure must be approved by their superiors. A document could be created. - 'Train the trainer' activities - Regular training, courses and information meetings (e.g. a seminar on the possibilities of research project funding once a year for the employees including doctoral candidates from 2nd year of study; heads of research teams should be trained in project management skills) - A document describing the strategic goals using the SMART method should be created. - Create a policy of inward and outward research activity communication. - A unified form of promoting open calls to submit project proposals at individual faculties with hindsight on the field of scope of various researchers. (Many approaches have been identified, e.g. formation of faculty project centres / reinforcement of a centralised project centre / reinforcement of the existing R&D and TTO departments... A further study is needed to find the best solution for the university) - A unified database and data repository of research results categorised by fields of science containing both local and international research (also for the needs of reproducibility of experiments), which would also allow to publish results in compliance with the required licence (in terms of Open Access and Open Data). - Mandatory communication with TTO and an obligation to research the state of the art.</p>

5. Contractual and legal obligations

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>In general, these principles are adhered to, however there can be occasional individual oversights. Lack of staff at the Technology Transfer Office (TTO). There is no institutional approach to training and courses. Leading by example and best practice examples are insufficient. Documents in English are missing. There is no institutional approach to initiatives when it comes to Open Access and Open Data. Overall, the legal and administrative support for contract-based research is insufficient. Insufficient legal awareness among the members of staff. Regulation: - Act No. 131/2002 Coll. on Higher Education - Act No. 311/2001 Coll., the Labour Code - Act No. 552/2003 Coll. on Performance of Work in the Public Interest - Act No. 553/2003 Coll. on Remuneration of Certain Employees During Performance of Work in the Public Interest - Working Regulations of the Slovak University of Technology in Bratislava</p>	<p>In general, it appears that researchers have a reasonable knowledge of national, industrial, and institutional regulations. Initiatives: - Technology Transfer Office (TTO) - Legal and Organizational Department - Code of Ethics for employees of the Slovak University of Technology in Bratislava - implementation of an extension for the Academic Information System (AIS) Suggestions: - Development of a set of information, examples of best practices and training. - 'Train the trainer' activities - Regular training and courses - raise legal awareness among the STU employees / Provide information without the unnecessary 'training' - Many approaches have been identified, e.g. to bolster the legal and administrative support for contract-based research / Create a university-wide consulting centre or a project management department / Improve efficiency of transfer of the necessary information at all levels / The way in which support departments of STU work needs to be changed – they need to work in support of the main activity of STU: education, science, and research. Additional staff should not be hired, the existing staff should be reorganized. A further study is needed to find the best solution for the university. - Motivate and support researchers to have the results of their work patented. - Simplify the processes used to claim intellectual property rights, set clear rules. - Motivating criteria for inventor(s) with regard to practical implementation of intellectual property. - The TTO could organize regular information seminars or at least send out information regularly. - When it comes to research projects, there is no information available about their progress – a separate interactive website/repository could help improve this. - Proposal to prepare a IPR directive and guidelines applicable at the STU - Cooperation with the Slovak Centre of Scientific and Technical Information in Bratislava with regard to Open Access and Open Data</p>

6. Accountability

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>In general, these principles are adhered to, however there can be occasional individual oversights. The concept of data storage and accessibility at an institutional level is inadequate. There is no institutional approach to training and courses. Leading by example and best practice examples are insufficient. Documents in English are missing. There is no institutional approach to initiatives when it comes to Open Access and Open Data. The Code of Ethics is not up to date. Considering the absence of long-term strategic goals, funds may not always be spent efficiently. The data required by researchers is not always up to date. Lack of internal control.</p>	<p>Researchers are more or less forced to use their funds in an efficient and effective way, because the funding of everyday needs is very strict, and each funding system has its own rules ensuring a reliable, transparent and efficient spending of funds as well as cooperation during any mandatory audits and other forms of inspection by the respective bodies. Initiatives: - Implementation of an extension for the Academic Information System (AIS) Suggestions: - Updated Code of Ethics for employees of the Slovak University of Technology in Bratislava - Development of a set of information, examples of best practices and training should be prepared. - 'Train the trainer' activities - Regular training and courses and/or an accessible clearly understandable document. - The process of holding employees accountable in case of violations must be more efficient. - The funds can be used more effectively and specifically when long-term strategic goals and means to achieve them have been defined. - Improve the system of gathering, transfer and availability of the required information and remove multiple checks of the same output – less bureaucracy. - 'Lead by example'</p>

7. Good practice in research

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
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Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
++ fully implemented	<p>STU does not have a centralized methodology for specific research activities (handling of biological material, waste, etc.), which are usually handled on a case-by-case basis whereas, with regard to the nature of our university, they are quite rare. However, with the development of biomedical applications, the need for such a methodology can be expected. Documents in English are missing. Information about suitable strategies and procedures for backup of research related data (e.g. a centralized repository) which could prevent the loss or misuse of such data are not available. At STU there is no overview of the possibilities to use specialized (expensive) equipment owned or hired long-term by the university. The excessive administrative burden of the researchers does not allow to fully utilize research capacities and procedures. Regulation: - Act No. 124/2006 Coll. on Occupational Safety and Health - Working Regulations of the Slovak University of Technology in Bratislava</p>	<p>STU has implemented general rules for hazardous work which are in line with the Slovak legislation. Protection of personal data at STU is in compliance with the EU GDPR regulation. The university also organizes mandatory annual occupational safety and health and fire protection training for its employees. Initiatives: - information and individual consulting regarding the requirements of funders are provided to researchers by the Department of Science and International Scientific Cooperation and the Department of International Relations in person, or 'en bloc' in a newsletter and through a designated website at http://www.granty.stuba.sk/ - Consulting regarding the requirements of funders is also offered by the University Project Centre and the project workers of individual departments and faculties. - Consulting regarding intellectual property rights is offered by the Technology Transfer Office of the Rector's Office at STU. - Consulting regarding OSH is offered by the STU HSE Specialist or the OHSE Protection Specialist. - Consulting regarding GDPR is offered by the Legal Department of the Rector's Office at STU In general, the OHS at STU is at the required level. The specific requirements of individual workplaces must be fulfilled by the respective head. Suggestions: - Update the Code of Ethics for employees of the Slovak University of Technology in Bratislava. - Possibly an improved coordination and unification of some university-level procedures. - Prepare data storage strategies and procedures and provide the necessary infrastructure. - Dissemination of centralized but personalizable information (e.g. filters). - Waste chemicals used for analyses should be collected more frequently. - Waste separation methodology.</p>

