

#### MASARYK UNIVERSITY



#### ANNUAL ACTIVITY REPORT







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The Annual Activity Report cover and section photographs represent the Botanical Garden of the Faculty of Science, MU.
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#### Foreword

From a long-term point of view, 2015 was a ground-breaking year for the university. First of all due to the conclusion of a programming period by the end of which Masaryk University had become one of the most significant beneficiaries and investors of European Structural Funds in the Czech Republic. In the past five years, European funding had an unprecedented impact and the university's teaching and research infrastructures now bear comparison with leading foreign universities.

The successful acquisition of European funds helped compensate for the stagnation or even decrease in funding allocated to Czech universities from the state budget. On one hand this was a powerful stimulus for the university, on the other – especially with respect to the overall funding of higher education – it also stoked fears of a growing structural deficit, an issue which will likely surface even before 2020, but which will dramatically manifest itself later on once the opportunity to reduce the lack of funding in Czech higher education by injecting European funds is significantly curtailed.

However, macroeconomic worries should not overshadow the fact that Masaryk University was able to take advantage of European opportunities perfectly, avoiding the serious clerical errors and ethical failures which so often plague projects funded by European Funds in the Czech Republic. This was made possible primarily thanks to my many colleagues in academic as well as non-academic positions who were entirely devoted to the planning, execution and incredibly challenging reporting associated with each individual project.

2015 was also groundbreaking with respect to the inner workings of the university, especially since it was the final year of the implementation of the university's five-year strategic plan set out for the 2011–2015 peri-

od. It is not the task of this brief text to assess whether all objectives were met, which challenges remain, how many proved infeasible and which lie dormant for the moment, awaiting a more favourable legislative or economic environment. However, the university need not be ashamed by any measure: in the past five years, we have maintained our position as a leader and innovator in Czech higher education as well as our status as an institution which is attractive for students, teachers and researchers alike. Naturally, there is always room for improvement.

Awareness of the need for improvement is in fact perhaps the most significant aspect of the past groundbreaking year, especially as it inspired the university to discuss, formulate and approve its plans and objectives for the next five-year period, i.e. until 2020. This time, our strategic plan is explicitly centred on a single underlying objective: to improve the university's standing in respected international rankings. Clearly, this is not because we view rankings as all-powerful marketing tools or because we are unaware of their risks and weaknesses. We are motivated by the fact that the indicators which form the basis for these rankings are in fact representative of what constitutes the prestige and quality of a higher education institution in the first place: academic performance, internationalization of the student and teacher community, conditions for individualized education and recognition of foreign colleagues.

I hope that together we will succeed in achieving this ambitious objective – an objective which once again calls for us to become leaders and innovators willing to exceed all expectations.

Mikuláš Bek Rector



# The University in 2015

## The University in 2015

**35,848** 

Students



Entrance applications submitted



**Partner** secondary schools



Lifelong learning participants

Students with disabilities

Scholarships paid out to students (million CZK)

6,962

International students

8,474

**Graduates** 

Degree 220

1,309 Fields of study

**Doctoral candidates** 

**Employees** 

Average monthly salary 44,188

6,460

non-investment income (million CZK)

Non-investment research and development funding (million CZK)

**Patents** granted

Patent applications submitted



## Key events in 2015

#### 1 Mikuláš Bek re-elected Rector

The Academic Senate re-elected Mikuláš Bek to a second term which began in September and is scheduled to run until 2019.

#### 2 New faculty management

Four new deans were elected in 2015. In early February, the Faculty of Education elected Jiří Němec, a former vice-rector and head of the Department of Social Education. In April, the Faculty of Law elected Markéta Selucká of the Department of Civil Law. In September, the Faculty of Informatics re-elected Jiří Zlatuška, rector emeritus and a member of the Chamber of Deputies of the Parliament of the Czech Republic. Břetislav Dančák was also elected to a second term as dean of the Faculty of Social Studies.

#### New Board of Trustees chair

A new chairperson and vice-chairs were selected by the university's Board of Trustees. The body, tasked primarily with supervising the administration of university property, has elected Marta Valešová, director of the South-East Cohesion Region, as its chairperson. Newly appointed vice-chairs are pastor of the Evangelical Church of Czech Brethren Jiří Gruber and media expert Petr Pleva.

#### 4 Extensive Faculty of Arts renovation and expansion completed

Large-scale construction works were finalized at the Faculty of Arts complex at Arne Nováka Street. The renovated A and B1 buildings as well as the new B2 building welcomed the first students and teachers in the autumn semester. The Faculty of Arts thus acquired modern teaching and research spaces while also replacing existing but now inadequate facilities.

## Renovated Faculty of Law library opened

The completely redesigned Faculty of Law library was reopened for the benefit of both students and academics. After sixteen months of renovation, future lawyers now have access to vastly improved study conditions – and the faculty's book collection is now housed in a respectable facility.

### Innovative cyber attack training ground for IT experts

A physical and virtual space designed for simulated defence against serious cyber attacks has been launched at the Faculty of Science and the Institute of Computer Science. The KYPO – Cyber Exercise & Research platform allows users to simulate a computer network in a safe and closed environment so that an attack may be examined and tested without impacting actual ICT infrastructure.









#### 1 New blood disorder discovered

In collaboration with researchers from abroad, scientists from the Faculty of Medicine have described a new type of blood disorder, caused by a hereditary gene mutation. News of the discovery has been published in the prestigious Nature Genetics journal.

#### 4 Two prestigious grants awarded to MU researchers

Two Masaryk University scientists were awarded the prestigious ERC grant in 2015. While Richard Štefl of CEITEC examines the detailed mechanisms behind the formation and function of the so-called biological dark matter, David Kosař of the Faculty of Law focuses on the effects of increased judicial self-government in EU member states and on the principle of separation of powers.

