

**Report the internal evaluation of the quality of
educational, creative and related activities at
Brno University of Technology for the period
2018-2022**

The report the internal evaluation of the quality of educational, creative and related activities at for the period 2018-2022 was approved by the Internal Evaluation Board of the Brno University of Technology on 26 September 2023.

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Brno University of Technology (hereinafter also referred to as BUT or also referred to as the University) has been dealing with quality issues since the early 1990s. The University regularly participates in institutional evaluations by the European University Association, and the findings, and recommendations, as well as the progress achieved in the evaluation have become the main content of the Report on the Internal Evaluation of the Quality of Educational, Creative and Related Activities at Brno University of Technology for the period 2018 - 2022.

The report also describes the qualitative and quantitative outcomes achieved by the University in the field of educational and creative activities, internationalisation, social responsibility and related activities, especially in 2022, and the measures taken to address any shortcomings. The dynamics of development of selected indicators, including quality indicators with comments, covers the period 2016 - 2022. The position of the University in international rankings is presented for the period 2018 - 2022.

The report is a follow-up to the Report on Quality Assurance and Internal Evaluation of the BUT from 2018 and the Appendices to this report.

The system of quality assurance and internal evaluation of quality at the BUT described here is in accordance with Act No. 111/1998 Coll., on Higher Education and on Amendments and Supplements to Other Acts, as amended, and the relevant Government Regulation No. 274/2016 Coll., on Standards in Higher Education.

1. Description of the system changes the field of quality assurance at BUT

Quality management at the BUT is based on the international system of European Standards and Guidelines 2005/2015, which is recommended for quality management. The basis of all quality assurance activities is based on two objectives: accountability and quality development. When used together, they create trust in relation to the functionality of the university. Through a successfully implemented quality assurance system, information is obtained that assures the college and the public of the quality operations (accountability) and also advice and recommendations for improvement (quality development). Quality assurance and quality development are interlinked. A quality assurance system promotes the development of a quality culture that is welcomed by all: students and academic staff, and university leadership and management.

The view of quality quality assurance has undergone a transformation at the BUT, especially in the area of understanding quality as a whole (the emergence of a systemic area), which raises the need at all levels of the university to create an environment of quality culture, its cultivation and awareness of responsibility for it.

The importance of improving and developing the internal quality evaluation system is part of priority objective 5 of the BUT 2021+, Build capacity for strategic management of the BUT. As part of the implementation of activities to meet this priority objective, a new Division/Department was established (ORA), which covers activities related to the support of strategic management, as well as analytical activities to support top management decision-making, for reporting purposes and for the creation of institutional documents, and last but not least, activities in the field of quality assurance and management. The establishment of the Division/Department was part of the organisational change of the Rector's Office, which aimed at integrating fragmented activities, mainly analytical, into one unit/department. The intention of this reorganisation is to strengthen the quality of activities in terms of an attribute that is inherent in all processes at the University. This is based on the thesis that quality is an attribute, not an evaluation setting.

The process of establishing the Division/Department was connected with the approval of the new organisational structure of the BUT Rector's Office. For this reason, the Division/Department was officially established in August 2022, but the individual analyses were being worked on throughout the year. Specific outputs include the creation of data cubes to support strategic management and analytical material on the issue of evaluation criteria in international rankings (THE, QS Ranking). On the basis of this material, the weaknesses of the BUT are strengthened. Selected specific criteria identified in the analyses of selected international rankings were also used for the preparation of the BUT Budget Rules for 2023, as a motivation area consisting of six parameters that lead to a separate quality indicator (Q), which is part of the K indicator with a weight of 12%.

The view of quality and quality assurance is undergoing a transformation, especially in the area of understanding quality as a whole (the emergence of a systemic area), which raises the need to create an environment of quality culture and its cultivation at all levels of the university.

At the same time, work has been initiated to strengthen quality management with the intention of the usefulness and necessity of input data to support the strategic management of the BUT and individual Faculties, which provokes a change in the concept of the quality management system and at the same time the role of the BUT EQC is being clarified, where in the context of institutional accreditation, the BUT EQC is focused in particular on the development and quality of programmes and the educational process.

In order to strengthen the quality of scientific and creative activities, the BUT has implemented a disciplinary division in the context of the Methodology 17+ and the establishment of the International Scientific Board of the BUT. With regard to the combination of technician artistic disciplines

At the BUT, the qualitative outputs in the area of budget measures were also significantly strengthened to align the RUV and RIV approaches. The BUT has also succeeded in filling important positions in granting authorities (TA CR and GA CR) or in the RVVI, which will undoubtedly contribute to better quality outputs in the scientific and creative fields.

Last but not least, the BUT has taken systemic steps to emphasize those activities that serve the public and are the so-called third role of the university. These activities have also been analysed in terms of quality or its perception. The biggest changes will occur in the area of institutional international marketing of the BUT, where the qualitative shift should be reflected in the BUT's position in various international rankings.

Considerable attention was paid to the preparation and discussion of the Supplement to the Report on Quality Assurance and Internal Quality Evaluation at the BUT for 2021. The Addendum reflected the measures aimed at improving quality the previous year, taking into account the continuous development of the internal quality management system with regard to the European Standards and Guidelines.

In 2022, a design of the Methodology of Quality Assurance and Evaluation at the BUT was completed. This design is the result of activity A8 RE 01 Development of the system for internal quality assurance and evaluation of the MOST project (Modern and Open Study of Technicians). On the basis of the design of the Methodology of Quality Assurance and Evaluation at the BUT, a system of quality indicators was finalized, tested at the Faculty of Business and Management at the BUT (FP) and, based on the results obtained, subsequently adjusted and fine-tuned by the staff of the Division/Department of Development and Analysis. The concrete output of this activity was the evaluation report, which consists of three basic parts: evaluation and quality assurance of the teaching process, the scientific research process at the FP, and the quality assessment indicators for the third role of the FP. The staff of the Division/Department of Development and Analyses collaborated the staff of other universities (in particular VŠB-TUO) on these tests of specific indicators using specific data obtained from the Faculty management system.

A very important step in the field of quality was the analysis of the position of BUT within European universities as well as domestic universities (especially technical universities), while the needs and specifics of education at technical universities in the Czech Republic were also analysed. Also for this reason, a meeting of the BUT management with representatives of the Times Higher Education ranking took place in Brno and preparations are underway for a meeting with representatives of the QS ranking. Analytical material on the issue of evaluation criteria in international rankings (THE, QS Ranking) has been prepared. On the basis of this material, the weaknesses of the BUT are being strengthened. Selected specific criteria identified in the analyses of selected international rankings were also used for the preparation of the BUT Budget Rules for 2023.

In 2022, partial cooperation continued on the preparation of the international quality evaluation in the framework of the U-Map and U-Multirank projects. However, the main activity on the international front was the evaluation of the visit by evaluators the European University Association (EUA) and the preparation of a self-evaluation report in which BUT highlighted the progress made since the last EUA evaluation in 2018. The self-evaluation report was a key background document for the EUA external evaluators. The actual visit of the evaluators took place in November 2022. The evaluation resulted in an assessment of progress since the completion of the initial evaluation, as well as suggestions and recommendations for improvement in different areas of the institution's activities, and risks arising from the findings. The suggestions recommendations made by EUA will be incorporated into the conceptual and strategic documents of the BUT.

2. Evaluations surveys that were carried out in 2022

of the evaluation system - regularly reported activities and one-off events.

Regular	Internal
	<ul style="list-style-type: none"> Report on the activities of the HEC: primarily concerns the study agenda (accreditation of programmes), or the approval of Guidelines (and their amendments) and supplements. Indicators are the number of meetings, SPs discussed, Guidelines approved, etc. Evaluation of educational activities by students. Evaluation of studies by BUT graduates employers. The system of evaluation of AP research and scientific staff (SHAP, evaluation from 2021).
	External
	<ul style="list-style-type: none"> university evaluations (QS, THE, newly ARWU), reflecting rather negative development of the main indicators (ranking), in some sub-categories. HRS4R/HR Award, Internal Review for Interim Assessment. The EUA report (2022/2023) evaluates positive developments, but still thematises transparent Evidence-Based-Decision-Making, indicators/measurement, Plan- Do-Check-Act approach, etc. Verbal evaluation.
Disposable	Internal
	<ul style="list-style-type: none"> Gender Audit (2021). No quantitative indicators listed.
	External
	<ul style="list-style-type: none"> Evaluation of the CEITEC BUT consortium by the International Evaluation Board ISAB CEITEC, without these indicators. European Quality Enhancement Agency for the Arts (EQ-Arts), without the indicators listed.

Source: minutes of the AGM, EUA report

Evaluation of programmes by the Internal Evaluation Board of the BUT

In 2022, 19 programmes were evaluated. The programmes were selected based on the criteria for accreditation according to the new conditions and the year of accreditation/authorisation. The evaluation of the programme is also an integral part of the application for renewal of accreditation. In 2022, this form of application was submitted to NAU 2 programmes (Automation and Measurement Technician and NMSP Expert Engineering in Transport). These programmes were evaluated in 2021.

Survey among BUT doctoral study students their final year of studies

In 2022, an online survey was conducted among BUT doctoral students in their final year of studies. Its aim was to find out the opinion on equal opportunities, career development opportunities, undesirable social phenomena in the workplace, the culture of the BUT working environment, the gender dimension, support for science and research, teaching and education, **as well as** the combination of doctoral studies and personal life or parenthood. The results of the questionnaire survey will be used to set up conceptual support for doctoral students.

Monitoring of Graduate/ Alumnus/ Alumni employment, measures to increase it, own and on the results in the content of programmes

2022, a regular internal survey was conducted by the BUT, in which graduates of continuing Master's Studies from 2019 and 2020 were contacted. Some of these graduates were already entering the labour market affected by the pandemic crisis. This fact was reflected in the data, but not significantly. Employment had been arranged before graduation for 69% of the graduates of the class of 2019 and 65% of the class of 2020. Overall, 67% of graduates/Alumni/Alumni had secured employment before graduation and a further 26% within three months of graduation. Despite this, a third of graduates/ Alumnus/ Alumnus said that the labour market situation in relation to the pandemic had affected them in some way, most often citing the reluctance of employers to increase financial compensation. Nevertheless, starting salaries mostly increased, on average by 19% for the BUT, while stagnation was recorded for two (smaller) Faculties. Salary growth continued after recruitment. The average gross salary of graduates one to two years after graduation was CZK 47 857. The most frequent employer of BUT graduates continues to be a Czech private company with 38% of graduates and 32% of graduates employed by foreign or multinational companies. The activities of the BUT (mostly cooperation during studies and presentations to employers) helped 36% of Graduate/ Alumnus/ Alumni to find employment.

The proportion of graduates/ Alumnus/ Alumni who, if they had their Resolution now, would study at the BUT again has increased to 88%, the same level as four years ago. The proportion of graduates who would go to the same Faculty they graduated from has increased from 70% to 79%. Graduates/ Alumnus/ Alumni again cited practical knowledge, managerial knowledge and skills, and economic and financial knowledge as the biggest gaps in their readiness for practice.

In addition, in the graduate research area, the BUT was involved in two other projects, the development project Graduate 2022 coordinated by the Czech University of Agriculture, which aimed to map the monitoring of feedback at individual and design a central methodology for data collection, and the international survey of graduates Eurograduate 2022 coordinated for the Czech Republic by the Centre for Studies in Higher Education.

Some questions on employment, job search and readiness for practice were also explored the questionnaires aimed at graduating Bachelor's and Master's students. However, these two surveys more intensively address satisfaction with study or its perceived difficulty. Repeatedly, high satisfaction the expertise of teachers/lecturers or the activities of study departments, but , for example, with the range of sporting activities on offer. The results are available to the management of the individual Faculties, which reflect them in marketing and in the design of programmes.

Surveys among employers of BUT graduates/ Alumnus/ Alumni

In 2022, two surveys were conducted among employers of BUT graduates. The first part was devoted to the readiness of Graduate/ Alumnus/ Alumni for practice, the second (preferred) cooperation universities. Only of the companies surveyed require education in the relevant field, a large proportion of others are satisfied with a related field or the situation is specific to individual positions. However, more than nine out of ten companies and evaluations require a university degree at least sometimes for professional positions. Although a Bachelor's Study is sufficient for more than half of employers (but often conditional on work experience), most employers value a postgraduate degree and are prepared to grant various concessions to their employees to supplement their training. key reason for the preference for further study is that these graduates/ Alumnus/ Alumni

employers with deeper more specific Transfer. However, for more than every other employer, it is also evidence of the student's/graduate's higher ambitions.

According to three quarters of employers, BUT graduates have a good level of professional Transfer; on a scale of 1 to 5 with a school-like evaluation, they marked them 1 or 2. Right behind (70%) readiness in terms of the ability to work with information, with the majority also praising of the necessary software (61%), working with devices, tools and technologies (53%) and the ability to apply professional knowledge in practice (52%). Conversely, graduates/ Alumnus/ Alumni perform less well the broadly required Transfer, for example, project management, economics and finance, or the ability to lead a team.

It is still true that according to employers, there is a shortage of graduates/ Alumnus/ Alumni in the fields in which the BUT education. Companies would be interested in intensifying contact with the BUT, offering internships or excursions, or participating in shorter presentations for students at the faculties. Employers expect from the cooperation especially the possibility to attract young talents in other ways than traditional recruitment marketing. However, they will also appreciate the fact that they will be able to present a real working environment to interested students or influence the future direction of students who are still undecided. Seven in ten admit that this is an important employer branding tool for them (definitely or more likely).

Results of international evaluation of BUT including foreign accreditations

On 30 July 2022, joined the Association of Research Universities (AVU), which aims to bring together Czech universities that build their competitive advantage on cutting-edge research and thus create opportunities for the development of quality education. Brno University of Technology thus joined the existing members: the Charles University, Masaryk University, Palacký University in Olomouc, the Czech Technical University in Prague and the University of Chemical Technology in Prague.

In 2022, the BUT was re-evaluated by the European University Association (EUA) as part of the Institutional Evaluation Programme. The re-evaluation follows the international evaluation from 2018. According to EUA experts, the University has successfully fulfilled the recommendations from the 2018 institutional evaluation. In January 2023, the BUT received the evaluation report from the EUA.

The evaluation results in an assessment of the progress made since the completion of the initial evaluation, suggestions and recommendations for improvement in the various areas of the institution's activities, as well as the risks arising from the findings. The suggestions recommendations made by EUA will be incorporated into the conceptual strategic documents of the BUT. In the context of recent and current external challenges, the team noted that the University is generally performing very well. It has a good awareness of the external environment, and is fully aware of its competitiveness, including the importance of excellence in research and increasing internationalisation. The evaluators appreciated the improvements in governance, specifically in the centralisation of support processes, and commended the division of responsibilities between the Faculties and the University Institutes of the BUT and the central BUT authorities. In this context, they noted progress in the centralisation of the BUT IS the systematic use of analytical tools for objective decision-making.

In the QS World University Rankings, BUT ranks 701st-750th, the same as in the previous year. The strongest criteria are traditionally the degree of student internationalisation and the university's reputation among employers. However, changes to the methodology for the next edition indicate a strong position in the newly included International Research Network criterion. This has already been demonstrated by the QS Subject Rankings, just

thanks to this top-ranked criterion), BUT appeared for the first time in the third top 100 universities in the world in the Engineering and Technology category, specifically at 247th place. The university was successful in seven sub-disciplines, and in the Architecture/Built Environment category the university was ranked for the first time, and immediately as the best among institutions, at 201st-230th place. A similar ranking (201st-250th) also belonged to Brno University of Technology in the Electrical & Electronic Engineering category, in which it moved into the top 50 year-on-year. It also did well in Mechanical, Aeronautical & Manufacturing Engineering (251st-300th), Materials Science (301st-350th), Computer Science & Information Systems (351st-400th), Mathematics (351st-400th) and Chemistry (451st-500th).

In the overall ranking of Times Higher Education, the BUT is now in the 1,201st-1,500th category, as is the Czech Technical University. Of the five areas that contribute to the overall score, the BUT fares best in the internationalisation criteria and also in its funding evaluation, receiving large its income from industry. In the Engineering & Technology subject category rankings, the HEI ranks 801st-1000th, with Business & Economics and Computer Science a category higher (601st-800th).

the ARWU international evaluation of universities, the so-called Shanghai Ranking announced in August 2022, the BUT is ranked 901st-1000th. It fares best in the pair of Electrical & Electronic Engineering and Nanoscience & Nanotechnology, where it ranks 301st-400th. The ranking methodology relies primarily on the scientific and research level of each institution, using six indicators for the evaluation, including the number of articles published in Nature and Science. The rankings have traditionally been dominated by American universities, with Harvard University repeatedly taking Eight universities are ranked in the overall evaluation for the Czech Republic, but others score at least in the disciplinary categories.

The position of the BUT international rankings see Attachment/ Annex 1.

Addressing quality issues within the Strategic Management Support Projects (SMSP) of the BUT in 2022

Each measure implemented with the support of the Strategic Management Support Programme in 2022 was structured in such a way as to clearly describe, among other criteria, the benefits of the measure with an emphasis on its contribution to the quality of the activities of the university.

3. Achieved qualitative outputs of the BUT in educational and creative activities, internationalisation, social responsibility and related activities and measures to eliminate any shortcomings

Activities of the Internal Evaluation Board of the BUT

On 13 September 2022, the Academic Senate of the BUT approved the amendment to the BUT Rules of Procedure, which reflects the experience gained during the 5 years of the BUT's In the amendment, non-functional parts have been deleted and adapted to real activities. Mandatory commissions have been abolished: the commission on educational activities, the commission on creative activities, the commission on the third role, the commission on and support processes. The Commission on Educational Activities has been replaced by a permanent working committee on Educational Activities. The composition of the working group replicates the original composition of the Commission, MgA. Kina Hládeková, Ph.D., (FaVU) has been replaced by Kaliopi Chamonikolasová, PhD, (FaVU).

In 2022, meetings of the AGM of the BUT were held (including 1 correspondence meeting). Resolutions from the meetings are published in the public part of the BUT website <https://www.vut.cz/vut/struktura/rvh/usneseni>.

In 2022, as in previous years, the majority of the activities of the BUT's AGM were devoted to the agenda The HEC of the BUT granted authorization to implement programmes under institutional accreditation and also approved designs of programmes submitted to the National Accreditation Office for Higher Education (NAE) for accreditation. The number of accredited programmes has decreased, but the activities that are very closely related to the functioning have increased proportionally. Examples include the approval of changes to programmes the review of inspection reports. the previous years, the BUT's AGM focused more intensively on the area of regular evaluation of study programmes in accordance with the Rules of the Quality Assurance System for Educational, Creative and Related Activities and Internal Quality Assessment of Educational, Creative and Related Activities of the BUT. An overview of the activities of the HEC of the BUT is presented in Table 2.

AGM deliberations outcomes programmes

Date of the BUT AGM meeting	Outcomes related to programmes				
	Approval of the application for SP accreditation at NAU	Grant of authorisation to carry out SP within IA	Discussion of the audit report requested by the NAO	Consideration of the audit report requested by RVH BUT	Discussion of substantial changes to the SP
1. 3. 2022	1	2	-	-	-
3. 5. 2022	1	2	-	1	1
27. 9. 2022	1	-	1	-	15
1 November to 7 November 2022	1	1	-	-	-
22. 11. 2022	-	1	2	-	3
TOTAL	4	6	3	1	19

(*) online MS Teams Source.

presents an overview of the number of approved applications for accreditation of programmes to be submitted to the NAU and the authorization to implement programmes by submitter.

Number of approved programmes by Faculties and Institutes (of) in 2022

Retrieved from	Approval of the application for SP accreditation at NAU				Authorisation to carry out SP within the IA				TOTAL for Fa/Institute (of)
Type SP	BSP	NMSP	DSP	Total	BSP	NMSP	DSP	Total	
FAST	-	-	-	0	-	1	-	1	1
FSI	-	-	-	0	-	1	-	1	1
FEKT	2	-	-	2	-	1	-	1	3
FA	-	-	-	0	-	1	-	1	1
FCH	-	1	-	1	-	-	-	0	1
FaVU	-	-	-	0	-	1	-	1	1
FIT	-	-	-	0	-	1	-	1	1
USI	-	1	-	1	-	-	-	0	1
Total	2	2	0	4	0	6	0	6	10

Source.

The discussion of each programme at the BUT's BOG was preceded by the preparation of expert opinions by external evaluators and the opinions of the members of the evaluation committee. The translator was then given the opportunity to correct any shortcomings the recommendations. All submitted applications were subsequently approved at the BUT ECC meeting.

Information the discussion of the requested audit report by the NAU Council at the BUT AGM in 2022

The NAU Council requested the submission of an audit report on the doctoral programme Architecture and Urbanism (SP code P0731D010001) at its meeting on 29 June 2018 (see Minutes of 6 of the NAU Council on 29 June 2018, Resolution No.198/2018: Note). The NAU Council set a deadline of 31 December 2022 for the submission of the audit report.

Since the BUT has institutional accreditation for the educational field of Architecture and Urban Planning (OV 1) for Bachelor, Master and Doctoral degree programmes, in which the respective programme falls, the inspection report was discussed by the Council for internal evaluation of the BUT (according to provisions of the NAU see <https://www.nauvs.cz/index.php/cs/aktualni-sdeleni>).

The deadline for submitting the audit report to the BUT's AGM was the deadline set by the NAU, i.e. by

The Faculty of Architecture prepared an audit report containing information on all required points. The audit report was submitted in October 2022 for review to the BUT BOCC working group (chairman: Associate Professor Ing. arch. Petr Dýr, Ph.D., [FAST], members. Ing. Robert Zich, Ph.D., [FP] and associate professor. MgA. Filip Cenek [FaVU]). After an extensive discussion on the review of the audit report, the Working Group recommended the BUT BOCC to consider the comments raised by the Working Group and to request a supplement to the report from the Faculty. The programme guarantor associate professor. Ing. arch. Ji Palacký, Ph.D., prepared a statement based on the comments, which was jointly

with the audit report other relevant documents was submitted to the BUT Council at its meeting on 22 November 2022. The programme guarantor and the chair of the working group were present during the discussion of the audit report at the BUT Council meeting.

Conclusion:

The AGM of the BUT discussed and took note of the audit report of the programme DSP Architecture and Urbanism implemented at the Faculty of Architecture of the BUT (Resolution No.3-06/2022).

Approval evaluation of programmes

Accreditation of programmes

In 2017, the introduction of new accreditation mechanisms at the BUT level was set up on the basis of an amendment to the Higher Education Act (Act No. 111/1998 Coll., on Higher Education and on Amendments and Additions to Other Acts, as amended), legal regulations (Government Decree No. 274/2016 Coll., on Standards for Accreditation in Higher Education, Government Decree No. 275/2016 Coll., on Areas of Education in Higher Education) and sub-legal standards (methodology of the National Accreditation Office for Higher Education).

To describe the newly created accreditation mechanisms, including related activities, and to anchor them in the BUT legislative framework, new internal BUT Ordinances were created (based on the experience gained and suggestions received, amendments were made):

- a) The Statute of BUT (successively amended by amendments).
- b) Study Examination Rules of BUT (amended by one amendment).
- c) Code/Rules of Programme (amended by one amendment).
- d) Guideline No. 67/2017 - Evaluation of programmes (amended Appendix).
- e) Guideline No. 68/2017 - Rules for discussion of accreditation and programme design in the Council for internal evaluation of the BUT (amended by one amendment).
- f) Guideline No. 69/2017 - Standards of Study Programmes (gradually amended by two
- g) ideline No. 72/2017 - Editing, submission and publication of final Thesis.
- h) Guideline No. 73/2017 - Rules the evaluation of educational activities by students and Graduate/ Alumnus/ Alumni of the BUT and employers (amended by two amendments).
- i) Guideline No. 40/2017 - Recognition of results of foreign stays
- j) Guideline No. 11/2017 - Applicants and Students with Specific Needs at
- k) Guideline No. 1/2017 - Interfaculty teaching of liberal arts courses at
- l) Guideline No.39/2017 - On teaching English, social sciences and physical education; replaced by Guideline No.12/2019 - On teaching foreign languages and Guideline No.17/2019 - On teaching physical education.
- m) Guideline No. 6/2019 - Interfaculty teaching of liberal arts courses at (amended Appendix).
- n) Code of Conduct.
- o) ideline No. 40/2017 - Recognition of the results of students' foreign placements (later replaced by Guideline No. 14/2020: Foreign placement and foreign practical training).

On the basis of these standards, the accreditation process was set up implemented, which included the individual parts from the preparation of the study programme, through the preparation and processing of for accreditation (or the granting of authorization to carry out within the IA), the process of internal and external evaluation of the application to the approval of the intention to submit the application for accreditation of the study programme to the NAU in the HEC of the BUT (or the granting of authorization).

The Centre for Computing and Information Services (CVIS) has created a new module Accreditation within the BUT IS for the creation of applications for programme accreditation and applications for institutional accreditation and its extension. The new module was continuously updated according to the requirements created mainly following changes in the methodological materials of the NAU, which were based on the experience with the accreditation process across universities.

From 2018 to the end of 2022, a total of 176 programmes have been successfully accredited (52 NAU and 124 IA). The vast majority of programmes have been accredited for the maximum possible period, i.e. 10 years
(SP NAU for 5 For 4 programmes the application accreditation at NAU was withdrawn.

a) Programmes accredited by NAU

2022, the NAU extended the validity of accreditation for 1 programme (BSP Automation and Measurement Technology, FEKT), i.e. the Resolution on the extension of accreditation came into force in 2022. The submitted application for the extension of accreditation validity positively and the period was extended to the maximum possible period, i.e. 10 years. For two programmes, the application for accreditation was withdrawn (BSP English in Electrical Engineering and Computer Science - application submitted in 2021 and NMSP Food Chemistry and Biotechnology).

b) Programmes accredited by the BUT

In 2022, the HEC of the BUT granted the authorization to implement SP within the framework of institutional accreditation of the BUT to 6 programmes.

Overview of programmes accredited under institutional accreditation in 2022

P.No.	Name of programme	Type SP	Faculty abbreviation	Duration of authorisation (years)	SP Code (MEST)
1.	Architecture territorial development	NMSP	FAST	10	N0731P010004
2.	Architecture and Urban Design	NMSP	FA	10	N0731P010003
3.	Fine Art and Design	NMSP	FaVU	10	N0213A310015
4.	Master of Information Technology	NMSP	FIT	10	N0613A140038
5.	Production systems	NMSP	FSI	10	not assigned yet
6.	Automotive Electronics and Electromobility	NMSP	FEKT	10	not assigned yet

Source.

Number of SPs by area of education:

1. Architecture Urbanism 2,
2. Electrical Engineering 1,
3. Informatics 1,
4. Engineering, Technology and Materials -
5. Art - 1.

Number of SP by type:

1. Bachelor's degree SP - 0,
2. Master's degree - 6,
3. Doctoral SP - 0.

Number of SP by profile:

1. academically oriented SP - 4,
2. professionally oriented SP - 2.

Number of SP by language of study:

1. Czech language 2,
2. English language - 4.

Similarly to 2021, the structure of the submitted programmes has changed. It can be seen that this year, too, the more demanding programmes were predominant in terms of preparation and coordination with other participants in educational activities. These were mainly programmes in cooperation with foreign partners or for foreign students. This trend is expected to continue to grow. The process of accreditation under the new legislative regulations for long-established programmes has been completed and a period of completely new programmes has begun.

Evaluation of study programmes by the Internal Evaluation Board of the BUT (main conclusions)

In 2022, 19 programmes were evaluated. The programmes were selected based on the criteria for accreditation according to the new conditions and the year of accreditation/authorisation. The evaluation of the programme is also an integral part of the application for renewal of accreditation. In 2022, this form of application was submitted to NAU 2 programmes (Automation and Measurement Technician and NMSP Expert Engineering in Transport). These programmes were evaluated in 2021.

The evaluation of the SP was carried out according to the internal regulations standards of the BUT:

- a) Rules of Programmes Implemented, Article 44 Evaluation
- b) regulation - of educational, creative and related activities and internal evaluation of the quality of educational, creative and related activities of BUT.
- c) BUTideline No. 67/2017 - Evaluation and course of evaluation of programmes.

Table: Programme evaluated in 2022

P. No.	Name of programme	Type SP	Shortcut Faculty/University Institute (of)	Method of accreditation	Grant of accreditation for a period of (years)	SP Code (MEST)
1.	Physical Engineering and Nanotechnology	BSP	FSI	NAU	10	B0719A110001
2.	Physical Engineering and Nanotechnology	NMSP	FSI	NAU	10	N0719A110001
3.	Mathematical Engineering	BSP	FSI	NAU	10	B0588A170001
4.	Industrial design in mechanical engineering	BSP	FSI	NAU	10	B0212A310002
5.	Production technician	BSP	FSI	NAU	10	B0715A270001
6.	Biomedical technician and bioinformatics	BSP	FEKT	NAU	10	B0688A060001
7.	Electronics a communication technologies	BSP	FEKT	NAU	10	B0714A060003
8.	Information Security	BSP	FEKT	NAU	10	B0612A060001
9.	Microelectronics and technology	BSP	FEKT	NAU	10	B0714A060004
10.	Power electrical engineering and power engineering	BSP	FEKT	NAU	10	B0713A060001
11.	Architecture Urbanism	DSP	FA	NAU	10	P0731D010001
12.	Chemistry Chemical Technology	BSP	FCH	NAU	10	B0711A130001
13.	Chemistry Technology of Materials	BSP	FCH	NAU	10	B0711A130002
14.	Environmental Chemistry Technology	BSP	FCH	NAU	10	B0712A130001
15.	Food Chemistry and Technology	BSP	FCH	NAU	10	B0721A210001
16.	Business economist	BSP	FP	NAU	10	B0413A050001
17.	International economists and trade	NMSP	FP	NAU	10	N0311A050001
18.	Technician risk management and economic systems	NMSP	USI	NAU	10	N0788A020001
19.	Sports technology	BSP	CESA	NAU	10	B0788P280001

Source.

At its meeting on 21 March 2023, the BUT's HEC discussed and approved the evaluation reports of all evaluated programmes.

Teaching quality innovation

The basic participants in ensuring, monitoring and evaluating the quality of teaching are study programme/course guarantors, heads of teaching departments and course guarantors. Their rights and duties are described in the internal regulations of the Rules of Programmes Implemented of the BUT.

The quality of teaching is significantly influenced by staffing. According to the aforementioned Rules of Programmes Implemented of the BUT, teaching is usually provided by academic staff of the BUT. Students of full-time Doctoral Study programmes may also participate in teaching, and the extent of their involvement in teaching is regulated by of BUT. Teachers/lecturers supervisors of bachelor's master's theses must have at least a university degree obtained in a master's programme. Teachers/lecturers of programmes in the field of arts may be exempted on the authority of the Dean if they demonstrate sufficient professional qualifications. Lectures are given by professors and associate professors; in justified cases, the Dean, or the Rector if it is not accredited by the Faculty, may also entrust another academic staff member to give a lecture.

The quality of teaching is continuously monitored and evaluated by the programme boards. The Dean appoints a programme board for each Bachelor's or Master's degree programme. The degree programme board shall have at least five members and shall consist of the degree programme guarantor and at least two other academic staff members who teach the degree programme. A student representative and an employer representative who a member of the academic community of the BUT may also be a member. The programme guarantor is the chair of the programme board. The student representative on the board is appointed on the design of the student chamber of the Academic Senate of the Faculty. The programme council is an advisory body of the programme guarantor and its task is, in particular:

- To discuss any changes, extensions and extensions of the authorisation to carry out the programme (Article 29).
- Continuously monitor evaluate the quality of teaching in the programme.
- Discuss the evaluation report the fulfilment of the requirements of the BUT programme (Article 44).
- Annually evaluate the development of the programme.

Admission procedure, qualifying theses and final state examinations

Admission examinations are administered by individual faculties and units of the BUT, unless they use the services of Scio, which regularly organises the National Comparative Examinations. Otherwise, the admission examinations consist mostly of high school mathematics physics, but at some Faculties of biology or computer science, depending on the specific programme.

Most Faculties have an extensive system of waiving admission examinations based on performance in high school, participation in competitions (especially in Secondary Vocational School Activities, various Olympiads, etc.). For example, FIT tries to find active applicants who are already involved in activities beyond their academic duties in high school. , FaVU and the architecture studies within FAST

the talent component of the admission examination. FEKT also has a talent component for the Audio Engineering programme and FSI for the Industrial Design in Engineering programme.

Admission examinations for programmes conducted in English are most often conducted in the form of oral interviews, and applicants' motivation to study and language readiness are also assessed. A specific character of the admission examinations for doctoral programmes is the form of a professional debate on the intended topic of the dissertation, where it is necessary to verify not only the necessary Transfer, but also the readiness of the candidate for the subsequent scientific work.

The maximum number of final Theses supervised simultaneously by one person is set in Rector's Guideline No.69/2017 Standards of BUT Study Programmes as follows:

- bachelor thesis: 20,
- diplomas: 15,
- dissertation: 7,
- total number of simultaneous works by one person: 20.

Rector's Guideline No.69/2017 also stipulates that the above-mentioned numbers may be further reduced at individual faculties by the internal standard of the faculty (some faculties of the BUT have actually implemented this reduction).

BUT tracks the highest numbers of final Thesis through the data provided the information system. In doctoral studies, these numbers are also monitored evaluated by the respective subject councils, in Bachelor's Study and Master's Study by the study programme councils and the heads of the respective teaching departments.

The formal requirements of qualification theses are regulated by Rector's Guideline No. 72/2017 - Editing, submission and publication of final Thesis. In accordance with the provision of Section 47b (1) of the Act, the BUT publishes non-profitably the bachelor's, diploma and dissertation theses that have been defended, including the opinions of the opponents, the record of the course and the result of the defence. Publication of final Theses after the defence is carried out through the electronic database of final Theses <https://www.vut.cz/studenti/zav-prace>.

The qualification requirements for persons who bachelor and diploma theses are set out Article 6(1)(a).

8 Rector's Guideline No.69/2017 as follows: *'Teachers/lecturers and supervisors of the Bachelor's or Master's thesis must have at least a master's degree or its equivalent from a foreign university. Teachers/lecturers of programmes in the field of arts may be exempted on the Dean's authority if they demonstrate sufficient professional qualifications.'* Article 9 of the Internal Regulations of the Rules of Programmes Implemented states. *Exceptions may be made for teachers/lecturers in programmes in the field of arts on the authority of the Dean they demonstrate sufficient professional qualifications."*

The qualification requirements for dissertation supervisors are set out Article 10(9) of Rector's Guideline No.69/2017 *'Supervisors may only be associate professors and professors and, where appropriate, other experts with a scientific degree and creative activity that corresponds to the content of the dissertation, approved by the relevant disciplinary board; supervisors of students in the field of art may also be experts with appropriate artistic erudition approved by the relevant artistic board. The supervisor is appointed and dismissed by the Dean, who defines his/her term of office.'* Article 31 of the Study and Examination Rules of BUT states. *In an exceptional case, a professor may be appointed as a supervisor after approval by the Faculty's Scientific Board.*

an eminent expert with a scientific degree in the field that forms the focus of the programme. The supervisor shall be appointed and dismissed by the Dean, who shall define his or her term of office."

At its meeting on 23 October 2018, the BUT's AGM also issued a recommendation (see Resolution the BUT AGM Meeting No.3/2018) that the scientific boards of faculties *and university institutes approve non-habilitated supervisors from among academic staff only for one specific topic*. This recommendation of the HEC of the BUT is in fact followed and will be incorporated as a binding requirement in the internal regulations of the BUT when they are next amended.

To monitor the quality of final Thesis:

According to Article 2 of Rector's Guideline No. 69/2017, *"The quality of dissertations is monitored and regularly evaluated by the departmental board of the relevant doctoral programme. The quality of bachelor's and master's theses is monitored and regularly evaluated by the respective programme boards."*

The quality control of final Thesis at the BUT a number of factors:

- Primarily, the quality of the thesis is checked by the examination committee during the student's defence.
- Examination committees are composed of experts from practice or other institutions.
- For bachelor's and master's theses, one opponent is required; for doctoral theses, three opponents are required (the aim is to involve more staff from foreign universities in doctoral thesis reviews).
- In the case of research faculties, the BUT intends to ensure that at least one doctoral dissertation supervisor is an employee of a renowned foreign university.
- The BUT uses the THESES anti-plagiarism system for the control.
- The quality of the final Thesis is also subjected to critical reflection by the fact that the BUT publishes the texts of all final Theses on its website.
- In the case of the Faculty of Fine Arts, the works are publicly exhibited a renowned exhibition institution such as the Brno House of Arts or the House of the Lords of Kunštát.
- In the case of dissertations, members of the relevant disciplinary boards and heads of teaching departments are often appointed to the defence committees to evaluate the quality of dissertations directly at the defence.
- CEITEC BUT: Units of the annual evaluation of PhD students are a presentation of the interim results of the study before the evaluation committee in the presence of the supervisor.

To the standard of the trainer:

Qualification requirements for trainers at the BUT are described in the above-mentioned provisions of the BUT Study and Examination Rules, Rector's Guideline No. 69/2017 and Resolution No.

The BUT has not yet established a standard for a supervisor in a doctoral programme as a separate document. The reason for this is that the University intends to implement all legislative changes related to the reform of Doctoral Studies (at the moment, the final wording of the amendment to the Higher Education Act the government regulation on standards for accreditation in higher education, which will require the existence of a supervisor standard, is not known). The standard of the supervisor of doctoral students will then be incorporated into the Standards of the BUT study programmes.

In reforming Doctoral Study (including the preparation of a supervisor standard), the BUT intends to draw inspiration from the experience of renowned foreign universities. For this reason, a survey of the evaluation of Doctoral Study at selected foreign universities will be carried out in 2023.

Internationalisation of educational activities

Description of development programmes aimed at internationalisation

Within the framework of the Development Project Creating International Study Programmes, the plan in 2022 was to support the creation of new international study programmes of the JD/DD type and at the same time to increase the number of students in existing study programmes of this type. Another objective was to support students studying a double-supervised doctoral programme (cotutelle) and to increase the number of professional courses taught in English.

In 2022, four new JD/DD programmes were being prepared at the BUT, one of which was successfully accredited. 41 students were studying in the existing programmes.

A newly accredited Master of Information Technology programme was opened at FIT. New courses in English have been created and newly opened for this programme. In addition, some courses have been modified added for better coherence synergy in the study plan of the new programme. The study plan of the already existing DD Information Technology programme with the partner Lappeenranta University of Technology has been updated.

Preparations for a new bachelor's degree programme of the DD type were launched at the FP in 2022. The objectives of the programme, the profile of the Graduate/ Alumnus/ Alumni and the study plan were defined. In June, negotiations were initiated with representatives of Rochester Institute of Technology (RIT Croatia - Dubrovnik, Croatia) on a joint Double Degree programme. Several joint meetings were held during July-September.

FaVU has accredited opened a new Master's follow-up programme in English, Fine Art and Design, where 2 self-paid students are currently studying from the academic yearIn 2022, FaVU concluded a Memorandum of Cooperation for the development of the JD programme Magyar Képzőművészeti Egyetem (The Hungarian University of Fine Arts).

In 2022, 7 students studied at the FCH the follow-up DD Environmental Sciences and Engineering, there were 23 applicants in the admission procedure for the academic year 2022/2023, 10 passed the admission interview, but only one applicant properly entered the study. The reason for this is seen as the administratively demanding documentation of previous education and the visa process for applicants from third countries.

In 2022, the FEKT started preparing an application accreditation of the PhD programme type DD Electrical Engineering and Communication. A contract with the partner university Northern Illinois University has been concluded and subsequently an application for accreditation of the said doctoral programme will be prepared. In 2022, a total of 31 students were studying in JD/DD programs at FECE. There are 12 students newly enrolled in the first year, and 7 students in the upper years studying in JD/DD master's programs at FEKT. In the year 2021/2022, 1 student of the JD programme graduated from the SZZ programme. There are 11 students in the higher years of the DD doctoral programme.

In 2022, the FA continued to prepare for the accreditation of the JD programme in Interactive Urban Studies at Vilnius University of Technology. All necessary documents were gradually delivered to the partner school in order to complete the dossier in the details required by the Lithuanian accreditation authority. It was agreed to open the programme in September 2024 and a pilot summer school in 2023. Unfortunately, the assumption of accreditation in 2022 was not fulfilled due to the late delivery of the dossier by the partner school.

The project supported 6 cotutelle studies in 2022, although the intention was to support a higher number of students. The reason for this is the lower interest this type of study from foreign universities their students, as well as the often difficult negotiations and hard to reconcile administrative processes of the schools.

In 2022, one study in the form of a cotutelle took place at the FP the University of Leuphana in Lüneburg (Germany).

In 2022, one cotutelle-type Doctoral Study was implemented at the FEC in cooperation with TU Wien. Negotiations were held to prepare another cotutelle doctoral study, but were not successful.

Two double-supervised doctoral study agreements (cotutelle) have been concluded at the FSI, namely with Krakow University of Technology in Poland and Szechenyistvan University of Győr. The contract with the Krakow University of Technology is about to be signed and the student has started the Doctoral Study.

Three students who are studying or preparing for a cotutelle were supported at CEITEC.

In the future, the BUT will continue to support the acquisition of contacts at foreign schools for the implementation of cotutelle studies.

In 2022, 30 new courses in English were created the BUT. 2 Division/Department courses taught in English have been created and introduced at the FP, and a third is about to be completed. At FIT, 4 new courses in English have been created and newly opened for the newly accredited Master of Information Technology programme. FaVU has introduced more professional courses English. FP has created 3 professional courses in English, two of which are already introduced in the study plans. FCH has created 2 new courses in English including e-learning support in IS Moodle. FEC staff prepared 10 professional courses English. All courses are included in the study plans of accredited bachelor master study programmes. The content the operational content for 2 teaching courses in English were created at the Institute of Science and Technology. In 2022, a new course for the Bachelor's degree programme in English, Presentation Tools, was prepared at the FA.

The international dimension of education in the form of JD/DD programmes supports the internationalisation of the BUT increases the competitiveness of the BUT the international environment. The creation of additional professional courses in English will also help the BUT to attract quality foreign language applicants and improve the English language skills of students in the Czech programme, where these courses are included.

- **Inventory of international programmes of the DD/JD type**

The Faculty of Chemistry of the BUT implements two Double Degree programmes, namely the Master's Degree in Environmental Sciences and Engineering with the University Koblenz-Landau (Germany) and the Doctoral Degree in Biophysical Chemistry with the University of Huelva, Spain.

The Faculty of Electrical Engineering and Communication Technology runs follow-up Master's Double Degree programmes, namely Telecommunications with Technische Universität Wien, Microelectronics with Northern Illinois University, Communications and Networking with Tampere University, Finland and Bioengineering with The

University of Applied Sciences, Technician Wien and one doctoral Double Degree programme in Electronics and Information Technologies with Tampere University.

The Faculty of Information Technology has accredited one Double Degree follow-up Master's degree programme with Lappeenranta-Lahti University of Technology LUT, Finland.

The Faculty of Mechanical Engineering runs a Bachelor and a Double Degree Master's programme in Production Engineering with Technische Universität Chemnitz (Germany) and a Double Degree Master's programme in Industrial Engineering with Art et MétiersParisTech (Cluny, France) and a Double Degree Master's programme in Applied and Interdisciplinary Mathematics with the University of L'Aquila, Italy.

At CEITEC BUT, a Double Degree Doctoral Programme in Advanced Materials and Nanoscience with Université Grenoble Alpes and the University of Bari Aldo Moro is underway.

Working using surveys polls

Work with surveys and polls is regulated at the BUT by Rector's Guideline No. 73/2017 - Rules for the evaluation of educational activities by students, Graduate/ Alumnus/ Alumni of the BUT and employers. In accordance with this Guideline, the following is carried out at the BUT:

- Evaluation of educational activities by students.
- Evaluation of studies by BUT graduates employers.

The evaluation of students' educational activities is carried out as follows:

- The evaluation of teaching in Bachelor's and Master's Study programmes takes place as an anonymous student survey, in which all students who participated in teaching during the evaluation period can participate. The evaluation is carried out after the end of each semester and all compulsory, selective courses and elective courses are subject to it.
- The subject of evaluation is mainly the quality of pedagogical activities of individual teachers/lecturers of the course. The evaluation may use both pre-formulated questions and the provision of space for free verbal expression of students.
- completion of the evaluation, the holder of the authorisation to implement the programme shall publish the results of the evaluation of all courses on the internal part of the Faculty's (or HEI's) website. All members of the academic community of the Faculty (or Institute (of) HEI) have access to results after logging in. Each teacher/lecturer has access to the complete results of his/her evaluation, including verbal comments from students, via the information system. Heads of teaching departments, course guarantors and study programme/course guarantors have access to the complete results of course evaluations within their scope of competence (including verbal comments from students). The academic management of the Faculty (or Institute (of) HEI) has access to the full evaluation results for all courses.
- The result of the evaluation is a summary report on the evaluation of teaching in Bachelor's and Master's degree programmes at the Faculty. The report contains in particular information specific corrective measures in the case of identified shortcomings and the main conclusions resulting from the evaluation and their possible consideration in the educational activities of the Faculty. The Dean or the Director of the Institute (of) HEI, as appropriate, shall submit the report to the Academic Senate of the Faculty or the Academic Senate of the BUT for consideration (for degree programmes

programmes that are not implemented at Faculties). The report is then published on the website of the relevant Faculty/Institute (of) Higher Education.

- Evaluation of teaching in doctoral study programmes is carried out once a year, after the end of the summer semester. Doctoral students participate in the evaluation once during their studies, passing the doctoral examination. All courses included in the doctoral student's individual study plan are subject to evaluation.
- Evaluation of teaching bachelor master programmes has been carried out at the BUT for about 15 years. However, the obligation to create the above-mentioned summary report has been in force since 2018, when Guideline No. 73/2017 - Rules for the evaluation of educational activities by students, graduates/ Alumnus/ Alumni of the BUT and employers came into force. The evaluation of teaching doctoral programmes at the BUT has not yet been carried out, the BUT is obliged to carry it out from 2018 in accordance with Guideline No. 73/2017.

Evaluation of studies by BUT graduates employers is carried out as a questionnaire survey a frequency of once every two years. The results of these questionnaire surveys are subsequently analysed at the BUT management meeting, the Rector's College and the BUT Internal Evaluation Board. The results of the questionnaire surveys are further commented on by the Faculty management.

In to the above-mentioned surveys according to Rector's Guideline No. 73/2017 - Rules for the evaluation of educational activities by students, graduates/ Alumni/ Alumni of the BUT and employers, a number of other surveys and questionnaire surveys were conducted at the BUT on the initiative of the BUT management and individual Faculties. These included in particular the socio-economic survey of Doctoral Studies conducted by the National Education Fund in 2021. Main outputs of the socio-economic survey of Doctoral Studies:

- Comparison of the evaluation, scope and intensity of Doctoral Studies at the Faculties and Units of the BUT (with reference to other universities in the Czech Republic and abroad). Selected other universities in the Czech Republic: CTU, VŠB-TUO, abroad: TU Wien, TU Chemnitz and Tampere University.
- Analysis of economic aspects of Doctoral Study at the BUT.
- Analysis of other conditions factors affecting the success of Doctoral Study at the BUT.
- Summary study of research on Doctoral Studies at the BUT design of measures to improve its quality.

Recommendations the above survey:

- Recruit fewer student) pay them better.
- Increase the minimum doctoral scholarship to one-twelfth of the annual contribution from the Ministry of Education and Science (1 250 CZK).
- Do not require doctoral students to perform job duties that are not related to the dissertation.
- Do not require students to work up to 40 hours per week they have a full-time contract for a definite/indefinite period at the relevant Faculty.
- Improve the awareness of international students.
- Revise the concept of so-called pedagogical
 - Reduce its current volume.
 - Teaching beyond the newly established threshold should be voluntary and rewarded with wages.
- Revise required courses for PhD students:
 - Adapt their content to the focus of the dissertation, replace some courses with other more appropriate forms of education.
 - Offer courses in publishing grant application skills.

- Check the offer of courses to see if they are actually implemented.
- Giving PhD students a full-time contract for a definite/indefinite period at the university (as is common abroad).
- Expand elements of teamwork on dissertation projects.
- Focus on increasing the completion rate. Unsuccessful study is often the result of adverse circumstances rather than a student's lack of professional aptitude. Reducing the failure rate may require lower numbers of students to be admitted.
- Expand support for doctoral student-parents in childcare (nurseries, kindergartens, playgroups).
- Introduce evaluation of supervisors (e.g. in the form of a questionnaire sent to students).
- Consider the establishment of an independent ombudsman to whom PhD students could turn for help when they have difficulties in working with their supervisor.
- Specify publication requirements.

Student-centred (counselling, student care)

Advice provided to students

Alfons counselling centre counselling for students with special needs Alfons are units of the Institute of Lifelong Learning of BUT. The Counselling Centre provides students with individual psychological services, namely psychological counselling, coaching and career services (career counselling and individual psychodiagnostics).

The Alfons Counselling Centre also provides personal assistants, lends software aids, offers supplementary English language teaching, which has been newly expanded to include conversation and on-line teaching, language counselling in Czech and English and proofreading of final Theses.

For those interested in studying at the BUT, the Alfons Counselling Centre offers an adaptation of the admission examination, and for already admitted students, an adaptation of their studies, which enables them to adjust their study regime so that students with SP can demonstrate the same Transfer as other students. Study adaptation takes the form of suggested overhead arrangements. This may include increasing the time allotment for exams, adapting or providing study materials, interpreting into Czech Sign Language (CSL), transcription services, allowing for hygiene breaks, simultaneous or content-based transcription of lectures/exercises, etc.

Another service is group courses workshops that develop the competences necessary to cope effectively with study/work demands and to manage social situations more effectively. These activities increase the student's capacity for quality personal, academic, family and work life. These include courses such as Time Management, stress management, better communication, relationships, working with self-motivation, working with strengths, etc. In 2022, 695 individual consultations took place.

In 2022, 20 courses were delivered, of which 16 were face-to-face and 4 were webinars. 94.3% of the participants had a good overall impression of the courses, of which 90.6% appreciated the content and 94% the evaluation.