8. Dissemination, exploitation of results

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
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Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>In general, these principles are adhered to, however there can be occasional individual oversights. Lack of staff at the Technology Transfer Office (TTO). There is no institutional approach to training and courses. Leading by example and best practice examples are insufficient. Documents in English are missing. There is no institutional approach to initiatives when it comes to Open Access and Open Data. There is no focus on commercialization, in particular among the senior researchers. The personnel support to ensure external or commercial presentation of results is insufficient, the cooperation with industry is lacking. There is no wide-spread support of dissemination of information about the research results in the media, including the modern social media. Dissemination of results has been partially implemented when it comes to publishing in scientific journals, however the results are not promoted (marketed) sufficiently to reach the general public. Researchers are evaluated on the basis of the quantity and not quality of their published results. There is also an issue with measuring the efficiency of research, which may be dissimilar for different fields of study. Regulation: - Section 4(1)(a) Academic Freedoms and Academic Rights of the Act No. 131/2002 Coll. on Higher Education guarantees 'freedom of scientific investigation, research, development of artistic and other creative activities and publicising their achievements'.</p>	<p>Researcher evaluation is based on the published research results, i.e. on their scientific publications and presentations at conferences and seminars. One of the criteria of scientific publication is how often they are quoted. The objective of each researcher is therefore to disseminate as many of their research results and practical applications as possible. Initiatives: - The results of the researchers' work are also disseminated through information circulated at department, faculty and university meetings. The results of their work are published in annual reports, evaluation reports, on collaboration programme portals and on websites of institutions. The results of the researchers' work are also disseminated through conferences and publication activity. - A number of researchers who strive to promote the results of their research use a profile at Google Scholar, Research Gate, ORCID or similar platforms. Such activities are not limited in any way at STU, but they are also not systematically regulated or controlled. - Technology Transfer Office (TTO). - Implementation of an extension for the Academic Information System (AIS). - The Chemday activity has offered new possibilities to share knowledge among researchers (a 'best practice activity' with focus on chemistry and related fields of research). Suggestions: - Development of a set of information, examples of best practices and training - Improve/develop a systematic institutional approach to presentation of research results on scientific networks. Significantly bolster cooperation with the industry, spin-off activities and entities such as the STU incubator. Alleviate researchers from marketing as much as possible by providing institutional support with dissemination outside of publishing and conferences. - 'train the trainer' activities - Regular trainings, courses and clear recommendations. - Institutional database of both active and completed research projects that have been published categorized by fields of science and the promotion thereof. - Improvement of communication with the industry, asking industry managers to help with preparing the curricula, seminars and workshops for business companies dealing with the issues at hand, etc. All of that with the objective of doing research with practical applications. - Obtain more funds for dissemination of research results through Open Access - When judging research, its quality should be taken into account, as well as the benefits of the output</p>

9. Public engagement

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
-/+ partially implemented	<p>There is a lack of common procedures, a comprehensive concept and support for promotion of science, research, and other results of creative activities at the university level, or any kind of training regarding this topic other than publication activities and enrolment of students. Public engagement often depends on individual activities of the faculties, on individual research teams or individuals. There is no institutional approach to initiatives when it comes to Open Access and Open Data. Lack of communication in English. Lack of information about domestic and foreign research activities. Researchers often do not have sufficient know-how on how to appropriately present the results of their research (both to the general public and to professionals from related fields). There is a lack of communication with secondary schools. A lack of material and financial support for science popularization, research- and other results of creative activities of individual research teams.</p>	<p>- Activities of the Ministry of Education, Science, Research and Sport of Slovak Republic: o Department of Higher Education, o Department of Science and Research, o Slovak Centre of Scientific and Technical Information (since 15 June 2007), and a specialised scientific library o The Central Information Portal and Information System for Research, Development and Innovation - Other activities to promote public engagement: o The Science and Technology Week has been organised in Slovakia annually since 2004 (by the Ministry of Education, Science, Research and Sport of SR, the National Centre for the Popularisation of Science and Technology in Society, the Slovak Centre of Scientific and Technical Information). The objective of the annual Science and Technology Week in Slovakia is to improve the perception of science and technology in society, promote and present them, encourage young people to study scientific and technical subjects, provide the general public with scientific and technical information, and communicate the necessity to support science and technology, which form the basis of economic and social progress and help resolve global issues and challenges. o Complementary events are organised by individual unions, associations, research & development organisations, ministries, self-governing regions, universities, and schools throughout Slovakia. The events usually have the form of open days, lectures, seminars, project presentations, conferences, workshops, exhibitions and similar. o The Slovak Rectors' Conference (SRC) cooperate with the Science and Technology Week to facilitate exchange of information between the Ministry of Education and the universities. Members of the SRC board regularly take place in this event giving presentations on the latest R&D topics. o The Night of Researchers is another annual event. The event was held for the first time in Europe and Slovakia in 2005. The central motive of the project is 'Researchers are among us'. Its mission is to show that researchers are 'ordinary' people with an exceptional profession. The results of their work help improve our lives, but other than that they lead normal lives just like everyone else. The project is organised by: SOVVA, SAV, EURACTIV in collaboration with the Ministry of Education, universities, business partners/sponsors and media partners. - Other events organised by universities: o Open days o Children's university o Summer schools o Olympiads and competitions o Student scientific forums o Universities of the Third Age o Conferences, seminars, workshops, exhibitions... o Science cafés and confectioners, different debates with researchers o Master classes focussing on physics (secondary schools, universities, CERN) Initiative: - implementation of an extension for the Academic Information System (AIS) Suggestions: - Develop a set of information, examples of best practices and training should be prepared - 'Train the trainer' activities - Regular training and courses - Bolster collaboration between universities with regard to international or complementary promotion of research results. We assume that the greater the number of universities presenting their results at the same time, the grater the public impact. - System solution for dissemination of STU results and PR activities of the university + support for young researchers when preparing such output. - We need professional PR staff at the university! / Promotion of science is often perceived as a necessary evil. In this regard, we should support promoters especially suited to carry out this work. Responsible lead researchers – prominent scientists – are not sufficiently engaged in projects to involve the public. In consequence, the public often get the wrong ideas about the actual research.</p>