#### 7 Werner von Siemens Excellence Award for sulfur mustard degrading enzyme

The Werner von Siemens Excellence Award was awarded to Zbyněk Prokop and his team of the Research Centre for Toxic Compounds in the Environment for the development of Yperzyme, an enzyme capable of neutralizing the chemical nerve agent commonly known as mustard gas.

#### 2 Breast cancer and ovarian cancer causes clarified

Significant progress in the understanding of the mechanisms behind certain types of breast and ovarian tumours has been made by Lumír Krejčí and his team at Masaryk University and the ICRC Research Centre. As reported by the prestigious Cell journal, the discovery could have significant implications for treatment.

#### 5 Nobel Laureates lecture at Masaryk University

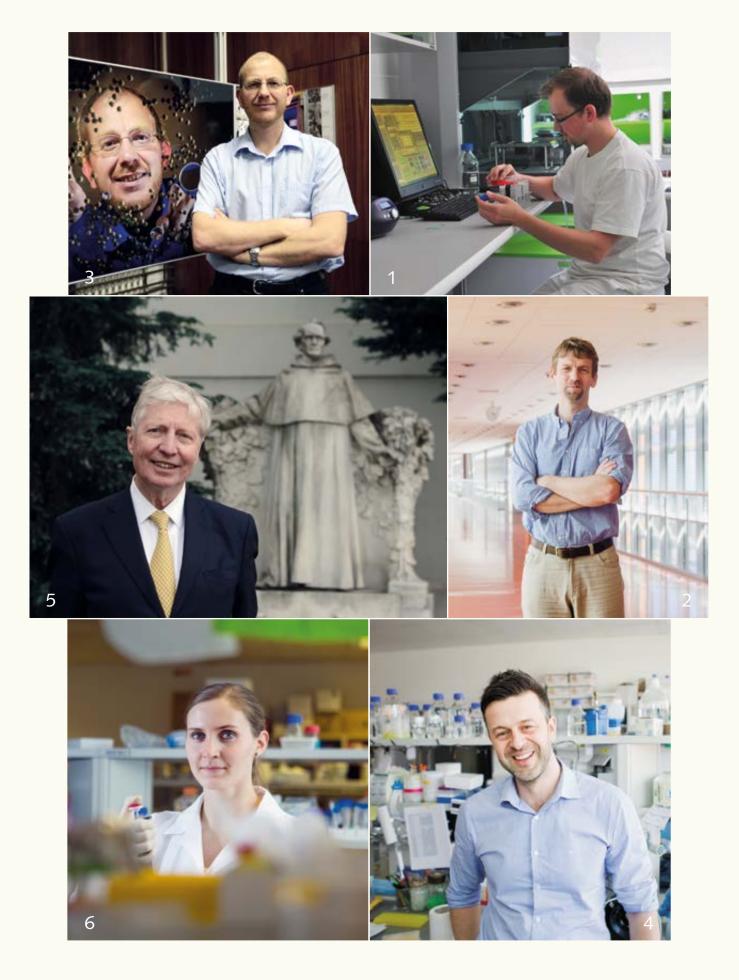
Three Nobel Laureates, biologists Jules A. Hoffmann and Kurt Wüthrich and biochemist Aaron Ciechanover, took part in the exclusive Mendel Lectures series. Experts and students alike were thus able to learn about the latest results of their ongoing research.

### Discovery improves fibre optic cell imaging

A research team from the University of Dundee – including Professor Tomáš Tyc from the Faculty of Science – published a study describing new uses for fibre optics in medicine and biology. The discovery may help scientists observe e.g. the processes taking place in the brain during the onset and progression of Alzheimer's disease.

## Junior Nobel Prize for biochemistry student

Overall 1st place in the life sciences category of the prestigious Undergraduate Awards, also known as the Junior Nobel Prize, went to Faculty of Science student Hana Sedláčková.



#### 1 Father of genetics celebrated at the University

Celebrations marking the 150th anniversary of the publication of the works of G. J. Mendel were held under the patronage of Sir Paul Nurse, Nobel Laureate and president of the Royal Society. An audiovisual show took place in the courtyard of the Old Brno Abbey where Mendel first conducted his groundbreaking experiments. In addition to Sir Paul Nurse, the event was also attended by Vicki Chandler, emeritus president of the Genetics Society of America.

## 4 Best-selling book published by Munipress

Masaryk University Press published the first Czech translation of the international bestseller The Emperor of all Maladies: The Story of Cancer by Pulitzer Prize winner Siddhartha Mukherjee.

#### 2 Grandson of Nazi executioner appears at Students' Day lecture

On 17 November, University Cinema Scala welcomed two rather unusual guests: Rainer Höss, grandson of the commander of the Auschwitz extermination camp, and Tal Bashan, an Israeli journalist and daughter of writer Ruth Bondy, who managed to survive internment in several concentration camps. Both warned against the radicalization of public opinion regarding Islam.

#### 5 First Masaryk jUniversity graduates receive diplomas

A graduation ceremony in May produced the very first alumni of Masaryk jUniversity. Diplomas for a successful first year of studies at the children's university were presented to 140 nine- to fourteen-year-olds in Scala Cinema.