In terms of evaluation of the usefulness of the courses, 74.3% of the participants found the courses useful in terms of developing effective study, 78.1% found the courses useful in terms of entry into practice and 92.4% found the courses useful in terms of personal development. 95.2% of the participants were satisfied with the personality of the lecturers.

2022, a larger number of students from FAST (48.3%), followed by FSI and participated in the courses, followed by students from FEKT (9%), FIT (8.4%), FCH (4.5%), FAVU and ÚSI (1.9%) and FA (1.3%).

Motiv for taking part in the courses were students' problems with evaluation, communication problems, experiencing excessive stress, lack of motivation, seeking ways of learning or a general interest in personal development.

Supporting students with specific needs

The work on the Dictionary of Selected Technical Terms of Czech Sign Language continues. At present, the dictionary contains 743 terms translated into sign language. In cooperation with Masaryk University, the signs are published on the website of the translation dictionary dictio.info.cz.

Students with hearing impairments are provided with interpretation of online recordings and presentations into Czech sign language, subtitling of online recordings and presentations into Czech, simultaneous transcription simultaneous interpretation. A student of FSI who passed the state exam and received the degree of Ing.

1st place in the Werner von Siemens Prize for overcoming obstacles in studies.

There were development courses focused on soft skills computer skills, attended by 39 students.

The I've Got It! programme, which is aimed at improving the skills with learning attention disorders, takes the form of regular individual consultations. 7 students have benefited from this programme.

The SunBall therapy suitable for students with specific learning disabilities,) or various post-traumatic conditions has been used² by students with ADHD.

Each year, the Alfons Counselling Centre evaluates a survey of students concerning the course of study and its adjustment to a specific need. Satisfaction with the services granted is high. This year, 93% of respondents a grade of one (the same scale as in school), 6% a grade of two, while the other evaluations were marginal. The overall average evaluation is thus again very high; namely 1.08. In their verbal responses to the question of what they were most satisfied with, students particularly praised the helpful and human approach, the overall communication of the Centre (of) and, of course, what the counselling centre provides for them, often proactively.

In 2022, the Alfons counselling centre 342 students with special needs.

Composition and support for students with special needs

Type of specific need	2016	2017	2018	2019	2020	2021	2022
1 - visual impairment	3	5	5	3	5	8	7
2 - visual impairment	0	0	0	0	0	0	1
1 - hearing impairment	8	13	12	13	19	18	21
Bhearing impairment	2	2	1	2	2	2	2
C1 - lower limb disability	0	1	1	0	4	5	2
2 - upper limb	2	3	3	4	4	4	3
D - learning disabilities	92	85	84	104	185	177	216
E autism spectrum disorders	4	5	4	6	7	5	8

somatic diseases	26	39	31	50	54	69	83
Total	137	153	141	182	280	288	343

Related activities, social responsibility/educational activities Internal employee training

In 2022, 119 courses and webinars with 53 topics were held, attended by 1,154 BUT employees. The largest participation was from FAST (19.6%), the Rector's Office (17.5%) and FSI (14.4%).

22 language courses organised at different levels - language competence (C1). 255 employees attended the courses.

After the evaluation of the feedback questionnaires, satisfaction with the content of the courses reached 90%, the expertise of the lecturers was rated as above average (99%) and overall satisfaction the course reached 99%. The outcome of the evaluation is the detailed report Analysis of the evaluation questionnaires for 2022.

Long learning - courses

At the ICV, the limitations caused by the COVID-19 pandemic, with 240 participants. The courses were conducted in a full-time format. Quality evaluation was based on evaluation questionnaires. After evaluation of the feedback questionnaires, the courses were evaluated similarly to last year. The content was sufficient (95%), the evaluation of the lecturers was rated as above average (95%), and the overall satisfaction with the evaluation and the course was 92%.

U3V BUT (University BUT)

Since February 2022, the U3V courses have been running again on a full-time basis, which fulfils mission, as seniors come to the U3V not only for education but also for social contacts. There were 67 courses at U3V, attended by 1 853 seniors. The range of courses for seniors was expanded with 8 new courses.

The evaluation of the quality of teaching at U3V, which is obtained as from students, is very positive. The quality of the courses offered is appreciated, which are expanded every year with new innovations, as well as the high level of lecturers/experts with many years of experience, who also have a high degree of empathy in their approach to the education of seniors. Senior students have the opportunity to actively participate directly in the classroom, in homework and in excursions and workshops.

Institutional internal evaluation of science research

Over the past evaluation period, the main theme in the field of institutional and internal evaluation has been a shift from quantity to quality evaluation.

Measures 2018-2022 (extending to 2023)

- In 2019, Guideline No.2/2019 - Ensuring internal evaluation of creative activities at the BUT and their registration was issued.

- The internal regulations based on the remuneration of scientific and academic staff on the principle of so-called which were based on the system of allocating RIV points, were abolished (Resolution No. 37/2017 - Competition for the most productive staff and students of Doctoral Study Programmes in terms of research and development results at the BUT, Resolution No. 28/2017 - Incentive system for increasing performance and quality in the field of R&D).
- Change in the rules for the distribution of IP at DKRVO - emphasis on quality (incentive component redistributed on the basis of the evaluation of R&D results in Module 1, Module 2 and funds obtained under contract research and national and international projects.
- Design of actions for improvement in the areas rated weakly in Module M3 by Faculties/Units.
- Support correct reporting of results in development of a manual in 2022 and the organisation of a seminar on reporting to the JRC.
- Introduction of the Rector's Awards for Outstanding Scientific Achievements Artistic Outcomes (Resolution No. 6/2023) quality evaluation respect for disciplinary differences.
- In 2022, the BUT became a signatory to the Coalition for Research Evaluation Reform (COARA), signed up to comply with the ARRA (Agreement on Reforming Research Assessment).
- A so-called disciplinary portfolio has been created, which the core disciplines on which focuses.
- Establishment of the position of Science and Research Analyst in the Research and Development Division/Department.
- Regular analyses in the area of publications and other outputs, use of InCites and SciVal tools, evaluation according to disciplines and organisational units, comparison with reference universities abroad.
- Preparation of a portal on Open Science Open Science, where the basic theses of open access, data management are clearly summarized.

Measures currently implemented:

- A Methodology for recording and reporting the results of creative activities at the BUT has been created and is being prepared for publication. The methodology is intended to ensure clarification of the rules for recording results and their successful reporting to RIV and SKV (Module 2 M17+).
- Actions to improve the reporting of results in M1 are ongoing: updating of the reporting manual, another workshop on how to improve the description of results. At the same time, efforts are ongoing to modify M17+ in the evaluation of applied results (quantification, rating scale).
- Review of BUT evaluation results by module year, identification of reasons for success and failures evaluation.
- paration for the M3, M4 and M5 evaluations (analysis of the weaker evaluation areas, analysis of how the data required in M3-M5 are recorded, for improving their recording).
- A new Science, Research and Innovation Results module is being prepared to replace the existing Apollo R&D Results module. This module should allow monitoring of metrics related to periodicals (quartiles according to AIS) and individual articles (citation response, standardized citation impact), the possibility for each evaluation unit to view statistics (in addition to the above metrics, e.g. share of publications with first/last/corresponding author; share of publications in collaboration with foreign countries), introduction of individual metrics relevant for some disciplines (Computer Science - CORE conference evaluation, arts disciplines - RUV evaluation, natural sciences disciplines Nature Index).
- Establishment of the International Scientific Advisory Board (ISAB) of the BUT, which will grant authority to the university management, Faculties and Units on strategic plans in the areas of management, science, research, innovation, doctoral studies or other topics such as internationalization or third

the role of the university. It is involved in the evaluation of individual faculties their units, or, if necessary, teams or individuals.

Involvement of students of bachelor's master's programmes in creative activities

- It is an effort to involve students of bachelor, master and especially doctoral study programmes in creative activities within the framework of work on their bachelor, diploma or dissertation thesis and they can also be involved in research, development and artistic projects of all types at individual faculties and units of the BUT.
- Students of continuing master's and doctoral programmes have the opportunity to apply for the Student Grant Competition in the framework of specific university research at the BUT. This competition emphasizes the strengthening of independent creative activities of students in collaboration with academic staff in the field of research development. The projects allow for intensive involvement of students in the issues addressed, especially in the context of team research and development activities at faculties and units. The annual student-specific research grants contribute to increasing the quality efficiency of scientific, research and artistic work, to interdisciplinary fields in doctoral and postgraduate studies, to establishing international cooperation and to supporting the publication of results, which is in line with the BUT Strategic Plan.

Furthermore, students are involved in research activities within various projects announced by TA ČR. These are, for example, projects in the Zéta programme (aimed at supporting budding researchers), Gama or National Competence Centres. aims to support long-term cooperation between the research and application spheres and to strengthen the institutional base of applied research for the period 2018 to 2022. BUT is the main beneficiary in two projects (National Centre of Competence for Aeronautics and Astronautics, National Centre of Competence for Mechatronics and Smart Technologies for Engineering) and a co-investigator in seven other projects.

A great advantage of studying at BUT is the opportunity to participate in research on the most current topics through cooperation with companies. Companies interested in developing a new process, product or new idea can suggest a topic for a bachelor's or diploma thesis and provide a professional supervisor who will consult with the student.

Within the framework of the Come to Business! project, the Faculty of Business and Management of the BUT together with the South Moravian Innovation Centre prepared a university-wide course Development and Implementation of a Business Idea. This course is offered in both winter and summer semesters. At the same time, the third edition of the Student Entrepreneurship Award competition was held. Out of ten finalists, the absolute winner was Pavel Šafl, a student of the Faculty of Electrical Engineering and Communication Technologies of the BUT.

The high professional quality of the creative activities of BUT students is by various other awards (see BUT 2022). An extensive list of our award-winning students can be found in the Achievements and Awards section at the beginning of the annual report.

Support for PhD students post-doctoral fellows

The BUT announces internal grant competitions for PhD students and post-doctoral researchers, provides them with project support and technology transfer support, they can choose from further education, career counselling or mobility programmes, or they can take advantage of measures enabling the reconciliation of personal and life. Other specific support for Students of Doctoral Study Programme (doctoral

and post-docs at the BUT is implemented at the level of individual faculties units. This is mainly due to the specificity and financial demands of the programmes for the preparation of these students and young researchers.

The quality of the work of PhD students or post-docs is also evident from the fact that many of them received awards for their work in 2022. Out of the twenty-five places awarded in the Ph.D. scholarship programme, students the BUT have been awarded Ph. Talent right away eleven places, which is the biggest achievement of Brno technician during the time of the competition. The young scientists managed to make it in the competition of 145 applicants their support was decided not only by Czech scientists but also by top experts from abroad.

Upcoming measures:

- Internal evaluation of R&D activities and outputs at the BUT according to individual disciplines, involvement of the International Scientific Board in the evaluation, Peer Review.
- Setting up new rules for the distribution of DKRVO+adjustments to the rules for the distribution of DKRVO following changes and adjustments under M17+.
- Modifications to SHAP - Department and functions, emphasis on quality outcomes reflected in M17+.
- Rev of the rules for habilitation professor procedures - those HEIs we want to compare ourselves with.
- for doctoral students - Doctoral School, project support (specific research, etc.), evaluation of doctoral studies.
- Optimization of the BUT IS in the area of R&D support (see above) project agenda.
- Measures defined in the HR Award Action Plan 2023-2025.
- Active R&D marketing.
- Support of the Open Science policy (implemented and planned measures are summarised in the document [Open Science Strategy at Brno University of Technology for the period 2022-2025](#)).

Internationalization of research, development and other creative activities

for the period 2018-2022 (extending to 2023)

- Presentation of science and research at the BUT in English, ensuring the availability of the website, the Research section in English 1:1 (including the newly introduced Open Science portal).
- Ensuring the language skills of the administrative support, all OVaV employees speak English at C1-C2 level.
- Gradual translation of internal regulations into English.
- The most important measure is the establishment of the International Scientific Board of BUT (ISAB BUT) - see description above. ISAB BUT members are renowned international experts covering the main areas of expertise

scientific disciplines of the faculties and units of the BUT. The International Scientific Board will contribute to better feedback to the University in the field of creative activity as well as in the strategic management of the University in international comparison. This will lead to an increase in the international prestige of the BUT.

Planned actions:

- Measures to increase the number of prominent foreign experts in foreign positions and extraordinary professors:
 - Revision of the rules for visiting professor status.
 - Estment of guidelines for defining the status of an extraordinary professor - the conditions and rules

Internationalisation

In order to improve the management of the internationalisation agenda, which includes not only the provision of mobility of students and academic, research and administrative staff, but also a significant part focusing on the development and and management of international cooperation processes, two Centres (of) have been created in the Division/Department of Internationalisation. These are the Centre (of) International Services and the Office of International Relations.

The International Service Centre (of) is responsible for activities related to short-term mobility, Full Degree students services for incoming foreign employees international students.

Under the Erasmus+ programme, which falls under the Centre (of) International Mobility, these processes and procedures have been improved:

- The Reservio booking system was introduced, which significantly improved the efficiency and quality of the services granted regarding the handling of the administrative agenda and after departure. The system is set up for students employees.
- In terms of the financial management of the Erasmus+ project, the in-depth analysis has significantly improved the financial management, planning and control process.
 - The analysis of the internal processes of registration set up within the Erasmus+ programme revealed certain shortcomings. The Centre (of) is now working on improving these processes, which will mainly be reflected in modifications to the internal guidelines.
- Work has started on digitising the agenda under the Erasmus Without Paper initiative, which promises to reduce administrative burdens and streamline and improve administrative processes.
- Overall, the administrative process of mobility through the Erasmus+ programme has been streamlined and accelerated, which brings improvement of the entire service provided to students and employees of the BUT.

The Central Welcome Service is one of the service activities that the Division/Department of Internationalisation and the Centre (of) International Services provide for foreign workers coming to work at the BUT. A concept is being prepared that will address both the cooperation with KaM (Halls of Residence and Dining Services (Student) to provide quality and prompt service and the registration of incoming staff, which the Division/Department plans to streamline so that data from this registration can be provided to members of the BUT and F/S management as statistical data for further strategic decision-making.

At the moment, the Centre (of) is also focusing on possible closer cooperation between the Brno City Council and Brno universities within the Welcome Service (basic cooperation already exists within the Study in Brno project).

An analysis of the internal admission process for foreign Full Degree students was conducted. The data the number of foreign Full Degree students at the BUT as well as the data the programmes were thoroughly analysed.

provided in English, which is used to process statistics necessary for evaluating the success of activities related to the recruitment of foreign students to Czech and English programmes implemented at the BUT.

The study portals Keystone, StudyIn, Study in Brno are used for student recruitment. Particularly in Keystone, the portal's offer was used more efficiently thanks to this, the recruitment of Full Degree students was improved, which was reflected in an increase in applications by approximately 38%.

In order to improve communication with foreign students who have expressed interest in studying at the BUT and have submitted an application for study, the Admission Office which is currently operating in a trial mode and will be launched from 1 September 2023.

The above-mentioned activities of the Centre (of) International Services have a significant impact on the improvement of processes within the framework of building "internal internationalization" at the BUT.

In order to streamline and improve the internationalisation of the BUT's international presentation and the establishment of important partnerships, the Office of International Relations was established.

The Office of International Relations has managed to streamline and improve the quality of the agendas that fall under this office.

A comprehensive analysis was carried out, which focused on the usability of the concluded contractual documents Memorandum of Understanding (hereinafter MoU) and also helped to set up information regarding university-wide and faculty MoUs, which are listed on the BUT website. Students and employees thus have a clear overview of the possibilities of trips abroad. The published information is also important for potential foreign partners who are considering cooperation with the BUT, and this information, among other things, can help them in their decision to establish cooperation.

A methodology for concluding university-wide faculty MoUs is currently being prepared.

On the basis of the analyses communication F/S, a tool for evaluation of strategic territories is being prepared, and this topic will be continuously discussed with representatives of relevant divisions/departments at the BUT Rector's Office. Comprehensive analyses of the geopolitical situation of the selected countries are also being prepared.

Guidelines and Checklists were developed to improve the quality of service when receiving foreign visitors. These procedures apply primarily to foreign visitors who deal with the Rector and the Vice-Rector for Internationalisation.

A very important Unit of internationalisation is active participation in European university networks and university alliances. BUT is involved in the European network EULIST and in the university alliance CESAER. It has been possible to significantly improve communication, not only in the relationship BUT EULIST/CESAER, but especially internal communication and active of BUT employees in the activities of these networks/alliances. The results of the participation in these international associations bring invaluable experience to the BUT, which will significantly help to improve the quality of activities in the field of education, science and research, international cooperation and the development of internationalisation itself, which connects the aforementioned areas.

An important and integral contribution to internationalisation is the setting up of internationalisation in the internal environment, which is primarily based on effective and high-quality communication between Faculties/Units among themselves and between the Rector's Office (management, Divisions/Departments) and Faculties/Units.

Division/Department staff meet regularly with faculty officers to address practical issues related to the mobility agenda and further developments in this area. They communicate emerging and potential problems and the central setting of the agenda. Similarly, they meet regularly with the Vice-Deans for International Affairs to communicate the strategic setting of internationalisation at the BUT.

Setting up a functioning internationalisation is underpinned by the Internationalisation Action Plan, the output of which will be the Strategy for Internationalisation in the internal environment of the BUT. Communication within

Internationalisation affects many areas such as STUDY, SCIENCE AND RESEARCH, INTERNATIONAL COOPERATION AND INTERNATIONAL RELATIONS. These areas are interlinked and effective communication between the areas and the different divisions/departments, Faculties and Units is a fundamental prerequisite for the functioning of the whole system. At the moment, analyses have been carried out, on the basis of which procedures to set up the quality functioning of internationalisation in the internal environment.

The BUT has made great progress in improving the quality of the service provided in the field of internal and external internationalisation, but thanks to the analyses and concepts carried out, the management of the BUT Internationalisation Division/Department is aware that there is still a lot of work to be done. At the same time, it perceives that the activities of the Division/Department are linked to the agenda of student affairs, science and research and other aspects that enter into the overall image of the BUT as an international university. The Strategy for Internationalisation, which will be an output of the Internationalisation Action Plan, should help to achieve this.

Social role

Transfer of knowledge into practice

At the BUT, the transfer of knowledge into practice takes place within the framework of active and long-term cooperation between individual participants from the university and representatives of external companies. This transfer also includes facilitating the creation of spin-off and start-up companies in the internal environment of the BUT as one of the units of active support for the commercial exploitation of intellectual property. The administrative and registration part and the university-wide support of intellectual property protection processes fall under the agenda of the Technology Transfer Division/Department. As a modern university with a high scientific potential, the BUT concentrates on all areas of human activity and participates in research in areas of societal importance, be it the development of new technologies, human safety or environmental protection.

Working in the region, cooperation with regional governments and important institutions in the region

In 2022, the BUT signed an agreement with representatives of the South Moravian Region on the concept of development of regional education with a focus on mathematics and physics. The university is addressing primary school pupils and students of lower years of multi-year grammar schools with an offer to participate in the university project BUT Junior, which is a project thanks to which pupils and students have the opportunity to gradually get acquainted with all faculties and university institutes of the BUT. Classes are taught in full-time sessions, if necessary, the project can be conducted online.

A BUT Roadshow is organised for secondary school students, offering all BUT study programmes and with the participation of ambassadors of individual faculties and university institutes of the BUT, according to the focus of these secondary school.

In 2022, the Rector of the Brno University of Technology signed a memorandum of cooperation on the development of electromobility in cooperation with the city of Brno. The aim is to cooperate more on the faster development of electromobility and on creating suitable conditions for its use by the general public. The Memorandum also an opportunity for students who can deal with the topic of electromobility in their bachelor and master theses or who will be able to participate in the trainee programme of Teplárny Brno, which is the guarantor of electromobility development for the city.

In the long term context, the BUT supports close links academic research at the BUT businesses, this area considerable progress can be noted in recent years. The strengthening of the links the BUT the application sphere results in further project opportunities, collaborative projects, accelerating contract research and objectively measured applicability of results such as licensing agreements, the creation of spin-off companies, the provision of consultancy and the resulting financial profit and further increasing the competitiveness of the BUT as a major technical university on a national and international scale.

Students of the Faculty of Fine Arts of the BUT have participated in the interior design of the new pavilions of the Masaryk Cancer Institute built in 2022. The psychological state of the patient is an important aspect in the treatment of cancer patients, and for this reason the Masaryk Cancer Institute has continued its cooperation with the Faculty of Fine Arts of the BUT in the interior design.

Scientists from Brno's technicians are actively involved in popularizing scientific or artistic events organized in the region, such as the Days of Electron Microscopy, Open House Brno, Open Studios Brno or the Festival of Science of the South Moravian Region organized by the Brno Observatory and Planetarium.

The BUT cooperates with institutes (of) the Academy of Sciences of the Czech Republic mainly at the level of basic research and Doctoral Studies. Experts the institutes (of the Academy of Sciences of the Czech Republic are supervisors of theses thus enable to improve the quality of teaching of students in areas in which the institutes have world-renowned experts and quality technical background.

Transregional impact importance of BUT

BUT is an educational research institution, but a cultural institution. It covers not only technician disciplines, but its complexity originality is due to its competence in art, design and architecture.

BUT reflects current social developments and contributes significantly to the dissemination of the latest scientific and artistic knowledge and values in many different ways. It aims to be in close and mutually open contact with society at national and international level.

the results, which also has a very strong social impact, is the exhibition of the authors of associate professor. Ing. Ondřej Anton, Ph.D., and Mgr. Petr Holub entitled "99 Brno Brickworks. Historical development of building materials made of baked clay and their production in Brno", which was also accompanied by a critical catalogue. The was installed in the premises of FAST, presented the results of research in the field of locating and identifying the owners and operators of brickworks in the city of Brno, including a clear map, presentation of archival materials and contemporary relics. The exhibition also described the historical development of bricks, their dimensions, surface marks, markings, etc. All information was then presented with an overlap from the Brno region to the whole Czech Republic and partly to Slovakia and Austria.

The impact of the ongoing climate change related requirements for building efficiency is illustrated in an article entitled Overview and future challenges of nearly zero energy building (nZEB) design in Eastern Europe recently published co-authored by Ing. Brzoň, Ph.D., and Ing. Kar Struhala, Ph.D., from the Institute (of) Civil Engineering FAST. The paper presents the results of a study focused on the implementation of zero energy building requirements (nZEB) in buildings in Eastern European countries.

FaVU prepared the symposium Communities of the Future: Ecology and Institutions Creative which 2 June 2022. creative practice that attempts to co-create a more just

Community. In doing so, it critically defines itself against the unjust systems of power that structure how we relate to ourselves, to others, and to the world around us. These possible communities, the so-called communities of the future, are understood in both an institutional and ecological sense, and their rethinking is informed by feminist, anti-colonial, and environmental art and thought that primarily issues related to education, collective evaluation, and the human relationship to nature. The aim of the symposium was to provide a platform for collectively developing the sensibilities necessary to transform the current unsustainable status quo defined by the climate crisis, the precarization of labor, and the rise of inequalities on both local and global scales.

FCH hosted world-leading experts in bio-organic electronics at the Bio and Sustainable Organic Electronics Workshop on 5 and 6 October 2022. Prof. Niyazi Serdar Sarıçiftçi, Director of the Institute of Organic Solar Cells (LIOS) and the Institute of Physical Chemistry at JKU Linz, the workshop. He is one of the world's most respected personalities and one of the most cited scientists in the research field. Another distinguished participant was Prof. Gianluca Maria Farinola, Vice President of the Italian Chemical Society, President of the Organic Chemistry Division (European Society of Chemistry) and Vice-Rector for Science Research at the University of Bari.

Research in the field of water purification at the FSI, for example, purification of water from microorganisms and chemical residues using low-temperature plasma or diploma theses focused on environmentally friendly handling of energy, etc., have also contributed to the increased awareness of BUT students. These themes are also reflected in the programmes sponsored by the FSI. The SPIL (Sustainable Process Integrated Laboratory) team at the FSI deals with the professional aspect of sustainability.

It should be emphasized that also on the basis of the students' initiative a systematic waste sorting at the university was initiated.

In 2022, the BUT joined the University Leaders in SDGs (UNILEAD), a centralized development project that and supports activities across universities.

Public lectures for the wider public are seen by the BUT as one of the main activities in its social, so-called third role of the university. These lectures are mainly carried out at the BUT through the University of the Third Age of the BUT (U3V BUT), which is intended for senior citizens. Primary and secondary school pupils are targeted by the university for young people, VUT Junior. Some staff of the Faculties and University Institutes of the BUT also organise professional popular lectures according to the focus of their research activities. BUT Faculties organise summer schools for secondary school students. Lectures for the general public have been moved to the online environment during the pandemic, but the general public (especially seniors) perceives online courses only as an emergency solution and mostly requires traditional face-to-face lectures, which also have a social dimension for them.

Related activities

A goal in the BUT 2021+ is the administrative burden on BUT staff so that they can fully devote themselves to their mission

In 2022, the convergence of the BUT IS was carried out through several independent projects of varying scope, mostly in study areas. The first phase of the convergence was the analysis of existing solutions

and assessing whether and how FACULTIES can adapt and use the existing solutions in the BUT IS. A significant part of the activities was also carried out internally at the Faculties. Finding ways to leverage existing applications minimize modifications to existing systems was a major effort in presentations and discussions.

Analysis of the study part of the BUT IS started in November 2022, the conclusions of the analysis will be known in the first quarter 2023.

In 2022, the further development of the SPP Elements Administration application, linking the Responsible Person databases to the approval of travel orders and shopping baskets, continued to reduce the administrative burden.

Furthermore, in 2022, projects were implemented within the framework of the PPSŘ, especially in parts related to the BUT 2021+, namely:

- Strengthen strategic management effective use of research and development capacities at the BUT.
- Build capacity for strategic management of the BUT.
- To reduce the administrative burden on BUT staff so that they can fully devote themselves to their mission.

projects to develop the quality of related activities to be implemented from 2022:

- Digitization of administration: contributes to the speeding up of processes and, above all, to the saving of operational costs of the BUT.
- Central facility management: the benefits of implementing professional digitalised facility management are greater efficiency and sustainability in property management. The new BMS upgrade will bring more opportunities for further expansion of the BMS BUT facilities as well as more sophisticated technology management options, which can bring savings in energy consumption in BUT facilities and campuses.
- SAP transformation: the project is expected to be implemented in the following years, the necessary personnel changes have already been secured for 2022.
- Unification of the BUT IS: integration of BUT faculties and university institutes into one BUT IS will simplify the comparison and exchange of data between universities, The benefits for the Faculties University Institutes of the BUT are mainly savings in IT costs, the possibility to focus on faculty processes, increased quality of HW solutions and security including increased functionality of 'HW.
- Strengthening of strategic human resources management at the BUT: setting up a new system of employee training in English should significantly support the internationalisation of the university, which is one of the university's strategic goals for the subsequent periods. By designing the concept of employee training, the prerequisites were created for the start of subsequent courses in this area. The need for this type of training also emerged from the results of the questionnaire survey carried out this year.
- MIS BUT: the introduction of analytical systems at the BUT Code/Rules increases the efficiency of managerial and control work at all levels. The concept of analytical cubes itself is not specific to the BUT, a professionally proven principle.
- SMART IS BUT: the findings of the internal audit, supplemented by the opinion of the IT expert and follow-up measures ensure relevant actions of the BUT management and the CVIS BUT management in the area of IT management at the University.
- Upgrading the qualifications of managers in globally used best practices in IT service management increases the quality of IT management at the university.

4. Assessment of strengthsweaknesses, opportunities and

(Source: Background material for the EUA Institutional Evaluation)

Governance institutional decision-making

Strengths

- Reducing the number of members of the Rector's College (KR) to the management of the BUT, the management of faculties and university institutes, focusing KR meetings primarily on conceptual issues.
- BUT management is conceived as a professional team significant managerial experience from previous work in senior positions across the BUT.
- Management leadership focused on process management.
- Transparency in decision-making.
- Emphasis on performance quality in HR management, application of principle.
- Respecting the gender aspect (internal environment).
- Open communication between the university boards (especially between the Academic Senate of the BUT, the BUT management).
- Emphasis on integrity respect for academics, students and other employees.
- Cooperation within research universities emphasis on cooperation between universities in Brno.

Weaknesses

- Insufficient information support for decision-making (integrity of data, their timeliness and availability).
- Formal work management documents, recommendations resulting from analyses are not sufficiently implemented.
- Unfinished computerisation of processes digitisation of agendas.
- The natural conservatism of the university.

Opportunities in the external environment

- Legislative setting as an initiator of change (amendment to the Higher Education Act, amendment to the R&D, accreditation).
- Project calls.
- Opportunities from crisis situations (COVID period - distance learning, conflict in Ukraine - emergency aid, etc.).
- Opportunity for change in development through HR Award, EUA evaluation more.
- Positive development of the demographic curve.
- Green Deal (environmental measures, creation of new energy solutions crisis).
- Pressure for international evaluation of the university, emphasis on excellence as an opportunity for development.
- Emphasis on the competitiveness of BUT in the higher education space.
- Balancing formal correctness, defining the position of the BUT in gender, political, and other areas.
- Mutual cooperation of universities within the JmK region the city of Brno.
- Creating the conditions for a good employer image.

Threats the external environment

- Instability of the external environment (instability university funding, energy crisis, war in Ukraine, COVID, etc.).
- Lengthy approval processes the limitations of the legislative setting of the Ministry of Education.
- Threats due to lack of flexibility of the university in implementing the requirement of the external environment (e.g. Open science).

- Unethical behaviour many areas, having to react due to loss of reputation.
- Pressure for formal exaggerated correctness (gender, political and the emancipation of marginal interests resulting from the evolution of society).
- Increasing administrative burdens regulation academic overload and creative workers.
- Low unemployment rate.
- Formalism, schematism, from the external environment (internal constraints e.g. in the area of decision-making).
- Non-ministerial legislation with impact on the HE sector and formal application of general legislative settings to the HE environment.
- The specificity of HEIs is not reflected the general measures legislative settings creative interpretation is required and the resulting increased costs).

Quality culture

Strengths

- Initiated reconstruction of the quality management system enhancing usefulness meaningfulness as part of the BUT management policy.
- Emphasis on procedural management.
- Emphasis on the development of human resources as a source of quality (information support, IT support, project support).
- Introduction of SHAP, pilot evaluation of THP for the BUT Rector's Office.
- Emphasis on defining quality standards in the context of international national comparisons.
- Emphasis on usefulness meaningfulness versus formalism of the applied quality management tools.
- Setting standards for institutional accreditation of the BUT standards for research evaluation aimed at continuous improvement.
- Emphasis on defining quality standards in the context of international national comparisons and the university's inclusion in international rankings (QS, THE,

Weaknesses

- Lack of definition of quality within the university.
- Delayed implementation of process management.
- Formal work documents.

Opportunities in the external environment

- Finalize consensus on the definition of quality, excellence and benchmarking.
- Compl conceptual documents (EUA, Open Science, documents of professional associations - CESAER).
- Membership of national and European associations and alliances that provide opportunities for benchmarking and standard setting.
- Openness of the university bodies (e.g. Scientific Board of the BUT, Board of Trustees of the BUT) to other universities in order to share academic standards and different approaches (e.g. habilitation and professorial procedures).
- Emphasis of BUT as a technician university on the application sphere.

Threats the external environment

- Lack of generally accepted standards evaluation criteria.
- The complexity of processes from the external environment and the increased economic intensity of quality management and improvement activities.

- Departmental evaluation of research quality, which is not entirely appropriate for technicians (emphasis on formality, publications versus applications).
- Isolation disregard for external developments the conservative approach of the BUT.

Teaching and education

Strengths

- The background of BUT as a research university.
- Modern teaching facilities, infrastructure, technical and instrumental support for teaching.
- Existence of the CEITEC BUT Centre (of) Excellence.
- Teaching combined research practical problem solving.
- Institutional accreditation gives the BUT autonomy in creating programmes.
- Functional system of internal accreditation internal evaluation of programmes.
- Functional system of questionnaire surveys among students, Graduate/ Alumnus/ Alumni and employers.
- Annual evaluation of the best teachers their awards.
- Companies are very interested graduates/ Alumnus/ Alumni, BUT graduates the prospect of working
- Extensive collaboration academic staff companies, solving practical problems.
- High starting salaries of BUT graduates/ Alumnus/ Alumni in practice.
- BUT offers a comprehensive portfolio of technical education.
- Structure of the BUT technical faculties, art faculties and Faculty of Business and Management, natural sciences.
- History tradition since 1899, building on the traditions of the original German technician founded in 1847.
- A wide range of programmes.
- geographical location attracting foreign (Slovak) students.
- The policy of the City of Brno supporting higher education in the city, Brno profiles itself as a Transfer region and a safe university city.
- Solid accommodation offer, modern dorms for students.
- Modern sports complex
- The system of teaching sports. Physical education is an elective course, a student can enroll in 2 hours of physical education each semester for the duration of his/her studies without a fee.
- Systematic support for disabled students.

Weaknesses

- Working on projects, which carries more funding resources, is for Code/Rules workplaces and academic staff a priority, teaching, which the main activity of the BUT.
- Higher number of students per teacher.
- Rigid structure of some programmes:
 - Some study programs are not enough attractive for applicants and therefore competitive (e.g. in relation to sister Faculties at CTU or MU).
 - Low proportion of electives.
 - Too much diversification of programmes (SP Architecture at FAST and SP Architecture at FA).
- High average age of the teaching staff.
- Inconsistency of study regulations of some Faculties University Institutes of the BUT with the Study and examination Code/Rules of the BUT, in some cases.
- Inconsistency of methodological procedures in the field of studies at various Faculties and University Institutes of the BUT.

- BUT does not yet have a unified information system (IS BUT) in of studies, some procedures in IS BUT have different versions for different Faculties University Institutes of BUT.
- The formal approach of many Faculties Workplaces of the BUT certain activities, for example:
 - Evaluation of teaching by students.
 - Compliance with the Programme Standards (e.g., meeting the SP standards on the mandatory existence of a course in English).
 - Accreditation of international programmes DD/JD.
- Many students work during their studies.
- breeding - the career development of academic staff as well as in habilitation and professorial procedures.
- Low scholarships for PhD students.
- Most students do not complete their studies within the standard duration of studies.
- The BUT does not have a functional system for evaluation of the quality of tutors' work.
- In many workplaces, students are used as cheap labour:
 - So-called teaching where doctoral students teach without bonus for their work.
 - Use of doctoral students for administrative other activities not related to the doctoral STUDY.
- The low international dimension of the study:
 - Low number of foreign teachers/lecturers.
 - Low number of home teachers/lecturers with foreign experience.
 - Low number of self-paying students.
 - Low number of programmes in English.
 - Very low number of foreign dissertation opponents.
- Absence of study programmes accredited the distance form of study.
- Insufficient work Graduate/ Alumnus/ Alumni, dysfunctional ALUMNI.
- A dysfunctional career Centre (of)
- Insufficient use of the extensive sports infrastructure of the BUT financially demanding for operation and maintenance.
- Lifelong learning as an important segment of educational activity is underutilised.
- Low number of students the boards of programmes.

Opportunities in the external environment

- The forthcoming legislative reform of Doctoral Studies as a basis for advocating the necessary changes (scholarships for students, modification of the so-called teaching practice, the need a standard for supervisors, etc.).
- Microcertificates.
- NPO projects.
- Professional programmes.
- Progressive fields of study.
- ERASMUS programme to support student mobility.
- Use of BUT membership the Association of Research Universities.
- Development programmes to support international cooperation international programmes.
- Possibility of using Graduate/ Alumnus/ Alumni for collaboration.
- Possibility of cooperation Graduate/ Alumnus/ Alumni within ALUMNI.
- Using the potential of companies, more involvement in teaching.
- Cooperation European universities (not only within EULIST).
- Increase the number of international programmes international students.

Threats the external environment

- Unstable external environment (war, expensive energy, uncertainty in
- Lack of support from companies, lack of interest to engage in teaching.
- Decline in students linguistically related countries due to the war.
- Disproportionate student interest technician fields, in relation to demographic
- Declining quality of secondary education.
- Low language proficiency of incoming students.
- The lack of interest of foreign students, especially from at the BUT.
- Problems with obtaining visas for foreign students.
- Overpaying students by companies.
- Underfunding of teaching higher education.

Creative activity

Strengths

- High-quality selected research teams with top results at international level.
- High-quality research infrastructure that is internationally competitive.
- Competitiveness in obtaining EU CZ grants.
- Linking research topics to practice industry needs.
- Shared research infrastructure offering open access collaboration hi-tech super-national societies.
- Wide range of DSP, significant share of doctoral students in the total number of students (8.5% of DSP students ranks BUT among research universities).
- Intensive involvement of students in research projects.
- Extensive cooperation with foreign workplaces.
- Linking artistic research activities.
- A single IP database IP management system setup.
- Setting up a system for checking the status portfolio control of intellectual property.
- Use of external partners professional networks.
- Transfer of project deliverables.
- Awareness the results of R&D projects subsequent transfer to the commercial sphere.
- The promoted concept of an entrepreneurial university.

Weaknesses

- Lower than expected level of international cooperation basic applied research.
- Lack of a coherent methodology for evaluation of R&D at the level of individual staff small research teams.
- Low number of foreign professors scientists.
- Low proportion of foreign students DSP programmes.
- Low efficiency of transfer of knowledge R&D results to the commercial sphere.
- Significant economic dependence of R&D on project funding public sources.
- The occurrence of non-compliance with ethical rules for the implementation reporting of research publication activities can bring damage or loss of prestige.
- Mutual ignorance of the local environment activities.
- Transfer of the IP share valuation system, including the distribution of to originators.
- Absence of active offerings the intellectual property portfolio.

- Weak motivation for establishing start-ups spin-offs.
- Unnecessary administrative burden between Faculties the BUT Rector's Office the administration of intellectual property.
- So far unclear, but gradually adjusting competence interface between Faculties and the Rector's Office BUT.

Opportunities in the external environment

- A wide range of possibilities for supporting (funding) from domestic and international sources.
- Expansion of cooperation with top foreign workplaces, programmes to support this cooperation.
- Interest industry practice in collaboration partnership in research projects.
- Interdisciplinary research directions with high potential for new knowledge and collaboration with foreign and domestic industry.
- Significant regional support, the existence of a Regional and National Innovation Strategy.
- Demand support for spin-off start-up companies high innovation potential.
- The existence of a sufficient number of science technology parks Division/Departments platforms.
- Sharing infrastructures on a European scale.
- Cooperation institutes of the CAS.
- Cooperation JIC, JmK, Brno and the possibility incubators.
- Operational programmes project calls (cutting-edge research
- Government statement support for excellent research.
- Cooperation within the Association of Research Universities, inter-university cooperation and collaboration with the CAS.

Threats the external environment

- Rapid development of new research capacities in the Czech Republic the last 10 years, a threat in terms of limited financial and personnel resources.
- Ever-changing R&D evaluation methodology and rules and an unfinished research methodology, yet ongoing evaluation.
- Lack of a stable long-term funding system for creative activities.
- Fragmentation of the grant system, disproportionate administrative burden of project preparation, generally low success rate.
- Busy of top research of research staff by others activities a high administration.
- Unstable project funding threatens the ability to maintain stable teams employees.
- Expert law for expert activities as part of creative activity.
- Duality of roles of universities CAS research.
- Disproportionate emphasis on publications versus applications.

Social responsibility

Strengths

- The combination of history tradition an open relationship to society in all areas of BUT's activities (professional relations to the city of Brno, the South Moravian Region, etc.).
- BUT as an institution with a strong awareness of its social responsibility in the field of education, science, in the area of cultural and social roles.
- BUT as an expert expert body producing independent expert opinions.

- Institute of Lifelong Learning BUT (courses for employees, students, university of the third age, courses for the public).
- Eff the BUT to increase the respect society for technical professions interest in technical and artistic education by choosing an appropriate marketing strategy with emphasis on popularization of science, art and research; presentation of the BUT at educational and professional fairs in the country and abroad; conceptual cooperation with secondary schools, introducing primary school pupils to the environment of the BUT, e.g. Participation in the FabLab Experience project, evaluation of regular roadshows, ensuring the operation of the Edisonka kindergarten, etc.
- Efforts to achieve gender balance technical education practice (informative events and for facilitating their contact with the environment and practitioners).
- Opening the field of education to the influence of the application sphere through direct cooperation (professional institutions and in the preparation, operation, completion, evaluation and adjustment of the educational process, with emphasis on learning outcomes and graduate/ Alumnus/ Alumni competences).
- Professional cooperation of students with research and technical workplaces (specific research, project and innovation cooperation).
- Recognised quality of graduates of all levels of study and their contributions in the working environment (possibility of good employment of graduates in theoretical and practical fields at home and abroad; cooperation with graduates in education and creative activities, including taking into account their evaluation of the benefits of their studies).
- The existence and successful operation of the Central European Institute of Technology (CEITEC) and important regional centres in science and research (especially in the industrial and economic spheres).
- Contractual cooperation with the application sphere in the field of creative activities (exchange of professional information and cooperation in science, research and innovation; granting of highly professional consulting and training activities in the areas of BUT's activity).
- Presentation popularization of the results of creative activities through all available communication channels.
- Cooperation with partners from key segments of the social and self-government sphere (joint projects with the Brno City Council, cooperation on educational projects financed by the South Moravian region, cooperation with the Regional Chamber of Commerce , cooperation with the South Moravian Incubation Centre).
- Awareness of the technician role of the university, the environmental responsibility for society linked to societal needs (Green Deal).
- The BUT takes care of the independence of its professional activities, thus establishing a reference pillar (expertise, ČŽV,
- Significant involvement of students crisis and emergency situations (solidarity, belonging to the university).
- Increased awareness BUT's environmental responsibility emphasis on the role of the technical university in its implementation.

Weaknesses

- The need to strengthen the relationship with sustainability quality of life in society.
- Lower use of the experience of foreign visiting professors at the university.
- Insufficient involvement of BUT experts in public discussions on professional and professional-policy topics.
- Reserves in cooperation with the public administration, lack of joint projects with secondary schools (e.g. teacher exchanges), insufficient contact with between admission and enrolment.

Opportunities in the external environment

- Opportunity to involve top practitioners in the educational creative activities of the BUT.
- The of successfully transferring the latest knowledge and studies, analyses, patents or licenses, establishing spin-off providing professional services, exhibitions, consulting and research in areas.
- Opportunity to build on EU priorities for innovation support for applied research.
- Increase the competitiveness of the region by selling innovations results of science research.
- Possible contribution to the technological restructuring of the region to the cultural development of the region.
- Institutionalization organizational anchoring of volunteer charitable activities.
- Use the professional potential for social needs.
- Strengthening awareness of the technological potential of BUT at home and abroad to support social issues.
- Increased involvement of experts in discussions opinion platforms.
- Providing patronage and building a favourable image of the university as a politically independent expert guarantor or expert (expert activities, lifelong learning, technician, economist, arts).
- Using specifics linking technical arts education to develop critical creative thinking.
- Utilization of the potential of BUT for the promotion of innovation entrepreneurship.

Threats the external environment

- Administrative barriers to cooperation between universities and industry (in the legal environment of the Czech Republic - e.g. public support, administrative burden of subsidies).
- Misunderstanding the role of the university as a research organisation in the context of legislation.
- Unclear role nature of cooperation universities and practice.
- Misuse or misinterpretation of Division/Department opinions.
- Maintaining the apolitical nature of the university, the threat of misuse of the university environment for political use.
- Abuse of the brand reputation of the BUT.

Internationalisation

Strengths

- Ambassador Network.
- Very well functioning Erasmus+ Office.
- Strong BUT brand cooperation technology companies.
- Involvement international university networks.
- Internationalisation is seen as a priority.
- Cooperation with student associations (ESN, BEST, IAESTE) and SK AS BUT.

Weaknesses

- Inconsistency of the central website the websites of the Faculties University Institutes of the BUT.
- There is no system access the Admission Office (support throughout the duration of studies).
- Lower symbiosis of internal collaboration across the university (communication, noise, incomplete information).
- data handling (duplications etc.), missing records (e.g. mobility of foreign workers).
- Delayed updating of data their registration the BUT IS, low information support for decision-making (data integrity, data timeliness and availability).
- L of evidence of operational activities (e.g. updating of brochures).
- Low level of digitisation computerisation.
- Low motivation to implement SP English language.

- Unused JD/DD programmes.
- Lower degree of internationalisation of the internal environment, including administrative support.

Opportunities in the external environment

- Developing collaboration the national international ecosystem.
- Strengthening its position international rankings by improving the quality of the granting authorities Data.
- Involvement of high quality foreign academic staff.
- Favourable living study conditions (safety, low financial costs).
- Use of the BUT brand.
- Brno, student city.
- Intent to obtain international industry certifications.
- Strengthening foreign marketing.
- Opportunity to take advantage of international benchmarking quality excellence.
- Use of policies HR Award, Open Science and gender equality for international Transparency.
- Setting internationally compatible ethical standards in education, research and creative activity.

Threats the external environment

- Not using the potential of national international networks (EULIST project, etc.).
- Longer reaction time to changes in the external environment (e.g. ERASMUS Without Paper).
- Relatively reduced accessibility of Brno for foreign students, partners.
- Difference in financial wage requirements of foreign workers BUT workers.
- Limitations the geopolitical epidemiological situation.

5. Recommendations For Next development BUT a improving system quality assurance and internal evaluation

A: Expectations in the internal and external environment of the BUT as seen by the Rector of the BUT (source: BUT General Assembly for 2022)

- In terms of developments in the external environment, it can be assumed that the year 2023 the expectation of the completion and implementation of the long-discussed amendment to Act No. 111/1998 Coll., on Higher Education Institutions. Among other things, this amendment is expected to bring about a fundamental change not only the approach to Doctoral Study, but especially in the conditions for its financing.
- In the context of the economic situation and the government's budget measures, the year 2023 will undoubtedly be accompanied by a continuation of the ongoing discussions the financing of universities in the Czech Republic and the search for a consensus on its amount and shares within the budget chapter of the Ministry of Education.
- The question of the quality and role of higher education in terms of its international competitiveness will probably become a crucial issue.
- In order to fulfil the government programme and to promote differentiation of universities, the Ministry of Education announced the preparation of criteria for the evaluation of excellence of Czech universities in the Czech Republic. This trend emphasising excellence is likely to be reflected in the differentiation of higher education funding and thus its reflection will also become an important motivating factor.
- In the field of research, the RVVI (Government Council for Research, Development and Innovation) is preparing an amendment to the research methodology with anstrengthening of the evaluation of research results, which we are significantly promoting from the university management level. An amendment to Act No. 130/2002 Coll., on support for research, development and innovation, is also being prepared. Significant initiatives will result the University's affiliation the International Agreement on Research Evaluation Reform (ARRA) and membership the CoARA (Coalition for Advancing Research Evaluation) as well as from reflection on concept papers of the European Union and the European University Association. Last but not least, the year 2023 will be accompanied by calls and implementation of projects of operational programmes, especially the OP JAK or NPO (National Renewal Programme) and programmes of other granting authorities.
- In the field of studies and education, the year 2023 at the BUT will be marked by reflections and preparations for the implementation of the reform of Doctoral Studies. The BUT plans to carry out the first stage of evaluation of doctoral programmes in order to be prepared for the apparently necessary changes in the granting authority for doctoral education. The evaluation will focus on the effectiveness of the completion of Doctoral Studies will also align these studies more closely to strategic research areas. It will focus on the development of the doctoral school concept and examine the opportunities for 'industrial doctorates'. In particular, the funding of doctoral scholarships will be a major issue. In the area of accredited studies, it will continue to focus on the promotion of technical education the creation of mechanisms to ensure quality applicants for technical studies. It plans to focus more on finding the optimal structure of programmes, both academic and professional, including ensuring their ECTS credits and permeability in an international context in the spirit of ECTS (European Credit Transfer System). In 2023, it intends to devote significant efforts to the topic of microcredentials, particularly in the context of the development of higher professional education programmes, including qualification studies of the Master type. A major focus will be on the internationalisation of studies, not only by supporting student and staff mobility, but also by consolidating and developing the quality and efficiency of programmes or courses offered in English. The quality of education in general will receive increased attention in 2023. In particular, we will focus on updating the guidelines quality standards in the field of study and also on profiling the evaluation role of the BUT Internal Evaluation Board in line with the fulfilment of the conditions of institutional accreditation.
- An evaluation of the research is being prepared to assess its quality strategic potential to contribute to build excellence competitiveness of the university. During the year 2023, the following will be established

the International Scientific Academic Board (ISAB), which will be actively involved in the ongoing evaluation phase. The BUT to strengthen the quality performance of research in order to prepare for the upcoming round of evaluation of research organisations and their scaling up, which will take place in 2025. In this context, we foresee a budgetary strengthening of the incentive component of the institutional support of the DKRVO and the promotion of excellence in research and development, including the announced establishment of a relevant development fund. We will be actively involved in the methodological setting of programmes project calls at the level of individual granting authorities. In the competition for Horizon Europe projects, we want to strengthen the motivation and support for winning prestigious ERC or ERC CZ Teaming research projects. We will place emphasis on obtaining targeted support to strengthen the University's direction in strategic areas and to support the University's competitiveness in research, development and other creative activities. In 2023, we will also pay significant attention to the continued technical implementation of the Open Science concept.