10. Non discrimination

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
++ fully implemented	<p>There is a risk of discrimination based on political views. There is no control of discrimination on the basis of the selected field of science. Regulation: - Article 33 of the Constitution of the Slovak Republic states that 'Membership in any national minority or ethnic group may not be used to the detriment of any individual'. Article 36(b) states that 'protection of the employee against discrimination at work'. - The Act No. 365/2004 Coll. on Equal Treatment in Certain Areas and Protection against Discrimination, (the Anti-discrimination Act) - Code of Ethics for employees of the Slovak University of Technology in Bratislava - Working Regulations of the Slovak University of Technology in Bratislava</p>	<p>While there was a huge difference between the distribution of work to and remuneration of men and women not so long ago, gender pay gaps and the equal status of men and women are no longer perceived by employees as an ongoing problem, even there is no scientific study to compare the assessment system and the subsequent remuneration of female and male researchers at the university, or at universities in Slovakia in general. Researcher remuneration is becoming more objective. However, it always depends on the superior who, to a large extent, influences distribution of work and remuneration. A system for monitoring of opportunities and remuneration should be introduced. Working with Erasmus and foreign students also requires training on multicultural issues. Improvement of language skills with lecturers teaching foreign students and similarly a 2-3-week instruction course for foreign students regarding the specifics of study in Slovakia.</p>

11. Evaluation/ appraisal systems

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
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Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>In general, these principles are adhered to, even though the amounts paid are mostly an expression of recognition rather than a financial motivation... There is no evaluation by international committees. The employer's hands are often tied due to the underfunding of education, science and research. Young researchers can usually cope with such disincentive, the senior ones often seek other opportunities to provide for their families. When evaluating R&D, too much attention is paid to publishing, while e.g., practical application is often neglected.</p>	<p>Researcher activity is regularly evaluated, in particular in connection with: - comprehensive accreditation of universities; - accreditation of study programmes; - preparation of documents for the Ministry of Education, Science, Research and Sport of SR required in the decision-making regarding distribution of subsidies to universities (publishing activity, involvement in domestic and foreign research projects); - individually through an international evaluation process (e.g., EUA) - not on a regular basis; - preparation of university annual reports; - through a process of qualification improvement (habilitation, nomination procedure...); - and preparation of foreign and domestic research projects. - when creating a subject of industrial property, employees of STU are paid a remuneration according to the law, and if their solution continues to be used, by law they are entitled to further compensation (rector's regulation On the Protection and Management of Industrial Property Rights at STU). Initiatives: - Rector's award for the best publications - Rector's award for the best artistic performance - Young researcher support programme - Young researcher excellent team support programme - Post-doctoral research stays at STU - The STU award 'Researcher of the Year' - Rewards for activities of authors - Faculty awards to the best researchers in individual departments (e.g., the FIIT Dean's Award) Suggestions: - Introduce an electronic automated system of employee (and team) evaluation at individual STU departments. The system should include clear criteria for evaluation of work (all activities and results) of employees which will be available to the public, and the evaluation must be transparent. It should also take into consideration the technical equipment and the funds spent on laboratory equipment; the rules for assignment of weights to individual research outputs should be defined. - Introduction of further (centralized) motivational remuneration schemes. - Along with the current performance evaluation, an international group of experts should be created, who can objectively evaluate the work of researchers and whose verdict will be relevant in the evaluation and appraisal of such researchers. The managers of a given employer do not have to be experts in the field in which their subordinates work, therefore their evaluation and appreciation of the performance of such a person may not always be objective. - There are evaluations of lecturers and assistants by students. This model could be used to nominate the best research team or best researcher from the students point of view. - Add the obligation to have selection procedures for all research positions. - Performance based financial rewards should be more direct instead of being implemented through institutes, but we should not forget about moral appraisal at the level of departments and institutes. - Improve funding of technical universities and schools in general (lobbying).</p>
<p>Recruitment and Selection - please be aware that the items listed here correspond with the Charter and Code. In addition, your organisation also needs to complete the checklist on Open, Transparent and Merit-based Recruitment included in a separate section, which focuses on the operationalization of these principles.</p>		