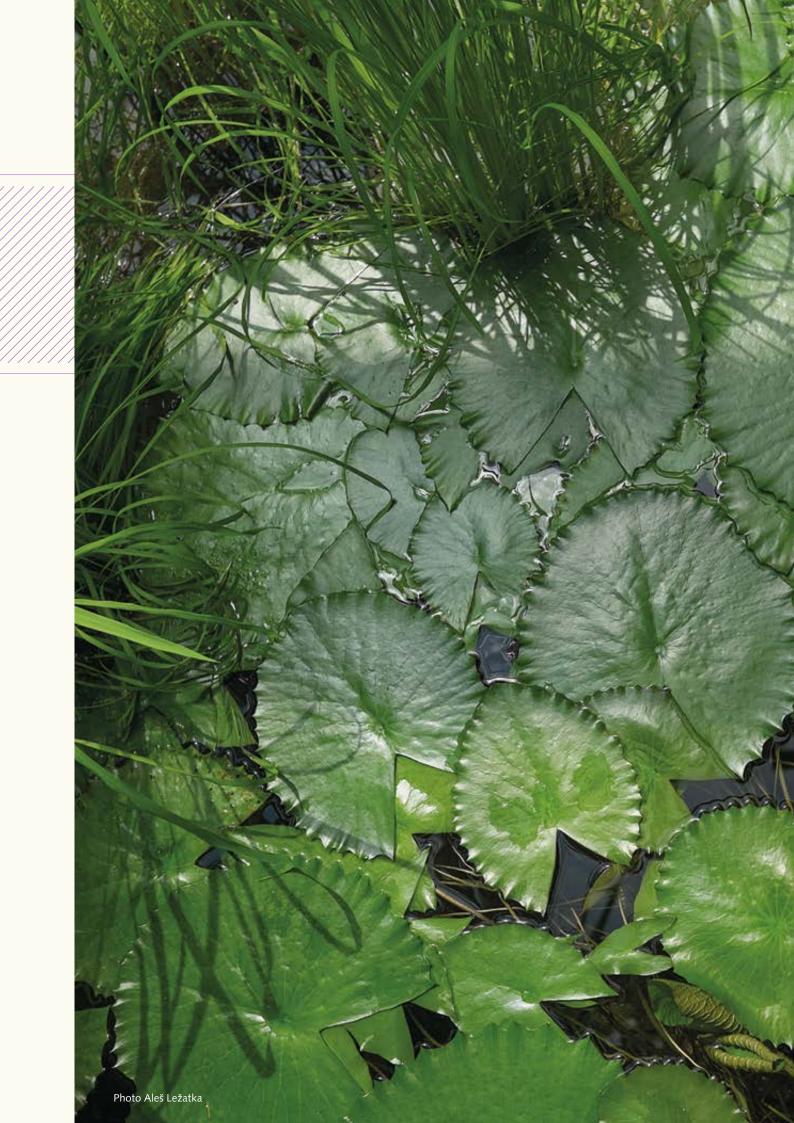
## MU wins company of the year award for services provided to hearing impaired

The 'company of the year' award was bestowed on the university in the seventh annual charitable competition organized by Silent World, an association dedicated to helping the deaf. The university was praised for its helpful approach to deaf employees, who in fact submitted MU for awards consideration in the first place.

#### 6 Researchers' Night with Masaryk University

The global Researchers' Night festival, dedicated this time to light and its impact on life, took place in dozens of MU locations. Over 6,000 people attended the event, which promoted the dissemination of knowledge and expertise from a variety of scientific fields.





# Educational mission and student-oriented approach

## 1.1 Degree programme profiles and study demand

In accordance with the Strategic Plan and its update for 2015, the university continued to innovate and develop degree programmes and fields of study on the basis of a meticulous analysis of existing degree programme offer.

The development of new fields of study focuses on the particular needs of each field as well as their interdisciplinary potential. A great deal of attention was devoted to making sure that individual fields of study are not offered in duplicate; this strategy has resulted in the withdrawal of accreditation from several fields of study which were no longer viable.

The development of new fields takes into account current demand as well as the theoretical knowledge and practical skills expected of future graduates. Individual faculties also extended accreditation of existing degree programmes in combined study mode. Examples include the Midwife field of study of the Nurse - Midwife degree programme implemented at the Faculty of Medicine. Other faculties focused on interfaculty collaboration and on the accreditation of new combinations of existing fields of study in response to applicant demand, launching double subject studies such as English Language and Literature and Political Science or Political Science in combination with Public Economics and Administration. These collaborations thus include the Faculty of Social Studies, Faculty of Economics and Administration and Faculty of Arts.

The Faculty of Science has accredited several fields of study designed specifically for professionals, including the Medical Genetics and Molecular Diagnostics and Bioanalyst – Specialist in Laboratory Methods Master's programmes, both of which were developed in close cooperation with experts from the Faculty of Medicine and tailored to provide learning outcomes directly targeting clinical laboratory competence.

Current examples of university collaborations with international institutions include double degree Bachelor's and Master's programmes implemented jointly by the Faculty of Economics and Administration and the University of Huddersfield (Great Britain), Institut de préparation à l'administration générale (France), University of Tampere (Finland), Università degli Studi del Piemonte Orientale - Amedeo Avogadro (Italy) and Université de Rennes (France). The Faculty of Arts is involved in double degree programmes with the University of Vienna as main coordinator, Czech-Belgian Master's studies held in collaboration with the Université Libre de Bruxelles and studies jointly implemented with the University of Paris and Université Jean Moulin Lyon 3. The Faculty of Social Studies focuses primarily on joint degree programmes with universities in Graz, Trento, Zadar and Rome, a double degree programme implemented in cooperation with Utrecht University and a joint MA degree programme in International Relations: Europe from the Visegrad Perspective held in collaboration with several partner universities under the auspices of the Jagiellonian University in Kraków.

MU also prepared a variety of summer activities for international students and teachers. Brno and Telč hosted a range of summer schools, conferences, seminars and workshop – some traditional, some new. Traditional events included the Summer School of Slavonic (Czech) Studies and several short-term study programmes held by the CIC and attended by 130 internationals and over 100 Czech participants.

Small-scale programmes implemented by faculties included e.g. the Autumn School of Legal Writing held by the Faculty of Law in collaboration with the European Academy of Legal Theory, University of Vienna and the John Marshall Law School of Chicago.