- We consider it essential to continue liberalising and setting the environment for the development of Transfer, including support for the establishment of spin-offs and start-ups. We will focus on increasing the efficiency of the transfer and use of intellectual property and the results of creative activity in practice. Within the framework of the ContriBUTe concept developed the Faculty of Business and Management at the BUT, we want to lay the foundations and develop an effective entrepreneurial ecosystem at the university in the spirit of the concept of the so-called Entrepreneurial University in 2023. We expect to continue profiling mechanisms of cooperation with strategic industrial partners in the field of contract research and research in effective collaboration in order to involve Faculties and Institutes (of) in larger industrial research projects. In this collaboration with industrial partners, we will also be setting up and testing the potential of so-called industrial doctorates. We will also profile with these partners the optimal way of communication in reflection of their needs as employers seeking to recruit potential employees from among graduates/ alumni/ students of our university. We also expect to look for ways to expand corporate internship opportunities for interested students, including creating opportunities for our students to gain work experience during their studies.
- Strengthening internationalisation and building the University's international credibility will be an integral part of our efforts. In addition to supporting student staff mobility, we will strive to develop inter-university cooperation in the field of collaborative research and at the international level, both within our EULIST university alliance and within traditional university and faculty strategic partnerships. In addition to ERASMUS+, we will look for funding opportunities to replace the relatively reduced earmarked funding for mobility and exchange support due to the closure of operational programme projects. a significant intensification of our relations and cooperation with the EUA (European University Association) and our active involvement in the network technical and research CESAER. Last but not least, in 2023 we will pay attention to international rankings and in particular to the preparation of relevant data that we grant to international evaluations.
- In the area of human resources management, we will continue to emphasize the development of the organization in the spirit of the HR Award standards build an evaluation culture based on the principles of openness transparency. In the context of fulfilling the goals of the Gender Equality Plan and the principles of the Code of Conduct, we will strive to systematically build a gender-correct and socially safe environment at the University. By negotiating the Ministry of Education and Science, we systematically to ensure adequate dignified wage remuneration for university employees, and therefore also for our university. By the end of 2023, we expect to complete the design of the University's personnel strategy. As part of its preparation, we expect to discuss reach a consensus on the University's personnel policy, on the optimisation of the evaluation system, in particular the fine-tuning of the evaluation of academic staff (SHAP) and the commencement of preparations for its extension to the evaluation of non-academic staff, as well as the optimisation appraisal and remuneration system, the staff development system and the human resources care system. In internal policy, we will continue the trend of promoting interdisciplinary inter-faculty cooperation. We have established a network of disciplinary coordinators in strategic areas of research and creative activity for

in order to professionally link and support the development of cooperation between our Faculties and Institutes (of). We will also look for competitive and unique solutions in deepening the interconnection and collaboration between the technical and artistic disciplines at our university.

- In the area of information technology and services, we will continue on our path of developing effective information support in 2023. In addition to completing the ongoing convergence of the student information system and the transition to a unified information system, we will develop preparations for upgrading the economic personnel information systems to digitalize the university environment. In particular, we will focus on further computerization of document circulation and approval. the completion of the reorganisation of the Centre (of) Computer and Information Services, we will complete the introduction of the IT project management system base the transparent at the same time sustainable development of the University's information system on, among other things, the budget setting of a normative method of financing IT services. We will also continue to unify the image of the University's organisational structure in information systems and consolidate databases to ensure the real-time availability of reliable and relevant data for decision support.
- For our students, in to supporting traditional student events, we will continue to support their extracurricular creative activities, sports, as well as cultural and leisure activities. In 2023, we will focus, among other things, on actively seeking resources for the completion of laboratory and space facilities used for student creative activities, such as, in particular, Formula Student, Chicken Wings, MachineLab, Pneumobil, etc. We will provide specific support for the traditional development of entrepreneurial skills of our students, e.g. in the framework of the next edition of the competition "Let's do business!". Last but not least, we also strive to find an optimal solution for leisure gathering spaces for students on the campus of the University Pod Palackého vrchem.
- We are aware of the University's environmental responsibility. The topic of sustainability and climate neutrality will remain our priority both internally, especially in investment and energy policy, and externally in the development of technical research and education. Aware of the DNSH (Do No SignificantHarm) concept, we will continue research and development the application of solutions using environmentally friendly and neutral technologies, the development of cooperation partner universities in the Czech Republic and abroad, including within the EULIST university alliance. In the construction and investment area, in addition to the implementation of reconstructions and additions within the Property Reproduction Programme of the Ministry of Education and Science, we will upgrade the BMS (Building Management System) in our integrated campuses and strengthen the energy management system in order to optimise the energy efficiency of the university. Within the budgetary possibilities, we will strive to expand the installation and acquisition of energy from renewable energy sources. In construction, we will continue to apply the concept of nZEB (Near Zero Energy Buildings).
- The also has Code/Rules the EUA international evaluation, which it successfully passed in 2022. We intend to implement these recommendations gradually.

B: Recommendations from the 2022 European University Association (EUA) institutional evaluation

The EUA Institutional Assessment 2022 responds to the conclusions and recommendations identified by the BUT following the 2018 European University Association Institutional Assessment Programme (EUA IEP). The report sets out the actions arising from or in response to the recommendations, the progress made since theevaluation. The report also captures the impact of significant changes in the tertiary education sector in the country, in particular the implementation of the amendment to the Higher Education Act, as well as the university's response to the changing environment, both internal (leadership changes in January 2022) and external (COVID-19, the impact of the war in Ukraine).

Area: governance and institutional decision-making

Recommendation: review all support processes and clarify the division of responsibilities between the Faculties/University Institutes of the BUT and the central bodies of the BUT to eliminate duplication of activities as much as possible.

The new management proceeded to analyse the process management at the Rector's Office of the BUT, both in terms of the main and especially in terms of supporting processes. The resulting process maps and process models have been implemented and form the basis of the new organisational structure at the BUT Rector's Office.

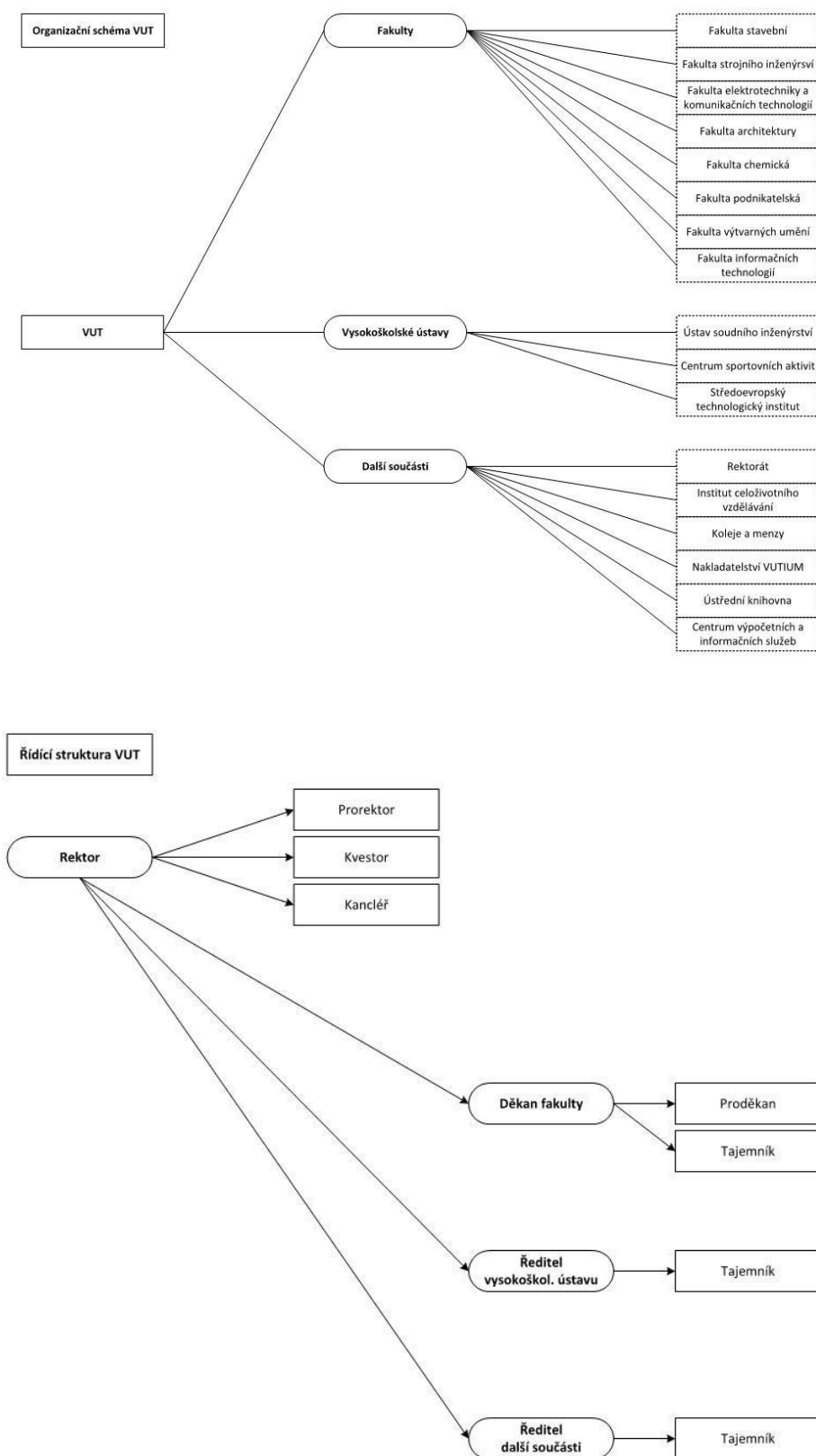
The basic self-governing powers of Faculties Universities are set out Sections 24–34 of Act No.111/1998 Coll., on Universities, according to which they have the right and act for the public university listed in the binding list of activities cited in the Act or according to their competence defined in the statutes of the university. The statutes of the Faculties and their respective Code/Rules then clearly define detailed competences which should not lead to conflicts of competence or duplication of activities.

The Faculties and University Institutes of the BUT may consciously carry out certain activities independently or organise them independently (always with due managerial care). This applies in particular to the self-management of the financial resources allocated to the Faculties and University Institutes of the BUT within their budgets. However, the Rector's Office of the BUT, due to the financial and professional complexity involved, provides certain support processes at the top level for all Faculties and University Institutes of the BUT on a fully cumulative basis, in some cases providing only supervision.

A detailed questionnaire survey was not prepared, this statement is based on the knowledge of the supporting processes and activities within the management agenda of individual Vice-Rectors in relation to Vice-Deans, in addition with the Bursar and Chief Financial Officers of Faculties and University Institutes of the BUT in the administration, management and leadership of the entrusted agendas.

As a simple hint, the organisational structure (Figure 1) - Internal structure of the administrative units of the Rector's Office of the BUT according to the organisational regulations in comparison with the Faculties and University Institutes of the BUT, which at first glance shows the division of competences and powers.

FigureEvaluation chart



Source.

It was already declared in the self-evaluation report for 2018 that the BUT is moving towards the integration of some processes and thus towards indirect centralisation, especially in the area of university management or in areas requiring common standards. This is happening in the following areas:

- Budget rules, setting quality indicators.
- was supported by the creation of a new post of Vice-Rector.
- Project support - unified support for strategic projects, ESF (European Social Fund), and international projects, as well as follow-up of the transfer of the results of creative project activities.
- Resources - a unified methodological support for updating HR Award Action Plan has been developed; (Gender Equality Plan) analysis has been carried out and a Gender Equality Policy has been established; changes to the rules for selection procedures, training and other areas are being prepared for 2022.
- With the major amendment to the Higher Education Act, the support of the study department (methodological guidance of the Faculties and University Institutes of the BUT) was strengthened thanks to institutional accreditation.
- Strateg management - centrally.
- Central of public contracts - the best value (thanks to its extensive experience, BUT also provides training to external evaluation authorities).
- Legal support legislative activities of Faculties University Institutes of the BUT.
- Marketing - a complete overhaul of marketing activities is underway, focusing on the following areas: marketing of educational activities, marketing of science and research, marketing of the institution as a whole; the Marketing and External Relations Department has been restructured and a new head has been appointed.
- Foreign relations.
- Operational investment areas:
 - Real estate administration (in amounts is provided by the Rector's Office of the BUT, but the administration and maintenance of the entrusted buildings and land is provided by the Faculties and University Institutes of the BUT under the supervision of the Rector's Office.
 - Energy management is provided centrally by the Rector's Office of the BUT; energy management and the basis for the standardization of facility management are being established as part of development projects, from which professional management and maintenance will be derived.

Recommendation: ensure greater consistency in data handling between individual faculties and university institutes of the BUT and at the central level. Greater use of shared comprehensive tools or information systems to enable transparent and evidence-based decision-making.

An evaluation of the information services system was carried out, which resulted in organizational changes including a change of management, unification of the form of organisational structures in the information system of the BUT (IS BUT and ensuring the consistency of the organisational structure.

The Code/Rules of the BUT are being prepared, which should codify the organisational structure of the BUT IS and its interconnection to ensure the efficiency of document circulation.

Responsibility for the data in terms of content, for the semantics of the data granted (for annual and other reports) at management level, and for data accuracy and system administration at the level of the Centre for Computing and Information Services (CVIS) is consolidated clearly defined.

A review of the information management information support system is underway the following three main areas:

- data reliability,
- computerisation of document circulation,
- digitization of documents.

In particular, the BUT has taken several relevant measures:

- First of all, technical tools for shared work from Microsoft (SharePoint, Power Apps) and Google (G Suite) were presented. These tools were quickly made available and implemented by BUT staff and were conveniently funded under university licenses. The BUT implemented a Code/Rules of conduct to extend and support them through training sessions and the granting of Service Desk and manuals.
- The process of unification of the information systems of the BUT faculties was started (especially in the area of student affairs, where two BUT faculties used their own information system) so that the BUT IS would be central and unified.
- In terms of evidence-based decision-making improving analytical tools in general, it was necessary to start the development of our own management information system (MIS BUT) as an analogue of Business Intelligence applications. This system is based on a special database of linked data cubes and draws on the individual core databases of the BUT IS. It enables advanced analytical work including the combination of data from different areas (economic, personnel, scientific, pedagogical). At the same time, it contains an interface for managers in a web environment, in which selected (and ad hoc) data or indicators relevant for a given manager can be continuously monitored.
- From an organisational point of view, the intention was to create a central specialised analytical unit (the Development and Analysis Division/Department) capable of producing internal and external analyses, including benchmarking, which would also form a data analysis Department. This step has been taken and the Department will be established at the BUT Rector's Office on 1 August 2022, after consultation with the relevant authorities.

All of the above has been included in the long-term Strategic Plan BUT 2021+, which sets relevant objectives focused on the area described in the recommendation.

The implementation of the strategic objectives is still ensured from the management position, namely at the BUT management level through the Chancellor (the original position of the Vice-Rector for Information Technology at the BUT the new BUT management as of 1 February 2022). The Chancellor works closely the Director of CVIS and now manages the BUT Information Systems Administrator, a special position established in the BUT Rector's Office to provide oversight of IT development at the University.

Recommendation: consider how the structure of the university could be used to promote an interdisciplinary approach to research and education to meet the current needs of the technology industry and society as a whole.

BUT places great emphasis on supporting cross-disciplinary research. The CEITEC research Centre was established to support cross-disciplinary research. In addition to CEITEC BUT, this Centre (of) also includes similar units of Masaryk University, Mendel University Veterinary University Brno, Research Institute of Veterinary Medicine and Institute (of) Physics of Materials of the Academy of Sciences of the Czech Republic. The multidisciplinary nature of CEITEC and the degree of integration of the fields of life sciences, advanced materials, nanotechnology and cybernetics make it the first research Centre (of) its kind in the Czech Republic. CEITEC BUT also cooperates closely with the faculties of BUT, in particular with the Faculty of Electrical Engineering and Communication Technologies of BUT and the Faculty of Information Technology of BUT (FIT), of BUT (FSI) and the Faculty of Chemistry of BUT (FCH). CEITEC announces an annual call for support for cross-disciplinary student research, the Jaroslav Koci Fund.

Interdisciplinarity at the BUT is also supported by study programmes covering various areas of education, e.g. cooperation between the Faculties of the FSI and FEKT on the Mechatronics study programme, cooperation between the FSI and the Faculties of Masaryk University on the Physical Engineering and Nanotechnology study programme, or the university-wide study programme Risk Management of Technical and Economic Systems, in which almost all faculties of the BUT participate.

An interdisciplinary approach is also applied in the design implementation of research projects. This concerns both basic research projects supported mainly by the GAČR, where cooperative projects are usually proposed on behalf of the BUT in cooperation with other domestic or foreign institutions with a different disciplinary focus. The interdisciplinary approach is also often applied in the design and implementation of applied research projects carried out in cooperation with industrial partners and aimed at meeting the current needs of technological sectors society. Recent examples include projects aimed at creating National Centres of Competence in specific technological areas that are strategically important for the development of the Czech economy and addressing the needs of society. Out of a total of 36 projects submitted in the Czech Republic to the competition based on the call of [the Technology Agency of the Czech Republic](#) (TA CR), BUT is represented in 22 projects.

Another conceptual form of support is [the Student Grant Competition for the support of annual specific university research projects at the BUT](#), which is announced annually and centrally managed by the BUT Rector's Office aims, , at the development of interdisciplinary fields in doctoral and master's studies. These are mainly interfaculty projects of specific university research aimed at the cooperation of doctoral students from universities, especially from different faculties and university institutes of the BUT. In 2022, a total of 13 BUT projects were recommended proposed for financial support by the GA of the Czech Republic. The main evaluation criterion is the current relevance of the scientific project so that the research is directed towards meeting the current needs of the technological sectors and society as a whole.

Interdisciplinarity is also supported by the new Operational Programme of Jan Ámos Komenský ([OP JAK](#)) and the National Recovery Plan (NPO). OP JAK is aimed at supporting cutting-edge research with international impact. The NPO also focuses on the field of education, promoting cooperation with companies, especially through new professional preferably of an interdisciplinary or international nature.

Recommendation: consider that planning for more than five years may be necessary some structural and legal obstacles.

The BUT management is fully aware of the need for long-term planning. In response to the recommendations of the BUT, it first formulated the Strategic Intent of the BUT 2030 (SI BUT 2030) in 2019. This document was discussed across the BUT and became the cornerstone of subsequent strategic planning at the BUT.

At the same time, the Ministry of Education, Youth and Sports of the Czech Republic (MŠMT) has created a new long-term strategic plan for higher education for the period from 2021 (SI MŠMT 2021+). In the higher education environment, the HEI is bound by a statutory regulation (Section 21 of Act No. 111/1998 Coll.), according to which the HEI as a public higher education institution is obliged to develop, discuss in all relevant bodies, and finally discuss with the Ministry and subsequently publish the strategic plan of the public higher education institution within the timeframe and in the form set by the Minister. Subsequently, the university is obliged to publish a strategic plan every year, which is also discussed and approved by the BUT bodies.

The BUT 2021+ Strategic Plan was developed discussed in connection with the BUT 2030 Strategy in accordance with the MST 2021+ SI. plan was discussed approved by the relevant BUT bodies (BUT Scientific Board, BUT Academic Senate and BUT Board of Trustees) and in accordance with the priority objectives of 2021+. The BUT SI 2021+ then served as a basis for the creation of the strategic plans of the BUT faculties and university institutes, which (in addition to the strategic goals of the faculties and institutes) reflect the strategic goals of the University and define the specific steps in which they will participate.

Area: quality culture

Recommendation: consider how mutual cooperation in institutional accreditation could be used to reduce administrative burden and bureaucracy.

Institutional accreditation does not lead to a reduction in the administrative burden and bureaucracy at the university, quite the opposite. A university with institutional accreditation must ensure that all the processes undertaken by the National Accreditation Office for Higher Education are in place prior to granting institutional accreditation. These include, but are not limited to:

- Setting up processes for the approval of programmes (SP).
- Evaluation of programmes by external evaluators.
- Independent approval of programmes by the BUT Internal Evaluation Board.
- Internal evaluation of the quality of programmes during their implementation.

For some the above activities, the administrative burden can be reduced through effective information support. Despite the increased administrative burden, however, institutional accreditation brings a number of undeniable advantages and benefits to the university, such as:

- Institutional accreditation is a certain sign of quality of BUT.
- Institutional accreditation led to the unification of some activities that were previously performed differently at individual Faculties and University Institutes of the BUT (which to some extent led to a reduction of the administrative burden).
- Institutional accreditation has given the BUT greater autonomy and flexibility in designing and approving programmes.
- Institutional accreditation requires continuous evaluation of the quality of programmes.

- Institutional accreditation requires the establishment of internal quality standards for programmes.

It should be noted that programmes accredited by the National Accreditation Bureau for Higher Education (NAB) and new programmes (falling under the institutional accreditation of the BUT) are now implemented simultaneously, which leads to an increased (often duplicative) burden. The phasing out of the original programmes will reduce this burden.

The University also implements programmes that cover (or partially cover) those areas of education where the BUT does not have institutional accreditation and therefore undergo the approval process of the BUT Internal Evaluation Board and the subsequent NAB approval process.

The BUT also aims to reduce the number of programmes the trend the European area with benchmarking within the [EULIST](#) consortium of universities.

Recommendation: reassess the suitability of the ISO methodology as a tool to achieve a common understanding of quality culture in academia.

[The ISO](#) methodology, specifically the application of the quality management system according to ČSN EN ISO 9001, is used at some Faculties of the BUT (e.g. FP) to ensure the quality support. At the same time, some Faculties of the BUT conduct annual internal audits of support processes (ČSN EN ISO 9001 is also monitored, if the sponsor requires such monitoring).

The application of the quality management system according to ČSN EN ISO 9001 cannot be considered a universal tool for quality assurance both at the Faculties of the BUT and at the university as a whole. At some BUT Faculties it is a supporting management tool.

The amendment to the Higher Education Act of 2016 brought the biggest changes in the management and understanding of quality as a whole (creation of a systemic area), which raises the need for an environment of quality culture and its cultivation at the university, at all levels. In the past, open seminars (Quality Days) on quality issues in higher education were used to promote quality culture and its cultivation, with individual topics determined based on feedback from faculties and university institutes, of academic staff and students.

The promotion of quality culture is also inherently linked to activities the implementation of the amendment to the Higher Education Act and the implementation of institutional accreditation of the BUT. Institutional accreditation was made possible by the amendment to the Higher Education Act, in 2018, the BUT received institutional accreditation for the following areas of education (Architecture and Urban Planning, Economist, Electrical Engineering, Energy, Chemistry, Computer Science, Civil Engineering, Construction Engineering, Technology and Materials, and Art). Institutional accreditation was granted to the BUT for a period of 10 years. In all of the above-mentioned fields of education, the accreditation covers Bachelor's, Master's and Doctoral degree programmes.

The fact that some faculties of the BUT are members of international professional associations [e.g. ELIA, European Foundation for Management Development (EFMD)] can be considered as a systemic tool for quality assurance at the BUT faculties, while the BUT faculties must meet the attributes, criteria and indicators of these associations.

Last but not least, the BUT subscribes to the Bologna Process and respects the documents of the European University Association (EUA), especially the ESG (Environmental, Social and Governance) objectives. A concrete example the Quality Assurance Internal Evaluation Report of the BUT, including its annual supplements, which, among other things, monitors progress in the implementation of activities and processes in line with the ESG objectives.

As part of the evaluation, the university management completely rebuilt the quality management system with the aim of embedding analytics as a decision support entity in the following areas:

- education,
- research creative activities,
- service to society,
- Internationalisation,
- proceedings.

The transition to a process management system is underway. It is based on the thesis that quality is a characteristic, not an evaluation setting. In the area of quality assurance, the university management finds inspiration from more than 25 years of experience in quality assurance in the UK.

Recommendation: Endeavour to make employees and students see evaluation processes as second nature, which will help create an institutional culture focused on quality.

The activities the amendment to the Higher Education Act and the institutional accreditation of the BUT, namely:

- The Internal Evaluation Board of the BUT (IEB BUT) an annual evaluation of selected study programmes, also using evaluators from among academic staff.
- Annual evaluation of academic staff individual courses by students.
- Preparation of the Report Quality Assurance Internal Evaluation of the BUT its annual supplements.

From these activities arises a natural need to cultivate a culture of quality and also the need for education in this area, which in the past has been fulfilled by open seminars (Quality Days). It has to be said that these seminars were not organised of the COVID-19 pandemic, which caused a deficit of awareness of the specific needs and activities quality assurance and evaluation at the BUT. These Quality Days were partly replaced by professional articles in the internal journal Events.

In the near future, it is necessary to follow up on the Quality Days also to raise awareness the issue of quality assurance and evaluation through a regular column the magazine Události or through the BUT e-newsletter (www.zvut.cz).

2020, the System of Academic Staff Appraisal (SHAP) has been designed, implemented and introduced at the BUT within the framework of the operational programme of the Modern and Open Study of Technology (MOST) project. In 2022, the version of SHAP is being revised in terms of the design of the performance management tool and its relationship to remuneration based on feedback from the Faculties and University Institutes of the BUT.

The reorganization of the BUT Rector's Office will contribute to the promotion of quality culture at the university, which aims to improve the perception of quality issues at the university and quality assurance and evaluation across the processes and activities of the university. Students are currently represented on many degree programme boards, appointed by the Dean of the Faculty or the Director of the University Institute for each Bachelor's or Master's degree programme, and by law students also have a representative on the BUT's BEB.

Recommendation: collect evidence more consistently and use it to evaluate quality and improve.

Systematically, it should be noted that the university management is moving to of management (both and supporting processes), where great emphasis is placed on working with data, availability, transparency and reliability. This process management model is a tool for implementing the design of the organisational structure.

Within the MOST project, the Methodology of Quality Assurance Evaluation at BUT was designed. This methodology defined the activities processes of quality assurance evaluation, the types of data it works or will work with.

BUT the widely used THESES system, which is a software for detecting plagiarism in final Theses, which also contributed to more effective quality assurance evaluation of final Theses.

In connection with the annual feedback evaluation of academic staff and individual courses by students, the evaluation system itself needs to be improved, especially with regard to the way results are published and in terms of the General Data Protection Regulation An annual Best Educator survey is held as part of the institutional development project.

In the area of human resources, data on academic staff is now consistently collected thanks to SHAP. data on their educational, research and creative activities. Some of the data can be considered as a basis for evaluating and improving the performance of academic staff in various areas.

ideline 73/2017 - by students, and employers deals with the specification of the collection of documents and their use evaluation and quality improvement. This Guideline is currently being updated.

Recommendation: ensure that consequences are drawn from all quality evaluation processes to ensure that all employees and students affected receive relevant feedback.

Low student participation in the evaluation of academic staff remains a problem. This raises questions about the representativeness of student evaluations. The low participation of students in feedback evaluation has long been influenced by the fact that students are not provided with adequate on their evaluations. Students have their own ideas about how should be implemented and communicated, but usually students' ideas are not aligned with feedback from supervisors or Institute (of) directors.

The feedback evaluation process itself is also affected by the role of the study programme guarantor, whose competences are not defined in relation to the heads and directors of institutes (this can be objectively understood as a consequence of the imperfect definition of the role of study programme guarantors in the amendment to the Higher Education Act). According to the amendment to the Higher Education Act, the study programme guarantor coordinates the content of the study programme, supervises the quality of its implementation, evaluates the programme and develops it.

Particularly from the students' point of view, it is necessary to increase the amount of information provided to students by the management of the faculties university institutes of the BUT measures taken to improve the quality of education, which resulted not only from the student evaluation. It is necessary to formulate steps leading to quality assurance and to follow up these steps and take corrective measures to improve the quality of activities of all processes. It is also important not to underestimate the form of communicating corrective actions, including communication with academic

staff. Similarly, it is necessary to ensure that students express themselves ethically in the academic staff evaluation system.

At some Faculties of the BUT, annual audits using the ISO 9001 methodology have proven to be a tool for (two-way) feedback from the Faculty management academic and economic staff (marginally also to students), not only in implementation steps responding to audit findings (e.g. designs for improvement), but also in the process of preparing the system for the audit (feedback from management academic and economic). The outcome of the audit is also a form of feedback from academic and economic staff to management, through the audit firm.

Regular evaluation of non-academic staff by their supervisors within the experimental system of non-academic staff evaluation contributes to the increase of feedback evaluation of non-academic staff at the BUT Rector's Office. The employee is evaluated four times a year, one of which is in the form of an oral interview between the supervisor and the subordinate. The University's System for the Evaluation of Academic Staff (SHAP) involves one interview per year the evaluation must always be completed by 28 February of the year.

Recommendation: make full use of this exemplary SWOT analysis and draw appropriate conclusions from it. Note: The SWOT analysis was refined at the management retreat through a differential SWOT analysis of the BUT (SWOT 2018 / SWOT 2022), see Chapter 3 of this report.

Area: Research management and exploitation of research results

Recommendation: Encourage interdisciplinary research projects through appropriate opportunities and incentives that remunerate both top-down and bottom-up approaches.

The issue of supporting interdisciplinary research projects has been described in detail in the section Governance and Institutional Decision Making.

The bottom-up approach is mainly used to support the preparation of projects within the framework of calls for proposals from various domestic and foreign granting authorities ([Horizon Europe](#), GA ČR, TA ČR, and many others). The central support of the University consists mainly in and other support for applicants through the Project Support Department of the BUT, whose basic activities include:

- Preparation and administration of calls (monitoring of calls, efforts to participate in the preparation and formulation of calls, evaluation of calls in terms of benefit for the BUT, informing potential applicants, etc.).
- Support in the preparation of project designs (interpretation of the rules of the granting authority, provision of the necessary documents to the BUT, methodological and conceptual assistance in the preparation of the design).
- Administrative support for project implementation management of project implementation methodology.
- Supporting the sustainability of projects.

In the form of direct funding, the BUT supports the above-described interfaculty projects of specific university research.

The top-down approach is then applied in particular when designing strategic research projects of the BUT, which include, for example, research projects implemented within the framework of EU-supported operational programmes. A recent example is the preparation of projects within the framework of OP JAK, [where the BUT](#) is preparing four large-scale

(each with a budget of approx. CZK 500 million / EUR 20 million) aimed at supporting applied research in the fields of Engineering for Climate Neutral Sustainable Production (FSI), Centre for Bioelectronic Medicine and Neuroelectronics (CEITEC BUT), Cyber Security (FIT) and Green Deal (Green Deal technologies, circular economy, energy and others). These projects also include planned cooperation of selected excellent workplaces leading Czech universities such as (CTU), Charles University (UK), Masaryk University (MU), University of Chemical Technology in Prague (VŠCHT) and others.

BUT has also been awarded several projects from the National Centres of Competence programme of the TA CR. The programme is aimed at supporting long-term cooperation between the research and application spheres and at improving the institutional base of applied research.

The interdisciplinary and interfaculty cooperation is then reflected in the published results of the projects. ready 15% of articles impact factor are produced at the BUT in collaboration between two or more BUT Faculties [data for 2021, data from IS BUT and Web of Science (WoS)]. This collaboration is on the rise.

Currently, the analysis of the university's disciplinary breakdown is also underway, which responds to the mapping of the university's scientific profile in terms of competitiveness from the following perspectives:

- publishing activities,
- staffing potential,
- financial performance.

Recommendation: Explore the possibility of increasing funding for Doctoral Studies in order to improve doctoral students' links with the University.

Scholarships for students of doctoral study programmes (DSP) are basically determined according to the Ministry of Education and Science and the Rules for the Provision of Contributions and Subsidies to Public Universities, where a fixed amount per student is set for each year. Therefore, the basic criterion for funding remains the number of DSP students. In 2022, the basic scholarship was CZK 13 500 (EUR 540) per month. Individual Faculties and University Institutes at the BUT are entitled to increase/decrease this fixed amount from their budgets at their discretion (provided certain conditions are met); DSP students may also be awarded additional exceptional scholarships for outstanding academic achievements, original publications, exceptional other creative activities, etc. Other ways to increase a DSP student's income are to engage in grants/projects as a researcher or to arrange a full-time teaching contract for a definite/indefinite period. These incentives are mostly used students at FIT BUT and CEITEC BUT. The faculties and university institutes of BUT are aware of these possibilities, however, the financial policy for supporting DSP students depends on the available funds of the faculty or university institute.

In 2022, a technical amendment to the Higher Education Act is being discussed, which considers increasing the fixed amount of the DSP scholarship to 1.2 times the minimum wage, i.e. to approximately CZK 20 000 (EUR 800) However, the above-mentioned possibility of increasing this monthly amount will be maintained, while at the same time the special-purpose support for specific research will be allocated by Act No 130/2002 Coll. to support research and development from public funds, and this support will be included in the relevant chapter of the normative funding of the Ministry of Education and Science, with greater freedom to dispose of the funds the internal decision of the university concerned.

In 2020, the BUT conducted a survey of the conditions of Doctoral Study and an analysis of the economic aspects of the DSP. This analysis shows that almost three quarters of Graduate/ Alumnus/ Alumni and 44% of former PhD students without a degree financed their dissertation through grants or projects. This suggests that funding dissertation research through grants or projects is a significant factor in successful completion of study. Possible recommendations/measures to improve the economic conditions were given - setting a minimum amount of scholarship in the Scholarship Code/Rules, regressively increasing a certain minimum percentage of the total annual grant, not requiring the performance of teaching/learning activities approaching full-time equivalent, setting standard study obligations in hours per week, considering increasing the financial limit for projects in the student-led grant competition. The results of the analysis were communicated to the Faculties and University Institutes of the BUT.

At turn of 2021/2022, the DOKTORANDI 2021 survey was conducted for by the Centre (of) Higher Education Studies in cooperation with universities. The survey was attended by 464 respondents HEIs, of which 367 students completed the questionnaire. The results of the survey were not yet available, and we intend to use this source of feedback as well.

Recommendation: Help researchers to make better use of systematic support for application preparation and technology transfer.

As part of his election programme, the Rector of the BUT focused considerable attention on technology transfer by establishing the position of Vice-Rector for Knowledge Transfer with the aim of improving technology transfer processes, especially the sale of licences and the establishment of spin-off companies.

Systematic support in the preparation of applications is provided centrally at the BUT by the Project Support Division/Department. This Department strives to continuously improve the granting authority for support to researchers at the Faculties and University Institutes of the BUT. The successful project implemented from 1 July 2017 to 30 June 2020, called IN-IN CENTRE of the BUT, which the BUT received from the INTER-EXCELLENCE programme and [the sub-programme](#) INTER-INFORM, has also contributed to the improvement of the services granted. Thanks to the support of the project, the activities and services of the Project Support Division/Department of the BUT have been streamlined, in terms of increasing the participation of BUT research teams European and other international research projects, with an emphasis on [Horizon 2020 projects, and](#) supporting participation in the coordination of European research. Within the project activities, a support framework aimed at increasing participation in international science and research support schemes has been established. Furthermore, processes were set up for the functioning of the university's central project office focused on international science research projects. Thanks to the described project the set processes, after the end of the project, the BUT ranked among the four most successful Horizon 2020 beneficiaries in the Czech Republic with 59 projects, both in terms of the number of grants received and the volume of financial contributions.

The above project was smoothly followed by the IN-IN NET BUT project, which BUT received from the INTER- EXCELLENCE programme and the INTER-INFORM sub-programme. This project is implemented from 1 July 2020 to 30 June 2023 and is aimed at further improving and streamlining the activities and services of the Project Support Division/Department of the BUT with a focus on international projects. The number of international projects addressed at the BUT is increasing and the BUT is one of the most successful applicants.

In the case of national projects, the support provided by the BUT Project Support Division/Department to the Faculties University Institutes of the BUT has been concentrated and made more transparent. The previously fragmented project

support within the individual departments the Office of the BUT was merged under the BUT Project Support Division/Department. Thanks to this concentration, the BUT is a successful applicant in projects [of the Operational Programme Research, Development and Education](#) (OP Research, Development and Education), TA CR and other subsidy programmes.

At the same time, project departments are continuously being established strengthened at individual Faculties University Institutes of the BUT, which can cooperate more closely with researchers and assist them in preparing project applications in a more targeted manner.

An important aspect of helping researchers to make better use of systematic support in the preparation of applications is the intensification of communication and information transfer between the BUT Project Support Division/Department and the project departments at the Faculties and University Institutes of the BUT.

Assistance to researchers in the context of technology transfers is provided by the Technology Transfer Division/Department of the BUT, which operates at the central level. Technology transfer ambassadors, called technology transfer managers, are stationed at the Faculties and University Institutes of the BUT. Their task is to facilitate researchers' technology transfer activities, to ensure easier communication with other institutions of the school in the field of employee inventions, intellectual property, its protection and commercialization. The Technology Transfer Department of the BUT has been transformed into a Department that grants authority in the preparation of scientific projects and in the conclusion of co-ownership agreements, exploitation agreements and licensing agreements concerning intellectual property. The structure of the Division/Department's website is currently being modified to actively offer R&D results and intellectual property outputs. The Division/Department engages in commercial activities and the preparation of commercial contracts at the request of researchers.

Support for technology transfers is also implemented through the Rector's advisory body - the Technology Transfer Council, which decides on the commercialisation of Transfer and decides on the use of the patent fund mainly in cases where the resources that the Faculty or the BUT Institute is able to provide are insufficient.

Support for technology transfers is also implemented by preparing Methodical directives for the development of technology transfers. Awareness raising, which is provided in the field of intellectual property protection for Ph.D. students and researchers, can be seen as direct support for technology transfers.

In the area of technology transfer support, there is a specific cooperation the South Moravian Innovation Centre (JIC), the Brno Technology Park the Brno Science and Technology Park (VTP Brno) and other transfer support entities. A project of entrepreneurship support for students called

"Let's go into business!". Within the framework of this project, a university-wide course was designed and is already being implemented "Business idea development and implementation". This course is provided by teachers from the Faculty of Business and Management of BUT (FP BUT) in cooperation with experts from JIC. The project "Come to Entrepreneurship" is accompanied by other educational activities in the field of entrepreneurship and business (also according to the requirements of the Faculties and University Institutes of the BUT, including the university-wide competition Entrepreneurship Award of the BUT student.

At the same time, a revision of all standards dealing with the transfer is underway (updated Guideline No. 3/2019 - Handling of Intellectual Property).

Last but not least, it is important to mention that BUT is the third largest university in the Czech Republic in terms of the volume of contract research.

Recommendation: pursue research collaboration with industry leading to publishable findings.

Within the framework of cooperation with industry, applied research projects are mainly addressed within the framework of project calls of the Czech Technical University of Technology and selected calls of the Horizon Europe programme. In terms of applied research outputs, the granting authorities require mainly applicable results (e.g. patents, prototypes, utility models, publication outputs are often not supported by the providers in these projects. In projects where publication outputs are desirable, they are given increased attention.

It is clear from the available data that BUT is publishing more and more publications in cooperation with industry. As mentioned above, TA CR projects are very important in terms of cooperation with industry. In the period 2017-2021, a total of 2081 results reported the Register of Information on Results (RIV) were produced at the BUT, including 27 patents, 6 industrial designs, 75 utility models, 247 functional samples, 177 articles in the WoS database and another 47 in the Scopus database, as well as 532 contributions in proceedings. On the basis of these data, it can be stated that the BUT is producing more and more publications in collaboration with industry.

The Rector of the BUT draws attention to the importance of reverse transfer, i.e. scientific publications obtained from the results of contract research with respect for commercial confidentiality and research in effective collaboration, and the BUT will strive for this goal.

Area: teaching and learning

Recommendation: improve research-based teaching, especially in Masters programmes, to broaden the horizons of Graduate/ Alumnus/ Alumni.

On the basis of the Standards of Study Programmes of the BUT (see Rector's Guideline No. 69/2017), research-based teaching is a condition for the accreditation of master's degree programmes. The above Standards explicitly state in particular the following:

- Students of Master's Study Programme may participate in scientific or artistic activities.
- The study plan of the academically oriented master's study programme is designed to enable students to acquire the theoretical transfer necessary for the performance of their profession, including application in creative activities, and to acquire the necessary practical skills.
- The teaching unit carries out scientific or artistic activities with an international dimension that correspond to the field or fields of education in which the programme is or is to be carried out.
- The pedagogical workplaces are a researcher of scientific or artistic projects in the Czech Republic or abroad that are professionally related to the field or fields of education in which the programme is or is to be implemented.

The main part of the research character of the study of master's degree programmes is implemented through the diploma thesis, which is a compulsory part of the Final state examination. In the case of art-oriented programmes at the BUT, it is an artistic activity.

Within the framework of the NP, the BUT received CZK 100 million (EUR 4 million) for the design of four progressive programmes with a strong element of interdisciplinarity with the interconnection of research and educational activities.

At the same time, the BUT reflects the requirements of partners domestic and foreign industry for the development of the SP based on research in the field of electronics, electromobility, Green Deal technologies and circular economy, which link the implemented research and teaching activities.

Recommendation: Implement rigorous training for teachers and professional development courses for existing teachers focused on methods of teaching and evaluation with a student-centered approach.

Internal education at the BUT is provided by the university-wide Lifelong Learning Institute (LLI BUT). It mainly includes pedagogical training for beginning teachers and other according to the requirements of the Faculties and University Institutes of the BUT and the BUT Personnel Office. The training of academic staff is recorded in SHAP and thus influences the regular performance appraisal of academic staff.

Approximately two years ago, as a result of the COVID 19 pandemic, training of academic staff in online tools for teaching or teaching support was implemented at the BUT. The experience of the training and the use of online tools has enhanced the knowledge of the academic staff and the BUT as a whole has gained valuable experience from this extensive training event.

With the arrival of the new BUT management, a complete review of the lifelong learning programmes in the field of internal education was carried out, focusing on five areas that can strengthen the following competencies of academic and non-academic staff:

- Pedagogical area:
 - Focus on distance education (area covered by a non-profit evaluation). Methods of activation and participation.
 - Development of managerial skills.
- Language area:
 - Promoting the development of internationalisation with an emphasis on communication skills and the English language.
- IT competencies:
 - Focus on work with the BUT IS process, BUT IS studies, R&D support system (WoS, SCOPUS database), electronic information resources portal (EIR), INSIDE information service in the field of information and communication technologies (ICT).
- Managerial competencies an academic environment:
 - Information System (MIS BUT).
- Other skills.

Recommendation: consider appropriate means to increase the interest of applicants with potential for further growth in the current competitive environment.

Since February 2022, the marketing department has undergone a gradual organisational change, which consists of dividing its activities into the following areas:

- research and development marketing,
- education marketing,
- institutional marketing.

The university management is intensively involved in negotiations the Ministry of Education and Science greater support for technical education in the Czech Republic. At the same time, an agreement on cooperation the BUT regional schools with the South Moravian Region is being prepared with the aim of strengthening the teaching of exact sciences (mathematics, physics and chemistry).

The university JIC runs [the FabLab Experience project](#) as a tool for promoting technology and the promotion of students' creative activities towards high school students is significantly improved ([Formula Student, Chicken Wings](#)).

The University to implement campaigns that focus primarily on potential students. In 2022, the campaign did not take the form of one long video, but rather short micro-videos presenting interesting students of individual faculties and university institutes of the BUT and their student work or area of research. The BUT expects this change to increase credibility with the target audience. In addition, the Faculties and University Institutes of the BUT will be able to use these formats for their own promotion. The campaign will also take into account the dates of the individual admission procedures (FA and FAVU). In the future, the university would like to use student ambassadors from the Faculties and University Institutes of the BUT, who for example, help students on social networks with their choice of field of study or answer their questions.

An analysis and subsequent evaluation of the last three campaigns, including the reach and effectiveness of social networks, was also conducted in 2022.

Despite the difficulties caused by the COVID-19 pandemic, the BUT Roadshow continued online. There is also a new video in English for foreign applicants (self-payers) and [a magazine](#) new lifestyle online focused on the advantages of studying in Brno has been added to the English version of the BUT website.

Negotiations are currently underway the Faculties the University Institute of the BUT on how to ensure early interest of students in studying at the BUT (due to the difference in the number of admitted and actually enrolled students). The aim is to find a suitable solution to effectively attract and motivate these applicants to study (templates for open days, special newsletters).

Recommendation: to inform applicants with disabilities to motivate them to apply to study at the BUT and to ensure that systematic support is widely and indiscriminately available to existing students.

This issue is addressed at the university level by the Alfons Counselling Centre, which is able to adapt the admission procedure to the specific needs of applicants with disabilities and provides them with systematic support during their studies. In 2022, for example, the BUT has the first deaf Graduate/ Alumnus/ Alumni to pass the Final state examination in Czech Sign Language, [who](#) also received [the Werner von Siemens Award for](#) overcoming obstacles in his studies. Two Czech sign language interpreters worked with Tomáš Zbavítel during his studies received honorary degrees as engineers at the FME BUT for their help.

Through the Centre for Sports Activities of the BUT (CESA BUT), the BUT regularly hosts the EMIL OPEN Games (European Games for Disabled Youth).

The Division/Department of Marketing and External Relations of the BUT promotes these activities to the maximum extent in the media space to increase the awareness of the general public and target audiences (e.g. the Association of the Deaf and Hard of Hearing in the Czech Republic).

Area: Service to society - social responsibility

Recommendation: look for ways the entrepreneurial spirit of Graduate/ Alumnus/ Alumni.

The BUT management considers it important to develop cooperation technology parks innovation creative incubators for the development of innovative and creative entrepreneurship, including the provision of start-up financial capital. The cooperates [the JIC](#), the Creative Hub Brno, [the Brno Technology Park and the Brno Science and Technology Park and](#) the establishment and development of innovation and creative communities (hubs), including support for students' entrepreneurial initiatives.

To foster the entrepreneurial spirit of students, the aforementioned university-wide Let's Do Business project was launched in 2019. The project develops awareness of entrepreneurship, including the opportunity to try out real business in a university environment. In collaboration with the JIC, workshops were developed to develop teamwork and entrepreneurial ideas among students. The workshops have been replaced by a university-wide course called Creating Implementing a Business Idea in cooperation between the FP BUT and JIC, where students can learn about the basic procedures and methods of working with an idea, verifying the commercial potential of an idea on the market, creating a business model, financial management of the project, presentation skills needed to present an idea, financing options and implementation of a business plan, as well as the minimum legal knowledge needed for entrepreneurship. Entrepreneurship education at the BUT is further developed through the upcoming second university-wide course, which aims to deepen Transfer for business development and thus facilitate and create conditions for the establishment of spin-off and start-up companies.

At the same time, BUT students can enter the BUT Student Entrepreneurship Award competition for the third year. Student ideas and innovations are presented and developed in three rounds of the competition. Successful student ideas that to the 2nd and 3rd rounds of the competition will receive a financial contribution of CZK 1 million (EUR 40,000) to support the development implementation of their business idea. During the competition, students can use the facilities of the BUT and the know-how of the BUT academic staff who act as mentors in the project. The aim of the competition is to create space for the creation of student start-up companies under the BUT banner.

In response to these activities, an internal regulation the establishment of spin-off companies by BUT students is being prepared.

Recommend: if possible, and expand cooperation with schools, involving teachers and students.

An agreement was signed with the South Moravian Region on a concept for the development of regional education with a focus on mathematics physics. Currently, an experimental cooperation with a full-profile primary and secondary school being built near the BUT campus in the field of teaching and use of infrastructure.

The University offers primary school pupils the opportunity to join the BUT Junior project. BUT Junior is a BUT project for primary school pupils pupils of equivalent grammar schools, in the framework of which they have the opportunity to gradually get acquainted with all faculties and university institutes of the BUT. The lessons are taught in a full-time form, if necessary, the project can be implemented online. An alternative online event took place during the COVID-19 pandemic.

The BUT Roadshow is organized for high school students the offer of all BUT programmes and with the participation of ambassadors of individual Faculties and University Institutes of the BUT. Individual events are tailored to the focus of the host high school.

Subsequently, the BUT organizes regular meetings the directors of secondary schools at individual faculties and higher institutes of the BUT with the aim of establishing the closest possible cooperation.

As part of the European exhibition of higher and lifelong learning [Gaudeamus](#), meetings are held not only with students but also with secondary school guidance counsellors.

The BUT is also the main partner of the FabLab Experience project, which gives the Faculties and University Institutes of the BUT the opportunity to choose a personal presentation within individual trips.

Recommendation: raise students' awareness of their social responsibility and engage them as ambassadors for their fields of study.

The BUT is fully aware of its professional social responsibility as a technically independent expert guarantor in the field of current topics such as usable energy sources, in for example in ecology: the Faculty ofEngineering of the BUT (FAST) and the Faculty of Electrical Engineering and Communication Technologies of the BUT (FEKT) have purchased ecological tanks for drinking water, the university supports waste sorting, etc.

Research in the field of water purification at the FSI, e.g. purification of water from microorganisms and chemical residues using low-temperature plasma or diploma theses focused on environmentally friendly energy management, etc. (which is also reflected in the programmes sponsored by contributed to increased student awareness. At FSI, the SPIL (Sustainable Process Integration Laboratory) team deals with the professional level of sustainability.

In 2022, BUT also joined the centralized development project UNILEAD (University leaders in SDGs), which maps and supports activities across universities aimed at achieving the SDGs.

During the COVID-19 pandemic, students employees were actively involved in volunteer activities (e.g. disinfectant production, mask distribution, shield production and distribution; more information is available at <https://www.vut.cz/vutpomaha>).

The University has taken a similarly responsible approach to the situation in Ukraine (volunteer activities within the refugee Centre in Brno) or to the reconstruction of the South Moravian regions affected by the tornado (including professional assistance - e.g. expert opinions, aerial photography).

Recommendation: offer public lectures to the wider public and consider offering public online courses at convenient times.

Within the framework of lifelong learning at the BUT, an important intention of the university management is to improve the quality of professional postgraduate education, including qualification standards of the Master type, enabling the deepening and broadening of qualifications of employees who end up working in other fields than those they originally studied. [The University for Continuing Education Krems](#) Austria serves as inspiration. The BUT considers public lectures for the wider public as one of its main activities within its third role as a university, i.e. service to society. These lectures are mainly carried out through the University of the Third Age of the BUT (U3V BUT), which is intended for senior citizens. The VUT Junior project is designed for primary and secondary school students. Some active members of the faculties and university institutes of the BUT organise professional popular lectures based on their research activities and the faculties of the BUT organise summer schools for secondary school students. Lectures for the wider public were moved to the Internet during the pandemic. However, the general public, especially the elderly, consider online courses only as a fallback solution and usually require traditional face-to-face lectures that also have a social character.

Recommendation: consider the possibility of more systematically expanding the range of continuing professional education courses for external experts.

Lifelong learning courses are designed for external experts. These include, for example, MBA courses especially professional courses organised by the Faculties of the BUT on the basis of company requirements. The BUT intends to systematically expand the offer of these courses. Within the framework of the National Renewal Programme projects, the BUT plans to significantly expand the offer of professional courses with micro-credit.

Recommendation: continue to expand the University's already significant on society.

BUT reflects current social developments significantly to the dissemination of the latest scientific artistic knowledge values in many different ways. The aim is to be in close mutually open contact with society at local, national and international level.

The task in this area is the transfer of the latest knowledge and technology in the form of studies, analyses, patents or licenses, the establishment of spin-off the provision of professional services, exhibitions, consulting and research in areas. This has a direct impact on employment, industrial development, the arts through innovation and socio-cultural care.