12. Recruitment

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
-/+ partially implemented	<p>The process of publishing of open positions is very detailed (the Higher Education Act, the Anti-discrimination Act, and different internal documents), however the interviews and hiring standards for researchers – in particular, at the beginning of their career – are rather inconsistent and vague. In many cases the recruitment process is very individualized. STU does not have a sufficiently detailed description of the recruitment process and career development. Insufficient legislation for hiring researchers (and teachers) at an international level (in particular, for professors and associate professors) poses a significant obstacle to making the university more international. Documents in English are missing. Most STU buildings are wheelchair accessible. The current remuneration possibilities prevent a faster development (recruitment from abroad and from the industry) and recruitment of younger staff. Regulation: - Internal regulation number: 1/2013 Rules of the selection procedure to fill positions of university teachers, researchers, professors and associate professors and managerial positions at the Slovak University of Technology in Bratislava (Rules of the Selection Procedure at STU) - Rector's decree number: 2/2013 Publishing of information about the habilitation proceedings, about the procedure for appointment of professors, and the selection procedure to fill positions of university teachers</p>	<p>Initiatives: - Job offers include requirements regarding education, required experience and qualifications. The offered benefits are described in the collective agreement. - Vacancies are advertised for a time period of 3 weeks (or longer), regardless of whether they are published on the STU website or at one of the job portals. - Project SASPRO 2 (Horizon 2020 Marie Skłodowska-Curie COFUND Action), offering competitive salary conditions with the aim to attract foreign researchers or Slovak expatriates from abroad. - Personnel audit. Suggestions: - Implement the recommendation of the personnel audit - Intensify publishing of open positions on the EURAXESS portal - Translate the most crucial documents into the English language. - Stipulate detailed conditions for hiring of researchers similar to those for hiring pedagogues. - Include foreign scientists in the selection panels - Prepare a comprehensive HR policy, issue a guidance for qualitative procedures in career development, detail the hiring standards for researchers and introduce long-term systemic measures for acquiring high-quality staff from the international non-university environment. - Researchers can be hired even without selection procedures without clearly specified requirements – this should be changed beyond the scope of the law. - A clear and precisely applied concept of STU development is the best advertisement when hiring new employees. - Improve funding of technical universities and schools in general (lobbying).</p>



13. Recruitment (Code)

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
-- insufficiently impleme...	<p>Employment for the duration of a project, employment for a fixed period of time and limited funds of universities reserved for researchers do not give researchers a lot of security in regard to their future employment. Frequently, the job description or a detailed description of obligations is vague, and the specification whether the contract is temporary or permanent is missing. The university has no rule to ensure transparency, career development and no mobility policy (alternative requirements), etc. Global websites for researchers (EURAXESS, Research Gate etc.) are rarely used. The Higher Education Act does not specify how the work activities of researchers differ from those of teachers. Information in job activity catalogues is also very limited. A large percentage of women with great research potential are discouraged by low social support for women on maternity leave. Insufficient funding and the therefrom arising unsatisfactory competitiveness on the labour market.</p>	<p>Job offers include requirements regarding education, required experience and qualifications. The offered benefits are described in the collective agreement. Vacancies are advertised for a time period of 3 weeks (or longer) regardless of whether they are published at the website of STU or at one of the job portals. Initiative: - Personnel audit Suggestions: - Implement the recommendation of the personnel audit - Presentation of the university, successful research projects, the possibilities and forthcoming nature of university's environment abroad. - Stipulate detailed conditions for hiring of researchers similar to those for hiring pedagogues. - A social programme for mothers on maternity leave should be introduced starting from PhD studies. - A clear and precisely applied concept of STU development is the best advertisement when hiring new employees. - Support for hiring via video-calls, sending of CVs in electronic form only. No obligation to mail CVs by post. - Improve funding of technical universities and schools in general (lobbying).</p>

14. Selection (Code)

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
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Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>In general, these principles are adhered to, however there can be occasional individual oversights. The criteria for selection of new employees and the terms for creating selection committees are only specified very vaguely in the regulations and procedures for hiring employees. Members of the selection committees are not trained on hiring and selection. The international dimension is often completely disregarded. Insufficient level/interest of applicants. Selection committees are mostly homogeneous, there is no variety of scientific qualifications. Regulation: - At present, these processes have been set to comply with the law, however there is room to modify them within the boundaries of the law. - Internal regulation number: 1/2013 Rules of the selection procedure to fill positions of university teachers, researchers, professors and associate professors and managerial positions at the Slovak University of Technology in Bratislava (Rules of the Selection Procedure at STU)</p>	<p>- The system used for selection of new employees works, despite the fact, that regulations on hiring of employees are not elaborated in detail. - The rule of gender and age diversity in selection committees at STU is respected in compliance with the Higher Education Act and the Anti-discrimination Act. - The selection committee takes into account the mobility assessment and the achieved research results, as well as project management experience. - New researchers are primarily hired to work on projects where the required competences are determined by the project owner (in the university's case, the selection includes multiple criteria with focus on comprehensive knowledge, results, publishing activity, etc.). - Thanks to external audits (Supreme Audit Office of the Slovak Republic, Labour Inspectorate) the processes are being gradually perfected. Initiative: - Personnel audit Suggestion: - Implement the recommendation of the personnel audit - Stipulate detailed conditions for hiring of researchers similar to those for hiring pedagogues. - Foreign and industry experts should also be invited, or external experts, who could be e.g. from the Rector's Office for all departments of the university. - The composition of the selection committee should not be purpose based. - Development of a comprehensive HR policy. Employees participating in different committees should undertake soft skills training, with a focus on managing interviews, and a competence model should be prepared linked to the position being filled. An applicant evaluation procedure and standard should be prepared which take account of additional skills (e.g., time management, communication, character qualities, ability to collaborate, etc.), and an HR and recruitment department should be set up.</p>

15. Transparency (Code)

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
-/+ partially implemented	<p>Job seekers applying for an advertised open position are notified about the hiring process and the selection criteria, however only seldom are they notified about the number of open positions, possibilities of career development and the strengths and weaknesses of their application, which is mainly due to the fact that in the Slovak Republic attention is paid primarily to the impartiality of the selection procedure, which usually takes the form of a ballot by the members of the selection committee. Because of this, it is difficult to notify the applicants of their strengths and weaknesses. Also a lack of transparency with respect to strengths and weaknesses has been identified.</p>	<p>Initiative: - Implement the recommendations of the personnel audit. Suggestion: - Improve transparency, awareness and the therefrom arising objectivity, e.g. by creating rules as part of the comprehensive HR policy.</p>

16. Judging merit (Code)

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	Even though this rule is generally accepted and used, the university is missing detailed evaluation criteria for judging merit and weights for individual evaluated indicators. Their specification in internal documents is very vague.	Initiative: - Implement the recommendations of the personnel audit. Suggestions: - Improve transparency, awareness and the therefrom arising objectivity, e.g. by creating rules as part of the comprehensive HR policy (a system of comprehensive evaluation of candidates). Propose evaluation systems and balance-out the output of applied research and development with basic research. - Non-university experts and experts from the respective fields should be invited to participate in the selection committees.