## 1.1 Degree programme profiles and study demand

#### Study demand

In order to provide applicants for studies with all relevant information well in advance of the beginning of the admission procedure, Masaryk University employs a range of current tools such as moderated social network profiles, continuously updated special-purpose websites, online campaigns and various competitions. In addition, MU is also focusing on bolstering interest in university studies among prospective students thanks to partnerships with dozens of secondary schools. Moreover, the university also provides a convenient electronic administration process for all matters connected with the admission procedure, i.e. from the submission of an electronic application to the delivery of examination results notifications. As in previous years, MU attended post-secondary education fairs in Brno and Bratislava

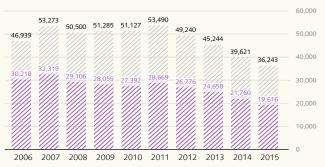
The learning potential test (LPT) is a unified entrance examination format used by all faculties apart from the Faculty of Medicine. An online e-learning LTP training course as well as the public versions of all entrance examinations to date are available free of charge on the university website. All online sources are widely used by prospective students and tens of thousands of users access individual course components every year. MU is thus able to provide equal access to all study applicants in terms of the quality of resources necessary for their preparation for the entrance examination, regardless of their financial situation or place of residence. One of the LPT terms is held in Bratislava each year, providing a convenient option for Slovak students.

The university is popular among international students, with approximately 6,000 (17.5 % of the student population) arriving every year.

#### Study statistics as of 31 October 2015:

- » 35,848 studies
- » of which 17,326 in Bachelor's degree programmes
- » 15,248 in long-cycle Master's and Master's degree programmes
- » and 3,274 in doctoral degree programmes
- » 6,962 international studies (all foreigners in all degree programmes in all languages)
- » 8,474 graduates (1 January 2015 to 31 December 2015)

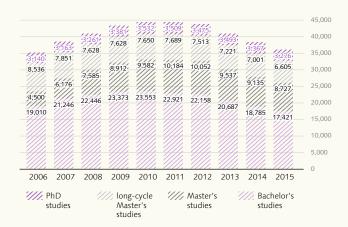
Graph 1 Number of entrance applications submitted (Czech citizens, Bachelor's and long-cycle Master's degree programmes) and number of applicants (physical persons, Czech citizens, Bachelor's and long-cycle Master's degree programmes) at MU as of 31 October of a given year



Entrance applications submitted /// Number of applicants (Czech citizens, Bachelor's and long-cycle Master's studies) Bachelor's and long-cycle Master's sudies)

Number of applicants (physical persons, Czech citizens, Bachelor's and long-cycle Master's studies)

Graph 2 Number of studies according to degree programme type (as of 31 October)



#### 1.2 Doctoral studies

Masaryk University's nine faculties currently offer over 50 doctoral programmes and over 130 fields of study. A total of 17 doctoral programmes have been accredited in collaboration with other universities and scientific institutions such as the Brno University of Technology, Mendel University and the Academy of Sciences of the Czech Republic. The Faculty of Medicine has recently accredited the Bioethics programme, the Faculty of Education has expanded the Specialization in Pedagogy programme to include the Didactics of Geography field of study and the accreditation of additional programmes is pending. A majority of doctoral candidates and successful graduates hail from the Faculty of Science, Faculty of Medicine and Faculty of Arts. Each of these faculties may claim over 20 % of the entire number of graduates.

An internal development project focusing on competence development and interdisciplinary support for doctoral candidates was prepared following a year-long debate dedicated to the development of research-oriented degree programmes. Activities supported during the first project year will benefit both doctoral candidates and academics responsible for supervising doctoral programmes. Specific project activities include the university-wide Life Sciences Seminar Series and similar lecture cycles dedicated to the humanities and social sciences.

University-wide doctoral candidate support also focuses on educational activities associated with soft and transferable skills. The PREFEKT lecture and workshop cycle, designed to provide doctoral candidates with knowledge regarding national and international research funding opportunities, was significantly innovated. MU also expanded collaboration with the Association of Moravian ASCR Units, especially with respect to the implementation of the Basics of Scientific Work courses

The Internal Standards for Doctoral Degree Programmes, a document supporting the unification of doctoral programme quality throughout the university, was completed and published in 2015. Furthermore, the PhD Guide was officially added to the Masaryk University website. The portal aims to simply and intuitively guide both Czech and international doctoral studies applicants to doctoral degree courses on offer and provide a list of supervisors and contacts who will help them find their bearings at MU and around Brno.

Since 2010, creative activities – and especially those performed by doctoral candidates – have been eligible for the **Student Project Grant**. In 2015, the total available funding for this competition stood at 135 million CZK. A total of 148 projects received financial support, including 14 student conferences.

Doctoral candidates from the Faculty of Science and the Faculty of Medicine successfully participated in the Brno PhD Talent competition. A doctoral candidate from the Faculty of Law won the **Ius et Societas** legal debate competition while the František Vencovský Award for young economists under 35 was presented to a doctoral candidate from the Faculty of Economics and Administration. Two doctoral candidates from the Faculty of Medicine presented winning papers at the 22<sup>nd</sup> annual Young Medical Doctors' Conference and the Conference on Stem Cells and Cell Therapy: From Research to Modern Clinical Application respectively. A third doctoral candidate from the Faculty of Medicine was presented with the Award of the Minister of Education, Youth and Sports for excellent students and graduates in degree programmes.

International awards presented to MU students include e.g. a third place in the Albert Schweitzer Prix for Medicine. Doctoral candidates from the Faculty of Science managed to win first, second and third place in the Jean-Marie Lehn Award for chemistry. A doctoral candidate from the Faculty of Arts was highly praised by the Mongolian Ambassador to the Czech Republic for the publication of The History of Mongolia.

Special thanks also go to doctoral candidates who represented MU in areas other than research. Significant successes include a first place in hammer throw at the Czech Championships and a Trainer of the Year award, both presented to doctoral candidates from the Faculty of Sports Studies.