BUT is not only an educational and research institution, but also a cultural institution. It includes technician disciplines, but its complexity and originality are also ensured by its competences in the field of art, design and architecture.

The BUT takes care to place art in the public space. The Faculty of Fine Arts of the BUT (FaVU) participated in the decoration of the new workplaces [of the Masaryk Cancer Institute](#).

[The BUT Art, Design and Architecture Board](#) was established.

BUT is also aware of its role in society and the need to help those in need by volunteering or providing financial support emergency situations (COVID-19, the tornado in South Moravia, the war in Ukraine).

The Rector of the BUT signed a memorandum on the increased use of hydrogen in 2021. The cooperation with the City of Brno and other partners in this case concerns joint activities for the development of sustainable energy,

transport and environmental protection, including the creation of the European Institute for Hydrogen and New Technologies, based in Brno.

This year, the Rector of the BUT also signed a memorandum of cooperation on the development of electromobility in cooperation with the city of Brno. The aim is to cooperate even more closely to accelerate the development of electromobility and create conditions for its use by the general public. The Memorandum also provides for opportunities for students to address electromobility topics in their bachelor and master theses; students will also be able to participate in the trainee programme of Teplarna Brno, which is the guarantor of electromobility development for the city.

The University also strategically develops lifelong learning, reaches out to the general public, especially in the area of popularization of science and research (e.g. through social networks, its website, zvut.cz, podcasts, events), supports technical education through the BUT Junior project, technical elementary schools at the FEC of BUT, FabLab Experience, etc.

Area: Internationalisation

Recommendation: analyse the possibility of reducing the deterrent effect of high fees for programmes in English.

An analysis of SP fees in English within the Czech Republic was carried out. The Vice-Rector for Internationalisation declared that the fees at the BUT are already quite low and do not cover the costs of study. The pricing policy needs to be considered in relation to the target audiences and the definition of areas of interest.

the student does not currently have the necessary cash, he/she may apply for a fee waiver, fee reduction or at least a deferral of the fee. If he/she cites health or social reasons in his/her application, he/she is obliged to properly document claims. general options which are specified in the individual study schedules of the Faculties and University Institutes of the BUT.

An amendment to Section 58 of the Higher Education Act on university fees is currently under preparation, according to which fees will be liberalised (likely to come into force in 2024). According to the current wording of the Higher Education Act, the fee may not be lower than the normative per student multiplied by the coefficient of economic intensity of the programme.

Recommendation: it is suggested to use foreign guest lecturers to establish further research collaboration, to attract more foreign lecturers and and to expand the offer Joint Degree and Double Degree

The projects of the OPIE, specifically the calls International Mobility of Researchers I and II together with the Institutional Development Projects (IDP) supported an increase in the number of short and long-term stays of foreign colleagues at the University.

The support for teaching stays of employees abroad has also increased (stays can be funded by the Erasmus+ / IDP / Indicator D programme (every year a higher amount is allocated for teaching stays where BUT employees can gain new contacts, establish new collaborations and provide teaching of foreign scientists at the BUT).

BUT supports organises various international activities to promote international cooperation and the visibility of the university, such as International Staff Week, international conferences and workshops, for example Brno International Week.

Academic staff attend international conferences, actively participate in international networks and participate in international competitions with their students.

BUT also participates in international exhibitions, expositions and fairs focused on job opportunities and careers. In 2017-2022, the BUT participated in the following events:

- 2017:
 - EAIE 2017 International Education. The exhibition took place in Seville, Spain, from 12 to 15 September 2017.
 - NAFSA 2017 - Educators. The exhibition was held Los Angeles, USA from May 29 to June 2, 2017.
- 2018:
 - EAIE 2018 European Association International Education. The exhibition was held on 1-14 September 2018 in Geneva, Switzerland.
 - IE 2018 - Pacific Association for International Education. The exhibition was held in Singapore from 25 to 29 March 2019.
 - NAFSA 2018 - Educators. The exhibition was held in Philadelphia USA from May 27 to June 1, 2018.
- 2019:
 - EAIE 2019 International Education. The exhibition took place in Helsinki, Finland, from 24 to 27 September 2019.
 - IE 2019 - Association for International Education. The exhibition was held in Kuala Lumpur, Malaysia from 25 to 29 March 2019.
 - NAFSA 2019 - Association of International Educators. The exhibition was held in Washington, D.C., USA from May 26-31, 2019.
- In 2020 2021, the BUT did not participate in any events due to the COVID-19 pandemic.
- 2022:
 - EAIE 2022 International Education. The exhibition took place in Barcelona, Spain, from 13 to 16 September 2022.

Sharing the experiences successes of international students who have studied at the BUT abroad (a network of agents and ambassadors has also been created to promote the BUT and studying at the BUT abroad).

[A web application](#) for agent registration has been created.

The BUT supports the introduction of Joint Degree (JD) and Double Degree (DD) programmes. Currently there are 15 programmes at the BUT, of which only 6 are active. The BUT plans to review the JD/DD programmes in terms of capacity.

Since 2018, the module Arrivals of Foreign Visitors, Scientists and Academic Staff has been introduced in IS Apollo, but not all foreign visits are registered there yet. Although there have been

progress, all foreign visits are still not systematically recorded in a way that is comparable to that of outgoing employees.

As of the academic year 2022/2023, this area will be regulated by the Methodological Guideline, which sets out the criteria for the registration of foreign visits (e.g. long-term/short-term, purpose of the visit, link to the Memorandum of Understanding/Bilateral Agreement, distinction between visits of academic staff/TOS, etc.). There is also no database for staff visits other than Erasmus visits. Business trip reports can be generated, but employees do not indicate the programme under which they travel.

Recommendation: prepare compulsory core modules of the programme taught in English for all students.

According to the Standards of Study Programmes of the BUT, the study programme must be designed in such a way that the student demonstrates the ability to apply the acquired professional knowledge, skills and general competences in at least one foreign language during the study. Study plans must include at least one course taught in English. The above shall be monitored during the approval of programmes and during the internal evaluation of programmes during their implementation. The introduction of compulsory core programme modules taught in English is currently under discussion at the BUT. The BUT is also gradually expanding the range of international Joint/Double Degree programmes conducted in English.

Recommendation: offer students attractive and interactive English language communication

These courses are offered to students by the language departments of individual Faculties, but the limiting factor is the capacity of the language centres. The main means of improving students' communication skills in English is to involve students in international activities (especially ERASMUS trips).

Recommendation: offer teachers professional focused on teaching their course English.

BUT systematically supports the development of language competences of both academic and non-academic staff. Courses to improve language competences are offered by the Institute of Lifelong Learning (ICV BUT), which regularly, in cooperation with HR specialists of the BUT Rector's Office, maps the requirements of both academic and non-academic staff and responds by offering language courses to demand.

Increasing language competences has been one of the areas addressed in recent years within the MOST project, where specialised courses focused on teaching in AJ in the given field of knowledge were offered to academic staff at some Faculties and University Institutes of the BUT.

Recommendation: improve centralised admissions and support services for international students and staff.

For incoming employees, [a Welcome Service](#) has been established at the Division/Department of International Relations of the BUT to facilitate the stay of incoming scientists in the Czech Republic. The Welcome Service staff will inform incoming employees about all the formalities that need to be completed before and after arrival (visas, insurance, travel to the Czech Republic). They also help with registration with the Division/Department of Asylum and Migration Policy of the Ministry of the Interior

Czech Republic or the Foreign Police, offer help in finding accommodation or in finding a Czech language course, etc. This service is mainly used by employees coming for long-term stays. A summary of information for foreign workers is available on the website, including practical guidance for foreigners. The Division/Department has also created [a welcome video service](#).

In addition, a registration (on-line system) has been developed as part of the support services for incoming staff. The data is stored in the BUT Apollo IS, from which statistics can be generated. There is a need to continuously raise awareness of the registration of incoming employees at the Faculties and Universities of the BUT, as short-term visits are mostly not registered and an overview of the total number of foreign visits, especially short-term ones.

The main body responsible for the incoming students is [the Erasmus Student Network \(ESN\)](#). In cooperation with the Division/Department of International Relations (DOR) of the BUT, the ESN organises a Welcome Week at the beginning of each semester to introduce incoming students to the environment, and ESN members prepare various games, excursions, language courses, etc. for incoming students during this week.

The ESN student evaluation also offers the Buddy system, which gives the international student a buddy to help them in their daily life throughout their stay.

Recommendation: provide all information for students and employees in English.

Information in English is available to students and employees on the website or on social networks ([Facebook in English](#)). Key information, such as information about COVID-19 or the situation in Ukraine, is translated into English in full. Other messages are translated if they concern foreign students or employees, deal with unique issues in the Czech Republic, etc.

[Themazine university-wide Události](#) is published in English, as is the newsletter for [VUTARIUM](#) Graduate/ Alumnus/ Alumni.

For incoming students, OZV BUT prepares and updates the brochure "Student Welcome guide". There is information for students on the website in the form of practical guides in English.

An online "Guide for foreign employees" is available for incoming employees. There is comprehensive information on the website for foreign employees under the Welcome service tab.

Ensuring that all documents and information relating to incoming students and staff are bilingual.

For foreign students in full degree programmes, an electronic version of the "BUT Freshman Handbook" in English is available, students can find all necessary for their studies (information about the university, sports, the functioning of the examination system, the information system, etc.).

The key for the future at the BUT is to ensure that quality administrative and procedural documentation is created in English and to develop language skills (primarily in English) especially among those administrative and technical staff providing at least the first line of communication with foreign employees, students and applicants.

C: Recommendations for the addition of responsibility for quality within the Organisational Regulations of the Rector's Office of the BUT

It is recommended that the detailed assignment of the HEI bodies and their units and senior staff to the quality evaluation processes at the HEI be included in the update of the Organisational Regulations of the Rector's Office of the BUT as shown in the table below.

Recommendations for the addition of responsibility for quality within the Organisational Regulations of the Rector's Office of the BUT

Procesy spadající do vnitřního systému kvality	Vlastníci procesů
HLAVNÍ PROCESY	
Strategické řízení univerzity a fakult <ul style="list-style-type: none"> ✓ Sledování klíčových ukazatelů předpokladů a výkonnosti + (národní- mezinárodní ranking) ✓ Evaluae roční a průběžná ✓ Mezinárodní evaluae 	<ul style="list-style-type: none"> • Vedení univerzity, fakult a dalších součástí VUT • Vedoucí věcně příslušných pracovišť rektorátu, fakult a dalších součástí • Akademičtí a neakademičtí zaměstnanci a zaměstnankyně • Studující • Další orgány dle zákona (RVH, VR, AS)
Vzdělávací činnost <ul style="list-style-type: none"> ✓ Akreditace (institucionální / SP) ✓ Realizace studií (Bc, Mgr, Ph.D.) ✓ Pravidelné hodnocení dle standardů ✓ Předmětové ankety ✓ Podpůrné prostředí pro studium 	<ul style="list-style-type: none"> • Rektor / Věcně příslušný prorektor • Děkan/ Věcně příslušný proděkan • Garant studijního programu/předmětu • Programová a oborová rada • Studující a vyučující • Kvestor/ tajemníci
Tvůrčí činnost <ul style="list-style-type: none"> ✓ Publikáční aktivity a výsledky tvůrčí činnosti ✓ Projektové aktivity v tvůrčí činnosti ✓ Transfer poznatků a spolupráci s aplikační sférou ✓ Akreditace habilitačního a inauguračního řízení a jejich realizace ✓ Podpůrné prostředí pro tvůrčí činnost 	<ul style="list-style-type: none"> • Rektor / Věcně příslušný prorektor • Děkan/ Věcně příslušný proděkan • Vědecká rada univerzity/ fakulty • Kvestor/ tajemníci • Vedoucí věcně příslušných útvarů rektorátu fakult a dalších součástí • Akademičtí a neakademičtí zaměstnanci a zaměstnankyně • Studující podílející se na tvůrčí činnosti
Společenská role univerzity <ul style="list-style-type: none"> ✓ Spolupráce s praxí ✓ Zajištění celoživotního vzdělávání ✓ Propojení s veřejností – služby 	<ul style="list-style-type: none"> • Rektor/ Věcně příslušní prorektoři • Děkan/ Věcně příslušní proděkani • Vedoucí věcně příslušných útvarů rektorátu a součástí
Hodnocení akademických zaměstnanců a zaměstnankyň	Děkan/ vedoucí kateder/ vedoucí jiných akademických pracovišť
PODPŮRNÉ PROCESY	
Personalistika	Kvestor; Tajemník;
Finanční řízení	Kvestor; Tajemník;
Provoz a správa majetku	Kvestor; Tajemník;
Služby knihoven	Kvestor; Tajemník; ředitel ústřední knihovny
IT podpora a služby	Kvestor; Tajemník; ředitel CVIS
Projektová podpora	Kvestor; Tajemník; Příslušný prorektor/ proděkan;
Marketing	Kvestor; Tajemník; Příslušný prorektor/ proděkan;
Ostatní služby pro studující, zaměstnance a zaměstnankyně a pro veřejnost	Ředitel/ka- KaM; CESA, VUTIUUM, ICV, vedoucí OPP a TZ , poradenského a kariérního centra apod.)
Hodnocení neakademických zaměstnanců	Kvestor/ tajemníci / prorektoři/ proděkani / vedoucí dalších součástí

Source.

Conclusion

The report on the internal evaluation of the quality of educational, creative and related activities provides a reflection of the issues of management, assurance and of the quality system individual of the University's for the period 2018 - 2022. The report proves that quality management, assurance and development is a transparent process at the BUT, which according to the established internal rules and criteria, both at the central level and at the level of individual faculties and units of the University. The University continues to focus on improving the internal quality management system, in particular focusing on increasing quality in programmes, strengthening the international character of programmes, implementing quality assessment criteria in educational and creative activities according to international standards set for excellent universities.

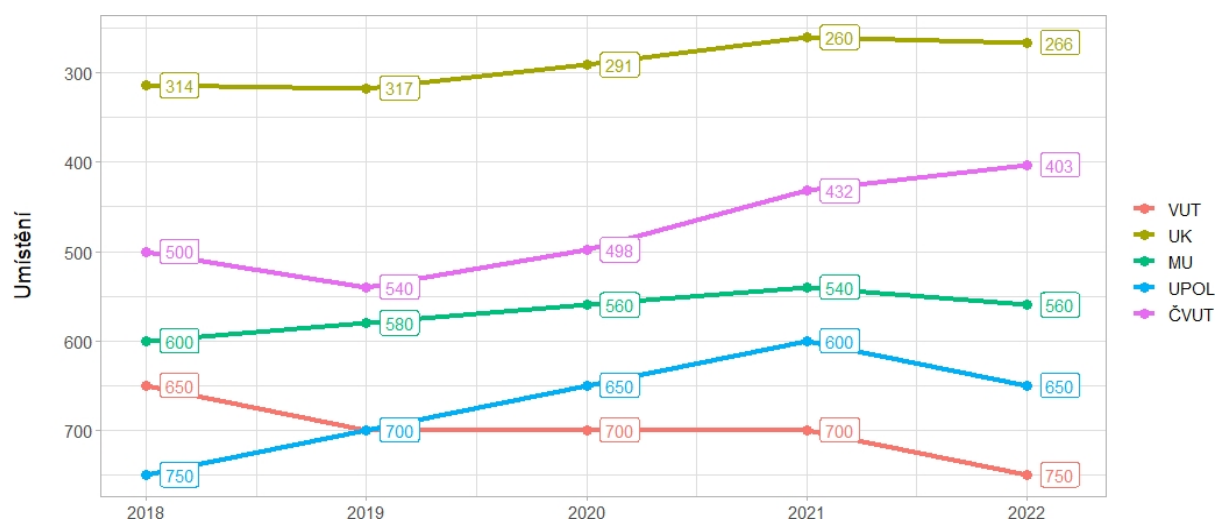
Attachment/ Annex 1: BUT position in international rankings

BUT's position international rankings

BUT is currently evaluated by several international rankings. Among the most important are the *QS World University Rankings* (QS) and *Times Higher Education World University Rankings* (THE), to which BUT annually reports the basis for the evaluation.

In the group of the five largest Czech universities for which data exist for the last five years (UK, MU, UPOL, CTU, BUT), BUT performs the worst in the QS ranking, but its position is relatively stable (Figure 1).

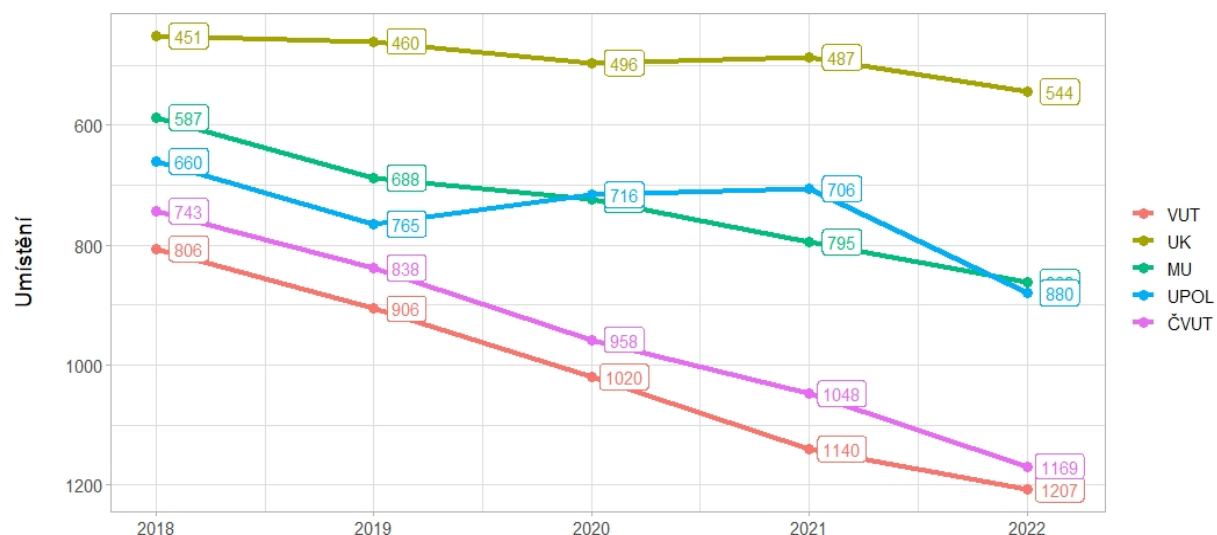
Figure 1. QS World University Rankings, ranking position, comparison of selected Czech universities



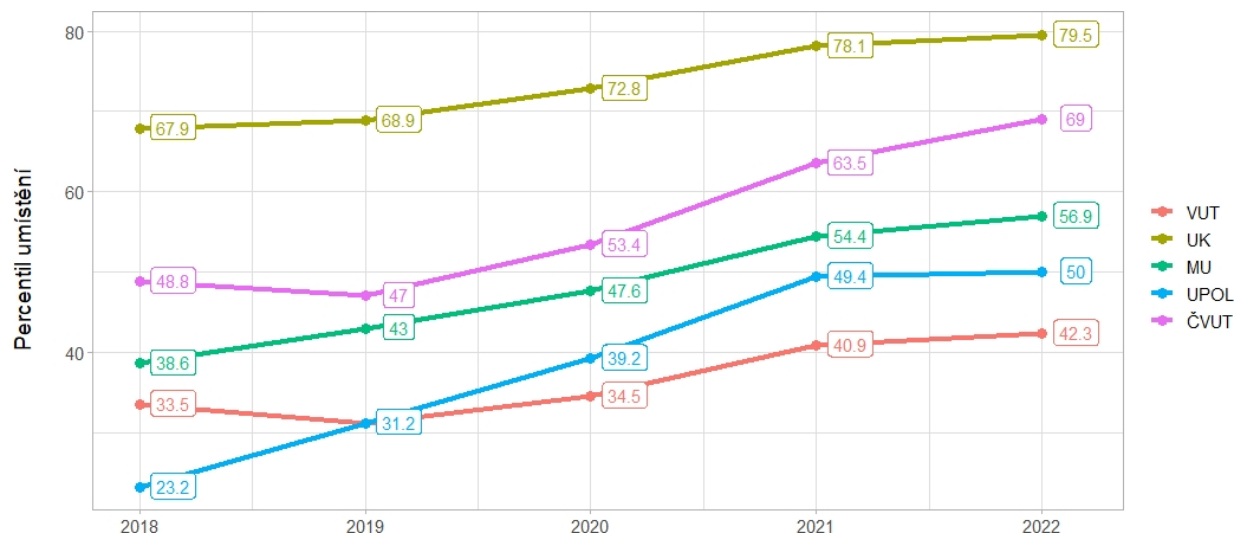
Note: Universities ranked below 400th are reported to QS at intervals. For this case, the graphs show the values of the upper limit of the interval.

In the same group and comparison, but this time in the THE ranking, BUT again shows the worst results. Over the last five years then, unlike QS, there has been a systematic fall in rankings (Figure 2).

Figure. THE World University Rankings, ranking position, comparison of selected

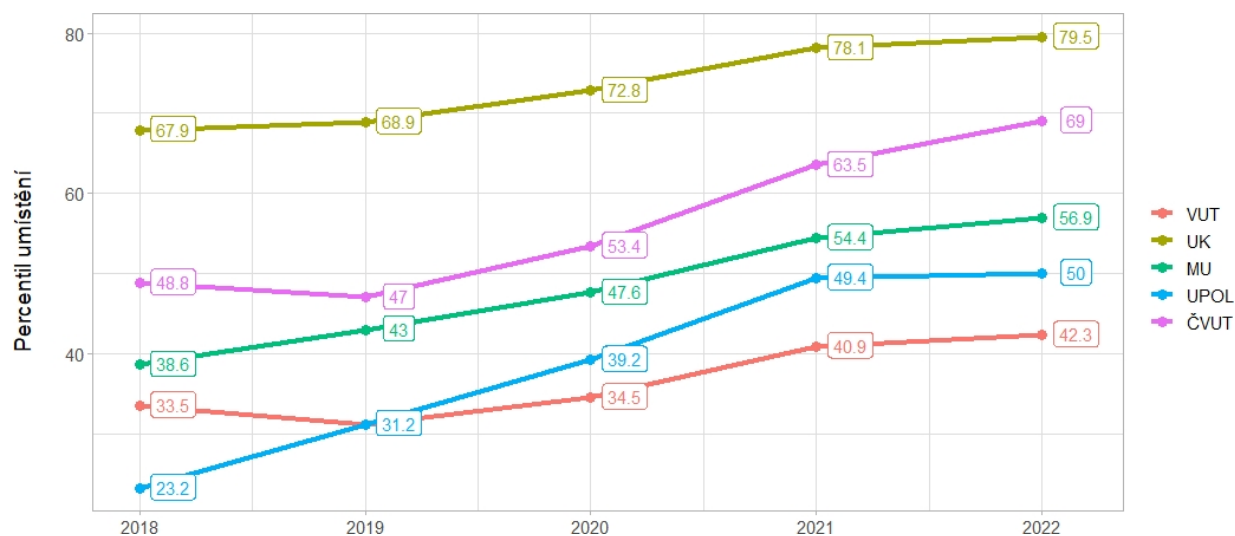


Absolute values of rankings in international rankings are a commonly communicated measure of a university's success, but year-on-year comparisons need to take into account the fact that a different number of universities are evaluated each year: the set of universities is constantly growing. For QS, 933 universities were evaluated in 2018, in 2022 already 1,300, for THE it was 800 for 2018 and even 1,662 for 2022. Figure 3. QS World University Rankings, ranking percentile, comparison of selected Czech universities



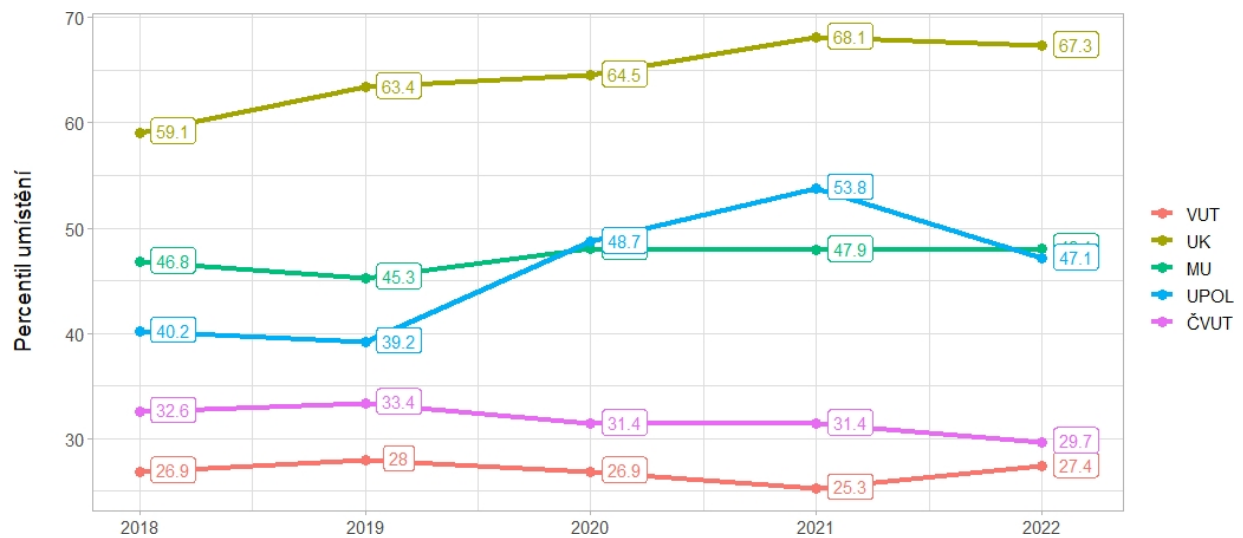
4 (QS) and Figure 3 (THE) show the data presented above, converted as percentile rankings.¹ In the case of both rankings, there is a significant effect of base change on ranking position: a position for BUT in QS translates into a steady improvement in percentile rank; in the case of THE, a steady decline (evident for all selected universities) translates into stagnation (e.g. BUT), or in some cases growth (UK).

Figure 3 QS World University Rankings, ranking percentile, comparison of selected Czech universities



4 THE World University Rankings, ranking percentile, comparison of selected Czech universities

¹ $percentil = - \frac{umistění}{počet\ hodnocených} *$



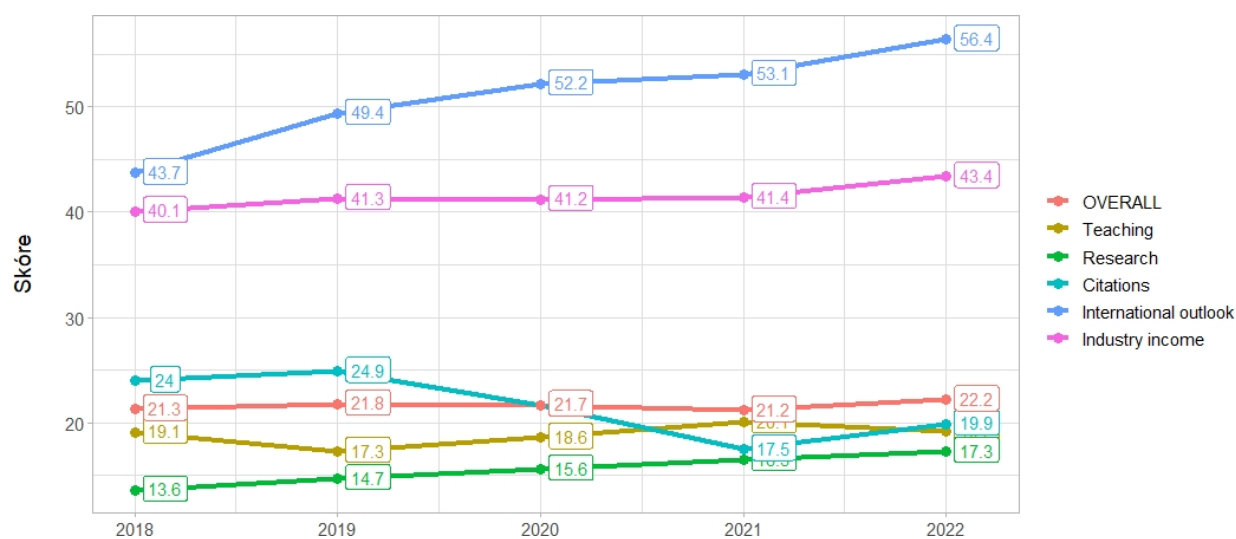
The two selected international evaluations report not only the overall ranking but also the performance the sub-categories. Complete data for the last five years are only available for THE, so the following summaries will only take into account that one evaluation.

The THE (World University Rankings) methodology works five categories of performance: Teaching (teaching; takes into account reputation survey, staff-student ratio, doctoral-student ratio, number of doctorates awarded per academic staff member, and institutional income), Research (research; *takes into account* reputation survey, research income, research productivity), Citations (citations), Industry Income (income), and International Outlook (*internationalisation; measured by the ratio of international to domestic students, the ratio of international to domestic staff, and the proportion of research that involves international collaboration.*)²

shows the evolution of the BUT scores for the mentioned performance categories over the last five years. Comparing the change 2018 2022, the BUT performs best in the areas of internationalisation (+29 p.p.) and research (+27 p.p.), with a slight improvement in the area of revenue (+7 p.p.). In the other categories, the BUT is either stagnating (teaching) or slightly deteriorating (citations, -17 p.p.)

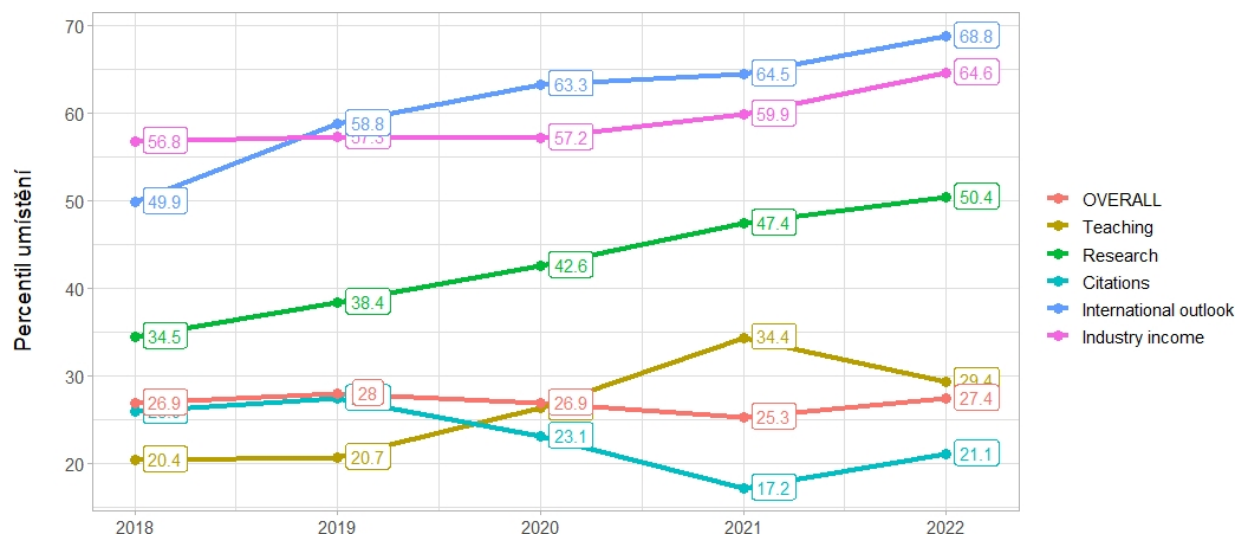
Figure. THE World University Rankings, BUT scores the evaluated categories

² Details At <https://www.timeshighereducation.com/student/advice/world-university-rankings- explained>



The above-mentioned trends in individual categories are also evident in the ranking of BUT among other universities. Figure 6 shows the ranking percentile, which indicates that in most categories (internationalisation, research, teaching, income) the BUT is improving compared to others. There is a decline in the citation category.

6 THE World University Rankings, rankings of BUT in the evaluated categories



Attachment/ Annex 2: Institutional quality indicators

The institutional quality indicators are divided into the chapters **Study and Creative Activity**. The **STUDY** chapter is then further divided into subchapters:

- **The offer of study**, which lists the indicators that may be relevant and applicants, such as the number of programmes offered, the number of students, or the characteristics of male and female staff.
- **Demand for study**, where indicators monitor of interest in studying or success in the admission procedure.
- **The study progress** summarises important indicators relating to success during the course of study graduation.
- **Internationalization** has been extracted as a separate subchapter in order to clearly present all indicators related to the international context of study at the BUT: the range of programmes in English, the number of international students, or the mobility of students and employees BUT.

The **Creative Activity** chapter includes subchapters:

- **All RIV outputs**, offering an overview of the number of publication and non-publication outputs.
- **The WoS publication** focuses purely on journal articles like Jimp, which can be considered a good representation of quality R&D production.

Indicators are marked with the letter "I" and a continuous numbering. With a few exceptions, they are always available for the entire BUT and then for individual Faculties/Units (also F/S).

Indicators absolute counts are displayed as flat stacked graphs, indicators expressing ratios or proportions as line graphs. The graphs are accompanied by supporting tables.

1. STUDY

1.1. Offer of study

Programmes

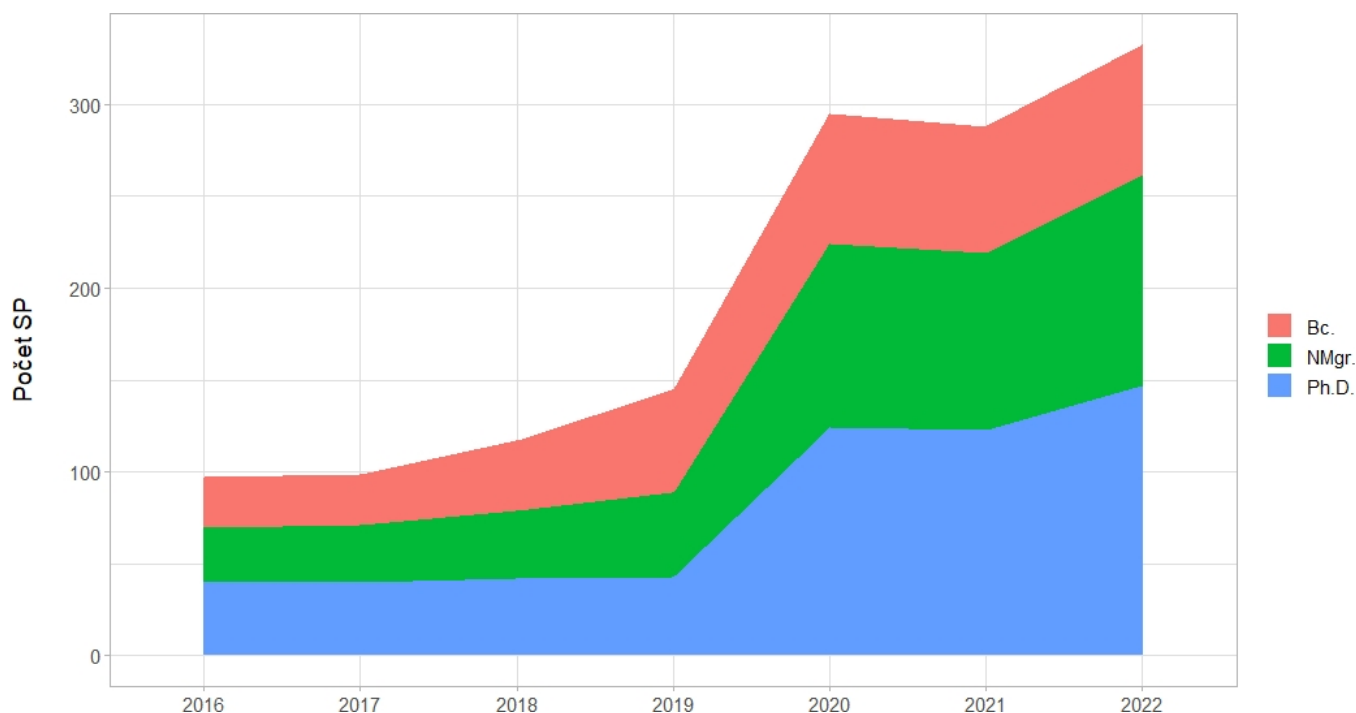
[I1] Number

Currently, there are 333 programmes at the BUT, 21% of which are Bachelor's programmes, 35% Master's programmes and 44% Doctoral programmes.

Between 2016 and 2022, the number of programmes at the BUT (observable for all F/S) increased threefold, in 2019. The nature of the increase is related to the change in the method of accreditation. There is currently an effort to reduce the number of programmes thus created, but as there are still students under programmes suitable for withdrawal, the number of students will decrease only gradually (once they graduate). Some Faculties are already showing a decrease in the number of programmes (e.g. FP, FEKT), while others are still increasing (e.g. FSI).

BUT

Chart1. [I1] Number of programmes, by type (source: VZoč 2016-2022)

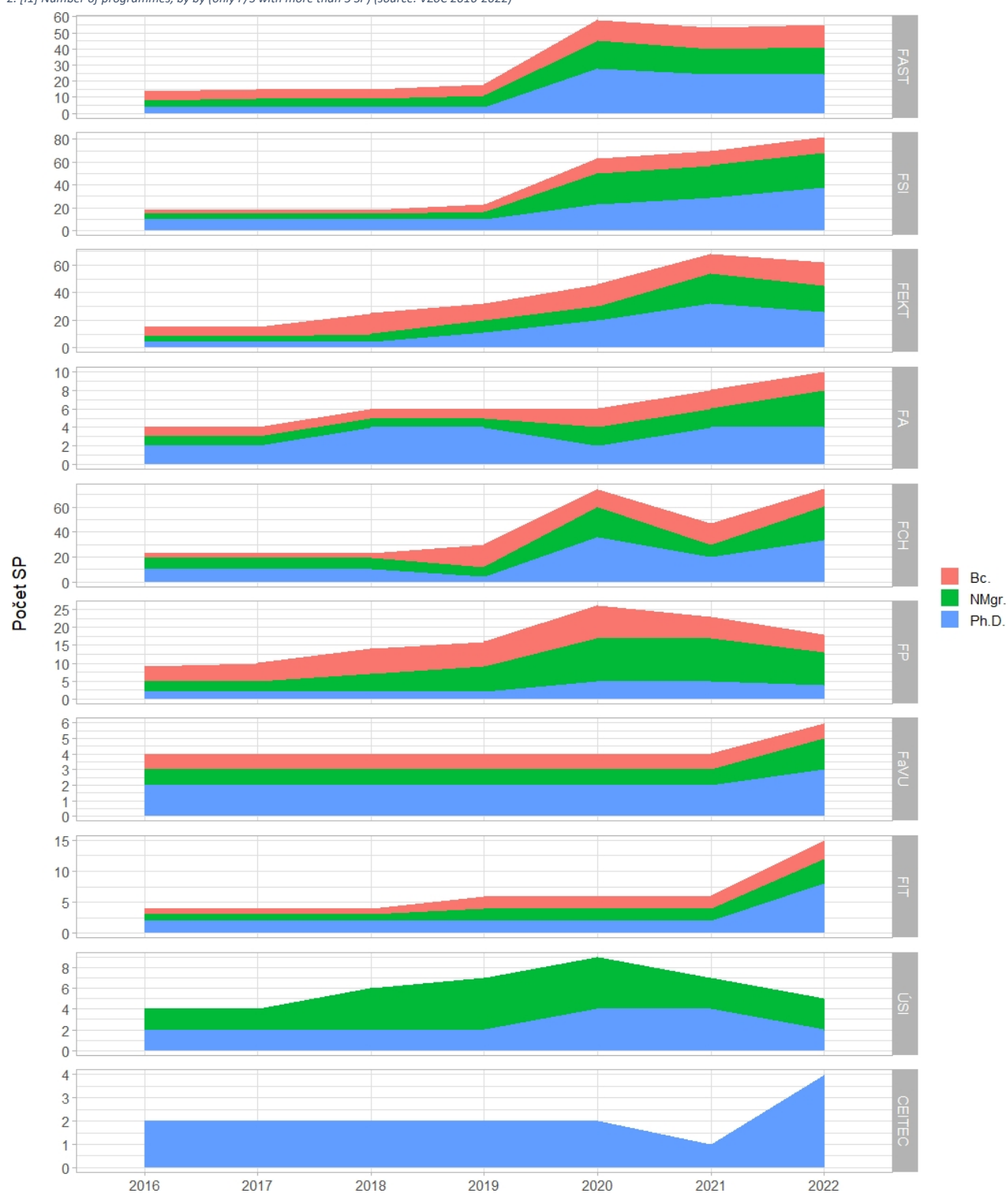


[11] Number of programmes, by type (source: VZoČ 2016-2022)

Type of study	2016	2017	2018	2019	2020	2021	2022
Bc.	27	28	38	56	71	69	71
NMgr.	30	31	37	46	100	96	115
Ph.D.	40	40	42	43	124	123	147

Faculties/Units

2. [11] Number of programmes, by by (only F/S with more than 5 SP) (source: VZoČ 2016-2022)



2. [I1] Number of programmes, by by (only F/S with more than 5 SP) (source: VZoč 2016-2022)

F/S	Type of study	2016	2017	2018	2019	2020	2021	2022
FAST	Bc.	6	6	6	7	13	13	14
	NMgr.	4	5	5	7	17	16	17
	Ph.D.	4	4	4	4	28	24	24
FSI	Bc.	3	3	3	7	13	13	14
	NMgr.	5	5	5	6	27	28	30
	Ph.D.	10	10	10	10	23	29	38
FEKT	Bc.	7	7	15	12	16	14	17
	NMgr.	4	4	6	9	10	22	19
	Ph.D.	4	4	4	11	20	32	26
FA	Bc.	1	1	1	1	2	2	2
	NMgr.	1	1	1	1	2	2	4
	Ph.D.	2	2	4	4	2	4	4
FCH	Bc.	4	4	4	18	14	17	14
	NMgr.	9	9	9	8	24	10	27
	Ph.D.	10	10	10	4	36	20	34
FP	Bc.	4	5	7	7	9	6	5
	NMgr.	3	3	5	7	12	12	9
	Ph.D.	2	2	2	2	5	5	4
FaVU	Bc.	1	1	1	1	1	1	1
	NMgr.	1	1	1	1	1	1	2
	Ph.D.	2	2	2	2	2	2	3
FIT	Bc.	1	1	1	2	2	2	3
	NMgr.	1	1	1	2	2	2	4
	Ph.D.	2	2	2	2	2	2	8
USI	Bc.	0	0	0	0	0	0	0
	NMgr.	2	2	4	5	5	3	3
	Ph.D.	2	2	2	2	4	4	2
CEITEC	Bc.	0	0	0	0	0	0	0
	NMgr.	0	0	0	0	0	0	0
	Ph.D.	2	2	2	2	2	1	4

STUDIES (STUDENTS)

[I2] Number of studies, by type of study

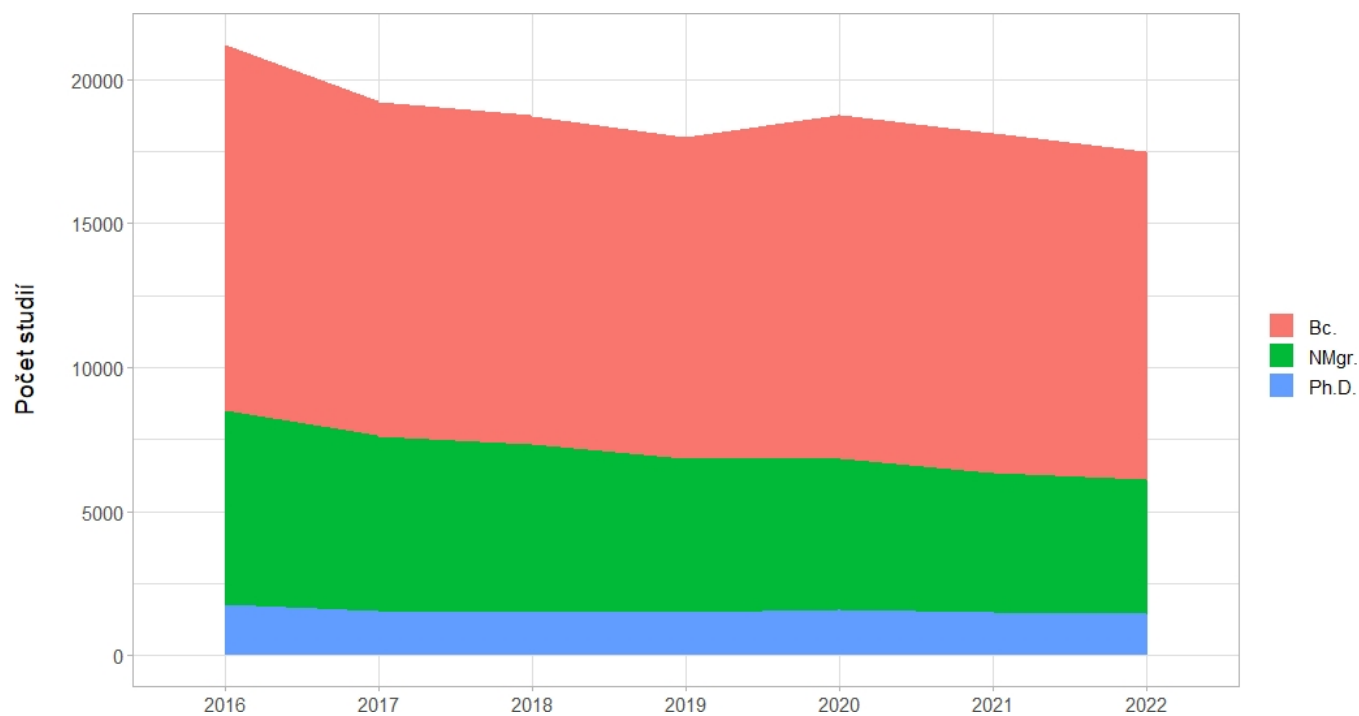
At the end of 2022, the BUT had 17,505 studies, of which 65% at the Bachelor's level, 27% at the Master's level and 8% at the doctoral studies.

The number of students at the BUT has been steadily declining from 2016 to the present, falling by almost a fifth (18%) compared to the baseline. The largest decline was in Master's Studies (-31%).

The decline is mainly driven by the decline in FAST (38% share of the total decline in 4202 studies, decline in studies on Faculty 32%), FSI (23% share, 21% decline) and FP (18% share, 25% decline). However, some faculties grew (FaVU +25%, FIT +11%).