17. Variations in the chronological order of CVs (Code)

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
++ fully implemented	Unified document is missing.	Suggestion: - Use a unified CV form for all. - This should be included in the comprehensive HR policy.

18. Recognition of mobility experience (Code)

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	Even though mobility experience is very important to STU, the provisions of internal documents in this regard are very vague. The university only has very limited resources to support mobility. Lack of information about the possibilities of funding mobility as part of grant schemes and projects. Lack of time due to the high workload of researchers. Language barrier or insecurity when communicating in a foreign language.	Assessment of applicants and their selection use a multi-criteria approach and mobility (in particular, international mobility) is one of the very important parameters when it comes to researchers. The importance of this parameter, however, depends on the type of position. When making an assessment we should also take into consideration the duration, the quality of institutions visited and the position in which the mobile employee has been working. Suggestions: - Should be included in the comprehensive HR policy with a focus on the quality of knowledge obtained as part of mobility (not just the time spent being mobile), thus creating a system (rules) for assessment of the mobility experience. - Promotion of mobility experience and raising of awareness about the possibilities of funding it.

19. Recognition of qualifications (Code)

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
-/+ partially implemented	<p>STU does not have a specific regulation on recognition of informal qualifications as part of professional mobility, and even though it is taken into account in the selection process, its impact is minimal. Insufficient legislation for hiring researchers (and teachers) at an international level (in particular, for professors and associate professors) poses a significant obstacle to making the university more international. Regulation: - Recognition of qualifications of researchers is based on the Higher Education Act. Academic titles (Doctor, Associate Professor, Professor) can be obtained from universities that offer accredited doctoral studies, habilitation and appoint professors. These titles are valid in all institutions in the Slovak Republic. Recognition of qualifications of foreign employees is regulated by a decree of the Ministry of Education.</p>	<p>Suggestion: - First of all, we need to define the term 'informal qualification' for the purposes of STU. - Introduce a system of training courses to teach employees different skills as part of a systematic life-long education. Lobbying: - The problem lies outside STU with its superior bodies (the Accreditation Committee, etc.) STU must use its influence to try to change this.</p>

20. Seniority (Code)

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
++ fully implemented		

21. Postdoctoral appointments (Code)

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
++ fully implemented	<p>Even this point was regarded as fully implemented by the majority of responders, some still perceive some room for improvement regarding: - Lack of information about the system of postdoctoral positions. - Transparency of selection of postdoctoral researchers and specify their obligations. - The postdoctoral researchers have no guarantee of employment at STU in the future. - The number of postdoctoral positions is small and only attracts a few foreign employees.</p>	<p>Even though the Slovak legislation does not differentiate between researchers and postdoctoral researchers, STU did introduce a system of postdoctoral positions. Suggestions: - Prepare clear rules and explicit guidelines for the recruitment and appointment of postdoctoral researchers who have completed their doctoral studies (at university level). - Clearly specify the obligations of postdoctoral researchers and researchers, which will be part of the employment contract. Clearly differentiate the postdoctoral positions from positions for research assistants. - Increase the number of postdoctoral positions at STU and systematically support the postdoctoral positions e.g., through a more efficient use of APVV grants.</p>

Working Conditions and Social Security

22. Recognition of the profession

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
++ fully implemented		Initiatives: - Rector's award for the best publications - Rector's award for the best artistic performance - Young researcher support programme - Young researcher excellent team support programme - Post-doctoral research stays at STU - The STU award 'Researcher of the Year' - Rewards for activities of authors Suggestion: - Highlight the results of scientific work having practical applications.

23. Research environment

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
-/+ partially implemented	Public institutions in the Slovak Republic are significantly limited by the funds available to them (compared to other EU countries, Slovakia only spends a very low GDP percentage on science and research). Cooperation with the industry, when it comes to joint worksites, could be better. Big differences between individual departments – issues with assessment of actual performance. A lack of long-term support of basic research at universities through industrial funds. A lack of technical equipment, lack of information about the equipment available at the university which could be used and shared even with another research group to achieve the required scientific output. There is no strategy and rules for a systematic maintenance of equipment of individual departments. There is only very limited communication between individual research worksites. A high administrative burden and bureaucracy involved in gaining projects (even small ones). Very non-transparent assessment of research project applications.	Initiatives: - Research support funds. - Internal university grants for science and research. Suggestions: - Prepare a strategy to help improve the research conditions in the less attractive fields of science. - Facilitate and promote inter-departmental collaboration and information sharing. - More funding to make the cooperation with the university more attractive for the industry, create stronger links with the industry, and get our graduates into managerial positions. Involvement in the matters of the university even after graduation (preparation of common projects, invitations to scientific seminars, lectures for students...) cultivate pride and a sense of belonging to the university. - Raise awareness among the researchers about the availability and the possibility of sharing technical equipment within departments, the university as a whole or within individual research workplaces (e.g., the Slovak Academy of Sciences), thus minimizing the cost of obtaining new equipment. - Development of rules and strategies, as well as their practical implementation in the systematic investment in the equipment of departments and its maintenance during its continued existence in the coming decades. Lobbying: - Improvement of funding of technical universities. - A transparent and objective approach to grants will help stimulate research.