Masaryk University Rector's Award for the Best Students in Doctoral Programmes:

Lucia Hudecová – student of the Faculty of Law, MU

Aleš Stýskalík – student of the Faculty of Science, MU

Ivo Pezlar – student of the Faculty of Arts, MU

Masaryk University Rector's Award for an Outstanding Doctoral Thesis:

Zinaida Shevchuk – student of the Faculty of Social Studies, MU

Helena Pětrošová – student of the Faculty of Medicine, MU

Moslem Amiri – student of the Faculty of Informatics, MU

## 1.3 Quality assurance and studentcentered learning

Throughout 2015 Masaryk University continued to develop its internal system for quality assurance and assessment of educational and related activities in line with European standards as expressed by the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) principles as well as the anticipated Higher Education Act amendment.

The primary mechanism for ensuring the quality of educational activities at Masaryk University is the internal evaluation system, supervised by the Quality Office. Internal evaluation is primarily focused on promoting the continuous improvement of course quality, verifying the consistency and logic of course structure and securing feedback regarding the state of fields of study based on information provided by external assessors while ultimately focusing on the strategic development of individual fields of study. The internal evaluation process is applied to all forms and types of study; in 2015, the internal evaluation process was applied to 44 fields of study which subsequently prepared for re-accreditation. In order to provide academic employees responsible for evaluation activities with additional support, an overall update of the internal field of study evaluation was carried out in 2015. All self-evaluation reports were updated and a detailed methodological guide for the guarantors of individual disciplines was prepared, including the relevant online support materials.

The Quality Office also focused on supporting the student-centered learning, in particular with respect to the involvement of students in quality assurance and collaboration with student representatives in quality in education.

#### **Quality Assessment Conference**

In cooperation with the Czech Rectors Conference, Council of Higher Education Institutions and the Centre for Higher Education Studies, Masaryk University organized the 16<sup>th</sup> annual Quality Assessment Conference. The conference has traditionally provided Czech universities with an important platform for sharing experiences with quality implementation and development and a space for discussing current trends in this area.

The conference took place from 21 to 22 May 2015 at University Centre Telč and focused primarily on issues associated with successful entry into university education. In addition to the admission procedure, the conference was primarily devoted to the psychological and sociological aspects of the emerging university student generation and to issues associated with drop-out rate.

Quality assurance are also reflected in analytical and evaluation activities carried out within the strategic planning. Activities performed by the Strategy Office of the Rector's Office dominated this area, especially their processing of data input for new strategic targets carried out in preparation for the publication of the MU Strategic Plan 2016–2020.

An extensive comparative study of individual MU faculties and related faculties found at public universities throughout the Czech Republic was carried out in 2015 in order to provide data for traditional evaluation talks between faculty and university management.

#### Institutional surveys at MU

The implementation of institutional surveys mapping progress "from freshman to graduate" continued in all its complexity throughout 2015. The Motivation and Expectations of First-Year Master's Students at MU survey was launched at the end of the autumn semester and its outcomes thus provide evidence of development taking place over time. Study outcomes indicate that e.g. full-time students generally submit multiple applications, usually two or more, and are also accepted for studies in multiple fields (70 % of respondents had to decide which option to choose prior to enrolment). Masaryk University is the preferred choice mainly due to field of study offer and prestige. A slight increase was registered in the number of students who plan to work regularly (from 18 to 25 %). Favourable developments include linear growth in several categories, most notably with respect to course offer at MU.

The Motivation and Expectations of First-Year Master's Students at MU Following their Transfer from Other Universities survey was conducted only for the second time. The survey focuses on how students who have successfully completed their studies at universities other than MU approach the Master's studies admission procedure. In addition, their study expectations are also recorded. The outcomes indicated that full-time students mostly come from universities in Slovakia, Palacký University in Olomouc and the Brno University of Technology. Combined studies students frequently completed their previous studies at UPOL, Tomas Bata University in Zlín or University of South Bohemia in České Budějovice. They generally turn leave their home universities for MU due to the absence of their chosen field of study or combination. In 84 % of such cases, field content was a decisive factor when choosing between several Master's fields. Reasons for shifting to MU included Master's degree programme offer and the prestige associated with Masaryk University.

The university also analysed premature study termination causes. In 2015, the outcomes of the third annual Premature Termination of Studies at MU survey were evaluated. Data collection took place throughout the year. See chapter 3.3 for further information.

#### 1.3 Quality assurance and studentcentered learning

Two traditional surveys focusing on **MU alumni** were also implemented in 2015: the **Recent Graduate Survey** and a second one, specifically assessing graduates' career choices 1 to 2 years after graduation. See chapter 7.5 for further information on graduate surveys.

In addition to internal surveys, the university also provided data for external purposes, including for the **U-Multirank** international university ranking which focuses specifically on student satisfaction with teaching quality. Students from selected fields taught at the Faculty of Science, Faculty of Arts and Faculty of Social Studies were included.

Throughout the past year, the Strategy Office continued to work with the IS development team on improving the Surveys application in the MU Information System, originally launched in 2014. Almost all university surveys taking place in 2015 were thus administered using this application. In addition to university-wide surveys conducted by the Strategy Office, a number of other investigations were carried out by individual faculties.

#### Course opinion poll

One of the major innovations of the course opinion poll, which was completely overhauled in the 2013–2014 period, is the written commentary feature which allows teachers to react to individual course opinion poll outcomes. These comments are then made available to students who have evaluated a sufficient number of courses and have thus obtained access to the poll outcomes.