BUT

Chart[12] Number of studies, by type (source: VZoČ 2016-2022)

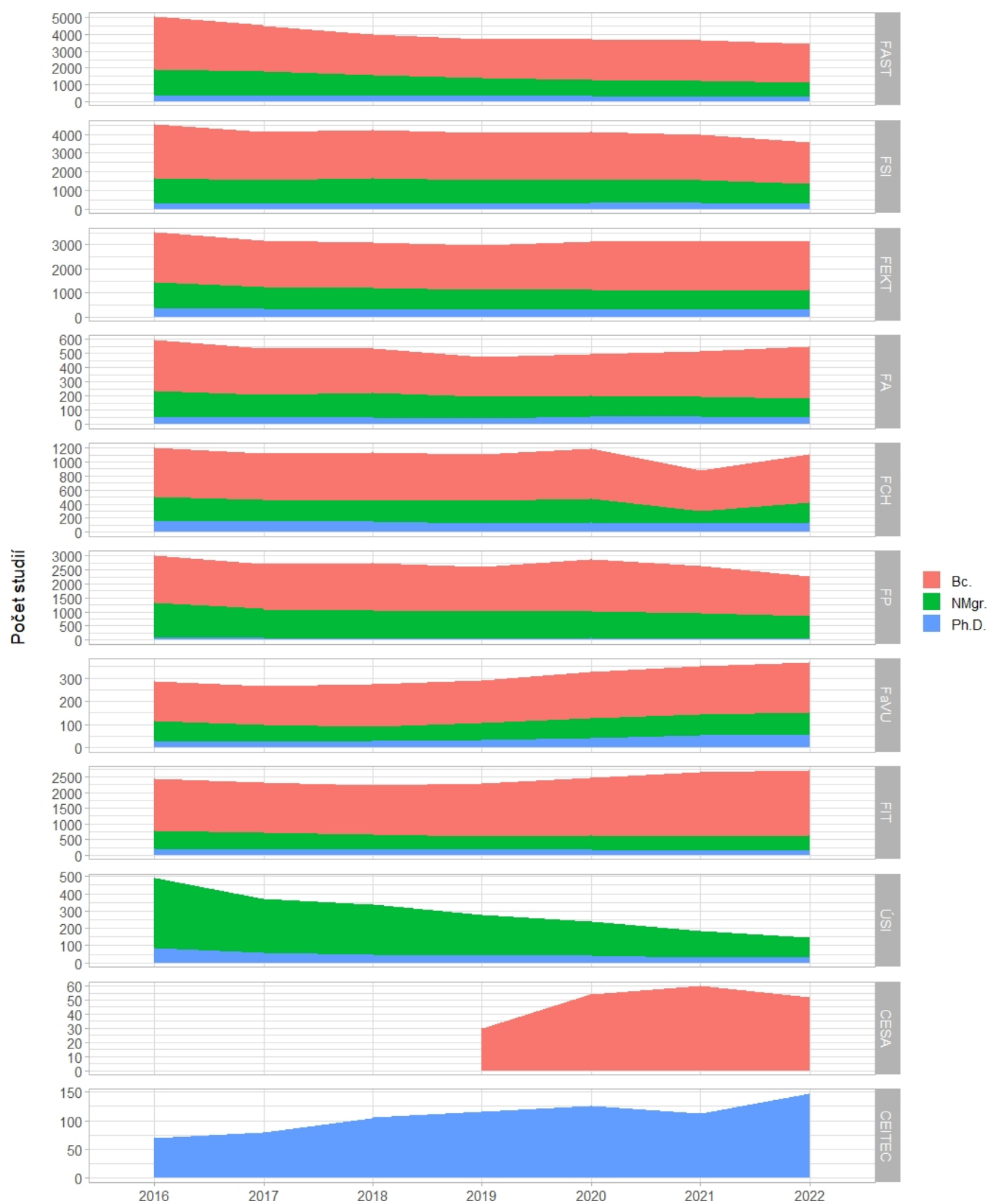


. [12] Number of studies, by type (source: VZoČ 2016-2022)

Type of study	2016	2017	2018	2019	2020	2021	2022
Bc.	12 12	11 610	11 398	11 16	11 939	11 806	11 73
NMgr.	6 744	6 058	5 19	5 366	5 42	4 28	4 649
Ph.D.	1 79	1 72	1 523	1 93	1 51	1 503	1 43

Faculties/Units

Chart[12] Number of studies, by type by (source: VZoČ 2016-2022)



. [I2] Number of studies, by type by (source: VZoč 2016-2022)

F/S	Type of study	2016	2017	2018	2019	2020	2021	2022
FAST	Bc.	3 140	2 760	2 437	2 302	2 421	2 430	2 338
	NMgr.	1 43	1 422	1 262	1 98	996	935	854
	Ph.D.	379	356	326	317	305	301	270
FSI	Bc.	2 887	2 561	2 610	2 502	2 568	2 421	2 203
	NMgr.	1 293	1 261	1 46	1 272	1 238	1 212	1 63
	Ph.D.	350	306	298	303	333	330	305
FEKT	Bc.	2 086	1 931	1 906	1 91	2 001	2 060	2 24
	NMgr.	1 64	937	903	806	807	774	816
	Ph.D.	381	322	297	301	314	299	295
FA	Bc.	358	320	311	282	292	321	362
	NMgr.	189	165	173	149	150	139	136
	Ph.D.	47	46	49	44	53	54	49
FCH	Bc.	709	669	679	660	707	581	691
	NMgr.	336	304	297	322	339	170	281
	Ph.D.	161	151	157	122	139	131	137
FP	Bc.	1 713	1 605	702	1 589	1 57	1 688	1 30
	NMgr.	1 23	1 45	1 003	975	963	894	789
	Ph.D.	64	59	52	52	64	53	53
FaVU	Bc.	170	166	181	182	201	205	216
	NMgr.	88	72	61	73	88	91	96
	Ph.D.	27	26	30	34	39	54	54
FIT	Bc.	1 69	1 98	1 72	1 678	1 838	2 040	2 057
	NMgr.	577	540	483	432	467	464	501
	Ph.D.	213	168	163	164	165	134	142
USI	Bc.	0	0	0	0	0	0	0
	NMgr.	401	312	291	239	194	149	113
	Ph.D.	88	59	46	40	43	34	31
CESA	Bc.				30	54	60	52
	NMgr.				0	0	0	0
	Ph.D.				0	0	0	0
CEITEC	Bc.	0	0	0	0	0	0	0
	NMgr.	0	0	0	0	0	0	0
	Ph.D.	69	79	105	116	126	113	147

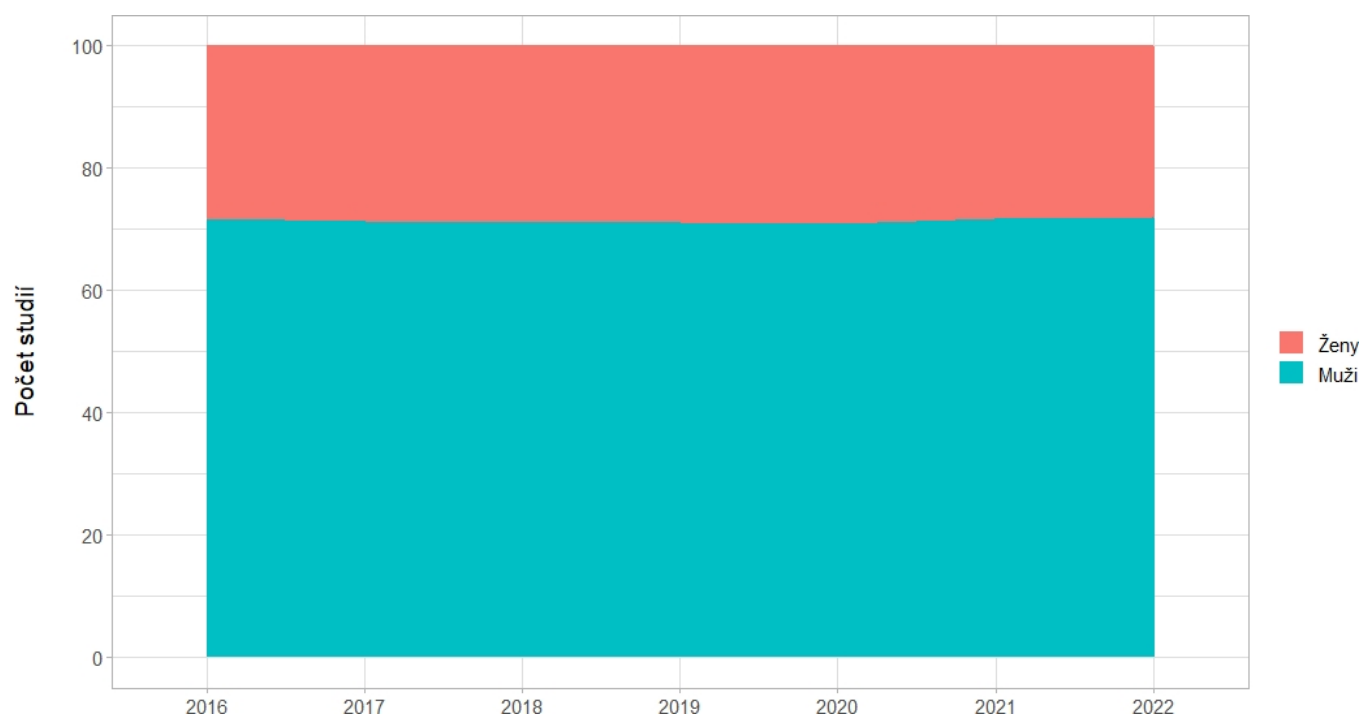
[I3] Distribution of studies by gender (%)

In 2022, 28% of women of men studied at the BUT. There are significant differences in the gender ratio across Faculties. Men predominate at FSI (89%), FIT (89%) and FSI (87%), while women dominate at FaVU (65%), FCH (63%) and FA (61%).

Over the last 7 years, the ratio women to men has changed only very slightly, with an overall increase of 0.4 p.p. Over the last 7 years, the ratio of women has increased at most Faculties (most notably FAST 5.9 p.p. and FaVU 4.9 p.p. and at FAST 7 p.p.), while a decrease has been recorded especially at FP (-4.6 p.p.) and FSI (-2.2 p.p.) .

BUT

5. [13] Distribution of studies by gender (%) (source: LFS 2016-2022)



5.[13] Distribution of studies by gender (%) (source: LFS 2016-2022)

Gender	2016	2017	2018	2019	2020	2021	2022
Women	28,3	28,6	28,8	28,9	29,2	28,2	27,9
Men	71,7	71,4	71,2	71,1	70,8	71,8	72,1

Faculties/Units

Figure 6. [13] Distribution of studies by sex %, by F/S (source: LFS)

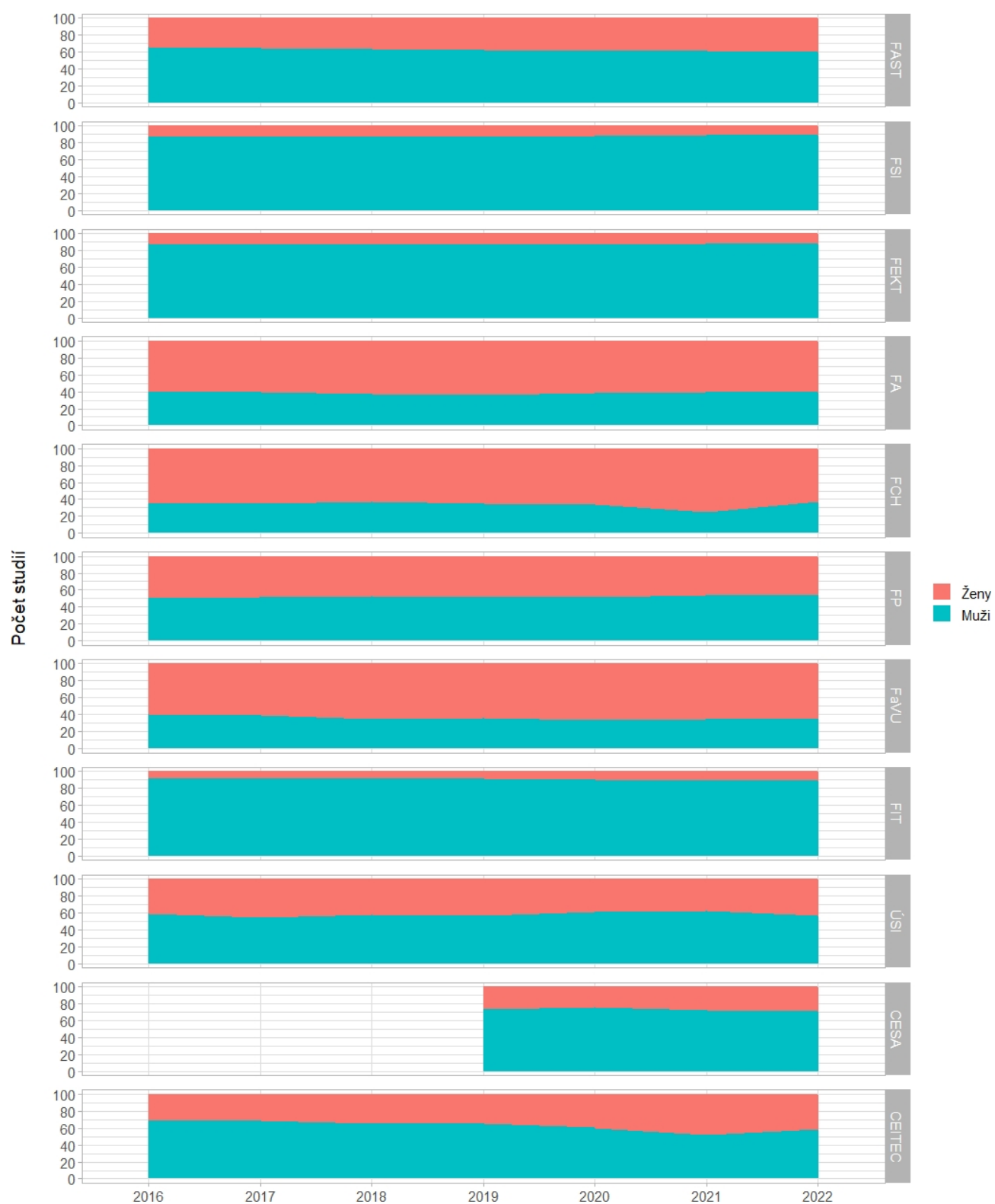


Table 6. [I3] Distribution of studies by sex %), by F/S (source: LFS

F/S	Gender	2016	2017	2018	2019	2020	2021	2022
FAST	Women	34,4	35,5	36,7	37,7	38,7	39,2	40,1
	Men	65,6	64,5	63,3	62,3	61,3	60,8	59,9
FSI	Women	12,9	13,1	13,6	13,2	12,1	11,6	10,7
	Men	87,1	86,9	86,4	86,8	87,9	88,4	89,3
FEKT	Women	12,4	13,1	13,7	13,6	13,6	12,3	12,7
	Men	87,6	86,9	86,3	86,4	86,4	87,7	87,3
FA	Women	60,9	60,5	62,7	64,0	61,8	60,9	60,9
	Men	39,1	39,5	37,3	36,0	38,2	39,1	39,1
FCH	Women	64,7	64,8	62,8	64,9	66,3	74,8	63,2
	Men	35,3	35,2	37,2	35,1	33,7	25,2	36,8
FP	Women	49,4	48,5	47,6	48,1	48,5	46,1	44,8
	Men	50,6	51,5	52,4	51,9	51,5	53,9	55,2
FaVU	Women	59,6	61,4	65,8	64,4	66,5	65,4	64,5
	Men	40,4	38,6	34,2	35,6	33,5	34,6	35,5
FIT	Women	8,7	9,0	9,0	9,0	9,9	10,4	10,8
	Men	91,3	91,0	91,0	91,0	90,1	89,6	89,2
USI	Women	41,5	46,1	42,7	43,7	38,4	38,3	43,1
	Men	58,5	53,9	57,3	56,3	61,6	61,7	56,9
CESA	Women				26,7	24,1	28,3	28,8
	Men				73,3	75,9	71,7	71,2
CEITEC	Women	31,9	31,6	34,3	34,5	39,7	47,8	41,5
	Men	68,1	68,4	65,7	65,5	60,3	52,2	58,5

Male and female employees

[I4] Number of and HRs

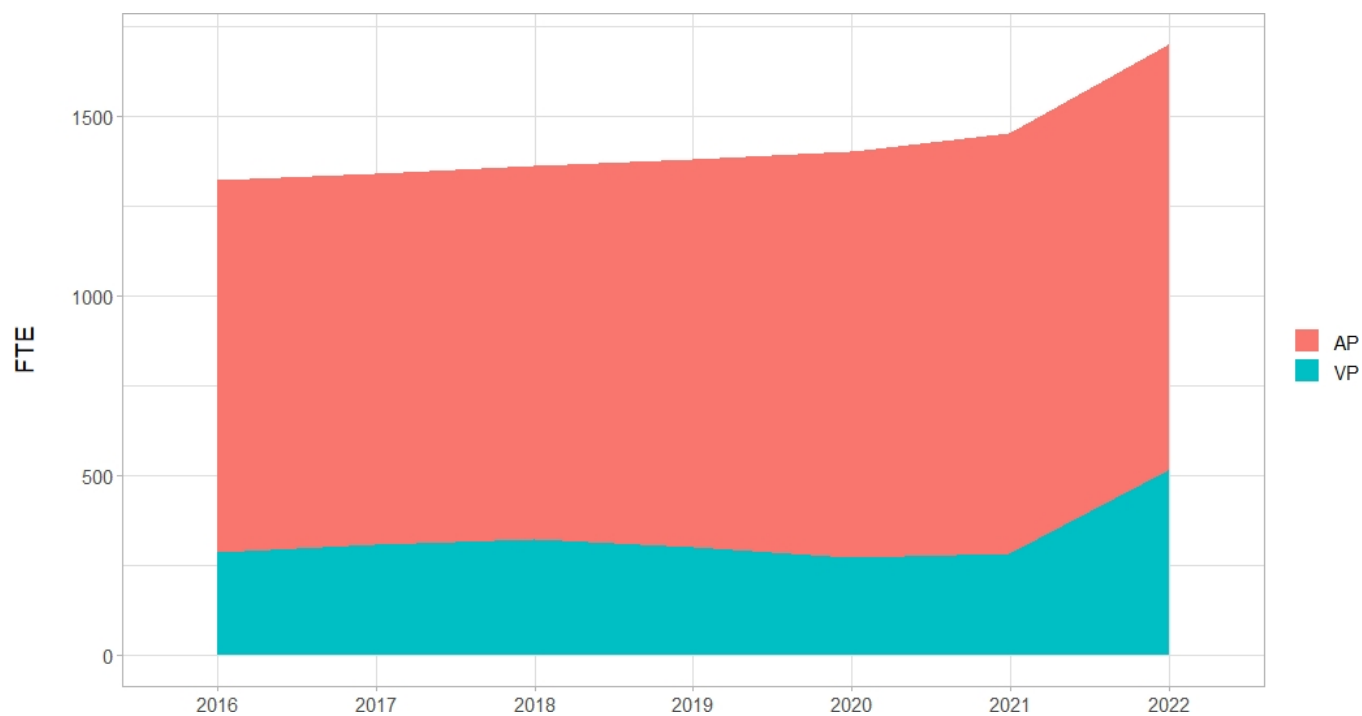
Currently, there are 1700.9 academic and research staff (AP and VP, FTE) working at the BUT, of which 70% are AP and 30% VP. The highest proportion of academic staff is in FP (98%), FA (97%) and FaVU (96%), while the lowest is in FIT (48%) and FEKT (64%).

the last 7 years, 380 new APs VPs have been added to the BUT (29% increase). The growth over the period under review linear, with the largest jump occurring in the last year under review. The increase in new FTEs (413) was

FSI (30% of the share) and FEKT (28% of the share) contributed the most.

BUT

[14] Number of APs and VPs (FTE) (source: VZoČ 2016-2022)

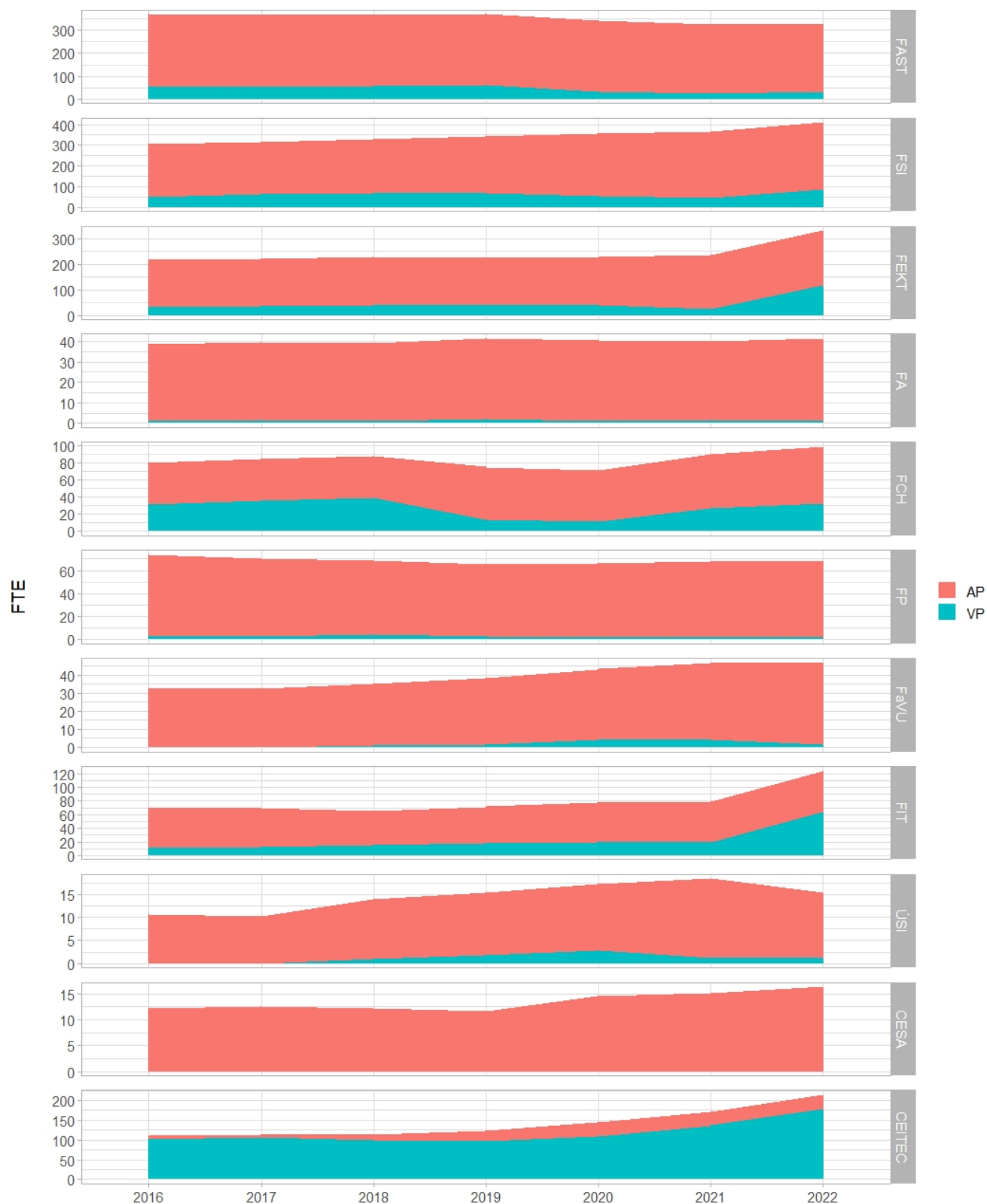


[14] Number of AP and VP (F)(source: VZoČ 2016-2022)

Type	2016	2017	2018	2019	2020	2021	2022
AP	1 034,5	1 031,6	1 037,4	1 078,3	1 128,0	1 168,4	1 182,6
VP	286,0	309,6	324,0	302,1	274,3	285,0	518,3

Faculties/units

[14] Number of AP and VP (FTE), by F/S (source: VZoČ 2016-2022)



[I4] Number of AP and VP (FTE), by F/S (source: VZoC 2016-2022)

F/S	Type	2016	2017	2018	2019	2020	2021	2022
FAST	AP	313,2	312,7	313,3	309,8	310,6	300,8	298,6
	VP	56,0	54,0	55,1	60,3	30,8	23,5	31,4
FSI	AP	256,0	255,6	260,8	275,8	302,4	320,2	325,0
	VP	49,8	61,5	68,9	65,5	55,6	45,2	86,0
FEKT	AP	185,7	187,0	187,9	185,5	189,0	210,5	213,9
	VP	31,6	35,4	39,5	40,7	37,8	24,9	118,8
FA	AP	37,6	38,2	37,9	39,3	39,2	38,4	40,2
	VP	1,0	1,4	1,1	2,1	1,0	1,4	1,1
FCH	AP	49,4	49,8	48,4	62,1	60,3	63,1	66,4
	VP	31,0	35,3	39,2	13,1	11,0	26,7	32,8
FP	AP	71,0	67,4	64,9	63,3	64,5	66,0	67,1
	VP	3,0	2,6	4,1	2,3	2,1	2,0	1,6
FaVU	AP	32,7	32,7	34,1	36,8	38,9	42,4	45,3
	VP	0,0	0,0	1,0	1,6	4,4	4,1	1,7
FIT	AP	58,0	56,8	49,9	53,1	57,5	59,5	60,2
	VP	11,2	13,0	14,8	18,4	20,0	19,6	64,4
USI	AP	10,7	10,3	13,1	13,6	14,4	17,3	14,1
	VP	0,0	0,0	0,9	1,8	2,9	1,1	1,3
CESA	AP	12,2	12,6	12,3	11,6	14,6	15,2	16,4
	VP	0,0	0,0	0,0	0,0	0,0	0,0	0,0
CEITEC	AP	8,0	8,5	14,8	27,5	36,6	35,0	35,4
	VP	102,1	106,4	99,4	96,2	108,6	136,6	179,2

[I5] Distribution of FTE AP by

In 2022, assistant professors (46%) accounted for the largest share of the group of academic staff, followed by associate professors (26%), professors (12%) and assistant professors (11%). Researchers involved in teaching activities accounted for 4% of this group, while lecturers accounted for the remaining 1%.

The qualification structure has not changed much during the 7 years under review, there has been a slight increase in the number of R&D staff involved in teaching activities (+3 p.p.), especially at the expense of assistant professors professors (identical -2 p.p.)

The most significant change in the structure was at CEITEC, where assistant professors and assistants significantly (-83 p.p.) and the number of VVaVPs increased (+95 p.p.).

BUT

Chart 9. [15] Distribution of FTEs by qualification structure (%), by qualification (source:

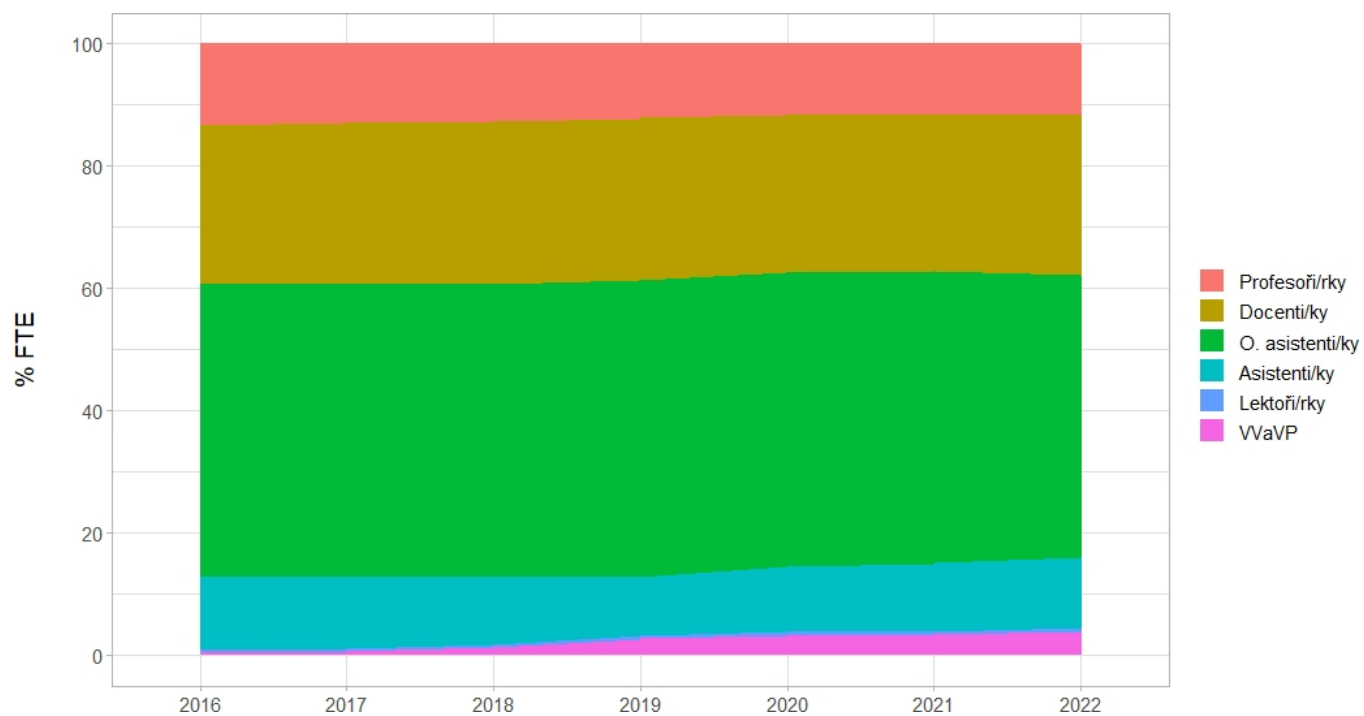


Table 9.[15] Distribution of FTEs by skill structure (%), by qualification (source:

Qualifications	2016	2017	2018	2019	2020	2021	2022
Professors	13,3	12,9	12,7	12,2	11,7	11,4	11,7
Associate professors	25,6	26,4	26,5	26,4	25,7	25,8	26,0
O. assistants	48,2	47,8	47,9	48,6	48,1	47,7	46,3
Assistants	11,9	11,8	11,0	9,6	10,6	11,1	11,4
Lecturers	0,4	0,5	0,4	0,5	0,5	0,5	0,7
VVaVP	0,5	0,6	1,5	2,8	3,4	3,5	3,9

Faculties/Units

Chart 10. [15] Distribution of FTE AP by skill structure (%), by qualification, by F/S (source: VZoČ)

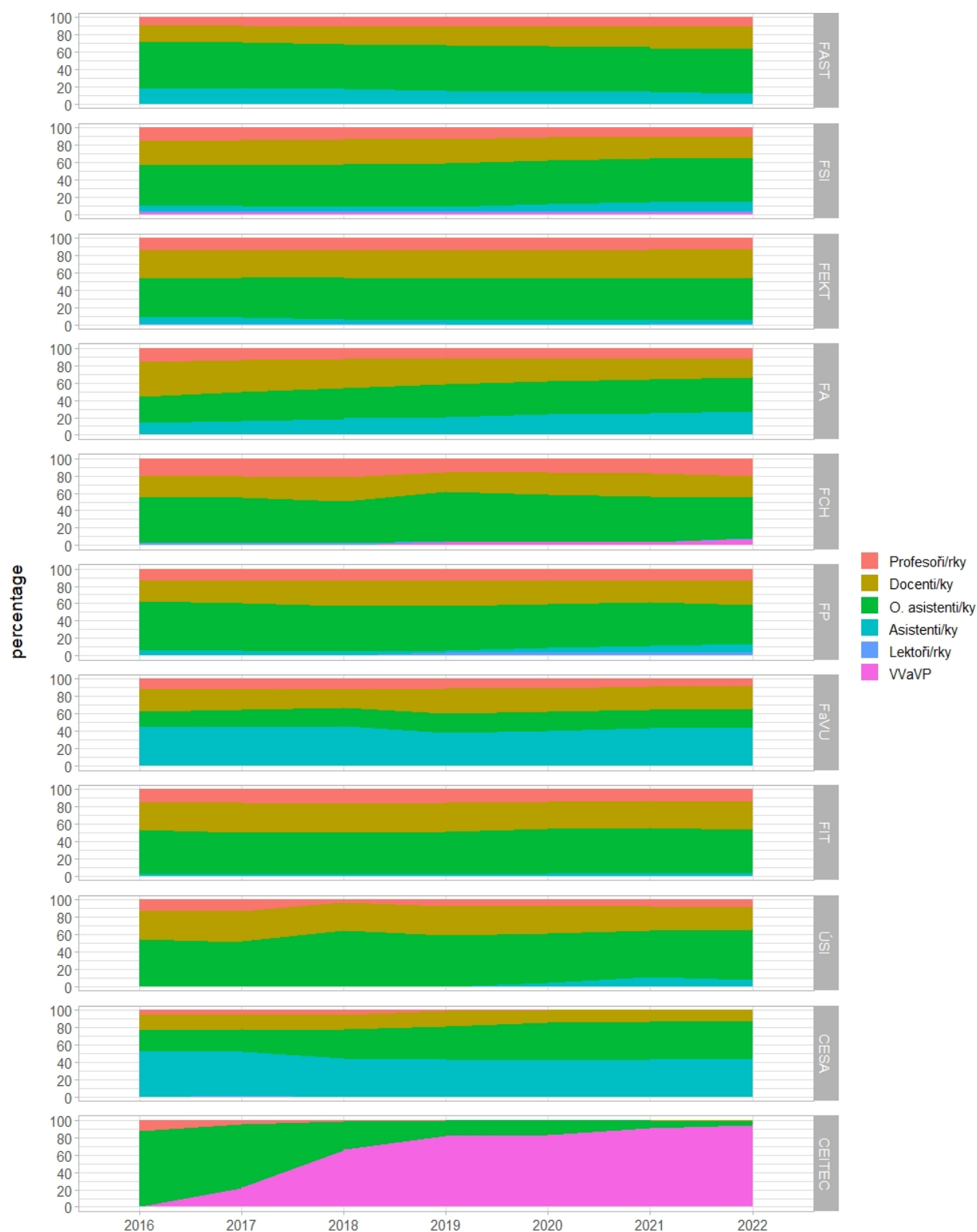


Table 10.[15] Distribution of FTE AP by skill structure (%), by qualification, by F/S (source: VZoČ)

F/S	Qualifications	2016	2017	2018	2019	2020	2021	2022
FAST	Professors	9,8	9,9	10,3	10,5	10,9	11,0	11,4
	Associate professors	18,1	19,0	20,4	21,8	22,5	23,8	24,6
	O. assistants	54,2	52,6	51,9	52,9	52,2	51,2	51,8
	Assistants	17,9	18,4	17,4	14,9	14,5	13,8	11,8
	Lecturers	0,0	0,0	0,0	0,0	0,0	0,2	0,4
	VVaVP	0,0	0,0	0,0	0,0	0,0	0,0	0,0
FSI	Professors	15,4	14,2	13,3	12,7	11,3	10,9	10,9
	Associate professors	28,5	29,6	29,5	28,2	26,4	24,6	25,1
	O. assistants	46,1	46,7	48,2	50,1	50,3	50,5	48,4
	Assistants	7,1	6,8	6,1	6,4	9,4	11,4	12,8
	Lecturers	0,8	0,9	0,8	0,7	0,7	0,7	0,7
	VVaVP	2,1	1,8	2,1	1,8	1,8	1,9	2,0
FEKT	Professors	14,7	14,6	14,5	14,6	14,8	13,3	13,5
	Associate professors	32,1	31,6	31,3	32,8	32,5	33,8	32,7
	O. assistants	44,4	45,2	47,7	47,1	47,2	48,3	47,8
	Assistants	8,3	7,9	6,2	5,4	5,4	4,2	5,4
	Lecturers	0,5	0,8	0,3	0,1	0,1	0,4	0,6
	VVaVP	0,0	0,0	0,0	0,0	0,0	0,0	0,0
FA	Professors	16,0	13,2	11,9	11,8	12,4	12,0	11,2
	Associate professors	39,6	37,6	33,6	29,3	25,8	24,0	22,6
	O. assistants	30,6	32,8	35,6	38,1	37,8	39,2	39,3
	Assistants	13,8	16,4	18,9	20,8	24,0	24,8	27,0
	Lecturers	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	VVaVP	0,0	0,0	0,0	0,0	0,0	0,0	0,0
FCH	Professors	20,0	19,8	21,2	16,1	15,6	17,0	20,5
	Associate professors	24,7	25,6	28,4	22,1	26,1	26,7	24,5
	O. assistants	53,3	52,6	48,3	57,1	54,9	52,3	46,6
	Assistants	0,0	0,0	0,0	0,0	0,0	0,0	0,3
	Lecturers	2,0	2,0	2,1	1,1	0,0	0,0	0,8
	VVaVP	0,0	0,0	0,0	3,7	3,4	3,9	7,4
FP	Professors	13,0	13,3	14,2	13,9	13,0	13,4	13,6
	Associate professors	24,0	26,0	28,8	29,0	27,4	25,4	28,5
	O. assistants	56,4	54,9	52,4	51,2	50,5	50,3	44,4
	Assistants	6,7	5,8	4,6	2,7	4,0	6,8	8,9
	Lecturers	0,0	0,0	0,0	3,2	5,0	4,1	3,8
	VVaVP	0,0	0,0	0,0	0,0	0,0	0,0	0,9
FaVU	Professors	12,2	12,2	11,7	10,9	10,3	8,4	7,0
	Associate professors	24,8	23,2	21,1	28,6	27,6	27,0	27,5
	O. assistants	17,1	20,2	20,8	22,8	21,9	21,3	22,1
	Assistants	45,9	44,3	46,4	37,7	40,3	43,4	43,4
	Lecturers	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	VVaVP	0,0	0,0	0,0	0,0	0,0	0,0	0,0
FIT	Professors	15,0	15,3	15,9	15,3	13,7	13,2	14,5
	Associate professors	31,5	34,7	34,2	33,4	31,9	31,5	32,0

F/S	Qualifications	2016	2017	2018	2019	2020	2021	2022
	O. assistants	50,8	47,9	48,2	49,7	51,0	52,1	49,0
	Assistants	2,7	2,2	1,7	1,6	3,4	2,9	3,5
	Lecturers	0,0	0,0	0,0	0,0	0,0	0,0	0,2
	VVaVP	0,0	0,0	0,0	0,0	0,0	0,3	0,7
USI	Professors	13,1	13,6	3,4	7,2	7,9	7,8	9,2
	Associate professors	32,7	34,8	31,5	33,3	31,0	28,1	25,2
	O. assistants	54,2	51,6	65,1	59,4	57,3	53,4	58,3
	Assistants	0,0	0,0	0,0	0,0	3,7	10,7	7,3
	Lecturers	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	VVaVP	0,0	0,0	0,0	0,0	0,0	0,0	0,0
CESA	Professors	5,7	5,5	5,7	0,5	0,0	0,0	0,0
	Associate professors	17,2	16,6	17,1	18,0	14,3	13,8	12,8
	O. assistants	24,6	25,2	33,1	38,0	43,5	43,2	43,2
	Assistants	52,5	50,7	44,0	43,5	42,2	43,0	44,0
	Lecturers	0,0	2,0	0,0	0,0	0,0	0,0	0,0
	VVaVP	0,0	0,0	0,0	0,0	0,0	0,0	0,0
CEITEC	Professors	12,4	4,7	1,4	0,5	0,4	0,0	0,0
	Associate professors	0,0	0,0	0,0	0,0	0,0	0,0	0,7
	O. assistants	87,6	72,8	32,7	17,7	16,2	8,8	4,6
	Assistants	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	Lecturers	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	VVaVP	0,0	22,5	65,9	81,7	83,4	91,2	94,7

[I6] Distribution of APs and HRs by age category (%)

In the last reference year, the largest age categories of male and female employees (APs and VPs) were those aged 30-39 9%) and 40-49 Employees now represent 76%. There have been relatively large changes in the age structure of APs and VPs over the course of the reference year. The of the age group up to 49 years has increased 9 p.p. There has been an increase in only two categories, the share of employees up to 29 years by 10 p.p., the same was the case for the 40-49 age group. There was a decrease not only in the over 49 age group, but especially in the 30-39 age group (-11 p.p.).

BUT

Chart 11. [I6] Distribution of AP and HR (in FTE) (%) (source: LFS 2016-2022)

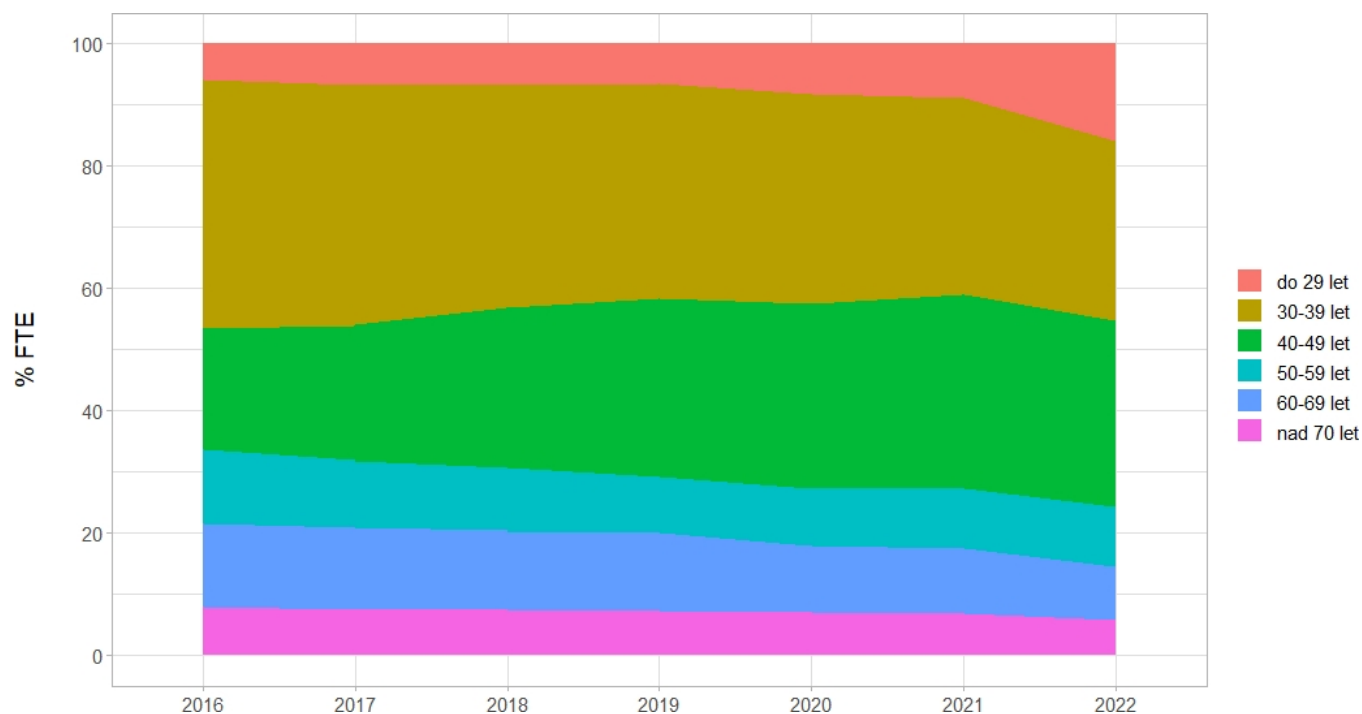


Table 11: [I6] Distribution of AP and VP (FTE) (%) (source: LFS 2016-2022)

Age	2016	2017	2018	2019	2020	2021	2022
up to 29 years old	5,8	6,8	6,8	6,5	8,1	8,8	15,8
30-39 years old	40,7	39,2	36,4	35,1	34,3	32,3	29,3
40-49 years old	19,7	22,1	26,0	29,2	30,2	31,7	30,5
50-59 years old	12,2	11,0	10,4	9,3	9,4	9,7	9,7
60-69 years old	13,5	13,3	12,9	12,7	10,9	10,6	8,7
over 70 years old	8,1	7,6	7,5	7,4	7,1	6,9	5,9

[I7] Distribution of AP and HR by gender (%)

Currently, women make up about one-fifth of APs VPs (21). Thus, the gender distribution male and female employees is very similar to the same distribution for studies.

Compared to 7 years ago, the number of women has decreased slightly (-1 p.p.).

BUT

Chart 12. [I7] Distribution of AP and HR (in FTE) gender (%) LFS 2016-2022

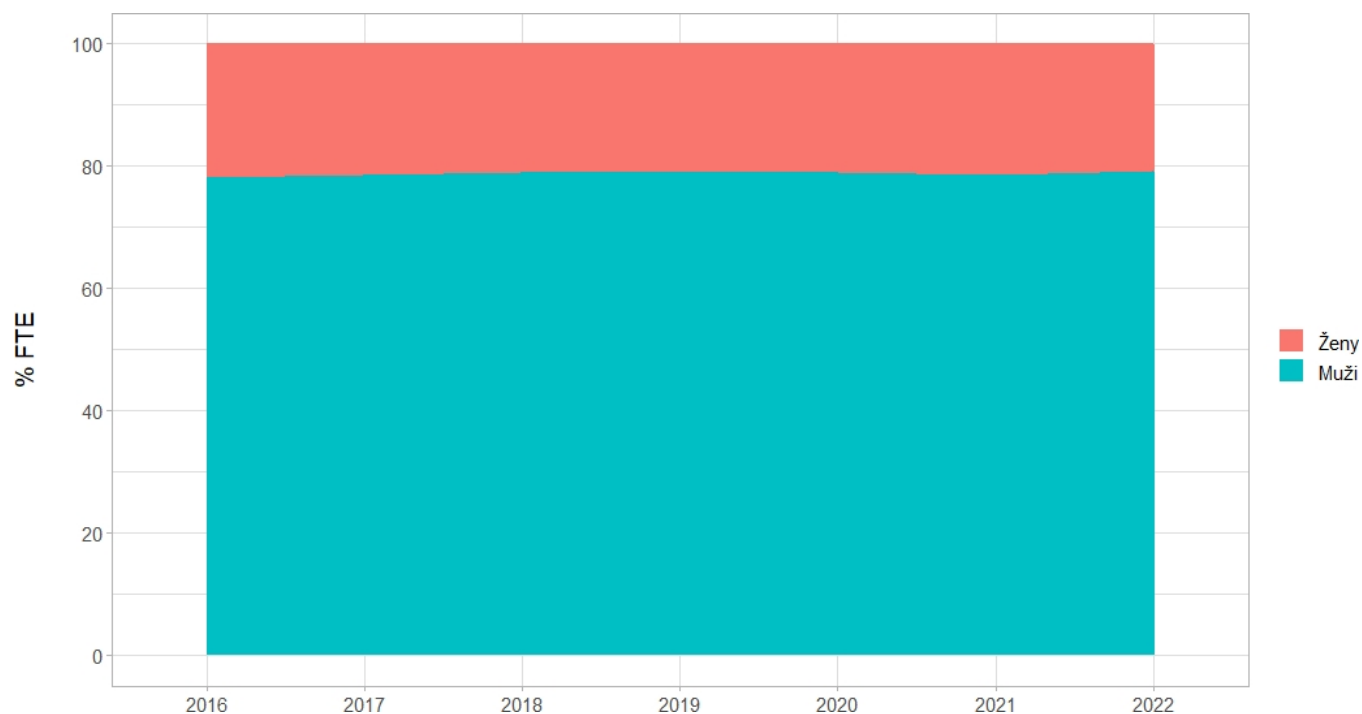


Table 12. [I7] Distribution of AP and VP by gender (%) (source: LFS)

Gender	2016	2017	2018	2019	2020	2021	2022
Women	21,8	21,4	21,0	20,9	21,0	21,4	20,7
Men	78,2	78,6	79,0	79,1	79,0	78,6	79,3

Studies on male/female employees

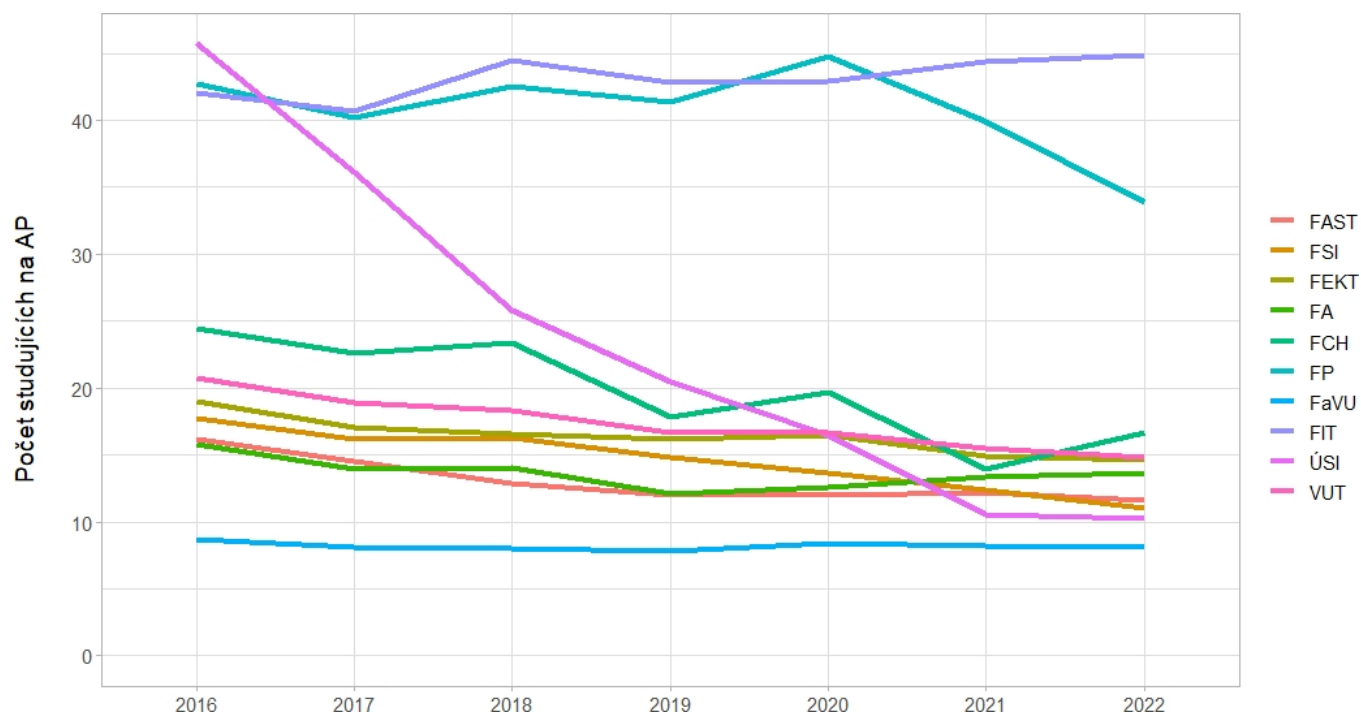
[I8] Number of studies per AP (FTE)

At the BUT, there are currently an average of 14.8 studies per AP. The number of studies per AP is significantly above average at FIT (44.9) and at FP (33.8), while other faculties are close to the average.

the last ten years, this ratio has been steadily but slightly decreasing (-6.0 studies), even at the Faculty level, with the only exceptions being FIT (+3.5 studies, but this ratio is quite volatile for and the IUI, where there has been a dramatic decrease of 47 studies per academic staff member.

BUT

13. [I8] Number of studies per (FTE) (source: LFS 2016-2022)



13. [I8] Number of students at (FTE) (source: LFS 2016-2022)

F/S	2016	2017	2018	2019	2020	2021	2022
FAST	16,2	14,5	12,8	12,0	12,0	12,2	11,6
FSI	17,7	16,2	16,3	14,8	13,7	12,4	11,0
FEKT	19,0	17,1	16,5	16,2	16,5	14,9	14,7
FA	15,8	13,9	14,0	12,1	12,6	13,4	13,6
FCH	24,4	22,6	23,4	17,8	19,7	14,0	16,7
FP	42,7	40,2	42,5	41,4	44,7	39,9	33,8
FaVU	8,7	8,1	8,0	7,9	8,4	8,3	8,1
FIT	42,1	40,6	44,4	42,9	43,0	44,4	44,9
ÚSI	45,7	36,2	25,8	20,5	16,4	10,6	10,2
BUT	20,8	18,9	18,3	16,7	16,6	15,5	14,8

1.2. Demand for studies

Login

[I9] Number of registrants

In 2022, 15,931 students applied to the BUT, of which 73% were interested in Bachelor's Studies, 24% in Master's Studies and 3% in Doctoral Studies.

the last 7 years, the total number of applicants has fallen 16%, studies (-40%).

The biggest drop in interest was recorded ÚSI (-78%), FEKT (-55%) and FP (-39%). On the other hand, CEITEC, FCH and FaVU managed to attract more applicants than in the past (+183%, +98% and +74%, respectively).