24. Working conditions

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>Long-term leave of absence for researchers (the so-called sabbatical) is not stipulated in the Slovak legislation. However, the respective draft bill is already in preparation. Some political parties have included it in their election programmes. Shorter working hours more or less an exception. There still are some departments or parts thereof, where the working conditions are alarming (non-existent ventilation, inferior air extraction from equipment in the workplaces, obsolete electrical wiring, and other media distribution systems, etc.), but the trend towards modernization is positive - mainly financed through European structural and investment funds, national funds, cooperation with industry, and own resources.</p>	<p>Initiative: - Tele-working (home-office) was implemented into internal documents during the first wave of Covid-19. - Project ACCORD (Advancing University Capacity and Competence in Research), aiming towards boosting the research infrastructure of the university. - For young researchers the university should provide child-care in its own soon to be opened kindergarten. Suggestion: - Increased transparency in procurement of personal protective equipment (PPE) would be helpful.</p>

25. Stability and permanence of employment

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
++ fully implemented	<p>In general, an employment contract concluded for a fixed period of time can only be extended twice, the third extension makes the employment permanent. However, the Section 48 (6) of the Labour Code of the Slovak Republic states: 'A further extension or renewal of an employment relationship for a fixed term of up to two years or over two years can be agreed with a teacher in higher education or a creative employee in science, research or development if there are objective reasons relating to the character of the activities of the teacher in higher education or creative employee in science, research or development as stipulated in special regulation'. Meaning basically, that if the employees are funded from grants, their contracts are only valid for the duration of the grant, following which they must leave, as the department does not have funds to cover their salaries. Despite that this situation is in compliance with the European standards and employing doctoral candidates and external students under a contract tied to the duration of a project is a common practice, the resulting uncertainty, however, can impact the productivity of the personnel and cause issues, e.g., when applying for a mortgage or a consumer credit.</p>	<p>Where possible, the employer offers stability and standard terms of employment in accordance with the law. The conditions could be improved by introducing a system of long-term funding of researchers positions with a performance-based remuneration model. The employee can also take advantage of the benefits granted by the collective agreement and, if necessary, request assistance from the unions. Suggestions: - Introduce a transparent and motivational way of determining the duration of employment contracts concluded for a fixed term. - Selection procedures should be announced automatically before the expiry of the existing contracts, or an obligation should be included in the internal regulations of STU to notify the researcher about the extension/non-extension of their employment in advance. - The possibility to improve the accommodation of pedagogues and researchers at dormitories for those who do not have or have lost their permanent residence at the location where the university is situated.</p>

26. Funding and salaries

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
-/+ partially implemented	<p>Significant differences in remuneration of researchers working for public institutions and in industry are caused mainly by the Act No. 553/2003 Coll. on Remuneration of Certain Employees During Performance of Work in the Public Interest. Female doctoral candidates have basically no entitlement to maternity allowances, because they do not receive a salary but a scholarship (a doctoral candidate is considered a student by Slovak law system). Quote from one of the responders: "Almost everyone I know in research and teaching has other work besides STU – especially for financial reasons, at best for personal development."</p> <p>Regulations: - Act No. 131/2002 Coll on Higher Education - Act No. 553/2003 Coll. on Remuneration of Certain Employees During Performance of Work in the Public Interest - Working Regulations of the Slovak University of Technology in Bratislava</p>	<p>Suggestion: - Cooperation with industry – focusing the research on industrial applications often helps resolve many material problems at STU. Support spin-offs. - Simplify the processes of concluding Contracts for Work and allow the use of funds from such contracts for investments. - STU-wide support of other than financial benefits. Lobbying: - Improve funding of research and the school system in Slovakia.</p>

27. Gender balance

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
++ fully implemented	<p>Even there is no scientific study on the topic of comparing the assessment system and the subsequent remuneration of female and male researchers at the university, or at universities in Slovakia in general and the gender balance is not regulated on a system level, gender balance is not perceived as an issue among the responders.</p>	<p>The university will have to design the Gender Equality Plan (GEP) to meet the eligibility criterion of the Horizon Europe Framework Programme for Research and Innovation 2021-2027 by the end of this year.</p>

28. Career development

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>In general, these principles are adhered to, however, there is no institutional strategy for career development of researchers. Lack of university-wide or department-wide career consulting. The terms of accreditation and the therefrom arising impossibility of habilitation and inauguration of our junior colleagues.</p>	<p>Career development is regarded as a matter of the individual – institutions only provide opportunities for him/her by allowing them to join projects, conferences, and scientific events, and to carry out scientific research for individual departments, faculties, and the university as a whole. Targeted institutional strategy for career development in the SR: - The Slovak Association of Doctoral Candidates (http://www.ads.sk) - The EURAXESS network (http://ec.europa.eu/euraxess/) Initiative: - information about available trainings is provided to researchers by the Department of Science and International Scientific Cooperation and the Department of International Relations in a newsletter and at a designated website http://www.granty.stuba.sk/ - Consulting is also offered by the University Project Centre and the project centres / faculty departments. Suggestion: - Offer foreign-language courses for employees and doctoral candidates at a reasonable price. - Prepare a basic career development strategy. - Improve communication with those interested in external PhD studies at the university and promote topics of an interdisciplinary nature. - Support for young workers to become independent.</p>

29. Value of mobility

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>Even the university recognizes the value of mobilities, there is no institutional career development strategy to acknowledge any mobility experience within the career progression/appraisal system. The acknowledgement is in the hands of the respective departments. However, this is not perceived as an issue among the responders. Their main concerns lie with insufficient support regarding: - Lack of funding of mobilities causing discontinuity between individual research stays and/or accommodation related issues. - Language barrier and cultural barrier. - Migration policy agenda (visa, differences in tax and migration legislation – e.g., third countries...). - Recognition of qualifications (legislation). - Low level of mobility between the state and private sector. - Complex red tape without professional support. - Unwillingness to accept long-term mobility due to a lack of workforce.</p>	<p>Motivation of researchers to be mobile is beneficial in particular in the context of: - career development and networking - reputation and working conditions of the hiring organisation - working atmosphere - interesting research topics - participation in joint international research projects - access to special equipment - improving the living standards of researchers - becoming familiar with new countries and cultures - business and commercial opportunities for the practical application of research results. Suggestion: - Offer foreign-language courses for employees and doctoral candidates at a reasonable price. - Increase the number of study programmes and research in English. - Prepare a comprehensive human resources management policy - Improve mobility between the university and the industry by making available and promoting specialized university equipment. - Simplify the mobility processes, in particular within the EU</p>