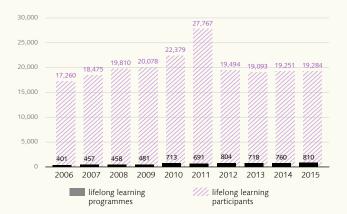
#### University-wide sociological surveys carried out in 2015:

- » Freshmen Survey
- » Motivation and Expectations of First-Year Master's Students at MU Following their Transfer from Other Universities
- » Completion of Studies at Masaryk University
  - Past and Future
- » Premature Termination of Studies at MU
- » Graduate Destination Survey 2013-2014
- » U-Multirank Student Survey

#### 1.4 Lifelong learning

Masaryk University has traditionally focused on the support and development of lifelong learning for all professional and age groups. Lifelong learning continued to develop in accordance with the MU Strategic Plan throughout the year, as evidenced by the fact that all faculties as well as the Rector's Office were involved in the implementation of several hundred - largely professionally-oriented - lifelong learning programmes. A total of 19,284 participants in full-time, distance or combined study mode took part in 810 programmes in 2015. The offer includes accredited degree programmes as well as professionally oriented supplementary, specialized and retraining courses for a wide range of professions. While demand for higher education among middle-aged secondary school graduates has been experiencing long-term growth, great emphasis has been placed on flexible forms of education and the associated need for extensive electronic support. Examples of best practices in the internationalization of lifelong learning programmes launched in 2015 include cooperation with Donau-Universität Krems. Courses for U3A participants, who make up approximately one fifth of all lifelong learning programme participants, are held in a variety of classrooms, computer rooms and MU library facilities; in addition, a lifelong learning film studies course launched in 2013 was one of the first to make use of the recently renovated University Cinema Scala.

Graph 3 Lifelong learning programmes and participants (2006–2015)



## Project activities in the area of

## educational offer development and associated services

The final batch of 29 projects implemented within the Education for Competitiveness Operational Programme was completed in 2015. A total of 108 sustainability reports on projects completed in previous years were submitted.

Six Research and Development for Innovation Operational Programme projects worth 4,109.7 million CZK were implemented in 2015. Operational programme projects included the development and innovation of research and development infrastructure at FSci, CEITEC, FI and FA. All remaining projects were transitioned from the implementation phase to the sustainability phase.

The last four Austria–Czech Republic Cross-border Cooperation and Slovakia–Czech Republic Cross-border Cooperation Operational Programme projects worth 21.8 million CZK were completed, as were two micro-projects funded by the Bílé Karpaty region worth 1.5 million CZK. The projects were designed to foster cooperation with institutions in Lower Austria and the Trenčín Region in Slovakia.

Three Human Resources and Employment Operational Programme projects worth a total of 3 million CZK and investigated by FI, FSS and CEITEC were also completed.

The first calls for project applications in the Development, Research and Education Operational Programme were announced in 2015. Masaryk University submitted one project as applicant and two projects as partner to another entity in Priority Axis 3: Inclusive Education, dedicated to ensuring equal access to quality early-childhood, primary and secondary education.

#### Centralized development projects

In 2015, Masaryk University participated in a total of five centralized development projects: as chief coordinator in three cases (some extensive projects included up to thirteen additional partners) and as partner in two cases (with financial participation). The total amount of subsidies allocated to MU amounted to 6,895,000 CZK.

#### Masaryk University Development Fund

The second annual university-wide Masaryk University Development Fund competition was announced as part of the MU Institutional Plan for 2015. An amount of 13 million CZK was earmarked for this activity by the Rector, with 2.6 million CZK specifically designated for student projects. A total of 392 project applications were submitted and 153 projects were selected for implementation by the evaluation board.

## 1.5 Project activities in the area of educational offer development and associated services

Project No. CZ.1.07/2.3.00/30.0009 – Employment of Newly Graduated Doctors of Science for Scientific Excellence

Projects completed in 2015 include **Postdoc I**; with nearly 198 million CZK, this was the most funded ECOP project investigated at MU during the entire 2009–2013 programming period. The project was dedicated to providing research and development with better human resources, improving training quality and working conditions and implementing appropriate motivational and promotional tools.

The project also successfully integrated a number of research activities within a single institution. Key activities included the integration of postdocs in research teams within MU and CEITEC and mobility support between research institutions as well as the organization of postdoc internships at European and international research institutions. The project also supported the establishment of international links and contacts with top scientific experts at notable foreign research institutions.

#### Project No. CZ.1.05/2.1.00/19.0382 – CETOCOEN UPgrade

The purpose of the project, implemented in 2015 as part of call 3.2 of RDIOP Priority Axis 2, was to improve research and development conditions at RECETOX (Faculty of Science) by acquiring new or improving existing cutting-edge equipment in order to increase the research infrastructure capacity originally developed in 2010–2013 with support from the CETOCOEN project using RDIOP funding and thus bolster the competitiveness of the centre's research programmes.

Investment funding provided by the CETOCOEN project helped finance the construction of a **new building at the University Campus Bohunice** and equip the facility with a range of modern technologies. The main objective of the project is to strengthen and develop the centre's four key research programmes: environmental chemistry and modelling, photochemistry and supramolecular chemistry, protein engineering and ecotoxicology. Subsidies acquired by MU for the project amount to 26.8 million CZK.



#### 2.1

## Degree programme openness and study offer in foreign languages

In keeping with its long-term Internationalization Strategy Plan for the 2014–2020 period, Masaryk University is dedicated to increasing the number of incoming international students who complete their entire studies at MU either in Czech or in English. In order to boost the internationalization of its internal environment further in 2015, the university sought to attract motivated students from abroad and strengthen its attractiveness not only among applicants from Slovakia but also among prospective students from Central, Eastern and Southeast Europe. Furthermore, the university also continued to focus on strengthening its position in East Asia and Africa, e.g. thanks to the Erasmus Mundus programme.

As of 30 October 2014, a total of **1,362** international studies (excluding Slovaks, i.e. a slight increase in comparison with 2014) were enrolled in regular degree programmes. The total number of international studies (i.e. including Slovaks) stood at **7,116**.