BUT

Chart 14. [I9] Number of enrolments, by type (source: VZoČ 2016-2022)

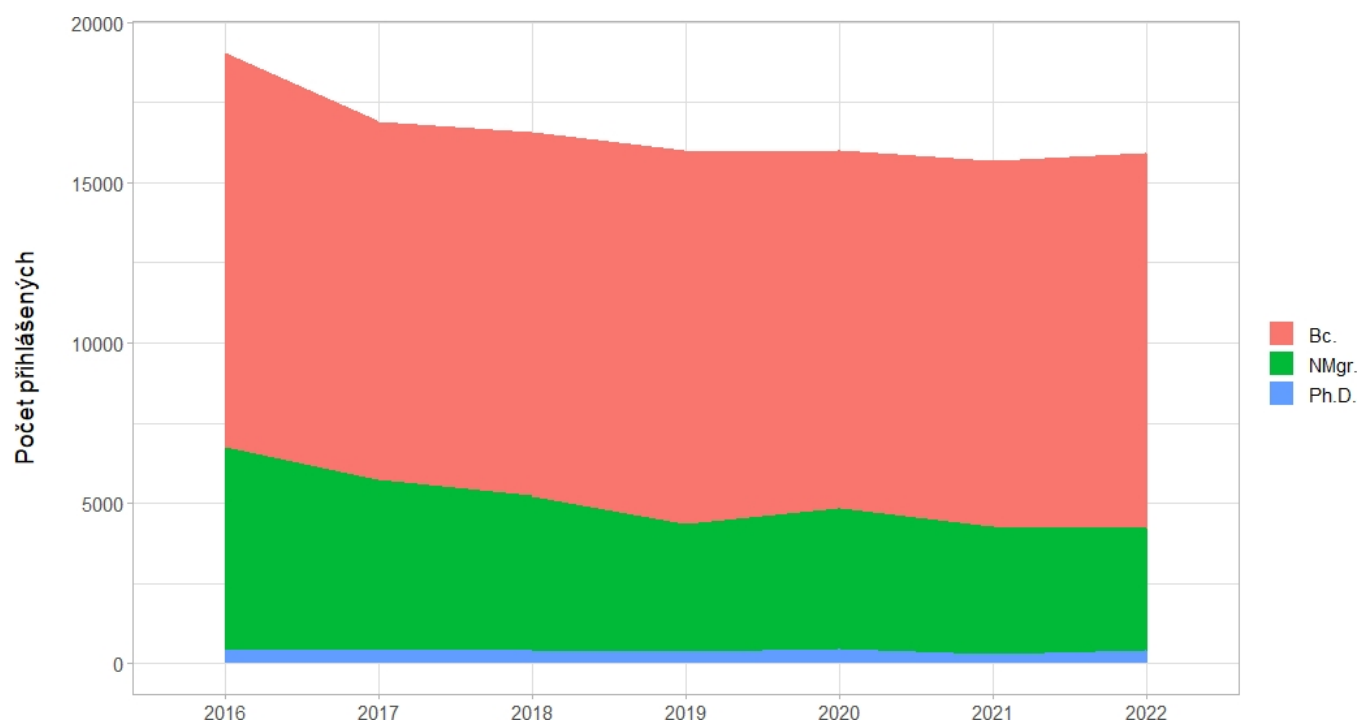


Table 14. [I9] Number of enrolments, by type (source: VZoČ 2016-2022)

Type of study	2016	2017	2018	2019	2020	2021	2022
Bc.	12 12	11 163	11 51	11 19	1 146	11 420	11 706
NMgr.	6 86	5 317	4 804	3 975	4 72	3 964	3 798
Ph.D.	479	428	429	391	474	310	427

Faculties/units

Chart 15. [19] Number of enrolments, by type by (source: VZoČ 2016-2022)

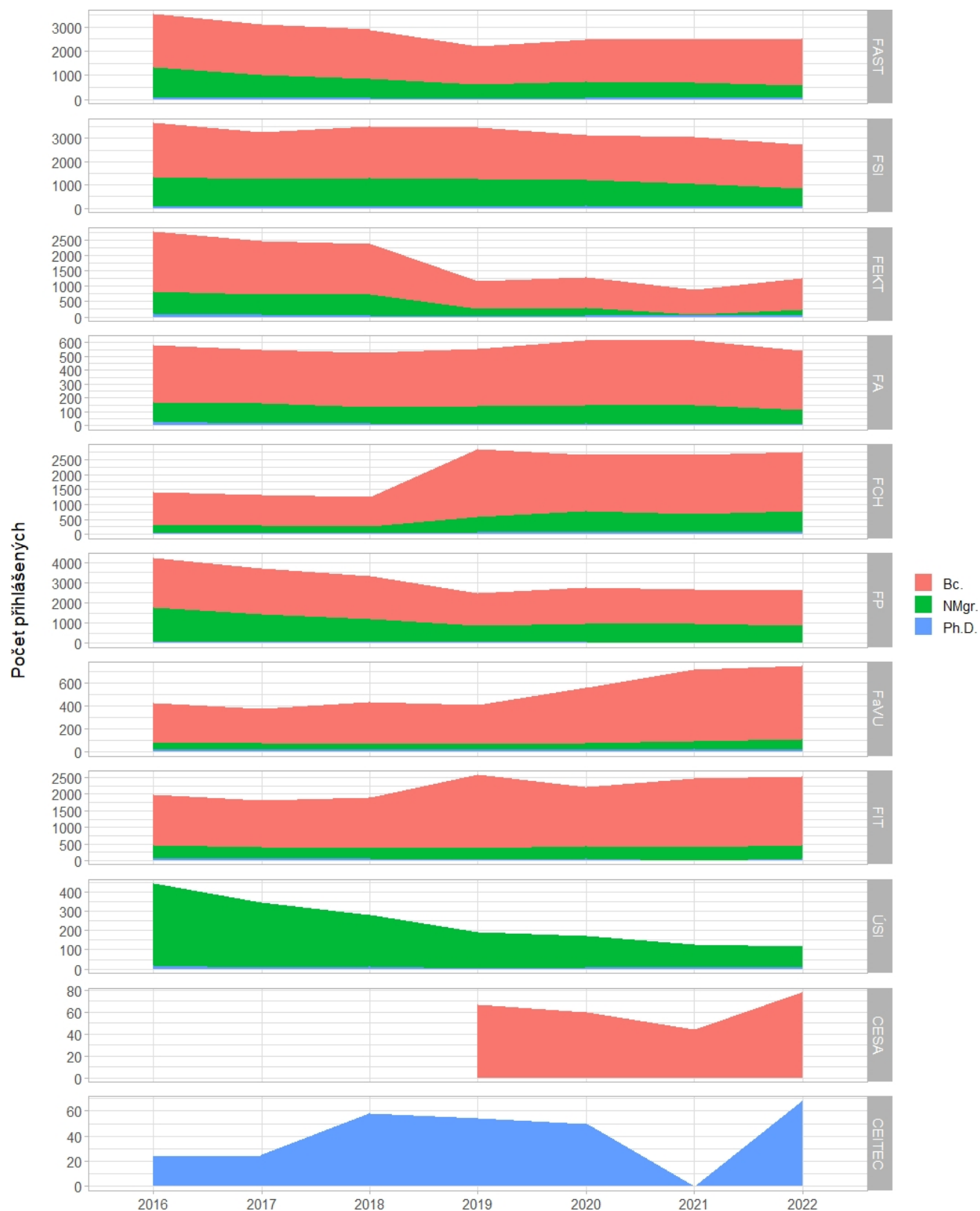


Table 15.[I9] Number of enrolments, by type by (source: VZoČ 2016-2022)

F/S	Type of study	2016	2017	2018	2019	2020	2021	2022
FAST	Bc.	2 193	2 6	2 038	1 78	1 38	1 767	1 99
	NMgr.	1 259	944	775	560	680	639	536
	Ph.D.	81	80	84	51	63	57	68
FSI	Bc.	2 338	1 84	2 232	2 22	1 930	1 989	1 56
	NMgr.	1 48	1 189	1 19	1 72	1 132	1 000	790
	Ph.D.	83	84	68	86	95	72	68
FEKT	Bc.	1 934	1 706	1 618	905	995	814	997
	NMgr.	727	671	685	234	233	41	201
	Ph.D.	108	71	58	19	57	33	43
FA	Bc.	413	388	392	411	467	468	430
	NMgr.	143	146	119	131	131	136	102
	Ph.D.	29	15	14	13	20	13	10
FCH	Bc.	1 92	1 12	1 05	2 4	1 870	1 54	1 975
	NMgr.	265	240	211	494	685	612	717
	Ph.D.	40	51	41	77	85	74	74
FP	Bc.	2 462	2 278	2 62	1 610	1 22	1 95	1 38
	NMgr.	1 752	1 78	1 19	804	907	947	849
	Ph.D.	32	33	33	35	39	25	21
FaVU	Bc.	356	302	368	340	482	626	643
	NMgr.	55	59	47	50	62	71	86
	Ph.D.	20	15	20	18	15	24	21
FIT	Bc.	1 24	1 17	1 536	2 202	1 782	2 063	2 090
	NMgr.	413	354	332	346	378	399	411
	Ph.D.	44	44	41	33	41	2	43
USI	Bc.	0	0	0	0	0	0	0
	NMgr.	424	336	267	184	164	119	106
	Ph.D.	18	10	12	5	9	10	11
CESA	Bc.				67	60	44	78
	NMgr.				0	0	0	0
	Ph.D.				0	0	0	0
CEITEC	Bc.	0	0	0	0	0	0	0
	NMgr.	0	0	0	0	0	0	0
	Ph.D.	24	25	58	54	50	0	68

Přijetí

[I10] Number of admissions

In the last reporting year 2022, 9050 male and female applicants were admitted to the BUT, 68% of whom were admitted to Bachelor's Study, 28% for Master's Study and for Doctoral Study.

the last 7 years, the number of admissions has fallen 35%, with the largest drop The highest decrease in the number of admissions over the period under review was recorded at the Institute of Science and Technology (-71%), the Faculty of Physical Education (-55%) and the Faculty of Science and Technology (-55%).
admissions grew CEITEC (+89%), FCH (+54%) FaVU (+28%).

BUT

Chart 16. Number of admitted students, by type (source: VZoČ 2016-2022)

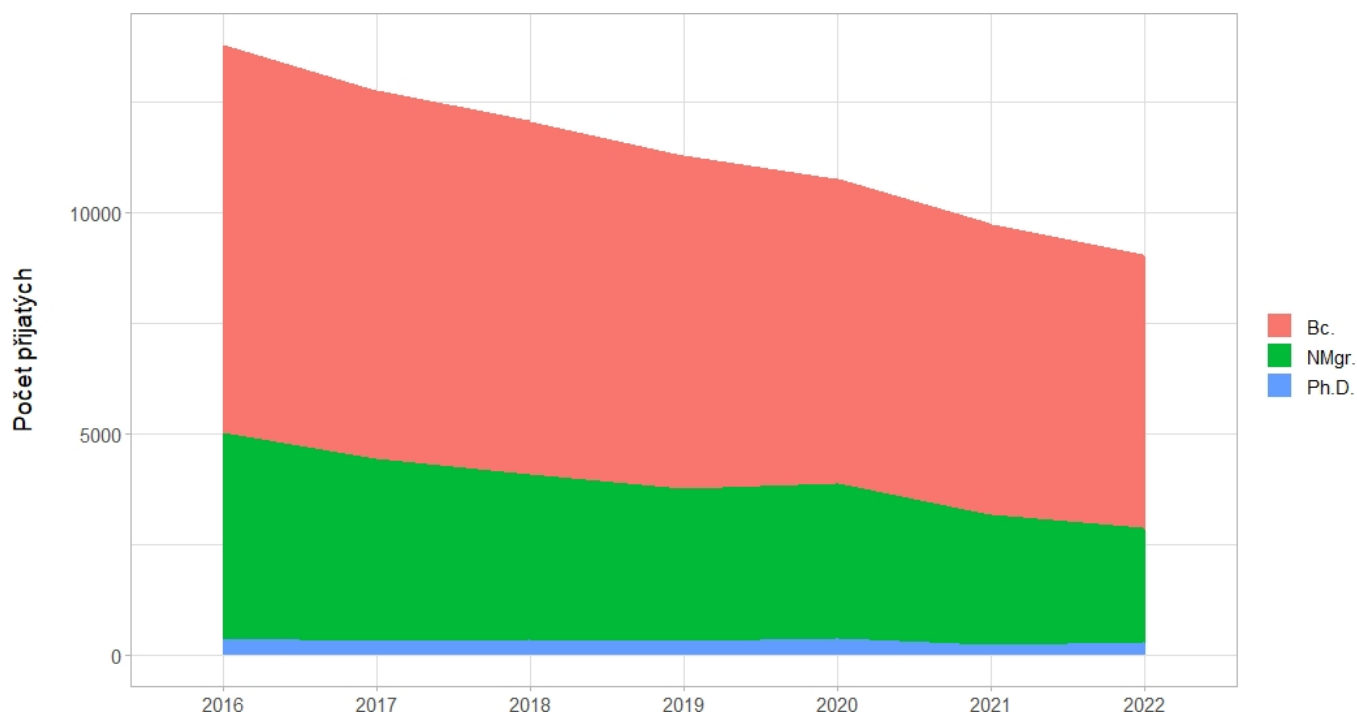


Table 16 Number of admitted students, by type (source: VZoČ 2016-2022)

Type of study	2016	2017	2018	2019	2020	2021	2022
Bc.	8 720	8 324	7 977	7 516	6 970	6 573	6 172
NMgr.	4 642	4 920	3 746	3 437	3 494	2 934	2 577
Ph.D.	394	351	360	340	391	244	301

Faculties/Units

Chart 17. Number of admitted students, by type by (source: VZoČ 2016-2022)

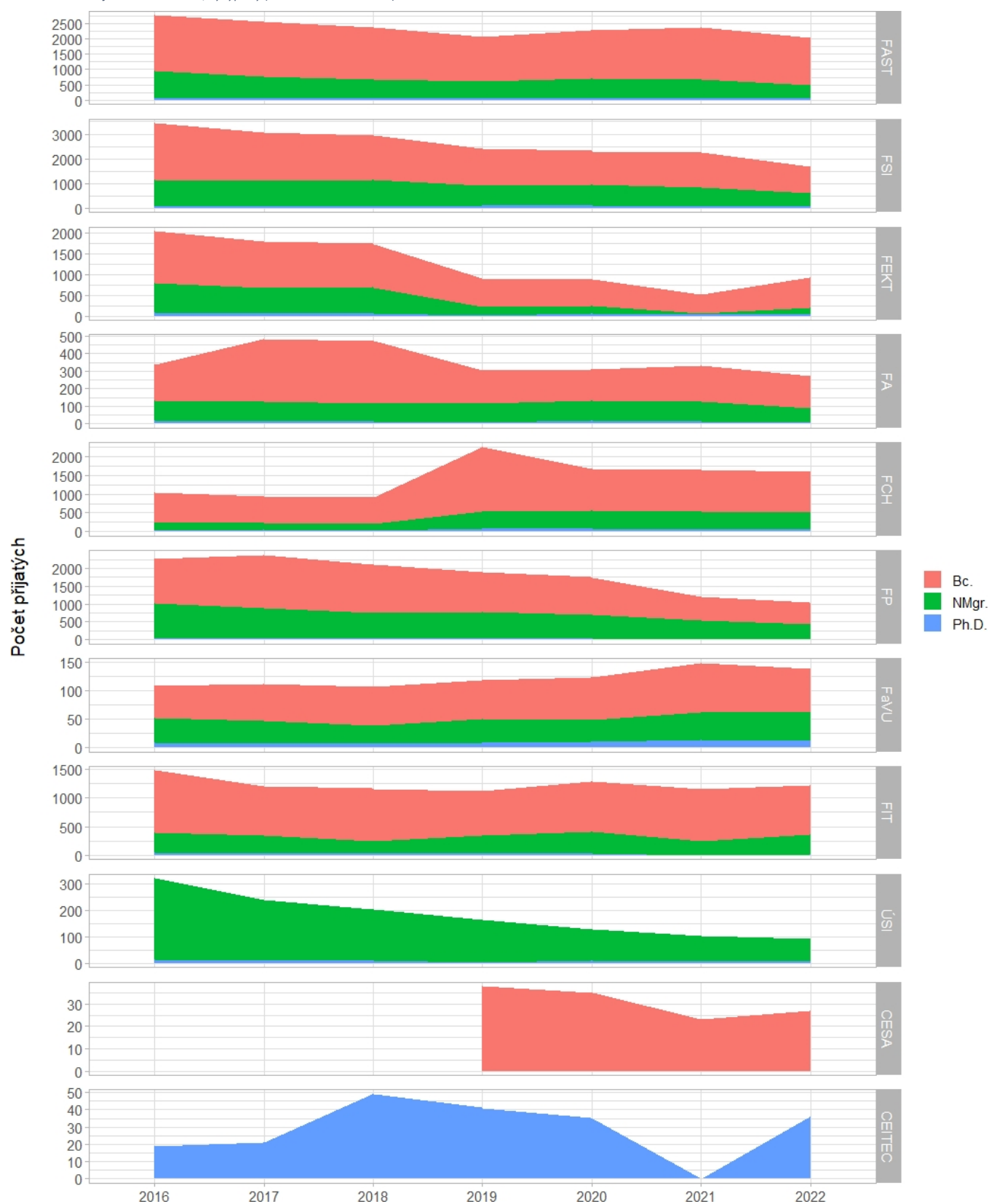


Table 17 Number of admissions, by type by (source: VZoS 2016-2022)

F/S	Type of study	2016	2017	2018	2019	2020	2021	2022
FAST	Bc.	1 29	1 774	1 99	1 58	1 580	1 688	1 527
	NMgr.	875	717	604	554	641	634	454
	Ph.D.	65	64	70	51	52	52	46
FSI	Bc.	2 294	1 932	1 791	1 471	1 34	1 414	1 93
	NMgr.	1 72	1 35	1 94	841	871	771	541
	Ph.D.	70	78	63	85	85	63	57
FEKT	Bc.	1 270	1 123	1 058	669	638	446	735
	NMgr.	693	620	638	205	187	33	147
	Ph.D.	90	51	52	17	54	29	42
FA	Bc.	205	356	356	192	178	204	183
	NMgr.	109	113	105	107	117	116	83
	Ph.D.	21	14	13	7	16	11	6
FCH	Bc.	796	710	717	1 725	1 12	1 120	1 81
	NMgr.	202	173	161	454	483	482	461
	Ph.D.	40	50	39	76	72	54	57
FP	Bc.	1 242	1 501	1 66	1 124	1 56	677	587
	NMgr.	993	858	713	756	663	509	423
	Ph.D.	27	21	24	22	26	15	17
FaVU	Bc.	57	66	68	68	74	87	76
	NMgr.	43	39	33	42	39	49	51
	Ph.D.	8	7	6	8	10	13	11
FIT	Bc.	1 089	862	922	771	880	914	863
	NMgr.	346	307	205	317	374	243	333
	Ph.D.	41	36	33	30	32	2	21
USI	Bc.	0	0	0	0	0	0	0
	NMgr.	309	230	193	161	119	97	84
	Ph.D.	13	9	11	3	9	5	8
CESA	Bc.				38	35	23	27
	NMgr.				0	0	0	0
	Ph.D.				0	0	0	0
CEITEC	Bc.	0	0	0	0	0	0	0
	NMgr.	0	0	0	0	0	0	0
	Ph.D.	19	21	49	41	35	0	36

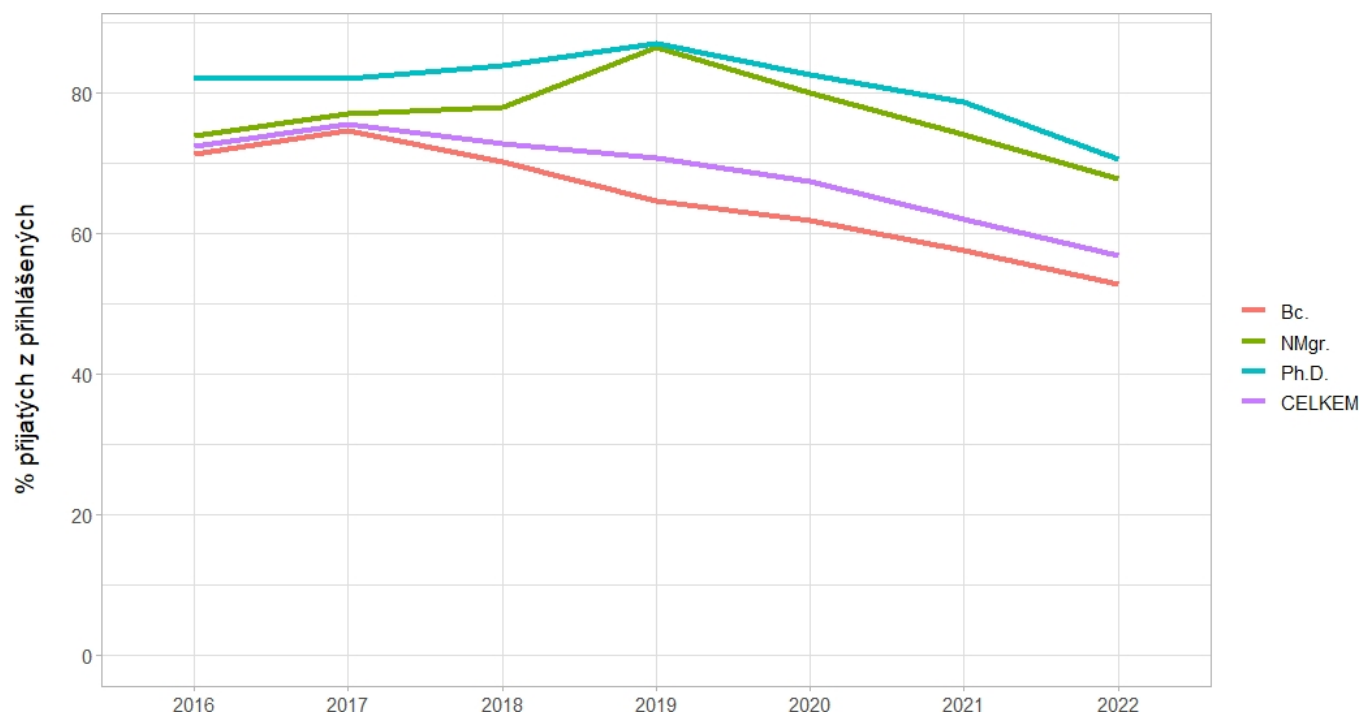
[I11] Percentage of admissions among applicants (%)

The of admitted students the enrolled students for the whole BUT is currently 57%, the highest share is for Doctoral Studies (71%) and Bachelor's Study 53%. The proportions of admissions are at FAST (81%), ÚSI (79%) (75%), while the lowest are at FaVU (18%) and FP (39%).

The overall proportion of applicants to enrolments for the BUT has decreased over the last seven years, with a decline starting in 2017 for Bachelor's Studies, and two years later Master's Studies also started to decline and doctoral. highest decrease in the share occurred FSI (by 31 p.p.) and FIT (by 27 p.p.).

BUT

Chart 18. Percentage of admitted students (%), by type of study (source:



18Percentage of admitted students (%), by type of study (source: 2016-2022)

Type of study	2016	2017	2018	2019	2020	2021	2022
Bc.	71,3	74,6	70,3	64,7	61,9	57,6	52,7
NMgr.	73,8	77,0	78,0	86,5	79,9	74,0	67,9
Ph.D.	82,3	82,0	83,9	87,0	82,5	78,7	70,5
TOTAL	72,4	75,5	72,9	70,6	67,4	62,1	56,8

Faculties/Units

Chart 19. Percentage of admissions of enrolled students, by type of study, by F/S (source: VZoČ)

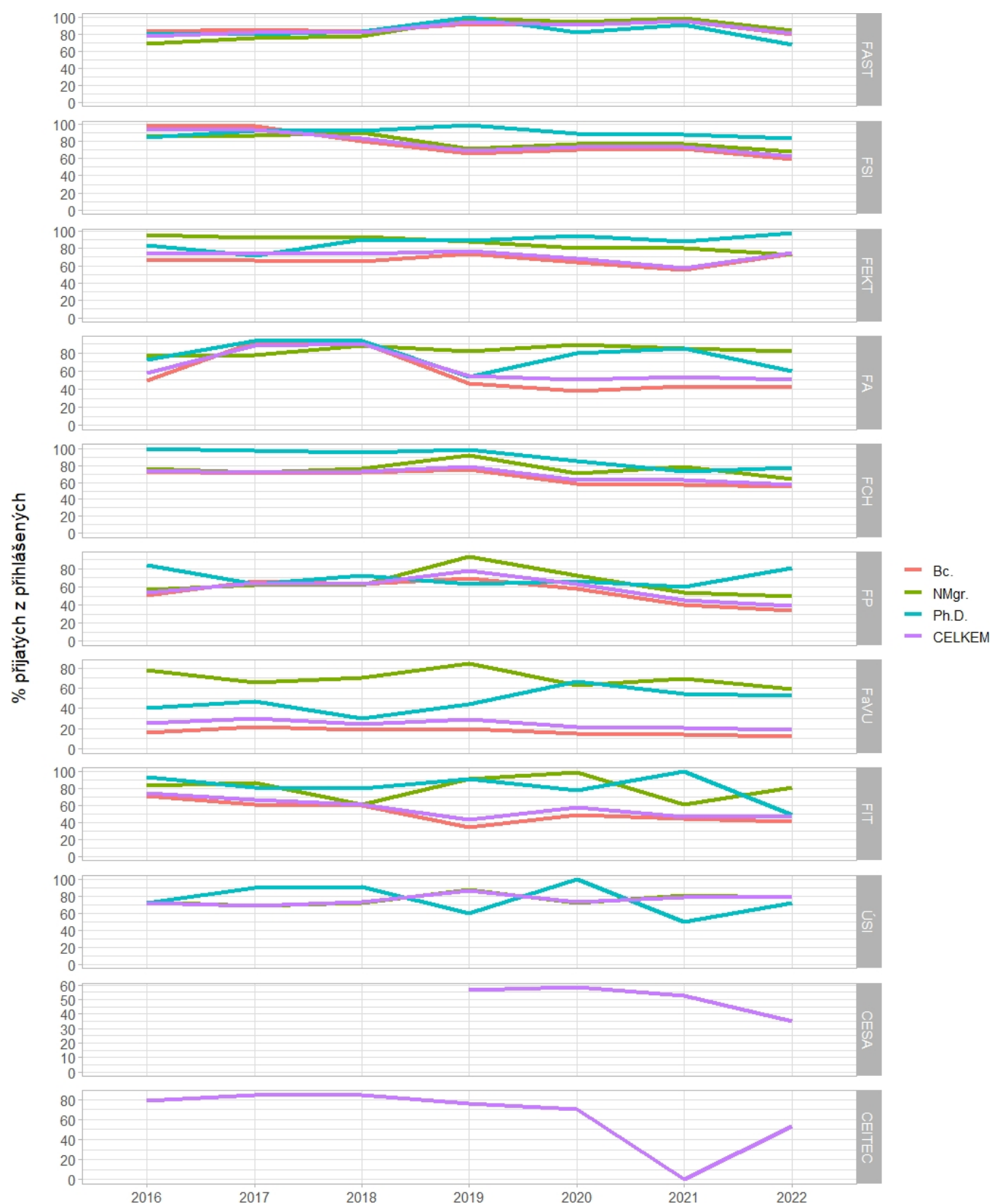


Table 19] Percentage of admissions (%), by type of study, by F/S (source: VZoS)

F/S	Type of study	2016	2017	2018	2019	2020	2021	2022
FAST	Bc.	83,4	85,5	83,4	92,4	90,9	95,5	80,4
	NMgr.	69,5	76,0	77,9	98,9	94,3	99,2	84,7
	Ph.D.	80,2	80,0	83,3	100,0	82,5	91,2	67,6
	TOTAL	78,4	82,4	81,9	94,2	91,6	96,4	81,0
FSI	Bc.	98,1	97,4	80,2	66,2	70,2	71,1	58,9
	NMgr.	85,9	87,0	89,7	71,8	76,9	77,1	68,5
	Ph.D.	84,3	92,9	92,6	98,8	89,5	87,5	83,8
	TOTAL	93,6	93,5	83,8	68,9	73,2	73,4	62,3
FEKT	Bc.	65,7	65,8	65,4	73,9	64,1	54,8	73,7
	NMgr.	95,3	92,4	93,1	87,6	80,3	80,5	73,1
	Ph.D.	83,3	71,8	89,7	89,5	94,7	87,9	97,7
	TOTAL	74,1	73,3	74,0	76,9	68,4	57,2	74,5
FA	Bc.	49,6	91,8	90,8	46,7	38,1	43,6	42,6
	NMgr.	76,2	77,4	88,2	81,7	89,3	85,3	81,4
	Ph.D.	72,4	93,3	92,9	53,8	80,0	84,6	60,0
	TOTAL	57,3	88,0	90,3	55,1	50,3	53,6	50,2
FCH	Bc.	72,9	70,2	71,3	75,5	58,9	57,3	54,7
	NMgr.	76,2	72,1	76,3	91,9	70,5	78,8	64,3
	Ph.D.	100,0	98,0	95,1	98,7	84,7	73,0	77,0
	TOTAL	74,3	71,6	73,0	79,0	62,8	62,7	57,8
FP	Bc.	50,4	65,9	63,2	69,8	58,0	39,9	33,8
	NMgr.	56,7	62,3	62,1	94,0	73,1	53,7	49,8
	Ph.D.	84,4	63,6	72,7	62,9	66,7	60,0	81,0
	TOTAL	53,3	64,5	62,9	77,7	63,0	45,0	39,4
FaVU	Bc.	16,0	21,9	18,5	20,0	15,4	13,9	11,8
	NMgr.	78,2	66,1	70,2	84,0	62,9	69,0	59,3
	Ph.D.	40,0	46,7	30,0	44,4	66,7	54,2	52,4
	TOTAL	25,1	29,8	24,6	28,9	22,0	20,7	18,4
FIT	Bc.	71,5	60,8	60,0	35,0	49,4	44,3	41,3
	NMgr.	83,8	86,7	61,7	91,6	98,9	60,9	81,0
	Ph.D.	93,2	81,8	80,5	90,9	78,0	100,0	48,8
	TOTAL	74,5	66,4	60,8	43,3	58,4	47,0	47,8
USI	Bc.	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	NMgr.	72,9	68,5	72,3	87,5	72,6	81,5	79,2
	Ph.D.	72,2	90,0	91,7	60,0	100,0	50,0	72,7
	TOTAL	72,9	69,1	73,1	86,8	74,0	79,1	78,6
CESA	Bc.				56,7	58,3	52,3	34,6
	NMgr.				0,0	0,0	0,0	0,0
	Ph.D.				0,0	0,0	0,0	0,0
	TOTAL				56,7	58,3	52,3	34,6
CEITEC	Bc.	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	NMgr.	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	Ph.D.	79,2	84,0	84,5	75,9	70,0	0,0	52,9
	TOTAL	79,2	84,0	84,5	75,9	70,0	0,0	52,9

Enrolled

[I12] Number of enrolled

In 2022, the BUT enrolled 7,425 applicants, of which 67% were enrolled in Bachelor's Studies, 30% in Master's Studies and 4% in Doctoral Studies.

Over the last 10 years, the number of enrolments has fallen 15%.

The decrease the number of admissions over the last 10 years was recorded ÚSI (-66%), FEKT (-63%) and FP (-35%), the increase was recorded at FCH (+129%) and FaVU (+35%).

BUT

Chart 20. Number of students enrolled, by type (source: VZoČ 2016-2022)

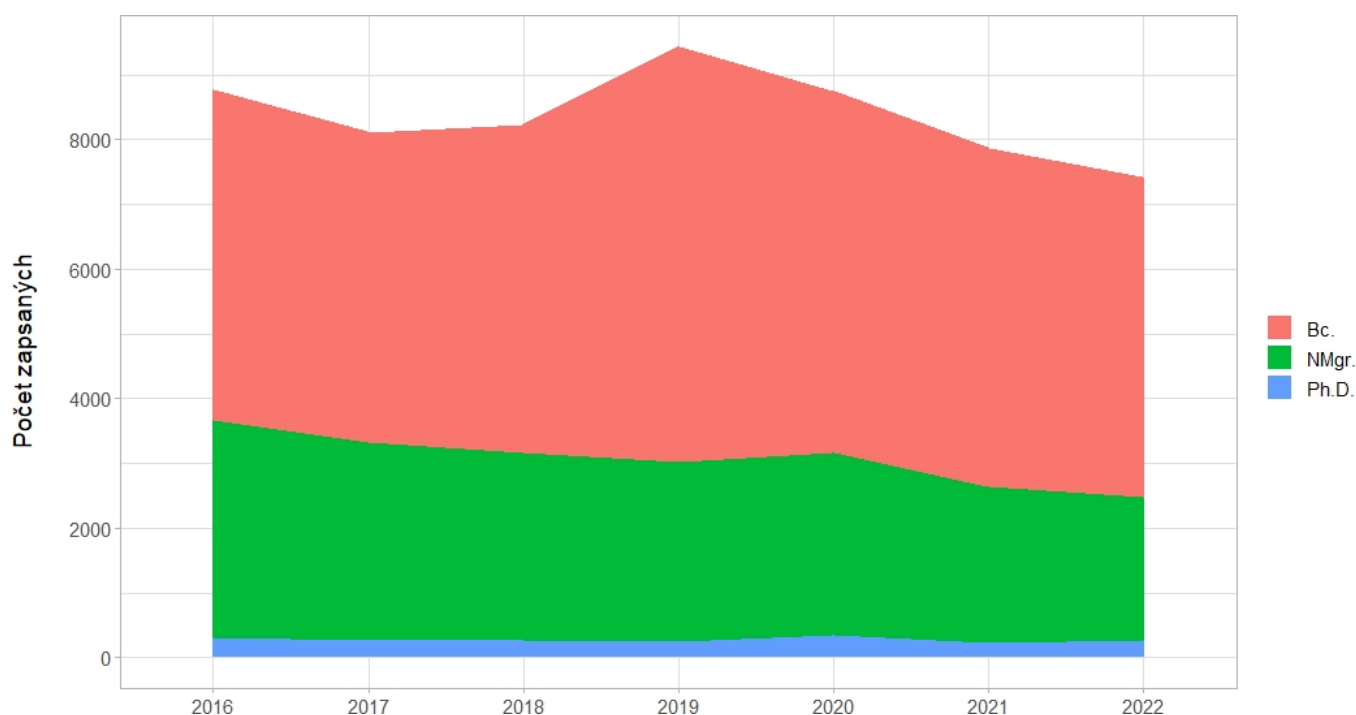


Table 20 Number of enrolled, by type (source: VZoČ 2016-2022)

Type of study	2016	2017	2018	2019	2020	2021	2022
Bc.	5 110	4 79	5 73	6 416	5 93	5 232	4 939
NMgr.	3 39	3 067	2 903	2 786	2 817	2 423	2 210
Ph.D.	305	261	263	247	344	223	276

Faculties/units

Chart 21. Number of enrolled, by type by (source: VZoČ 2016-2022)

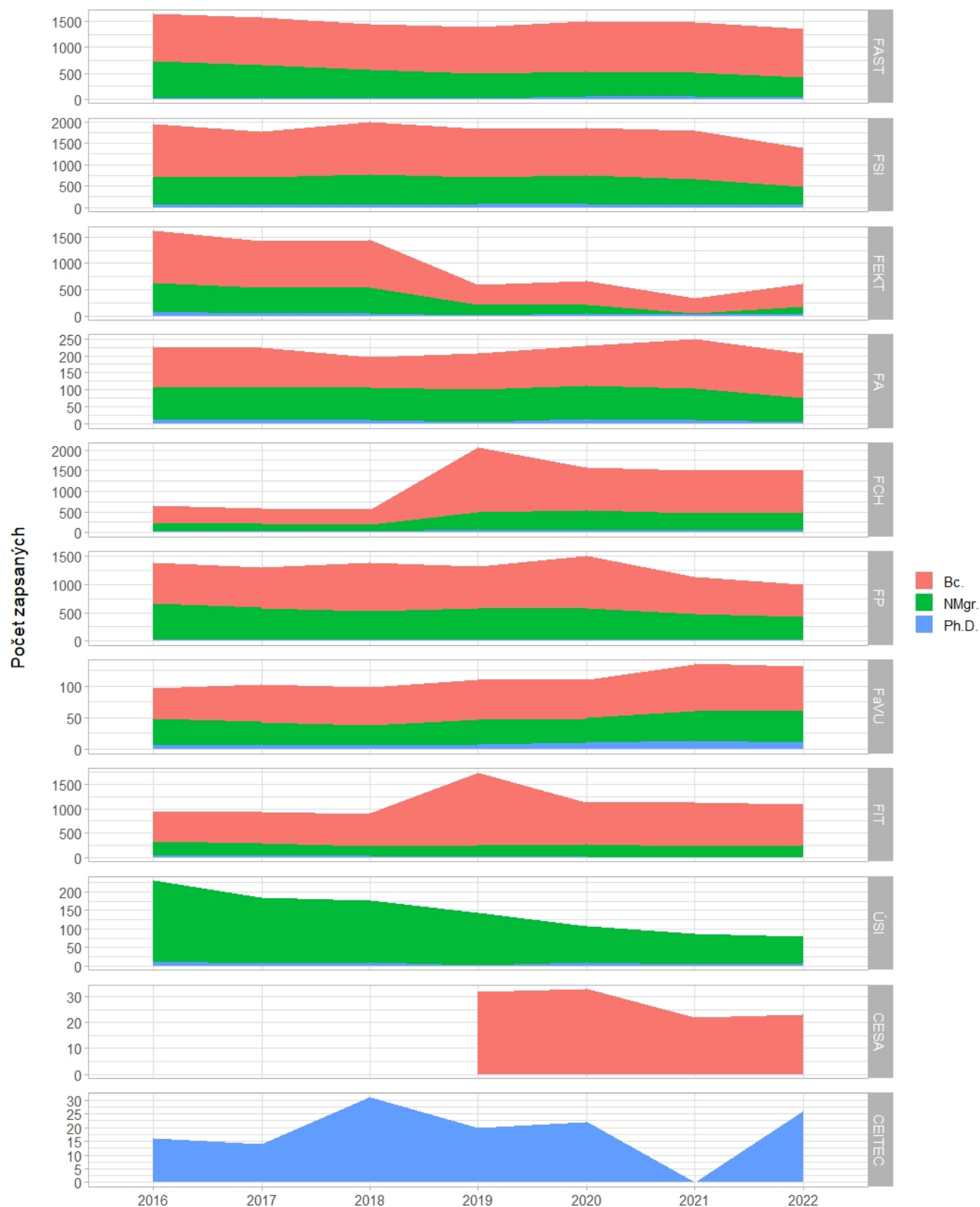


Table 21 Number of enrolled, by type by (source: VZoč 2016-2022)

F/S	Type of study	2016	2017	2018	2019	2020	2021	2022
FAST	Bc.	908	935	894	887	985	972	940
	NMgr.	733	642	543	495	480	471	380
	Ph.D.	7	10	19	7	49	48	42
FSI	Bc.	1 242	1 047	1 226	1 138	1 17	1 125	916
	NMgr.	647	650	713	630	669	605	422
	Ph.D.	60	61	49	75	79	57	56
FEKT	Bc.	989	893	904	381	443	273	430
	NMgr.	553	488	495	184	171	30	133
	Ph.D.	83	47	46	17	46	24	41
FA	Bc.	121	114	91	104	116	146	130
	NMgr.	90	98	93	96	97	92	71
	Ph.D.	16	13	13	6	16	11	6
FCH	Bc.	446	381	369	1 53	1 033	1 043	1 000
	NMgr.	170	157	149	426	473	418	446
	Ph.D.	39	49	39	67	63	49	51
FP	Bc.	733	709	860	742	938	667	587
	NMgr.	635	565	510	550	550	454	404
	Ph.D.	26	20	19	20	24	15	14
FaVU	Bc.	48	59	61	63	61	75	71
	NMgr.	43	36	31	39	39	47	49
	Ph.D.	6	7	6	8	10	13	11
FIT	Bc.	623	651	668	1 96	867	909	842
	NMgr.	280	255	203	225	239	224	234
	Ph.D.	40	32	31	25	26	2	21
USI	Bc.	0	0	0	0	0	0	0
	NMgr.	218	176	166	141	99	82	71
	Ph.D.	12	8	10	2	9	4	8
CESA	Bc.				32	33	22	23
	NMgr.				0	0	0	0
	Ph.D.				0	0	0	0
CEITEC	Bc.	0	0	0	0	0	0	0
	NMgr.	0	0	0	0	0	0	0
	Ph.D.	16	14	31	20	22	0	26

[I13] Percentage of enrolled of admitted (%)

The of enrolled students from the entire BUT currently reaches 82%, the highest in Doctoral Studies (92%) and the lowest in Master's Study (86%). The highest proportions of enrolled students are at FP (98%), FaVU (95%), FCH (94%), the lowest at FEKT (65%), FAST (67%) and CEITEC (72%).

The overall share has increased the last 7 years, reaching a peak in 2019 (82%), where it has been stagnant for the last under review. At the Faculty level, there has been a more significant increase in FP (+36 p.p.) and FCH (+31 p.p.)

BUT

Chart 22. Percentage by type of study (source:

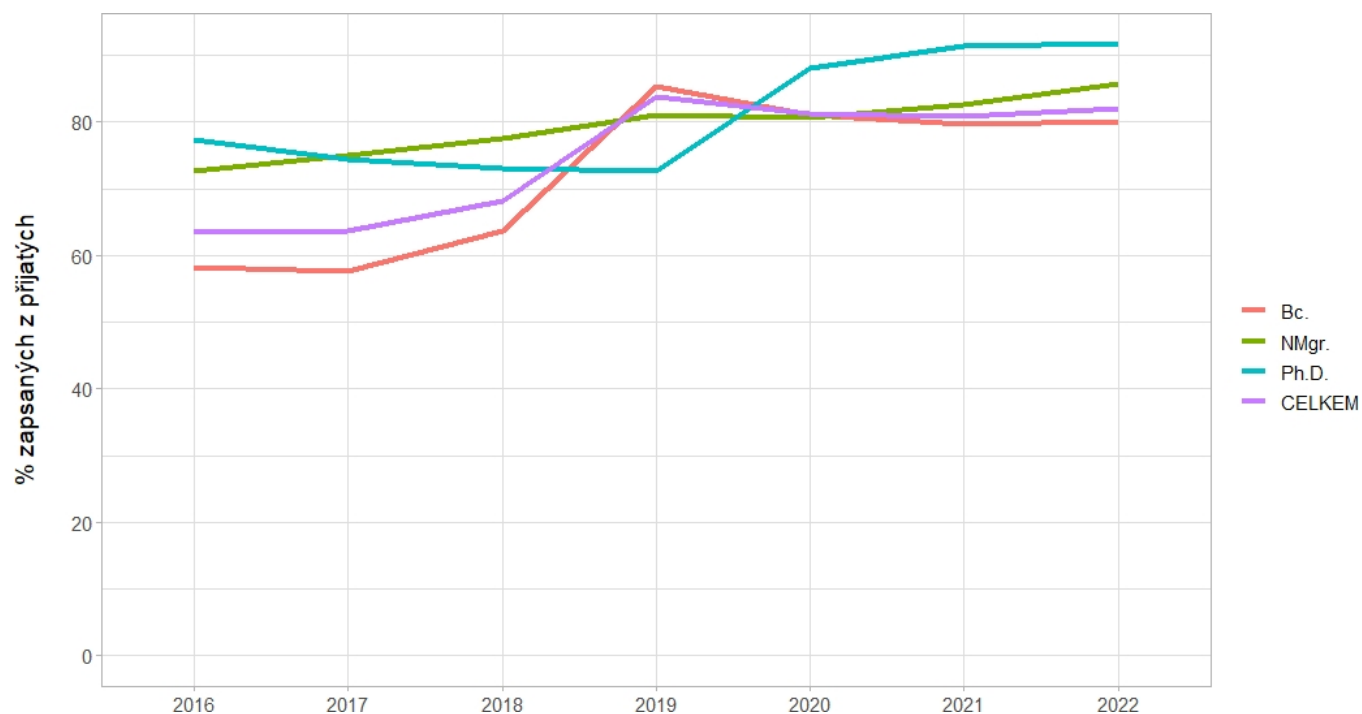


Table 22] Percentage (%), by type of study (source:

Type of study	2016	2017	2018	2019	2020	2021	2022
Bc.	58,2	57,5	63,6	85,4	81,1	79,6	80,0
NMgr.	72,6	75,0	77,5	81,1	80,6	82,6	85,8
Ph.D.	77,4	74,4	73,1	72,6	88,0	91,4	91,7
TOTAL	63,6	63,6	68,2	83,7	81,2	80,8	82,0

Faculties/Units

Chart 23. Percentage (%), by type of study, by F/S (source: VZoČ)

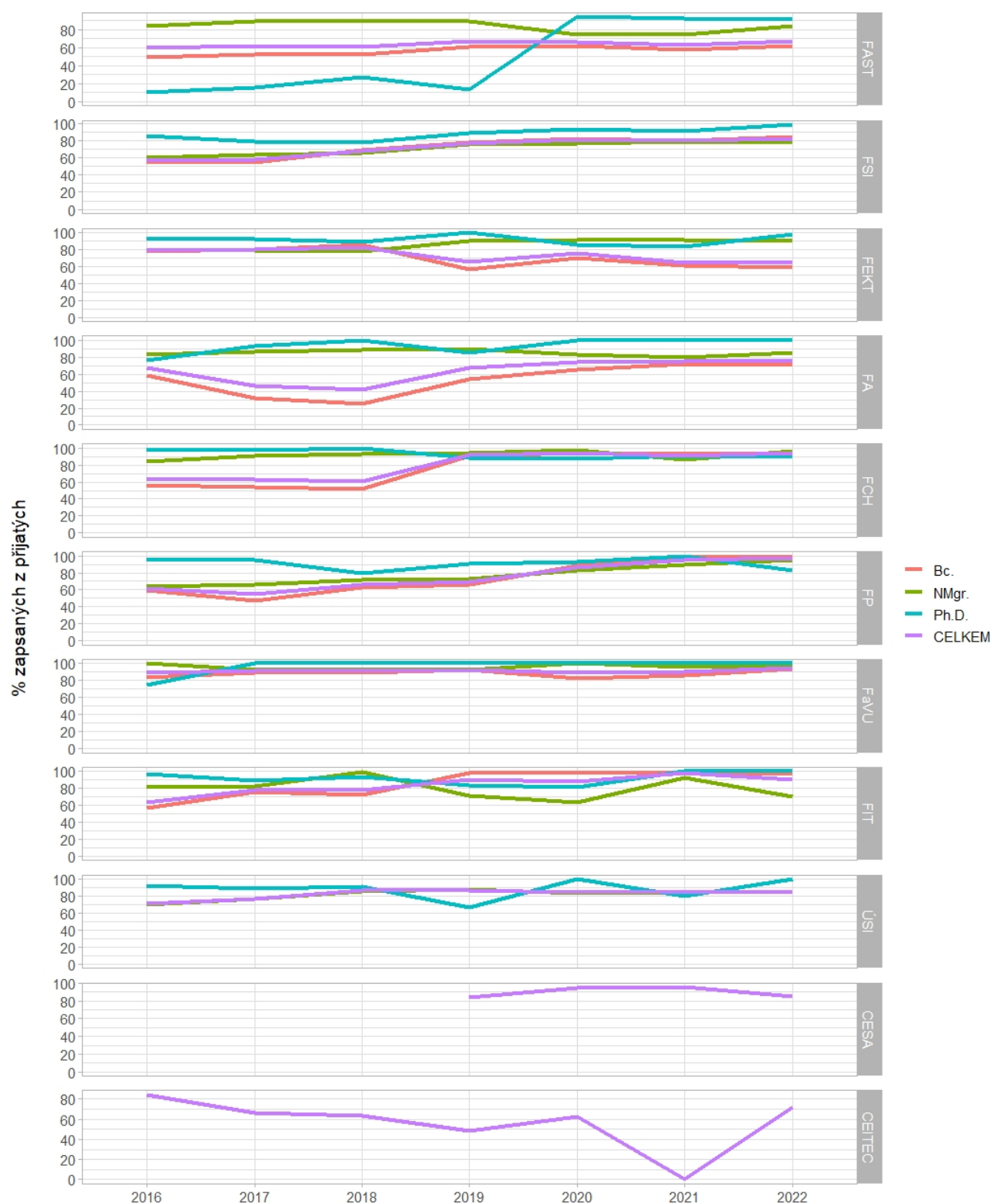


Table 2313] Percentage (%), by type of study, by F/S (source: VZoČ

F/S	Type of study	2016	2017	2018	2019	2020	2021	2022
FAST	Bc.	49,6	52,7	52,6	60,8	62,3	57,6	61,6
	NMgr.	83,8	89,5	89,9	89,4	74,9	74,3	83,7
	Ph.D.	10,8	15,6	27,1	13,7	94,2	92,3	91,3
	TOTAL	59,5	62,1	61,4	67,3	66,6	62,8	67,2
FSI	Bc.	54,1	54,2	68,5	77,4	82,5	79,6	83,8
	NMgr.	60,4	62,8	65,2	74,9	76,8	78,5	78,0
	Ph.D.	85,7	78,2	77,8	88,2	92,9	90,5	98,2
	TOTAL	56,7	57,7	67,4	76,9	80,7	79,5	82,4
FEKT	Bc.	77,9	79,5	85,4	57,0	69,4	61,2	58,5
	NMgr.	79,8	78,7	77,6	89,8	91,4	90,9	90,5
	Ph.D.	92,2	92,2	88,5	100,0	85,2	82,8	97,6
	TOTAL	79,2	79,6	82,7	65,3	75,1	64,4	65,4
FA	Bc.	59,0	32,0	25,6	54,2	65,2	71,6	71,0
	NMgr.	82,6	86,7	88,6	89,7	82,9	79,3	85,5
	Ph.D.	76,2	92,9	100,0	85,7	100,0	100,0	100,0
	TOTAL	67,8	46,6	41,6	67,3	73,6	75,2	76,1
FCH	Bc.	56,0	53,7	51,5	91,2	93,7	93,1	92,5
	NMgr.	84,2	90,8	92,5	93,8	97,9	86,7	96,7
	Ph.D.	97,5	98,0	100,0	88,2	87,5	90,7	89,5
	TOTAL	63,1	62,9	60,7	91,6	94,7	91,2	93,6
FP	Bc.	59,0	47,2	63,0	66,0	88,8	98,5	100,0
	NMgr.	63,9	65,9	71,5	72,8	83,0	89,2	95,5
	Ph.D.	96,3	95,2	79,2	90,9	92,3	100,0	82,4
	TOTAL	61,6	54,4	66,0	69,0	86,6	94,6	97,9
FaVU	Bc.	84,2	89,4	89,7	92,6	82,4	86,2	93,4
	NMgr.	100,0	92,3	93,9	92,9	100,0	95,9	96,1
	Ph.D.	75,0	100,0	100,0	100,0	100,0	100,0	100,0
	TOTAL	89,8	91,1	91,6	93,2	89,4	90,6	94,9
FIT	Bc.	57,2	75,5	72,5	98,0	98,5	99,5	97,6
	NMgr.	80,9	83,1	99,0	71,0	63,9	92,2	70,3
	Ph.D.	97,6	88,9	93,9	83,3	81,2	100,0	100,0
	TOTAL	63,9	77,8	77,8	90,1	88,0	97,9	90,1
USI	Bc.	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	NMgr.	70,6	76,5	86,0	87,6	83,2	84,5	84,5
	Ph.D.	92,3	88,9	90,9	66,7	100,0	80,0	100,0
	TOTAL	71,4	77,0	86,3	87,2	84,4	84,3	85,9
CESA	Bc.	N/A	N/A	N/A	84,2	94,3	95,7	85,2
	NMgr.	N/A	N/A	N/A	0,0	0,0	0,0	0,0
	Ph.D.	N/A	N/A	N/A	0,0	0,0	0,0	0,0
	TOTAL	N/A	N/A	N/A	84,2	94,3	95,7	85,2
CEITEC	Bc.	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	NMgr.	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	Ph.D.	84,2	66,7	63,3	48,8	62,9	0,0	72,2
	TOTAL	84,2	66,7	63,3	48,8	62,9	0,0	72,2

1.3. STUDY PROGRESS

Academic failure

[14] Failure rate in the first year, 'dropout rate' (%)

The current overall academic failure rate at the BUT in the first year is 33%. It is the at ÚSI (50%) and CESA (46%), while the lowest at FAVU (9%), CEITEC (11%) and FEKT (12%). The majority of this failure rate is made up of failure in the Bachelor's Study, where the total number of students who fail to graduate from Bc. studies in the first year 42% of students.