Status

30. Access to career advice

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
-/+ partially implemented	<p>The rules of career development are not stipulated in any internal document (only the terms of habilitation and appointment of professors) and there is no system solution to career advice. Lack of an institutional strategy for career development of researchers. There is only informal consulting.</p>	<p>In connection to career advice, researchers at STU usually consult their superiors (heads of departments, Head of the institute/department, Head of the research team, the Vice-Dean for Science and Research, the Vice-Rector for Science and Research, ...) STU supports research careers, among other things, by organising occasional internal training courses and with active identification of suitable external training courses. Initiatives: - Information about available training is provided to researchers by the Department of Science and International Scientific Cooperation and the Department of International Relations in a newsletter and at a designated website http://www.granty.stuba.sk/. - Consulting is also offered by the University Project Centre and the project centres of individual departments and faculties. - The EURAXESS network (http://ec.europa.eu/euraxess/). Suggestions: - Establishment of a career advice centre for university employees. - Provision of career support as part of the academic information system. - Preparation of an institutional career development strategy for researchers with clearly specified rules of career progression.</p>

31. Intellectual Property Rights

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
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Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>In general, these principles are adhered to, however there can be occasional individual oversights. There is no institutional approach to training and courses. Leading by example and best practice examples are insufficient. Documents in English are missing. These issues are mainly tied to the lack of staff at the Technology Transfer Office (TTO). There is no institutional approach to initiatives when it comes to Open Access and Open Data. A directive on copyright in the STU environment is missing. The rules currently valid in this area usually encourage researchers to look for loopholes, as most intellectual property rights (and the thereto related benefits) belong to the institution, and the researcher only gets moral appraisal (if any at all). Intellectual property protection by means of patents and similar legal tools offer very limited benefits to the employees, which is why most employees do not use this form of research result protection. When results are published in a recognised magazine, the researcher cannot have them subsequently patented (and vice versa), therefore our employees are not interested in having their work patented. Patents do not offer any significant financial bonuses either, and are not taken into consideration with regard to career development, therefore they are unattractive to the employees.</p> <p>Regulation: - The Act No. 131/2002 Coll. on Higher Education (Section 62a Special requirements Regarding Final, Rigorosa, and Habilitation thesis and Part Eight: University Employees). - Disciplinary Regulations of the Slovak University of Technology in Bratislava for Students - Working Regulations of the Slovak University of Technology in Bratislava - Rector's Regulation No. 8/2017 – SR Protection and Management of Industrial Property Rights at the Slovak University of Technology in Bratislava</p>	<p>In general, it appears that researchers have reasonable knowledge of intellectual property ownership of research data, of co-authorship and plagiarism. At STU there are 2 main issues pertaining to intellectual property:</p> <p>1. Employees who create an industrial property register it under their own name (thanks to the activities of the TTO, this issue is becoming less frequent, but it can still occur). Proposed solution: consistent application of responsibility as it is a breach of work discipline. 2. Contracts disadvantageous for STU concluded with business companies, where STU – in order to obtain funding – often gives up an inadequate portion of its industrial property rights. Proposed solution: more staff should be hired for the TTO in order to provide consulting and disseminate information at individual departments. Initiatives: - As part of its activities, the Technology Transfer Office (TTO) is in charge of the entire process of protection and management of industrial property rights. - Legal and Organisational Department - Ethics Committee of the Slovak University of Technology in Bratislava - Updated Code of Ethics for employees of the Slovak University of Technology in Bratislava - implementation of an extension for the Academic Information System. Suggestion: - STU Ethics Portal. - A set of information, examples of best practices and training should be prepared. - 'Train the trainer' activities and regular trainings and courses. - Intellectual property rights should be more balanced and tied to their authors - Create support schemes for the activation of industry transfer (e.g., licences). - Hire more staff for the TTO. - Strict application of punishments for work discipline violations related to violations of the intellectual property law and directive.</p>

32. Co-authorship

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>In general, these principles are adhered to, however there can be occasional individual oversights. There is no institutional approach to training and courses. Leading by example and best practice examples are insufficient. Documents in English are missing. A directive on copyright in the STU environment is missing.</p>	<p>Co-authors are recognised and listed and/or quoted in connection to their actual contribution (percentage of contribution to the final product). Suggestion: - Development of information, examples of best practices and training. - 'Train the trainer' activities - Regular training and courses - Set clear criteria for the assessment of employees who are assessed on the basis of the % of their contribution in publications. - Co-authorship should be also recognised when organising different scientific, professional, and promotional events – when only the responsible organiser is recognised, the co-organisers often lack motivation. - Establish clear criteria for the assessment of employees who are assessed on the basis of the % of their contribution in publications. - Create copyright standards applicable to the university environment.</p>

33. Teaching

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
++ fully implemented	In general, these principles are adhered to, however some respondents feel that the level of adequacy of teaching in individual workplaces and departments is not evenly distributed, stating that there are workplaces where the pedagogical activity far exceeds the scope of a scientific researcher, and his/her scientific activity is supplanted. Some feel, that the teaching requirements are high, in particular for the young researchers. Most of the young researchers lack formal pedagogical education, which in some cases reflects in the quality of teaching and the students' feedback.	Teaching is considered an integral part of the professional development of researchers, which is also reflected in their evaluation. On the other hand, researchers also expect their teaching obligations not to significantly interfere with their research. It is expected that doctoral candidates become involved in teaching, consulting, and laboratory supervision. Suggestions: - A balanced ratio between pedagogical and research activities and a fair evaluation system for researchers with numerous teaching obligations. - All doctoral candidates and researchers should be obliged to take a quick teaching training course directly at their workplace or under the supervision of an older colleague or a more experienced pedagogue. - Require and use feedback from students. - Transparent evaluation of teaching feedback to be able to measure the quality of teaching and prioritize quality over quantity. - Recognize preparation for lectures or practical exercises, or the tutorship for bachelor, diploma or doctoral thesis as part of teaching obligations.