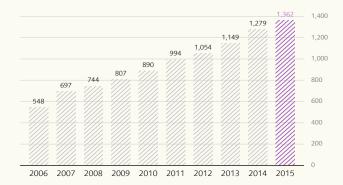
The highest numbers of international students enrolled in degree programmes taught in foreign languages were to be found at the Faculty of Medicine (640 students), followed by FSS (90), FEA (47), FI (21) and FA (15). Some were also to be found at the FEdu and FSci (4 and 10 students, respectively).

The highest numbers of international students enrolled in degree programmes taught in Czech were to be found at the Faculty of Arts (205 students), followed by FSci (111), FMed (56), FLaw (55), FEA (37) and FEdu (31). International student numbers at MU (degree programmes taught in Czech and in foreign languages combined) prominently feature students from Russia (FA, FEA, FI), Ukraine (primarily FA, FI, FSci, FSS), Great Britain (primarily FMed) and Portugal (primarily FMed).

#### International studies (as of 31 October 2015):

- » 1,362 international students in accredited degree programmes in all languages (excluding students from Slovakia);
- » 827 international students were enrolled in degree programmes taught in foreign languages (increase of 10.5 %);
- » all foreign students (including Slovaks) accounted for 19 % of all studies at MU;
- » the highest numbers of international students (excluding students from Slovakia) enrolled in foreign language degree programmes were to be found at the Faculty of Medicine and the Faculty of Social Studies;
- » a total of 89 degree programmes in foreign languages were accredited in 2015.

Graph 4 International studies (excluding Slovaks) in accredited degree programmes in all languages



#### 2.2 Language Centre

The Language Centre plays a key role in the area of internationalization and language competence development. The centre, dedicated to meeting the needs of both Masaryk University students and employees, is the largest such facility in the Czech Republic. In 2015 the Language Centre provided specialized and academic language courses (in English, German, French, Spanish, Russian, Latin and Czech for foreigners) for a total of 17,000 students of Bachelor's, Master's and doctoral programmes at all MU faculties. Newly introduced language courses included Arabic and Chinese. Additional innovations took place within the scope of Language Centre projects supported by the MU Development Fund.

The Language Centre completed two key international projects in 2015: IMPACT, a project dedicated to improving the quality of language education at universities, and CZKey, which produced a portal for the teaching of Czech as a foreign language. The IMPACT project (2012-2015) led to the development of 103 innovated language courses for students, 318 new testing modules and 10 online methodological courses for teachers. The project ended with an international conference which welcomed 324 university language education experts from 25 countries and provided its participants with the opportunity to share experiences as well as recent findings in the field; moreover, MU was able to utilize the event as a promotional platform and an opportunity for connecting with new international partners. The CZKey project (2013-2015) led to the development of the mluvtecesky.net portal, a platform for the teaching of Czech as a foreign language, including general language as well as optional special-purpose and medical modules. The project ended with an international conference attended by 98 experts from 5 Central European countries. The conference helped reinforce the position of Czech taught as a foreign language at the Faculty of Medicine on an international

A Language Centre project dedicated to improving conditions for international experts welcomed 10 lecturers from universities in the UK, Italy and the Netherlands in 2015. Semester-long as well as intensive courses taught by these expert lecturers focused primarily on the development of academic competencies of doctoral candidates and early-stage academics, specifically in areas such as academic writing and teaching in English.

The Language Centre continued to actively participate in national and international professional and scholarly organizations (CASAJC, CercleS, IATEFL and EULETA) and to collaborate – in the form of exchange placements, seminars and video-conference mediated instruction – with universities in Great Britain, Germany, Finland, the Netherlands, Spain, Belgium and Turkey and now also in Sweden, Argentina, Canada and China.

## 2.3 International student and academic employee mobility

Improving the quality of studies by participating in international student and employee mobility programmes is one of Masaryk University's decisive internationalization priorities. In 2015, a total of 1,680 outgoing students took advantage of the study and work placement opportunities offered by Erasmus+. An additional 28 graduates participated in the newly offered work placement programme. The most popular mobility destinations included traditional countries such as France, Germany, Spain and Austria. Students preparing for international exchange programmes such as Erasmus+ were given the opportunity to engage in preliminary intercultural sessions.

In addition to Erasmus+ students also benefited from opportunities offered by a range of other international schemes including e.g. Erasmus Mundus, which took students to China, South Africa, Sri Lanka, the Philippines, Morocco and the Balkans, and the university's membership in several international university networks (Utrecht Network, ISEP). A total of 2,054 students participated in short-term mobility schemes in 2015.

As in previous years, MU was able to provide high-quality administration services for the Erasmus+programme; this was confirmed by the final results of an external Erasmus+/LLP audit conducted by the MEYS Centre for International Cooperation. The university also received the Erasmus Quality Seal 2015.

The number of incoming students increased in both categories in 2015, i.e. short-term mobilities and degree students. A grand total of 1,000 international incoming students were enrolled in studies thanks to exchange programmes in 2015, of which over 60 % comprised Erasmus+ students, primarily from Spain, Poland, France, Portugal and Germany. MU was also highly active in the Erasmus Mundus programme, which provided 142 students from non-European countries with the opportunity to study at MU.

The successful collaboration between European and Israeli universities within the framework of the EMAIL (II and III) project continued throughout 2015, as did the KITE project which focused on African, Caribbean and Pacific countries. MU continued to serve as the coordinator for both projects.

In the autumn semester, incoming students were also invited to participate in a survey designed to assess the quality of MU courses taught in foreign languages. Over 700 exchange students took part in the survey in 2015. Additional introductory events included regular Mobility Weeks – organized in October for outgoing students – and Orientation Weeks – organized prior to the beginning of each semester for incoming students. Over 650 international students took part in 2015.

Academic employee mobility was primarily carried out within the Erasmus programme. In 2015, a total of 164 outgoing teachers and 301 incoming teachers participated in international mobility schemes (of which 109 in the Erasmus+ programme).