Over the last 7 years, the failure rate has not changed much, fluctuating in the Code/Rules of at most higher units of percentages, without a clear long-term trend, only in it has started to rise (+8 p.p.), which is mainly influenced by the values in the Bachelor's Study. The biggest changes over the period under review are ÚSI, FIT and FSI, where the failure rate has increased (+12 p.p., +11 p.p., +10 p.p.), while it has decreased in FEKT and FA (-16 p.p. and -13 p.p.).

BUT

Chart 24. First year failure rate %, by type of study (source: LFS)

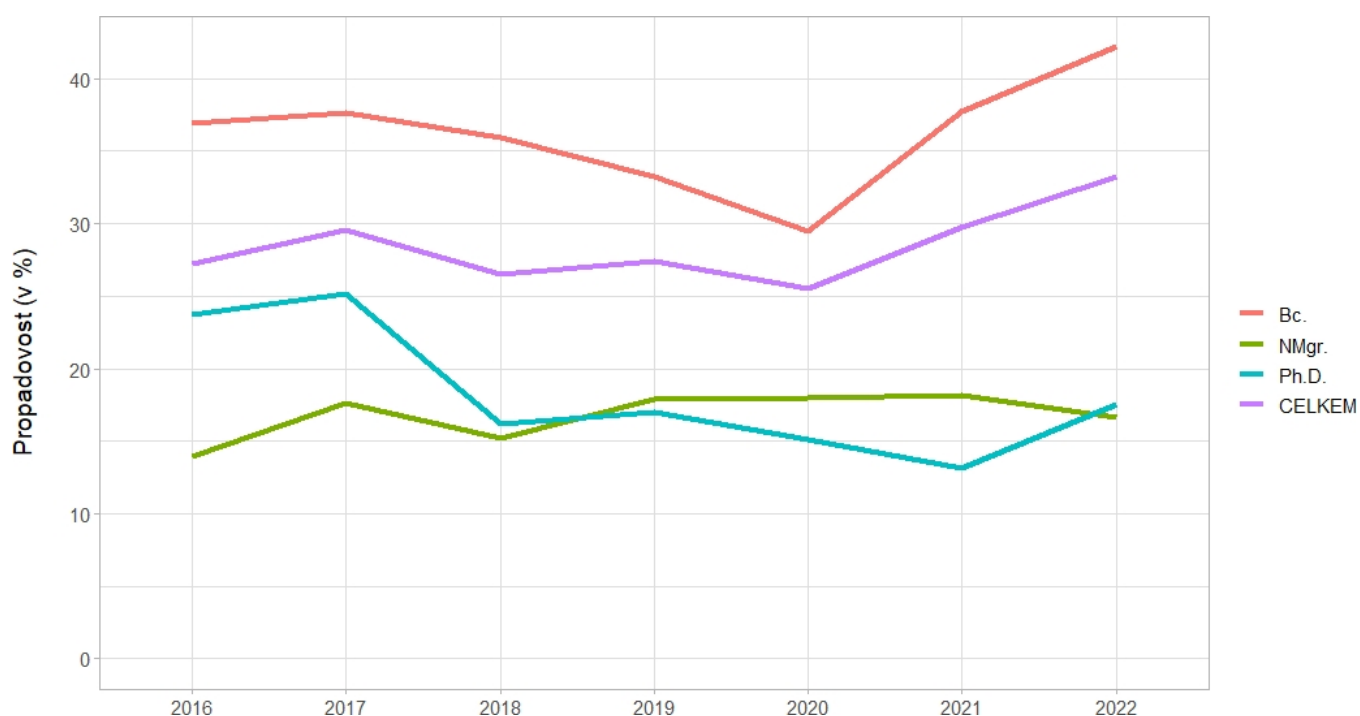
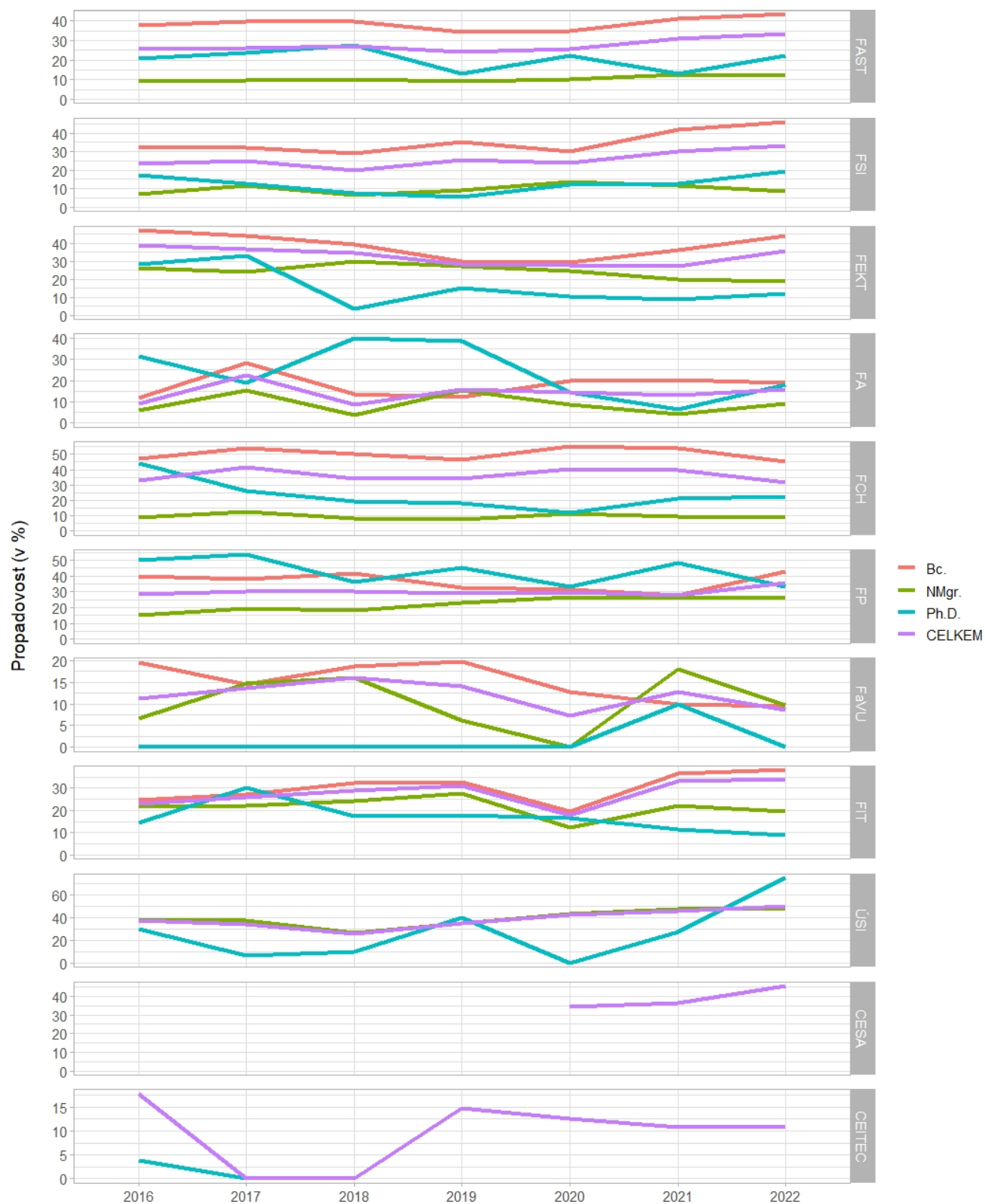


Table 24 First year failure rate, 'drop-out rate' %, by type of study (source: LFS)

Type of study	2016	2017	2018	2019	2020	2021	2022
Bc.	36,9	37,6	35,9	33,2	29,5	37,7	42,2
NMgr.	13,9	17,6	15,2	17,9	18,0	18,1	16,7
Ph.D.	23,7	25,1	16,2	17,0	15,1	13,1	17,5
TOTAL	27,2	29,6	26,5	27,4	25,5	29,7	33,3

Faculties/Units

25. First year failure rate, 'dropout rate' (%), by type of study, by F/S (source: VZoČ 2016-2022)



25First year failure rate, 'dropout rate' (%), by type of study, by F/S (source: LFS 2016-2022)

F/S	Type of study	2016	2017	2018	2019	2020	2021	2022
FAST	Bc.	37,5	39,7	39,5	34,1	34,8	41,0	43,4
	NMgr.	9,3	9,8	10,1	9,3	10,0	12,5	12,1
	Ph.D.	20,6	23,7	27,5	13,2	22,4	13,2	22,0
	TOTAL	25,6	26,2	27,0	24,1	25,8	31,1	33,2
FSI	Bc.	32,5	32,0	29,3	35,2	30,0	42,1	46,0
	NMgr.	7,2	11,9	6,4	9,3	13,9	11,4	8,7
	Ph.D.	17,2	12,9	7,7	5,7	12,2	12,7	19,4
	TOTAL	23,6	25,0	19,9	25,3	24,1	29,9	33,2
FEKT	Bc.	47,1	43,8	39,4	29,5	29,1	36,3	44,0
	NMgr.	26,3	23,8	29,7	27,0	24,5	19,7	18,5
	Ph.D.	28,0	32,9	3,5	15,2	10,4	8,8	11,8
	TOTAL	38,7	36,4	34,5	28,4	27,5	26,9	35,5
FA	Bc.	11,7	28,4	13,7	12,3	19,8	20,2	19,2
	NMgr.	6,2	15,6	3,6	15,2	8,8	4,1	9,1
	Ph.D.	31,2	18,8	40,0	38,5	14,3	6,2	18,2
	TOTAL	9,1	22,6	8,6	15,6	14,6	13,0	15,7
FCH	Bc.	47,1	53,8	50,0	46,5	55,3	54,2	45,4
	NMgr.	8,7	12,7	8,0	7,6	11,4	9,4	9,0
	Ph.D.	44,1	26,3	19,0	18,0	11,8	21,1	22,6
	TOTAL	32,7	41,7	33,9	34,0	40,3	39,9	31,6
FP	Bc.	39,7	37,7	41,6	32,5	31,5	27,9	43,0
	NMgr.	15,3	19,6	18,1	22,9	26,3	26,1	26,1
	Ph.D.	50,0	53,8	36,4	45,0	33,3	48,0	33,3
	TOTAL	28,1	30,1	30,0	29,2	29,3	27,6	35,7
FaVU	Bc.	19,6	14,6	18,6	19,7	12,7	9,8	9,5
	NMgr.	6,6	14,6	16,1	6,2	0,0	17,9	9,8
	Ph.D.	0,0	0,0	0,0	0,0	0,0	10,0	0,0
	TOTAL	11,1	13,5	16,1	14,1	7,2	12,7	8,6
FIT	Bc.	24,7	27,3	32,2	32,5	19,4	36,6	38,1
	NMgr.	21,7	22,2	24,0	27,7	12,2	22,3	19,6
	Ph.D.	14,3	30,0	17,5	17,6	16,7	11,5	9,1
	TOTAL	23,0	25,9	28,9	30,9	17,9	33,1	33,8
USI	Bc.	0,0	0,0	0,0	0,0	0,0	0,0	
	NMgr.	38,0	37,6	26,9	34,9	43,4	47,5	48,8
	Ph.D.	30,0	6,9	10,0	40,0	0,0	27,3	75,0
	TOTAL	37,2	34,0	26,1	35,1	42,8	45,5	50,0
CESA	Bc.					34,4	36,4	45,5
	NMgr.					0,0	0,0	
	Ph.D.					0,0	0,0	
	TOTAL					34,4	36,4	45,5
CEITEC	Bc.	0,0	0,0	0,0	0,0	0,0	0,0	
	NMgr.	22,9	0,0	0,0	0,0	0,0	0,0	

F/S	Type of study	2016	2017	2018	2019	2020	2021	2022
	Ph.D.	3,8	0,0	0,0	14,7	12,5	10,7	10,7
	TOTAL	17,7	0,0	0,0	14,7	12,5	10,7	10,7

Graduate/ Alumnus/ Alumni

[I15] Number of Graduate/ Alumnus/ Alumni

In 2022, 4066 people successfully graduated from the BUT, of whom 50% completed bachelor's degrees, 46% master's degrees and 4% doctoral studies.

The of male and female graduates/ alumni at the BUT has been steadily and continuously decreasing, with a 28% decrease compared to ten years ago. The highest share of the decrease (-1637 Graduate/ Alumnus/ Alumni) is accounted for by FAST (39% share, decrease between

which has seen a steady increase, is bucking the overall trend, with current numbers of graduates/ Alumnus/ Alumni up 6% compared to seven years ago.

BUT

Chart 26. Number of graduates/ Alumnus/ Alumni, by type (source: VZoČ 2016-2022)

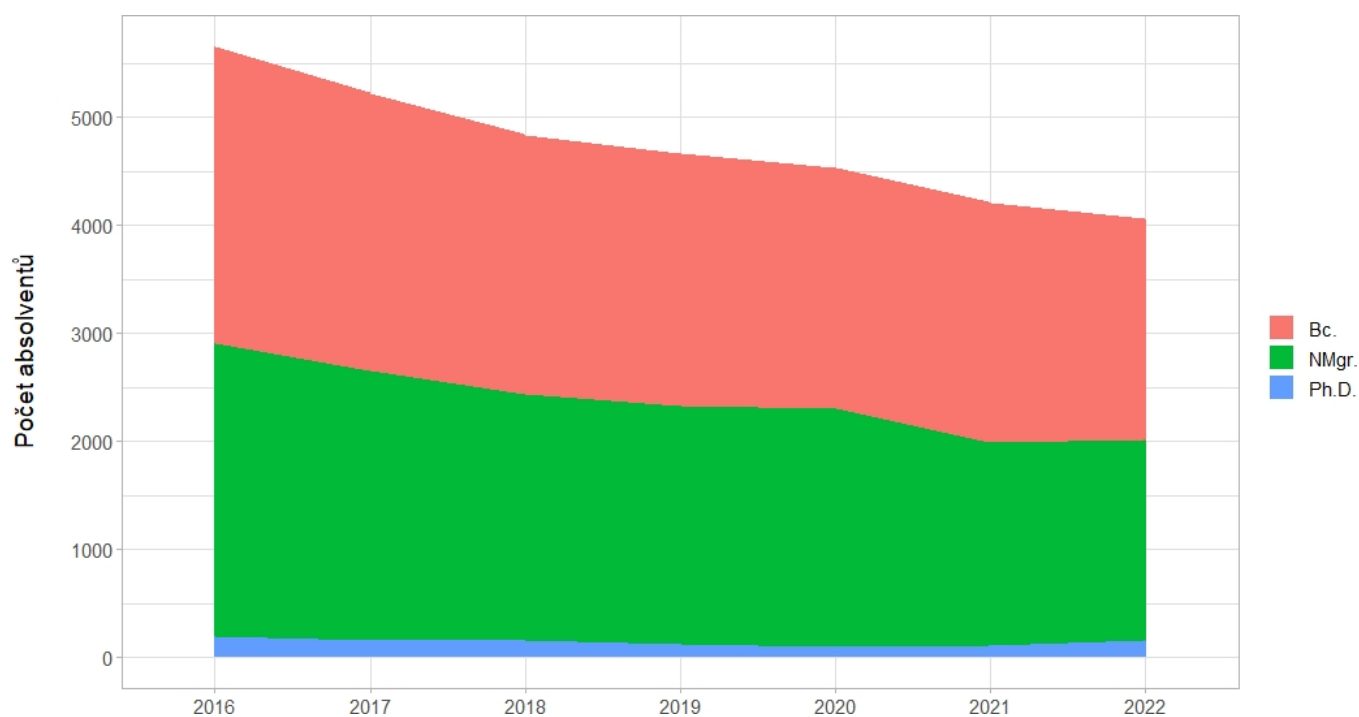


Table 26] Number of graduates/ Alumnus/ Alumni, by type (source: VZoČ 2016-2022)

Type of study	2016	2017	2018	2019	2020	2021	2022
Bc.	2 749	2 576	2 406	2 336	2 226	2 17	2 049
NMgr.	2 16	2 492	2 268	2 209	2 202	1 84	1 855
Ph.D.	196	159	165	124	105	112	162

Faculties/Units

Chart 27. Number of graduates/ Alumnus/ Alumni, by type by (source: VZoČ 2016-2022)

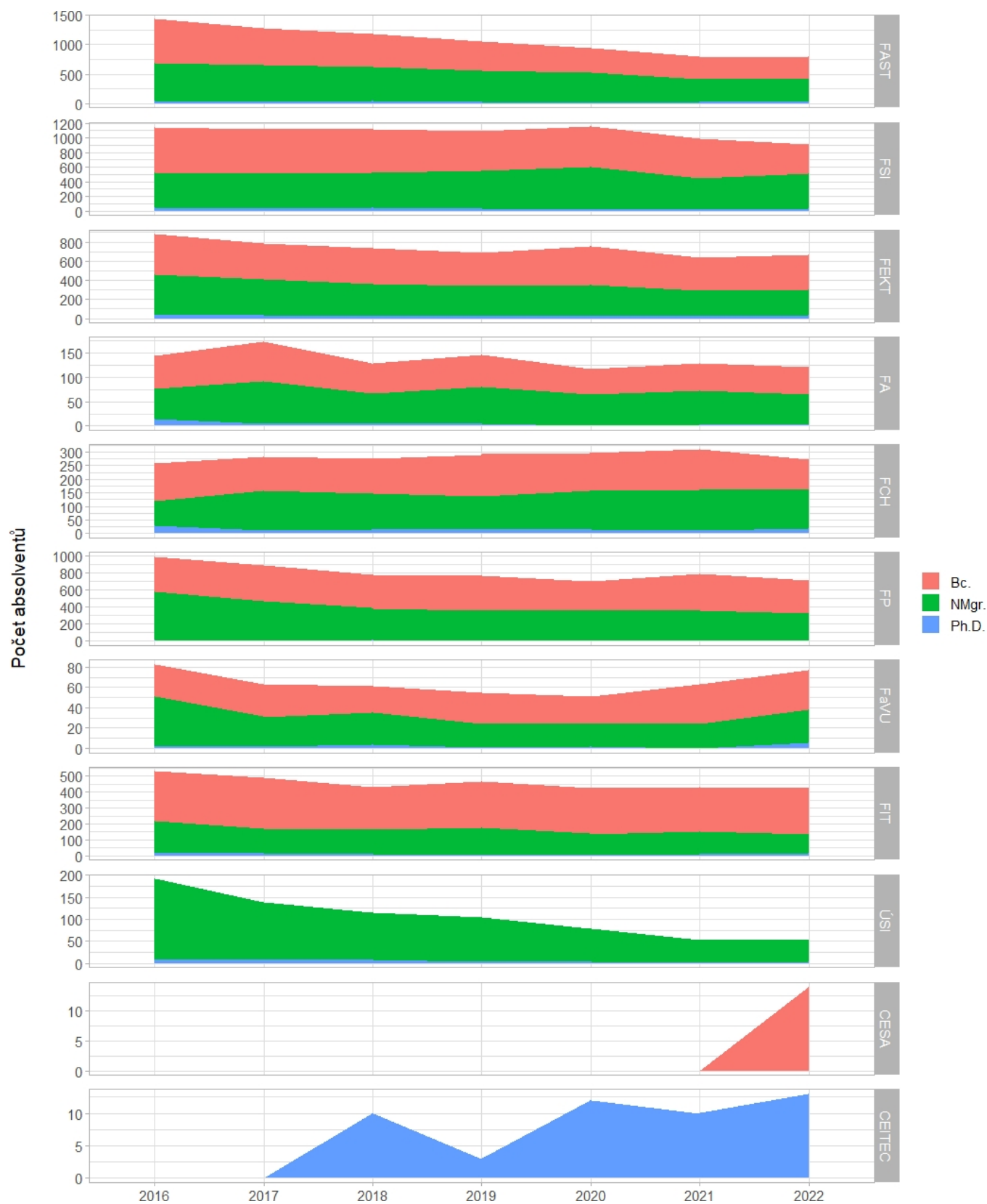


Table 27 Number of Graduates/ Alumnus/ Alumni, by type by (source: VZoS 2016-2022)

F/S	Type of study	2016	2017	2018	2019	2020	2021	2022
FAST	Bc.	744	622	554	488	423	369	382
	NMgr.	651	616	586	537	502	393	383
	Ph.D.	40	37	39	26	18	28	33
FSI	Bc.	608	604	594	547	556	537	404
	NMgr.	484	481	483	512	581	433	472
	Ph.D.	45	36	42	37	17	19	37
FEKT	Bc.	424	373	380	347	400	348	370
	NMgr.	427	375	331	317	329	266	270
	Ph.D.	34	38	27	22	27	24	31
FA	Bc.	69	82	61	66	53	57	56
	NMgr.	62	87	63	76	64	70	62
	Ph.D.	14	5	4	4	0	2	3
FCH	Bc.	138	124	129	153	138	151	110
	NMgr.	90	149	134	122	142	147	145
	Ph.D.	29	10	14	16	16	13	17
FP	Bc.	421	424	393	414	342	436	385
	NMgr.	569	470	378	350	358	357	323
	Ph.D.	8	4	8	6	1	3	3
FaVU	Bc.	32	32	26	31	27	39	39
	NMgr.	49	29	31	23	22	24	32
	Ph.D.	2	2	4	1	2	0	6
FIT	Bc.	313	315	269	290	287	280	289
	NMgr.	200	153	154	170	130	141	119
	Ph.D.	16	20	9	6	8	12	15
USI	Bc.	0	0	0	0	0	0	0
	NMgr.	184	132	108	102	74	53	49
	Ph.D.	8	7	8	3	4	1	4
CESA	Bc.				0	0	0	14
	NMgr.				0	0	0	0
	Ph.D.				0	0	0	0
CEITEC	Bc.	0	0	0	0	0	0	0
	NMgr.	0	0	0	0	0	0	0
	Ph.D.	0	0	10	3	12	10	13

[I16] Average length of graduation in years

In the academic year 2021/2022, the average length of a Bachelor's Study reached 3.5 years, while for Master's degree is 2.2 years, doctoral degree 7.2 years.

It takes the longest time to get a Bachelor's degree at FAST (4.2), FA (4.1) and FaVU (4), while the fastest at (3) and FP (3.1). Master's Study takes the longest at FIT (2.6) and FaVU (2.6), and the least at FA, FEKT and FCH (2.1).

terms of the length of the doctorate, FAST (8.6) and FIT (8.1) lead the way, the fastest average length of study is FP (5.7) and (5.8).

The average length of Bachelor's Master's Study has remained virtually unchanged over the last 7 years. In contrast, the length of Doctoral Study has increased by 0.8 years on average.

BUT

Chart 28. Average length of graduation in years, type (source: BUT)

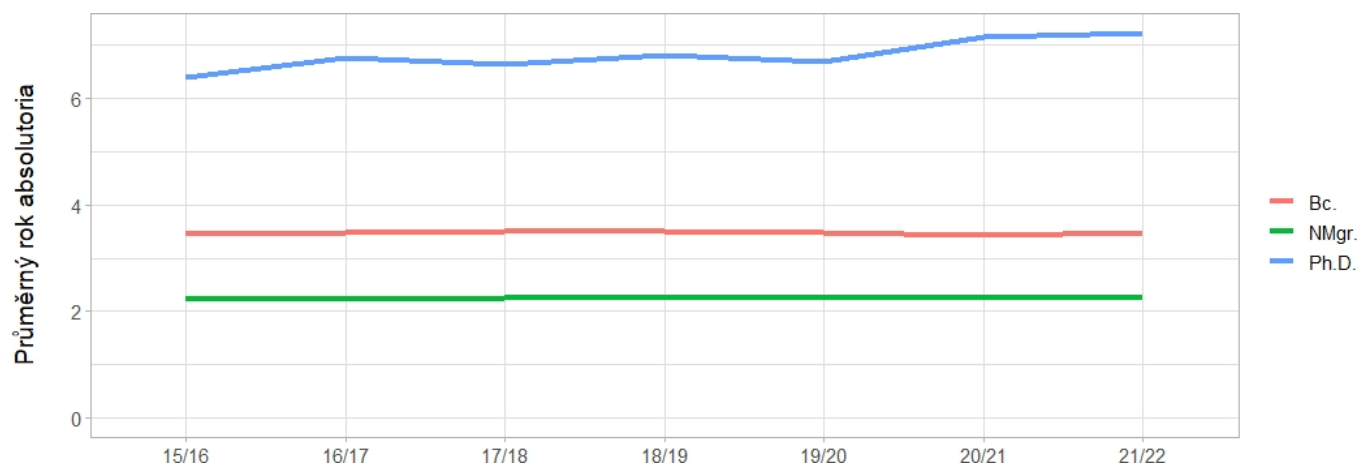


Table 28 Average length of graduation in years, type (source: BUT)

Type of study	15/16	16/17	17/18	18/19	19/20	20/21	21/22
Bc.	3,5	3,5	3,5	3,5	3,5	3,4	3,5
NMgr.	2,2	2,2	2,2	2,3	2,3	2,3	2,2
Ph.D.	6,4	6,8	6,6	6,8	6,7	7,2	7,2

Faculties/Units

Chart 29. Average length of graduation in years, type by (source: IS BUT)

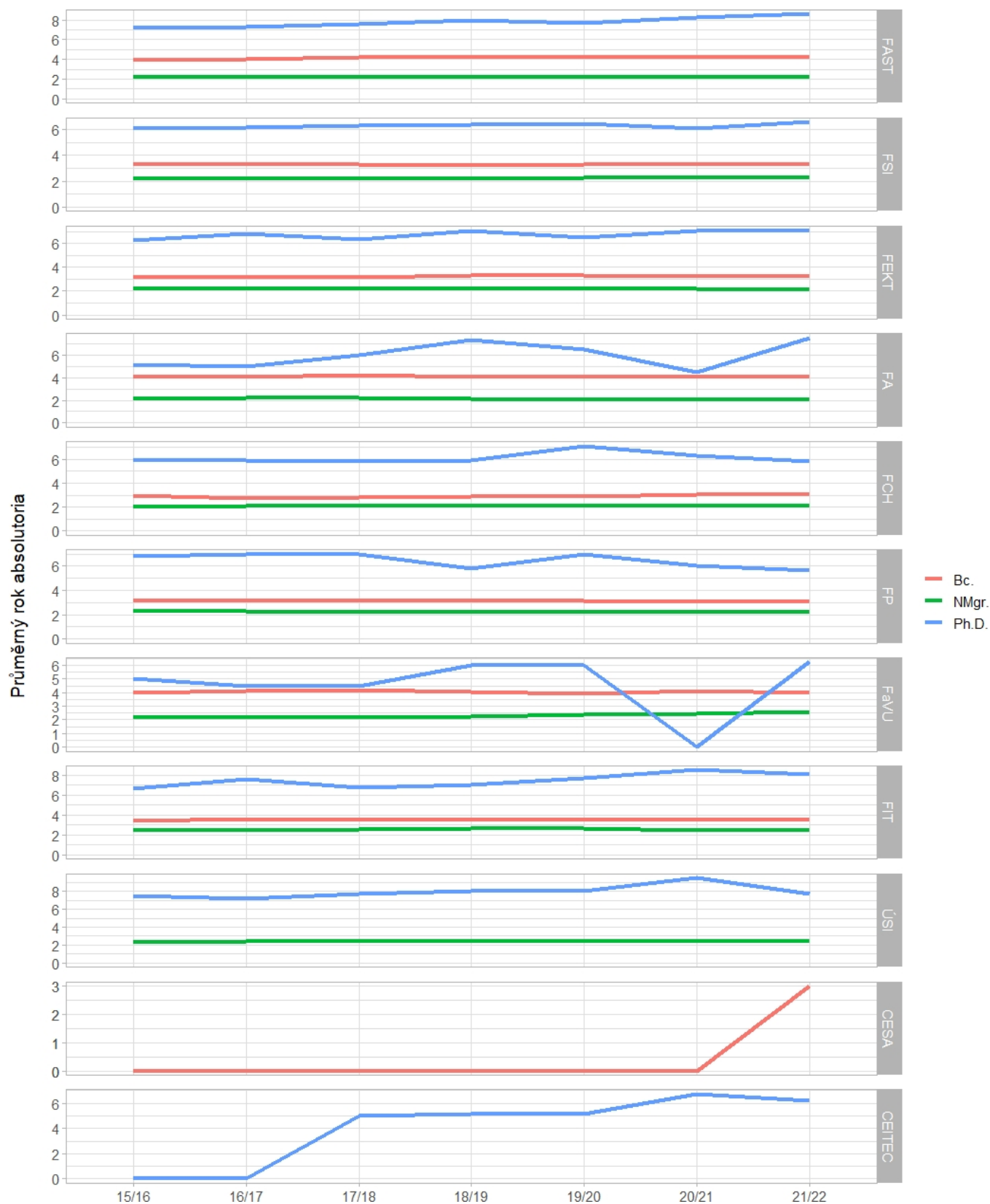


Table 29 Average duration of graduation in years, type by (source: IS BUT)

F/S	Type of study	15/16	16/17	17/18	18/19	19/20	20/21	21/22
FAST	Bc.	3,9	4,1	4,2	4,3	4,2	4,2	4,2
	NMgr.	2,2	2,2	2,2	2,2	2,3	2,2	2,2
	Ph.D.	7,2	7,3	7,6	8,0	7,7	8,2	8,6
FSI	Bc.	3,3	3,3	3,3	3,2	3,3	3,3	3,4
	NMgr.	2,2	2,2	2,2	2,2	2,2	2,3	2,3
	Ph.D.	6,1	6,2	6,3	6,4	6,5	6,1	6,6
FEKT	Bc.	3,2	3,2	3,2	3,3	3,3	3,2	3,2
	NMgr.	2,2	2,2	2,2	2,3	2,2	2,2	2,1
	Ph.D.	6,3	6,8	6,4	7,1	6,5	7,0	7,1
FA	Bc.	4,1	4,0	4,3	4,0	4,1	4,1	4,1
	NMgr.	2,1	2,2	2,2	2,1	2,0	2,1	2,1
	Ph.D.	5,1	5,0	6,0	7,3	6,5	4,5	7,5
FCH	Bc.	2,9	2,7	2,8	2,9	2,9	3,0	3,0
	NMgr.	2,0	2,1	2,1	2,1	2,1	2,1	2,1
	Ph.D.	5,9	5,9	5,8	5,9	7,1	6,3	5,8
FP	Bc.	3,2	3,1	3,2	3,2	3,1	3,1	3,1
	NMgr.	2,3	2,2	2,2	2,2	2,3	2,2	2,2
	Ph.D.	6,8	7,0	7,0	5,8	7,0	6,0	5,7
FaVU	Bc.	4,0	4,1	4,2	4,0	3,9	4,2	4,0
	NMgr.	2,3	2,2	2,2	2,3	2,4	2,4	2,6
	Ph.D.	5,0	4,5	4,5	6,0	6,0	0,0	6,2
FIT	Bc.	3,4	3,6	3,5	3,5	3,5	3,5	3,5
	NMgr.	2,4	2,5	2,5	2,6	2,6	2,5	2,5
	Ph.D.	6,7	7,6	6,8	7,0	7,7	8,5	8,1
USI	Bc.	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	NMgr.	2,3	2,4	2,4	2,4	2,4	2,4	2,4
	Ph.D.	7,5	7,2	7,7	8,0	8,0	9,5	7,7
CESA	Bc.	0,0	0,0	0,0	0,0	0,0	0,0	3,0
	NMgr.	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	Ph.D.	0,0	0,0	0,0	0,0	0,0	0,0	0,0
CEITEC	Bc.	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	NMgr.	0,0	0,0	0,0	0,0	0,0	0,0	0,0
	Ph.D.	0,0	0,0	5,0	5,1	5,2	6,7	6,2

1.4. Internationalisation

[I17] Number of in AJ

In the academic year 2021/2022, 99 study programmes were taught at the BUT in English, of which 67 doctoral, 25 master's and 7 bachelor's degrees.

Compared to six years ago, the number of programmes has increased 168 overall, with doctoral programmes increasing the most, by 191%.

BUT

Chart 30. Number of programmes in AJ, by type (source: IS BUT)

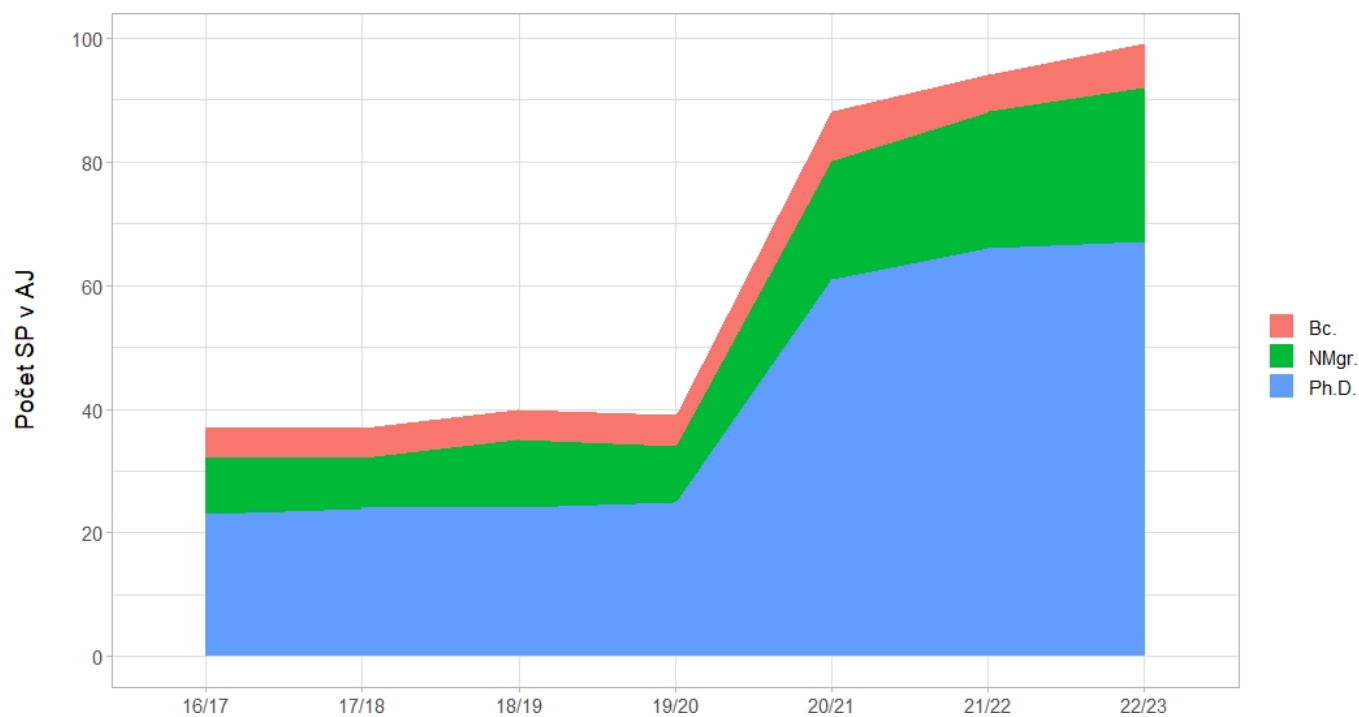


Table 30. [I17] Number of in AJ, type of study (source: IS BUT)

Type of study	16/17	17/18	18/19	19/20	20/21	21/22	22/23
Bc.	5	5	5	5	8	6	7
NMgr.	9	8	11	9	19	22	25
Ph.D.	23	24	24	25	61	66	67

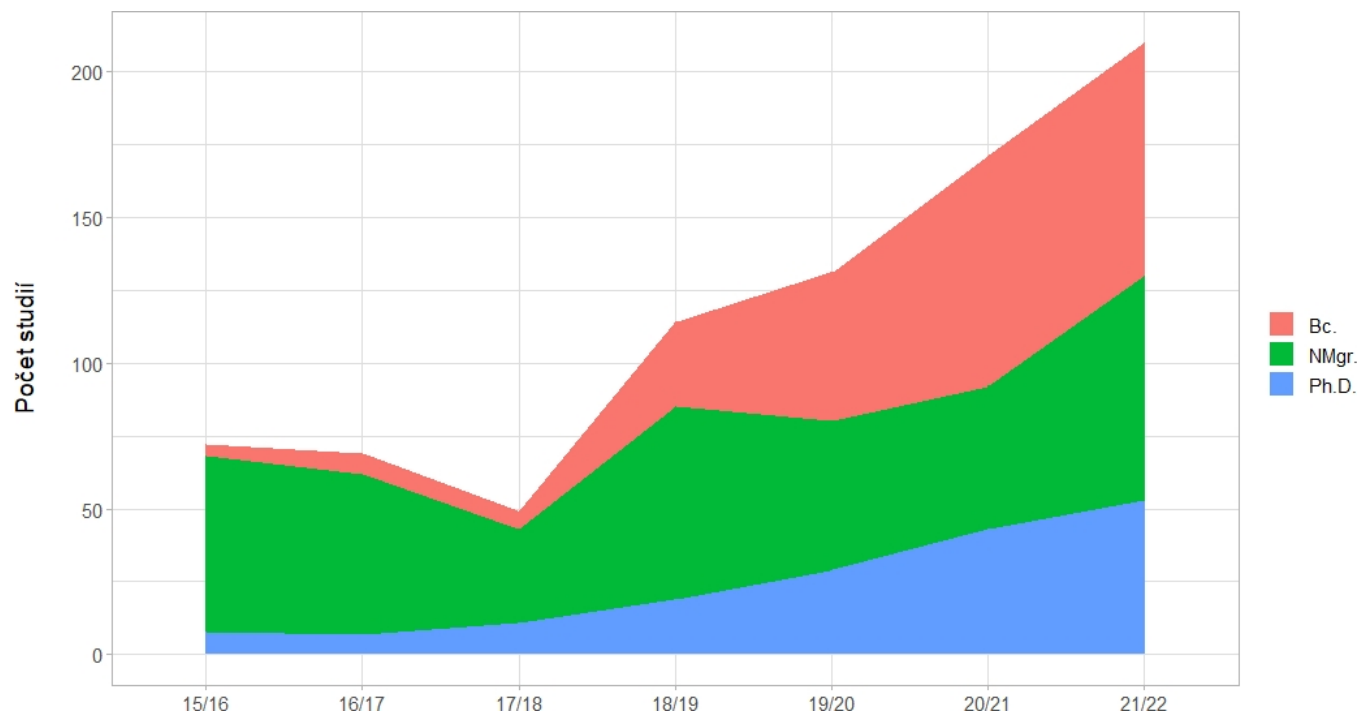
[I18] Number of STUDIES in AJ

In the academic year 2021/22, 210 students studied in English at the BUT, of which 38% were Bachelor's degree, 37% Master's degree and 25% PhD degree.

Compared to six years ago, a significant increase observed for programmes).

BUT

31. Number of studies in AJ, by type (source: IS BUT)



31 Number of studies in AJ, by type (source: BUT)

Type of study	15/16	16/17	17/18	18/19	19/20	20/21	21/22
Bc.	4	7	6	29	51	79	80
NMgr.	60	55	32	66	51	49	77
Ph.D.	8	7	11	19	29	43	53

[19] Number students sent (in trips)

In the academic year 2021/22, BUT students made 773 trips abroad, the largest number of them were made by students from FA (32%), FP (13%), FSI and FaVU (12%).

The in the number of trips has not changed much over the last 7 years (fluctuation between 700 and 800 trips, slight increase), with only an understandable drop (approximately half) during the Covid pandemic¹⁹

BUT

Figure 32. [I19] Number of students (travelling), by F/S (source: IS BUT)

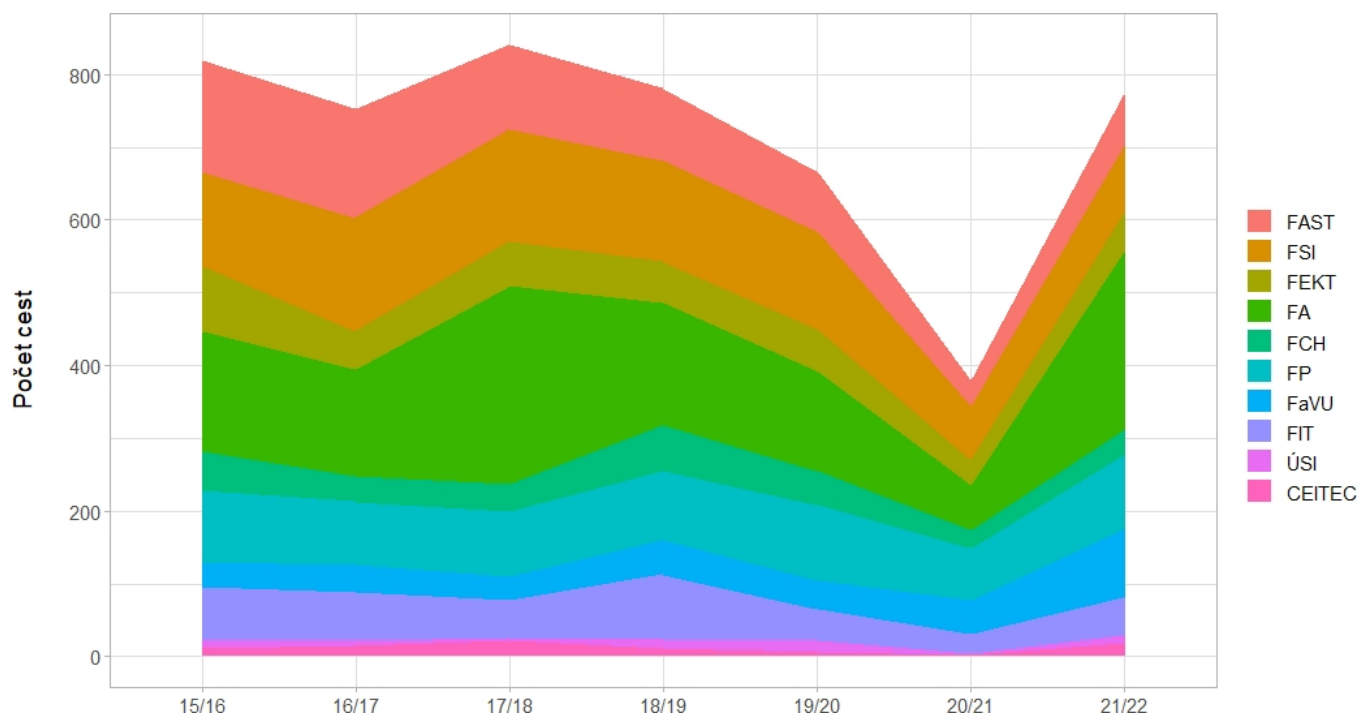


Table 32. [I19] Number of students (travelling), by F/S (source: IS BUT)

F/S	15/16	16/17	17/18	18/19	19/20	20/21	21/22
FAST	154	150	117	99	83	35	71
FSI	128	156	154	139	134	74	92
FEKT	90	53	62	57	58	35	54
FA	165	146	272	168	137	62	244
FCH	54	35	37	63	46	25	35
FP	98	87	90	95	105	72	101
FaVU	35	37	32	47	39	46	94
FIT	72	66	52	89	43	26	53
ÚSI	12	7	4	12	15	2	10
CESA	0	0	0	0	0	0	0
CEITEC	11	16	22	12	7	3	19

[I20] Number of enrolled students (in studies)

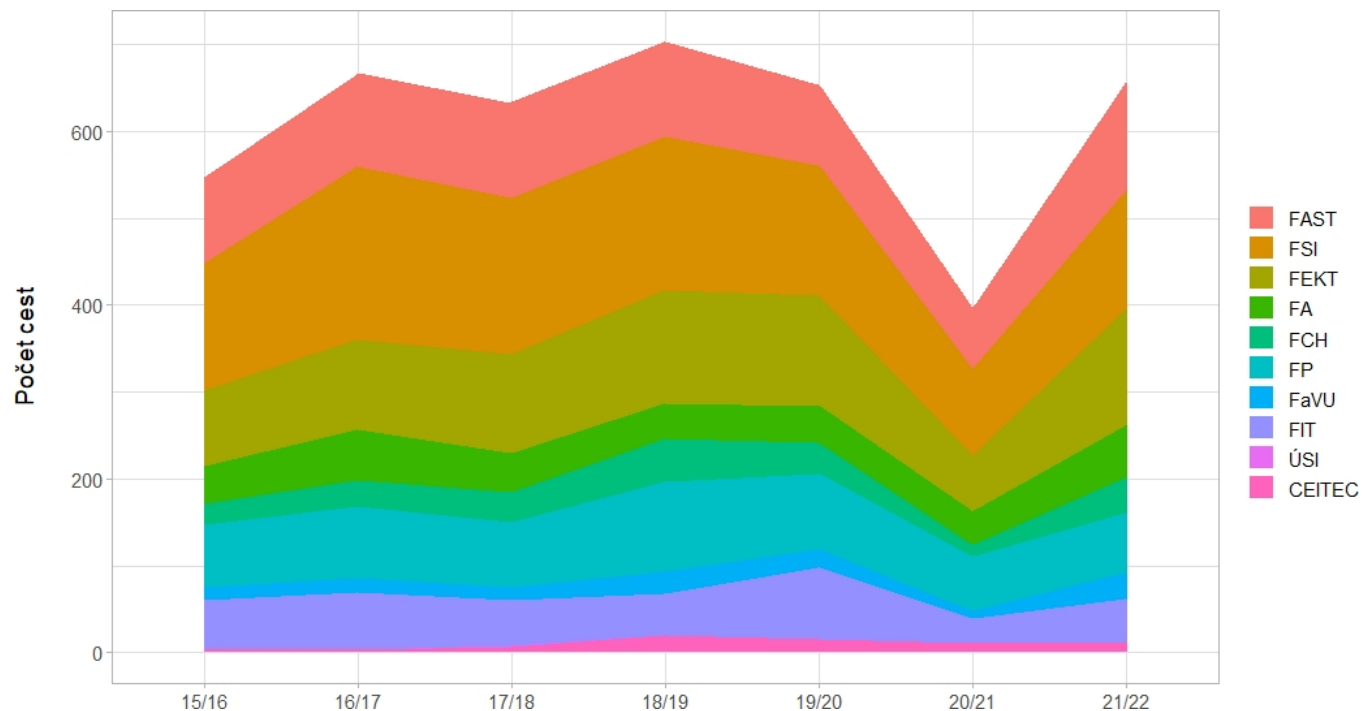
In the academic year 2021/22, 657 students arrived at the BUT, most of them at FSI (21FEKT (20%) and FAST

The trend in the number of studies shows an increasing trend, but with a strong drop during the Covid pandemic.¹⁹ It can be assumed that the final figures for 2022/23 will show a resumption of this trend. During the years under review

The structure of foreign students in terms of the receiving Faculties has slightly changed, especially FaVU (+107%) and FCH (+71%) have strengthened, while the most admitted foreign students decreased at FSI (-11%) and FIT (-6%).