34. Complains/ appeals

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
++ fully implemented	There is no institutional approach to training and courses. Leading by example and best practice examples are insufficient. Documents in English are missing.	Initiatives: - Ethics Committee of the Slovak University of Technology in Bratislava - Updated Code of Ethics for employees of the Slovak University of Technology in Bratislava Suggestion: - Development of a set of information, examples of best practices and training. - Raise awareness of these issues among the employees and offer help in resolving conflicts. - 'Lead by example'

35. Participation in decision-making bodies

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
++ fully implemented		Public universities proceed in compliance with the Act No. 131/2002 Coll. on Higher Education and the internal regulations of universities and allow researchers, i.e. employees and students, to participate in academic self-government bodies. Researchers can participate and make joint decisions in meetings of colleges, boards, senates, and scientific councils.

Training and Development



36. Relation with supervisors

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>In general, these principles are adhered to, however there can be occasional individual oversights. Even though student and doctoral candidate checks are compulsory, the requirements pertaining to employees are managed by individual faculties and departments. There is no unified control system and postdoctoral researchers do not have to behave in the same way in university workplaces. Researchers do not always establish a structured relationship with their superiors and faculty representatives, and communication is not always at the required level. There should be more information about the professional possibilities and research conducted by individual departments, even though the interdisciplinary nature of numerous departments is apparent. This is to the detriment of faster development of individual workplaces both in terms of research and pedagogics.</p>	<p>Suggestions: - Introduce a unified system of evaluation and control with constant supervision. - Amend the reporting lines and improve communication. - Establish a culture and rules of research projects and work in the form of trainings, workshops, etc.</p>

37. Supervision and managerial duties

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>In general, these principles are adhered to, however there can be occasional individual oversights. - There is no systematic conceptual approach to training in the field of management, HR management and pedagogic skills, meaning that the lead researchers have often trouble with coordinating supervising activities with other obligations. - Lack of an institutional strategy for the career development of researchers. Regulations: - Act No. 131/2002 Coll on Higher Education - Code of Ethics for employees of the Slovak University of Technology in Bratislava - Working Regulations of the Slovak University of Technology in Bratislava</p>	<p>Suggestions: - Prepare the institutional strategy for career development of researchers. - Systematic approach to training in the field of management, HR management and pedagogic skills. - Teachers performing demanding pedagogical activities and required to carry out complex management and administrative tasks when working with doctoral candidates and performing research and publication activities should be unburdened.</p>



38. Continuing Professional Development

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
-/+ partially implemented	<p>Lack of an institutional strategy for the career development of researchers. There is no centralised support for workshops and conferences. The possibilities for education are scarce and usually only available after working hours. There is no sabbatical during which employees could stay abroad.</p> <p>Regulation: - Act No. 131/2002 Coll on Higher Education - Code of Ethics for employees of the Slovak University of Technology in Bratislava - Working Regulations of the Slovak University of Technology in Bratislava</p>	<p>Suggestions: - Ensure equal access to qualification improvement at all levels regardless of age and position. - Develop an institutional strategy for the career development of researchers and prepare a comprehensive human resources management policy. - Increase motivation in young employees. - Improvement of the life long education should be improved (IT technologies, English etc.), and thereto related (easily) accessible resources to fund further education of employees should be created.</p>

39. Access to research training and continuous development

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
+/- almost but not fully i...	<p>- Lack of an institutional strategy for the career development of researchers. - Lack of a central library and the thereto related services providing training related to research of sources and writing of a thesis, but especially 'soft skills' training for students and staff. - There is no consulting when it comes to using library systems, book search, or obtaining research on a specific topic and/or insufficient access to scientific literature and computers.</p>	<p>Researchers have access to professional training in the field of research and to continuous development through: - a specialised scientific library at the Slovak Centre of Scientific and Technical Information (CVTI) - faculty libraries - the State scientific library - the Slovak computer science library - free access to the WoS and SCOPUS databases and free access to articles in journals published by Springer, Elsevier, etc. - life-long education at various universities (foreign languages, different seminars, workshops, conferences, ...) - consulting (heads of departments, colleagues, the Department of Science and International Scientific Cooperation, the Department of International Relations, ...) - professional networks. Suggestions: - Access to global databases must be ensured at an STU or country level (e.g. CVTI). - 'soft skills' training for students and staff. - Develop an institutional strategy for career development of researchers, which should include the introduction of research training funding with clear rules. - Active promotion of life-long education opportunities – getting closer to employees. - Modernization and restructuring of the libraries.</p>

Status

40. Supervision

Implementation	GAP / Implementation impediments	Initiatives undertaken/new proposals
++ fully implemented	<p>In general, these principles are adhered to, however some respondents experienced issues, that leave room for improvement such as: - It is not always clear to whom young researchers can turn to for assistance in the early stages of their career. - The institute of tutoring is underdeveloped. - Researchers are frequently overloaded with other activities, in consequence of which they have very limited time for supervision, or they are forced to provide supervision outside their normal working hours. Regulations: - Directive No. 2/2006-N Rights and Obligations of a Study Programme Guarantor - Rector's Directive number: 2/2014-SR: Professional Committee for Doctoral Study Programmes at the Slovak University of Technology in Bratislava - Rector's Directive number: 6/2014 – SR: Post-doctoral Research Stays at the Slovak University of Technology in Bratislava</p>	<p>Suggestions: - Use professors emeritus for supervision tasks more frequently. - Supervision by study programme guarantors. The SP guarantor should also be the lead researcher. - A clear hierarchy should be set for the tasks at hand. - The faculty management should carry out more control tasks. - There is a Professional Committee for Doctoral Study Programmes at STU, however the doctoral candidates could also obtain the information directly from the study department which can point them in the right direction if they need to change the field or trainer.</p>