BUT

33. Number of enrolled students (in studies), F/S (source: IS BUT)



33Number of enrolled students (in studies), by F/S (source: IS BUT)

F/S	15/16	16/17	17/18	18/19	19/20	20/21	21/22
FAST	98	107	110	110	93	71	125
FSI	147	200	180	177	149	100	136
FEKT	87	103	113	130	127	64	134
FA	43	58	45	40	43	38	60
FCH	24	31	35	50	35	14	41
FP	72	82	74	104	87	63	68
FaVU	15	16	15	25	21	9	31
FIT	56	66	53	48	83	28	50
ÚSI	0	1	1	0	0	0	0
CEITEC	4	3	7	20	15	11	12

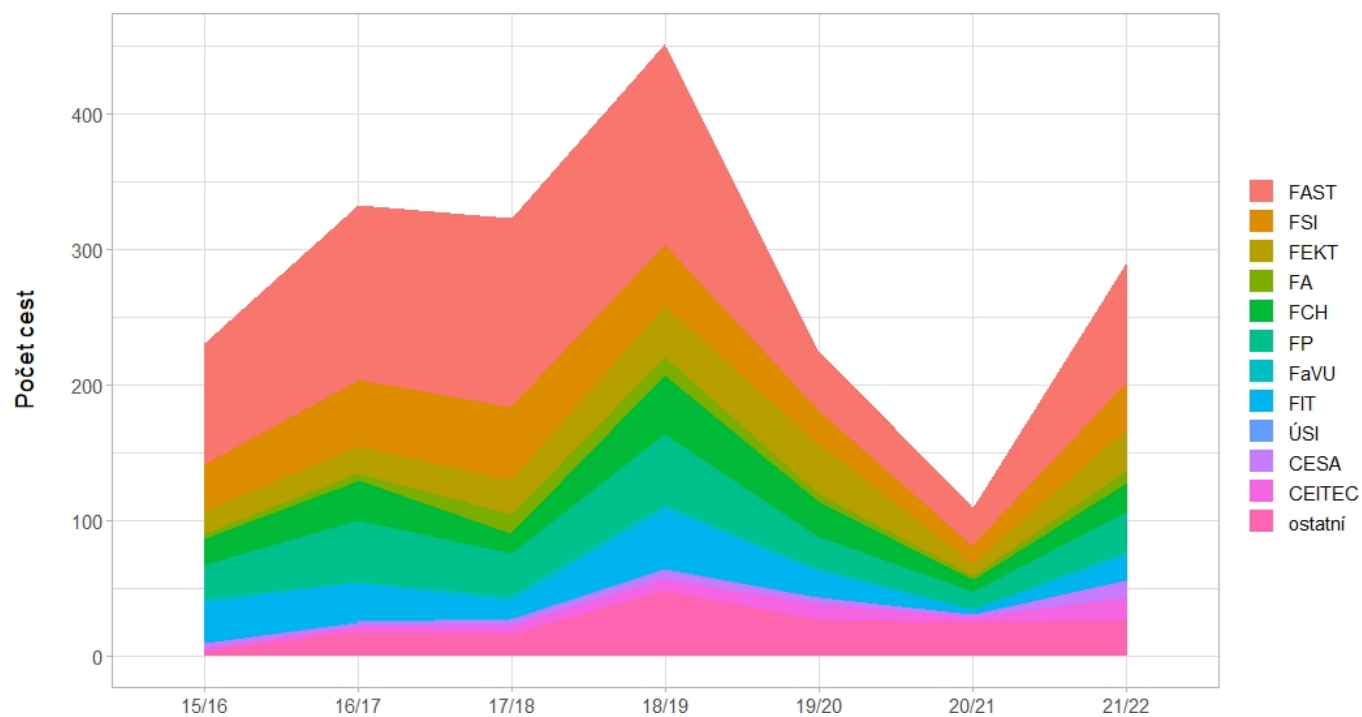
[I21] Number of Erasmus staff on secondment (travelling)

In the academic year 2021/22, 290 employees were sent to the BUT on an Erasmus trip abroad, most of them from FAST (36%) and FSI (12% each).

In terms of the two extremes of the time series, major changes, there were significant changes over the period under review. Firstly, there is a marked increase in the pre-Covidian period, when the number of trips reaches 452, and secondly, the number dropped to 100 trips during the pandemic. The number of trips appears to be increasing again, but has not yet approached the peak.

BUT

34. Number of Erasmus staff (travelling), by F/S (source: IS BUT)



34Number of Erasmus staff (travelling), by F/S (source: IS BUT)

F/S	15/16	16/17	17/18	18/19	19/20	20/21	21/22
FAST	90	129	139	148	44	28	88
FSI	33	49	54	45	24	13	35
FEKT	17	20	25	38	37	9	30
FA	4	5	14	13	6	3	9
FCH	19	29	15	44	26	9	21
FP	25	46	31	52	23	13	29
FaVU	3	1	4	3	2	0	3
FIT	30	28	13	44	19	4	19
ÚSI	0	1	1	1	0	0	0
CESA	4	2	4	7	5	2	12
CEITEC	2	4	6	8	12	4	17
Other	4	19	17	49	27	25	27

[I22] Number of recruited workers (in persons)

In 2022, 214 foreign workers came to the BUT.

The number has been steadily significantly increasing over the years under review, but due to the fact that this indicator has only recently started to be monitored. The numbers are dependent on reporting, and this has only improved over the last few years.

BUT

Figure 35. [I22] Number of recruited staff (in persons), by F/S (source: IS BUT)

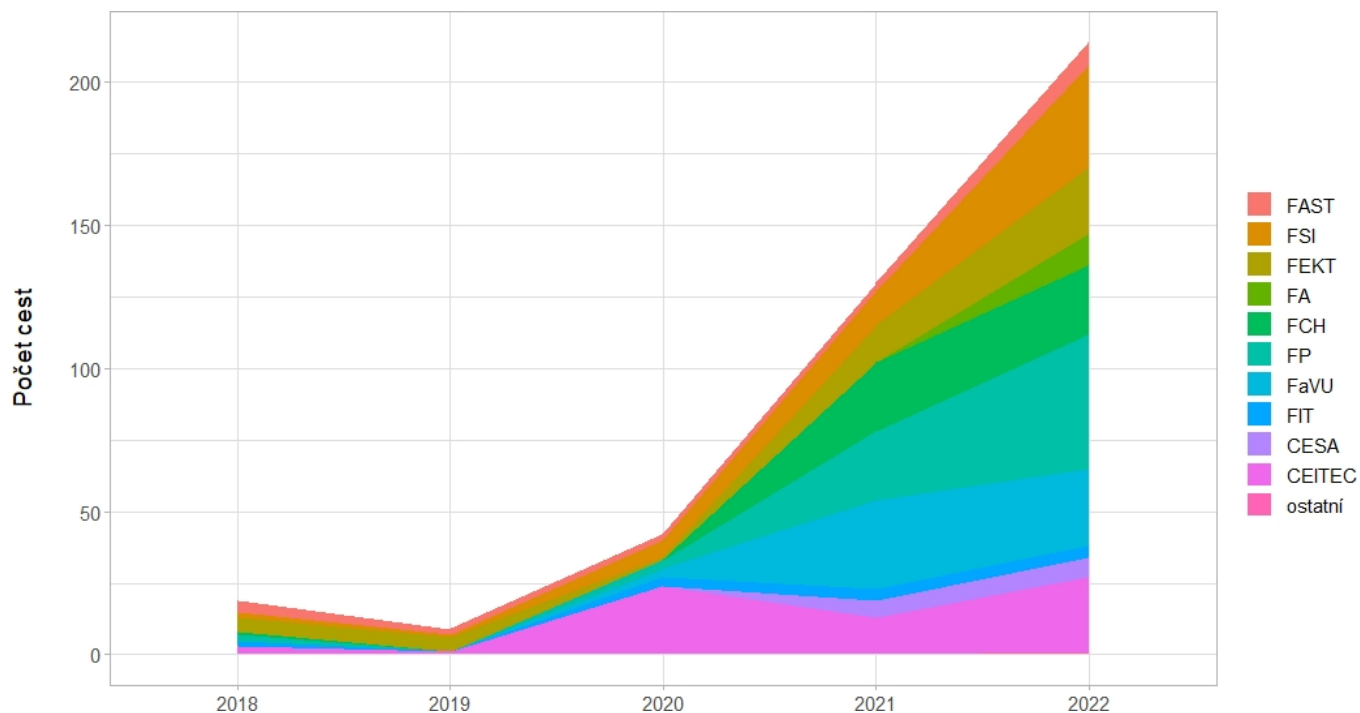


Table 35. [I22] Number of recruited staff (in persons), by F/S (source: IS BUT)

F/S	2018	2019	2020	2021	2022
FAST	4	2	2	3	8
FSI	2	1	6	12	36
FEKT	5	5	1	13	23
FA	0	0	0	0	11
FCH	1	0	0	24	24
FP	2	0	3	24	47
FaVU	0	0	3	31	27
FIT	2	0	3	4	4
CESA	0	0	0	6	7
CEITEC	3	1	24	13	26
Other	0	0	0	0	1

2. Creative activity

All RIV outputs

[I23] Number

Last year, the BUT produced 2220 publications, mostly articles from the WoS database , 57%), the second most represented category is articles in WoS or Scopus proceedings (27%).

While the number of publications has decreased significantly the last ten years (-41%), the structure of publications has changed fundamentally. The formerly completely dominant articles in WoS or Scopus (57%) have been replaced by the aforementioned Jimp-type publications, strongly represented by Jost - other"), dropping from a 31% share to an 8% share. The number of Jimp publications has increased by 348% over the last 10 years.

CEITEC (85%), FCH (81%), and FSI (74%) currently have the highest proportion of high quality Jimp outputs among other own publications. On the other hand, the lowest proportion is at ÚSI (16%), FIT (26%), and FAST (37%) (FA and FaVU we do not include).

BUT

Figure 36. [I23] Number of (source: IS BUT)

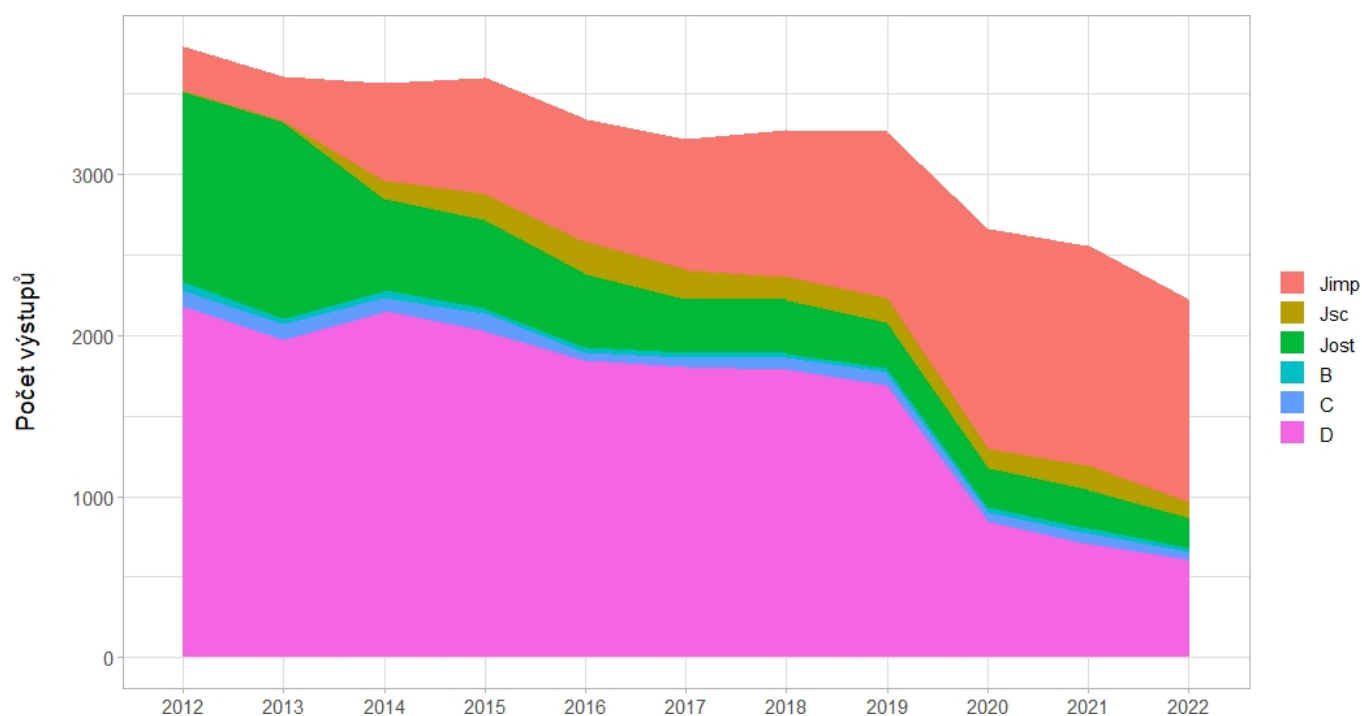
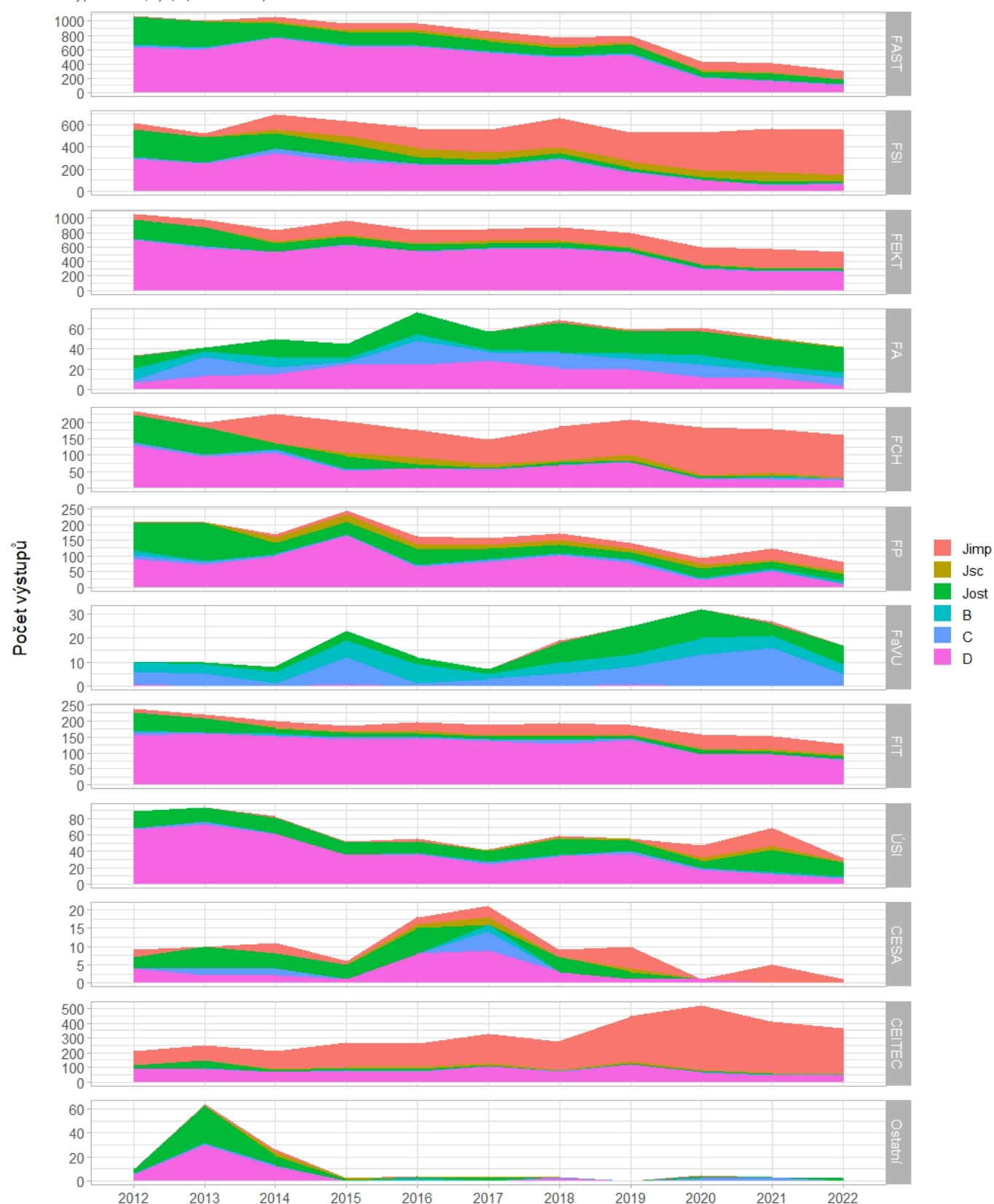


Table 36. [I23] Number of (source: IS BUT)

Category	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Jimp	280	276	608	722	763	811	915	1 033	1 360	1 63	1 255
Jsc	5	6	113	160	199	181	139	149	121	151	98
Jost	1 82	1 220	566	550	453	331	331	282	244	240	186
B	50	32	42	28	35	28	27	31	30	29	26
C	96	100	87	110	48	63	74	76	56	65	51
D	2 180	1 967	2 147	2 024	1 841	1 800	1 787	1 690	847	707	604

Faculties/Units

37. Number of publications, by F/S (source: IS BUT)



37Number of publications, by F/S (source: IS BUT)

F/S	Category	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
FAST	Jimp	16	10	66	97	98	112	102	103	119	126	112
	Jsc	3	2	27	22	42	30	35	23	22	19	8
	Jost	377	364	187	179	174	144	117	117	76	92	62
	B	12	13	9	8	5	8	6	11	5	3	3
	C	28	17	10	30	5	16	11	22	7	3	5
	D	639	601	765	631	648	553	492	523	206	162	109
FSI	Jimp	56	37	136	139	178	205	263	258	342	389	410
	Jsc	0	0	33	67	79	70	50	61	60	85	58
	Jost	246	228	131	119	62	39	37	27	18	24	11
	B	1	1	4	0	3	2	4	2	3	2	2
	C	16	7	46	48	3	5	15	9	2	11	8
	D	293	248	339	262	242	232	285	171	103	49	68
FEKT	Jimp	83	99	159	193	185	160	184	201	231	262	222
	Jsc	0	0	21	27	19	41	25	19	8	15	11
	Jost	266	265	120	107	87	65	69	50	46	30	28
	B	6	2	0	4	5	4	3	3	1	4	2
	C	7	27	3	5	4	6	7	4	10	7	11
	D	702	584	528	632	539	576	583	524	298	258	259
FA	Jimp	1	0	0	0	0	0	3	1	4	1	0
	Jsc	0	0	0	0	0	0	0	1	0	1	1
	Jost	13	3	18	14	21	18	29	21	23	26	24
	B	11	6	11	4	7	2	1	6	10	5	6
	C	3	19	6	3	24	9	15	10	12	7	7
	D	6	13	15	24	24	28	21	20	12	11	4
FCH	Jimp	10	13	88	96	84	76	102	107	145	132	130
	Jsc	0	0	2	9	19	11	7	17	5	8	1
	Jost	84	83	17	39	11	2	6	4	6	4	2
	B	0	0	3	2	0	1	1	0	0	1	0
	C	7	6	9	3	1	4	1	1	1	7	3
	D	131	95	106	53	61	54	69	79	27	26	25
FP	Jimp	5	1	10	13	23	21	21	19	19	35	32
	Jsc	0	3	17	23	17	13	14	12	14	7	7
	Jost	88	122	35	39	49	31	27	21	30	19	22
	B	13	4	3	3	3	5	4	4	3	7	8
	C	12	7	3	2	3	4	4	10	3	4	2
	D	91	72	100	165	66	82	101	76	23	50	10
FaVU	Jimp	0	0	0	0	0	0	1	0	0	1	0
	Jsc	0	0	0	0	0	0	0	0	0	0	0
	Jost	0	1	2	4	3	2	8	12	12	5	8
	B	4	4	5	7	8	2	5	5	7	5	4
	C	5	5	1	11	1	3	5	7	13	16	5
	D	1	0	0	1	0	0	0	1	0	0	0
FIT	Jimp	12	12	18	17	27	34	38	28	45	41	33
	Jsc	2	1	3	1	8	3	4	4	1	4	5
	Jost	54	43	17	17	10	8	10	9	15	9	9

F/S	Category	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	B	3	1	5	0	2	1	2	0	1	0	0
	C	13	2	4	5	3	6	12	5	0	2	3
	D	155	161	151	143	146	136	127	141	95	95	79
USI	Jimp	0	0	2	1	4	0	2	1	15	23	5
	Jsc	0	0	0	0	0	2	1	2	4	4	1
	Jost	21	18	19	15	14	13	20	12	9	27	17
	B	0	0	1	0	1	1	1	0	0	2	1
	C	1	3	0	0	0	2	1	4	2	0	1
	D	67	73	61	36	37	24	34	37	17	13	7
CESA	Jimp	2	0	3	1	2	3	2	6	0	5	1
	Jsc	0	0	0	0	1	2	0	1	0	0	0
	Jost	3	6	4	4	7	0	4	2	0	0	0
	B	0	0	0	0	0	2	0	0	0	0	0
	C	0	2	2	0	0	5	0	0	0	0	0
	D	4	2	2	1	8	9	3	1	1	0	0
CEITEC	Jimp	95	103	124	165	161	200	197	309	439	348	310
	Jsc	0	0	7	10	14	8	3	9	7	8	6
	Jost	26	56	8	12	14	7	4	7	7	4	1
	B	0	0	1	0	0	0	0	0	0	0	0
	C	3	4	2	3	4	3	2	4	4	5	6
	D	86	88	68	76	69	106	70	117	65	43	43
Other	Jimp	0	1	2	0	1	0	0	0	1	0	0
	Jsc	0	0	3	1	0	1	0	0	0	0	0
	Jost	4	31	8	1	1	2	0	0	2	0	2
	B	0	1	0	0	1	0	0	0	0	0	0
	C	1	1	1	0	0	0	1	0	2	3	0
	D	5	30	12	0	1	0	2	0	0	0	0

[I24] Number of non-publication

In 2022, the BUT produced 344 non-publication outputs. types of outputs are mainly produced at FSI (28%), FEKT (27%) (17%), FIT (13and CEITEC (11%). of these outputs are functional samples (Gfunk,with software (R, 33%) being the second most common type, followed by prototype (Gprot, 9%).

In the last ten years a steady steep decline in the number of non-publication outputs,

with a low in 2018. The number has been fluctuating since this year. Compared to ten years ago, the

In 2022, it produced 50% fewer non-publication outputs. The structure of these outputs, remained largely the same, with patents almost completely disappearing (0.3% vs. 4%).

BUT

Chart 38. [I24] Number of non-publication (source: IS BUT)

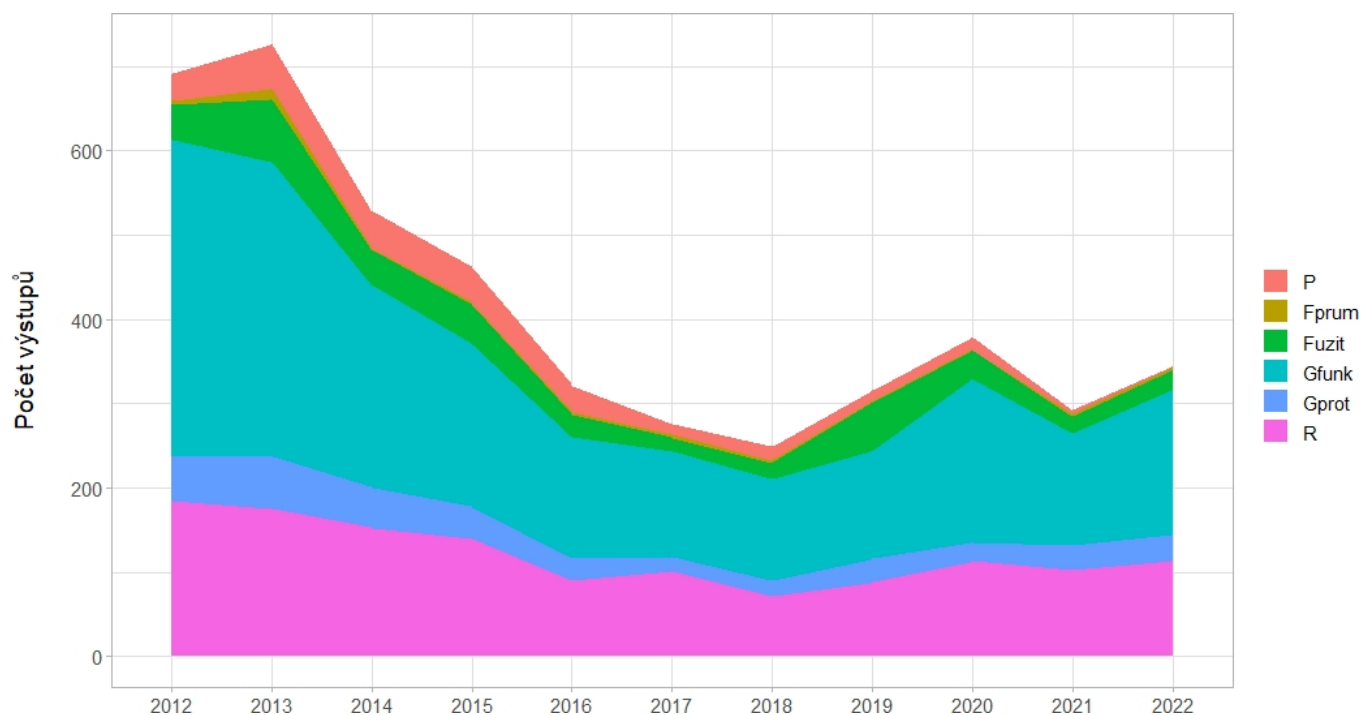


Table 38. [I24] Number of non-publication (source: IS BUT)

Category	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
P	31	54	44	43	32	12	16	13	15	5	1
Fprum	5	12	2	2	3	4	3	2	1	2	3
Fuzit	42	74	42	47	27	16	19	57	34	20	23
Gfunk	375	350	239	193	144	125	121	128	193	133	173
Gprot	53	62	48	38	26	18	18	28	23	29	31
R	185	175	153	140	90	101	72	88	113	103	113

Faculties/Units

Chart 39.] Number of non-publication outputs, by Faculty/Unit (only F/S with at least 10 outputs) (source: IS BUT)

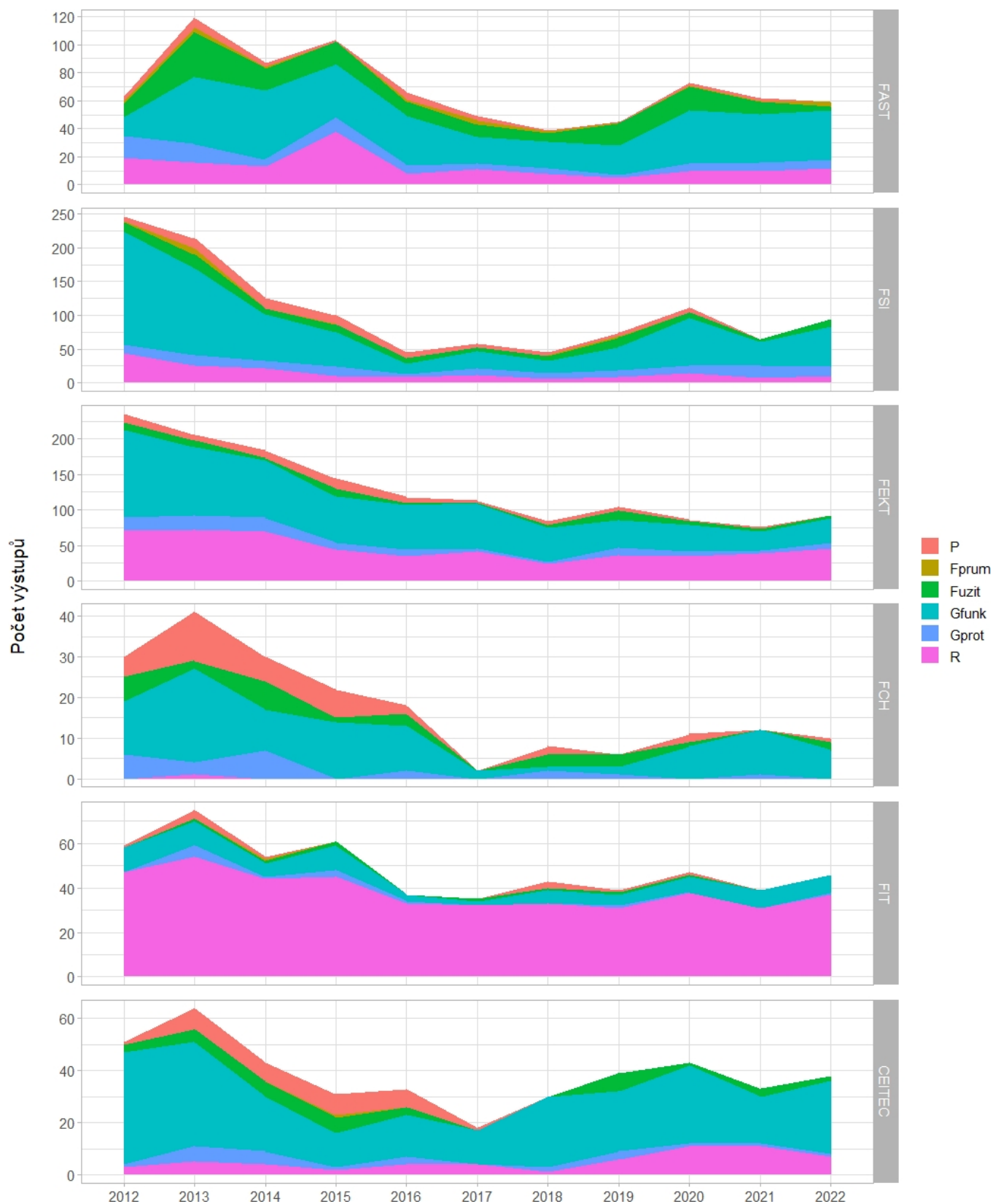


Table 39 Number of non-publication outputs, by Faculty/Unit (only F/S with at least 10 outputs) (source: IS BUT)

F/S	Category	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
FAST	P	4	7	3	1	5	3	1	1	2	2	0
	Fprum	2	3	1	0	2	3	1	0	1	1	3
	Fuzit	9	32	16	16	10	9	6	16	17	9	3
	Gfunk	13	48	49	38	35	19	19	21	38	34	35
	Gprot	16	13	5	10	6	4	4	2	5	6	6
	R	19	16	13	38	8	11	8	5	10	10	12
FSI	P	7	15	16	13	9	5	5	5	8	0	0
	Fprum	2	9	0	1	0	1	1	2	0	0	0
	Fuzit	14	21	9	11	8	5	6	14	8	4	12
	Gfunk	168	128	69	51	15	26	19	35	71	35	59
	Gprot	12	15	11	14	4	10	8	10	10	18	14
	R	44	26	21	10	9	11	6	8	15	7	10
FEKT	P	12	8	11	14	9	3	5	6	2	3	0
	Fprum	0	0	0	0	0	0	1	0	0	0	0
	Fuzit	10	10	3	11	2	1	3	14	5	4	4
	Gfunk	124	96	81	65	63	63	49	38	38	27	34
	Gprot	18	20	19	10	9	4	2	11	7	3	9
	R	71	72	70	44	35	42	24	36	34	39	45
FCH	P	5	12	6	7	2	0	2	0	2	0	1
	Fprum	0	0	0	0	0	0	0	0	0	0	0
	Fuzit	6	2	7	1	3	0	3	3	1	0	2
	Gfunk	13	23	10	14	11	2	1	2	8	11	7
	Gprot	6	3	7	0	2	0	2	1	0	1	0
	R	0	1	0	0	0	0	0	0	0	0	0
FIT	P	1	4	1	0	0	0	3	1	1	0	0
	Fprum	0	0	1	0	0	0	0	0	0	0	0
	Fuzit	0	1	1	2	0	1	1	1	1	0	0
	Gfunk	11	11	6	11	3	2	6	5	7	8	8
	Gprot	0	5	1	3	1	0	0	1	0	0	1
	R	47	54	44	45	33	32	33	31	38	31	37
CEITEC	P	1	8	7	8	7	1	0	0	0	0	0
	Fprum	0	0	0	1	0	0	0	0	0	0	0
	Fuzit	3	5	6	6	3	0	0	7	1	3	2
	Gfunk	43	40	21	13	16	13	27	23	30	18	28
	Gprot	1	6	5	1	3	0	2	3	1	1	1
	R	3	5	4	2	4	4	1	6	11	11	7

Publications in WoS

[I25] Percentage WoS by F/S

In terms of contribution to the total number of Jimp publications at the BUT, FSI was the largest contributor in 2022 (33%), followed by CEITEC (25%) and FEKT (18%). Together, these three BUT units accounted for 3/4 of Jimp production at the BUT.

Over the last ten years, the FSI (+13 p.p.) and FCH (+7 p.p.) have improved the most, while the FEKT (-12 p.p.) and CEITEC (-9 p.p.) have seen the greatest decline in their share. With this ten-year comparison, it is necessary to

bear in mind that the number of Jimps has increased significantly over the period under review and the structure of publications has completely changed by type.

BUT

Figure 40. [I25] Percentage WoS by F/S (only F/S with at least 10 (source: IS BUT))

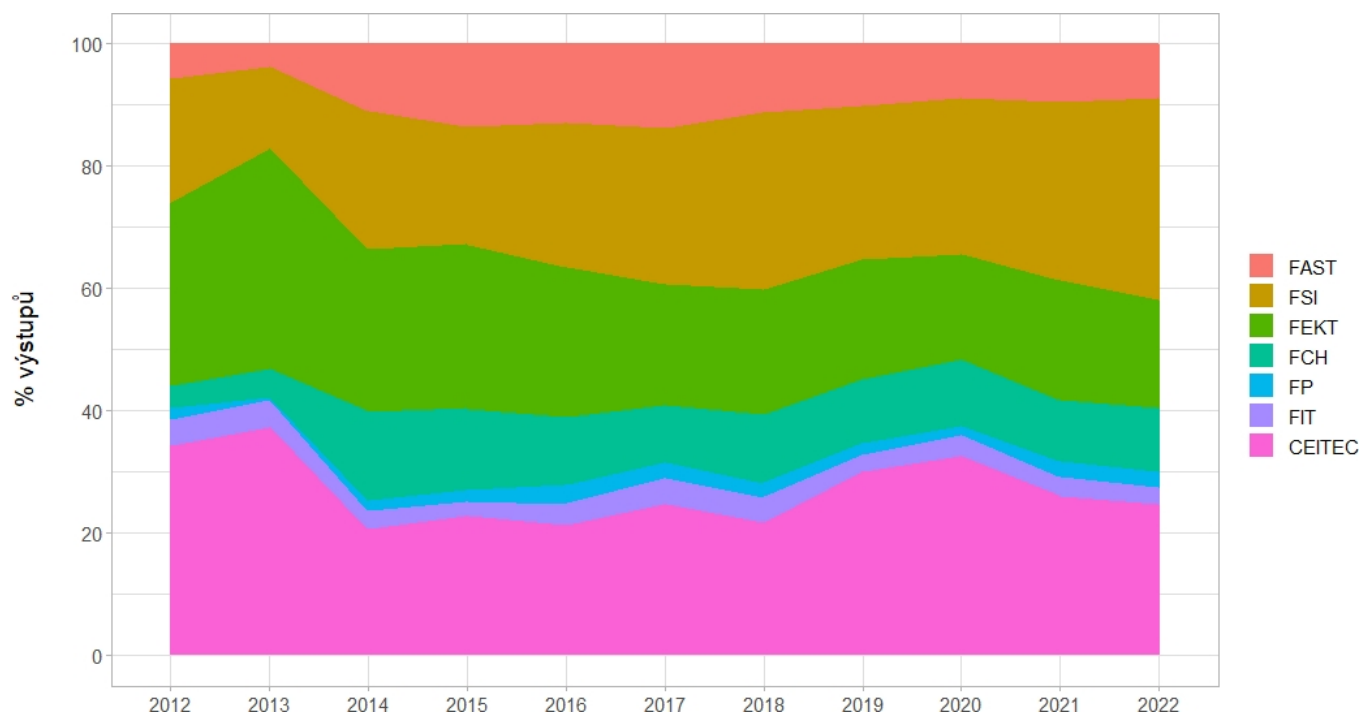


Table 40. [I25] Percentage WoS by F/S (only F/S with at least (source: IS BUT))

F/S	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
FAST	5,8	3,6	11,0	13,5	13,0	13,9	11,2	10,0	8,9	9,5	9,0
FSI	20,2	13,5	22,6	19,3	23,5	25,4	29,0	25,2	25,5	29,2	32,8
FEKT	30,0	36,0	26,5	26,8	24,5	19,8	20,3	19,6	17,2	19,7	17,8
FCH	3,6	4,7	14,6	13,3	11,1	9,4	11,2	10,4	10,8	9,9	10,4
FP	1,8	0,4	1,7	1,8	3,0	2,6	2,3	1,9	1,4	2,6	2,6
FIT	4,3	4,4	3,0	2,4	3,6	4,2	4,2	2,7	3,4	3,1	2,6
CEITEC	34,3	37,5	20,6	22,9	21,3	24,8	21,7	30,1	32,8	26,1	24,8

[I26] Number WoS employee

At present, there are 0.8 Jimp publications per employee/ci (AP+VP) at the BUT, while ten years ago it was only 0.2. The highest average number of this type of publications was currently recorded CEITEC (1.4), FCH (1.3) and FSI (1), while the lowest number was recorded at FIT and FAST (0.3).

BUT

Chart 41. [26] Number WoS employee (only F/S with at least 10 (source: IS BUT)

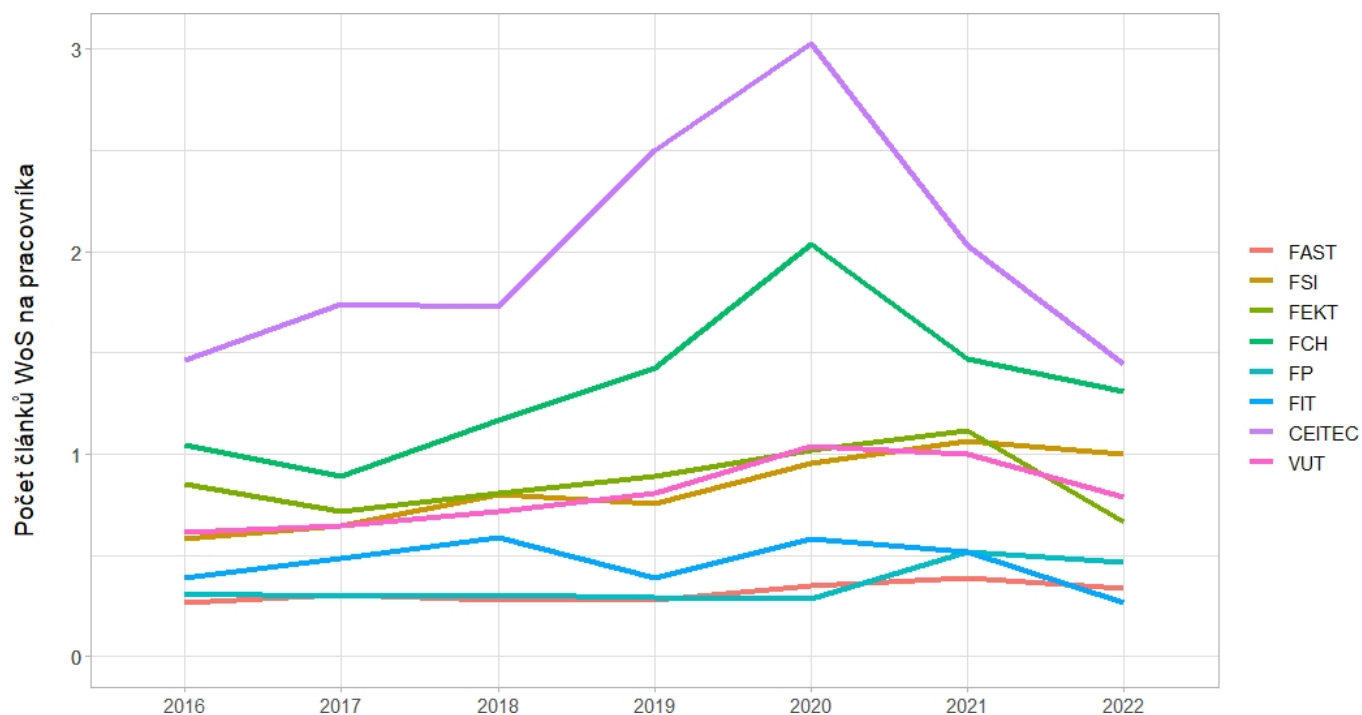


Table 41. [26] Number WoS employee (only F/S with at least 10 (source: IS BUT)

F/S	2016	2017	2018	2019	2020	2021	2022
FAST	0,3	0,3	0,3	0,3	0,3	0,4	0,3
FSI	0,6	0,6	0,8	0,8	1,0	1,1	1,0
FEKT	0,9	0,7	0,8	0,9	1,0	1,1	0,7
FCH	1,0	0,9	1,2	1,4	2,0	1,5	1,3
FP	0,3	0,3	0,3	0,3	0,3	0,5	0,5
FIT	0,4	0,5	0,6	0,4	0,6	0,5	0,3
CEITEC	1,5	1,7	1,7	2,5	3,0	2,0	1,4
BUT	0,6	0,6	0,7	0,8	1,0	1,0	0,8

[I27] Distribution of WoS by assigned AIS quartile

2022, most Jimp publications produced at BUT (and with an associated AIS quartile) were classified in AIS quartile Q2 (33%) and then Q1-D1 (28%), with 16% of Jimp publications classified in the most comprehensive category D1.

The increase in the quality of Jimp is evident, with Q2 and Q1-D1 steadily increasing by 7 p.p. over the years under review, and D1 increasing by 6 p.p. For most F/S, the share is increasing, especially in the top quartile and decile. Where quality publishing is just starting, the increase is particularly noticeable in the third (or third and second) quartile (FP,

BUT

Figure 42. [I27] Distribution WoS according to the assigned AIS quartile (source: IS BUT)

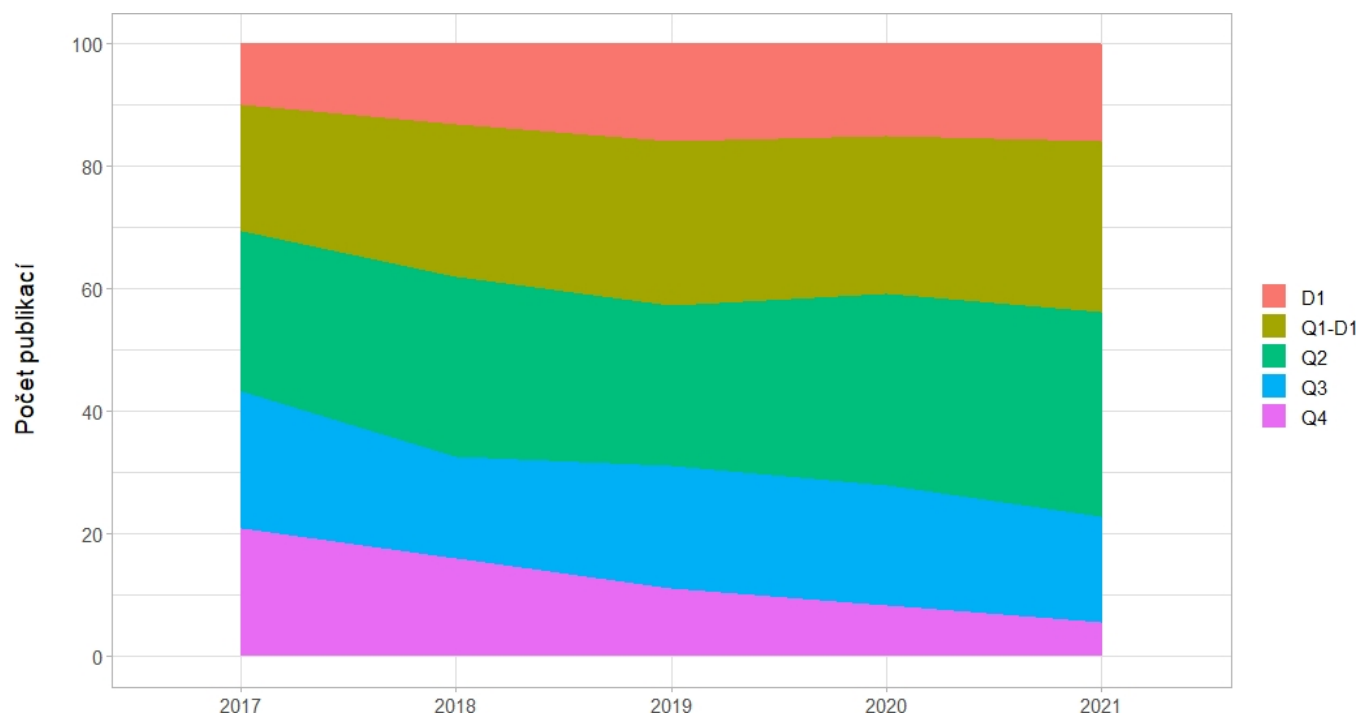


Table 42. [I27] Distribution WoS according to the assigned AIS quartile (source: IS BUT)

Category	2017	2018	2019	2020	2021
D1	9,9	13,2	15,9	15,1	16,0
Q1-D1	20,6	24,9	26,7	25,7	27,9
Q2	26,3	29,2	26,1	31,2	33,4
Q3	22,2	16,7	20,2	19,5	17,1
Q4	21,0	16,0	11,1	8,4	5,7

Faculties/Units

Figure 43. [I27] Distribution of WoS by assigned AIS quartile, by F/S (only F/S with at least (source: IS BUT)

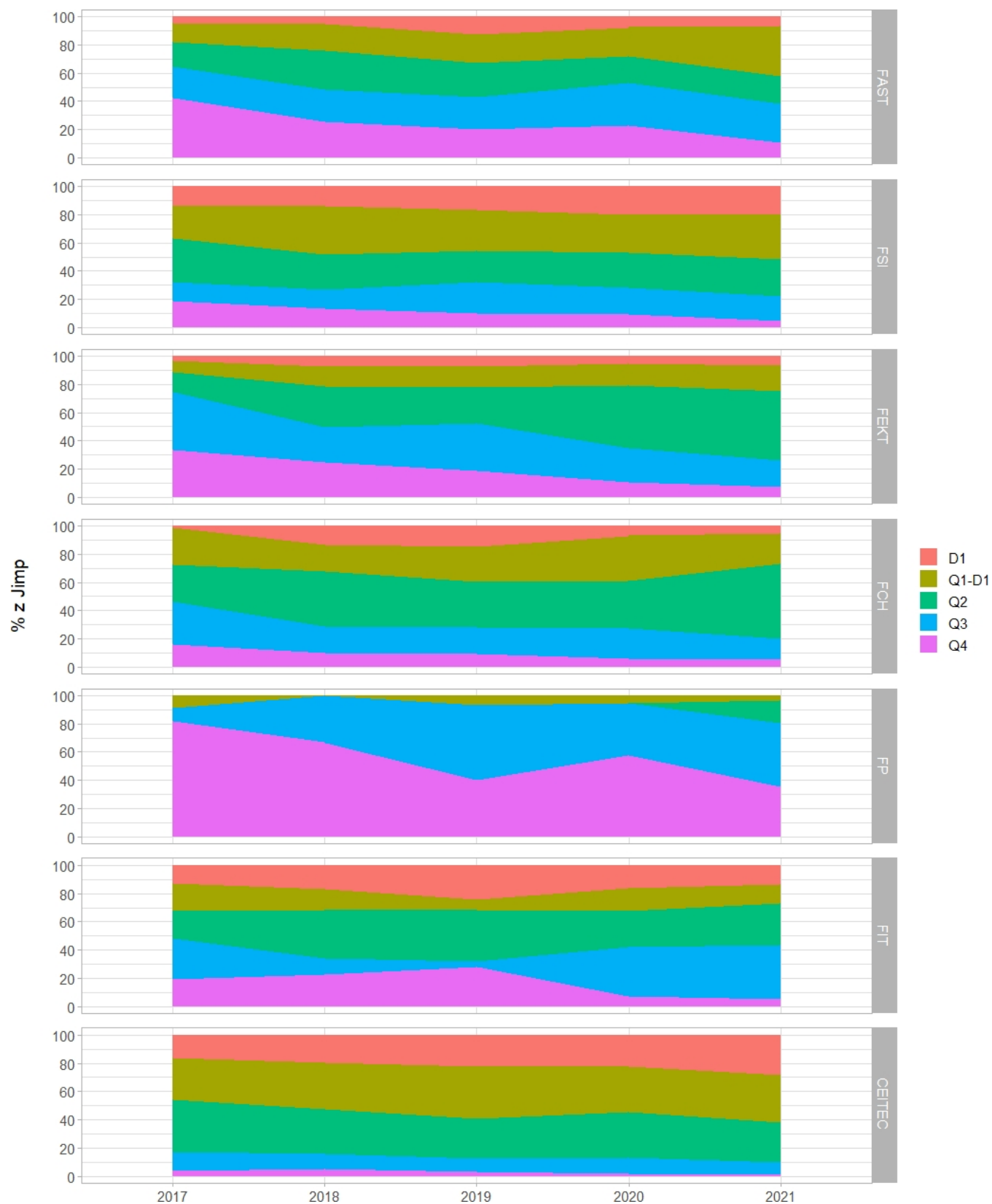


Table 43. [127] Distribution of WoS by assigned AIS quartile, by F/S (only F/S with at least (source: IS BUT))

F/S	Category	2017	2018	2019	2020	2021
FAST	D1	4,4	5,4	12,7	7,6	6,4
	Q1-D1	13,2	18,9	20,3	20,2	36,0
	Q2	17,6	27,0	24,1	19,3	19,2
	Q3	22,1	23,0	22,8	30,3	28,0
	Q4	42,6	25,7	20,3	22,7	10,4
FSI	D1	13,9	14,3	16,6	19,9	20,3
	Q1-D1	23,1	33,9	28,9	26,8	31,1
	Q2	30,6	25,0	22,1	25,0	26,8
	Q3	13,3	13,4	22,6	19,0	17,0
	Q4	19,1	13,4	9,8	9,2	4,9
FEKT	D1	3,4	7,6	7,3	5,3	6,5
	Q1-D1	7,6	13,9	14,6	15,4	18,1
	Q2	14,5	29,1	25,8	44,7	49,6
	Q3	40,7	24,7	33,7	24,1	18,5
	Q4	33,8	24,7	18,5	10,5	7,3
FCH	D1	1,4	13,3	14,6	7,0	5,4
	Q1-D1	26,1	18,9	25,0	31,7	21,7
	Q2	26,1	38,9	32,3	33,8	52,7
	Q3	30,4	18,9	18,8	21,8	14,7
	Q4	15,9	10,0	9,4	5,6	5,4
FP	D1	0,0	0,0	0,0	0,0	0,0
	Q1-D1	9,1	0,0	6,7	5,3	3,2
	Q2	0,0	0,0	0,0	0,0	16,1
	Q3	9,1	33,3	53,3	36,8	45,2
	Q4	81,8	66,7	40,0	57,9	35,5
FIT	D1	12,9	17,1	24,0	16,3	13,5
	Q1-D1	19,4	14,3	8,0	16,3	13,5
	Q2	19,4	34,3	36,0	25,6	29,7
	Q3	29,0	11,4	4,0	34,9	37,8
	Q4	19,4	22,9	28,0	7,0	5,4
CEITEC	D1	16,4	19,9	22,4	22,4	28,3
	Q1-D1	29,1	32,8	37,1	32,3	33,5
	Q2	37,6	31,2	28,2	32,3	28,6
	Q3	13,2	10,8	9,2	11,4	8,4
	Q4	3,7	5,4	3,1	1,6	1,2