## 2.3 International student and academic employee mobility

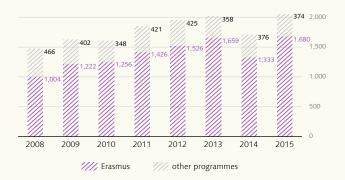
MU also continued to participate in activities organized by the Theodor Herzl Distinguished Chair, a programme funded by the Israeli government. In addition to individual mobilities and traditional seminars for teachers and doctoral candidates from Israel and Central Europe, MU also organized a unique public debate featuring Rainer Höss, grandson of the commander of the Auschwitz concentration camp, and journalist Tal Bashan, a descendant of Holocaust victims. The debate took place as part of the commemoration of the Velvet Revolution and drew a great deal of attention, with 23 mentions in the press, television, radio and online media, including a report published in both the Hebrew and English editions of the Jerusalem Post.

MU also continued to organize activities within the Masaryk Distinguished Chair programme which facilitates placements of Czech researchers at the Israeli Interdisciplinary Center Herzliya. Five participants including two MU employees took advantage of this opportunity in 2015.

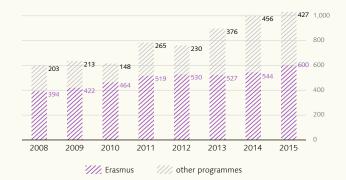
The university was also very successful in Erasmus+ projects. In addition to eight strategic partnership projects (one with MU as coordinator), the university also participated in three capacity development projects (one with MU as coordinator; project includes Vietnam, Cambodia and Mongolia) and three knowledge alliances.

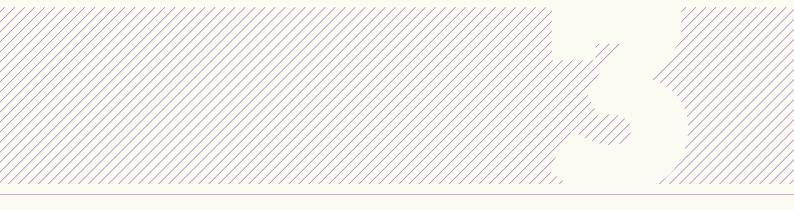
Moreover, MU also continued to focus on increasing non-academic employee mobility in the form of international training, staff shadowing at international institutions, language courses and conference participation. The 7<sup>th</sup> annual Masaryk University Staff Training (MUST) Week, an international event targeting administrative workers from partner institutions, was organized by the Centre for International Cooperation. A month-long training for non-academic employees from countries outside the EU, which traditionally follows MUST week and which focuses primarily on foreign relations and international marketing, was also a resounding success. In 2015 MU welcomed experts from Fiji, Sri Lanka, Nigeria, Russia, Mongolia, El Salvador, Egypt, Armenia, Israel and the Philippines.

Graph 5 Outgoing students participating in international mobility programmes



Graph 6 Incoming students participating in international mobility programmes





# Social responsibility and openness in education

#### 3.1 Access to education for disadvantaged groups

The Support Centre for Students with Special Needs (SCSSN) is tasked with providing comprehensive services as required by all Masaryk University students with disabilities. Facilities for disabled students and employees include 80 workstations in non-stop operating computer rooms installed with a range of assistive software available on the Czech market, a publishing house specializing in Braille publications as well as tactile graphics and maps and a recording studio dedicated to sign language productions.

In addition to students, teachers and scientific employees working at MU in 2015 also included 4 visually impaired, 8 hearing impaired and one wheel-chair-bound person. Based on a survey conducted among the Czech deaf community, the Silent World company granted MU a company of the year 2014 award: "We appreciate the variety of communication tools which Masaryk University offers its employees, from interpreting for sign language users to simultaneous transcription of speech for employees who prefer communication in Czech. Deaf and hearing impaired employees are involved in national and international research projects, participate in conferences and international placements and are respected as equal partners."

In the autumn 2015 semester, Masaryk University registered a total of 509 studies of persons with the following disability types:

- » 85 visually impaired persons (interannual decrease of 10.5 %).
- $\,$  » 67 hearing impaired persons (decrease of 22 %),
- » 63 persons with limited mobility (decrease of 11 %),
- » 171 persons with learning disabilities (decrease of 25 %),
- » 123 persons suffering from mental health problems and chronic somatic diseases (decrease of 3 %).

The overall number of disabled persons at MU decreased by 16 %, which corresponds to the overall decrease in student numbers throughout the university.

A total of 425 students (i.e. 8 % more than in 2014) met the MEYS-defined requirement for the allocation of a subsidy for services provided:

- » 65 visually impaired persons,
- » 63 hearing impaired persons,
- » 83 persons with limited mobility,
- » 129 persons with learning disabilities,
- » 85 persons suffering from Autism Spectrum Disorder, other mental health problems or chronic somatic diseases.

In addition to students of full-time and combined studies, a total of **66 lifelong learning participants** also took part in MU-organized studies.

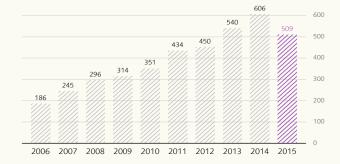
Public university libraries at MU house 1,510 volumes in Braille and a total of 6,705 volumes are available in electronic form, including as hybrid books, a format developed at Masaryk University.

In 2015, the SCSSN in collaboration with PU launched a unique **online Czech sign language dictionary**, a helpful educational tool designed specifically for deaf students.

The new Strategic Plan 2016–2020 introduced in 2015 envisions Masaryk University as an inclusion policy standard setter in regional, national and international environments with respect to the education of persons with disabilities or special needs, incarcerated persons, persons at risk of social exclusion or persons with other impairments.

Under the chairmanship of Masaryk University in 2015, the Association of Service Providers for Students with Special Needs at Universities has expanded to include twelve universities dedicated to providing services to persons with special needs and guaranteeing a national standard for such services.

Graph 7 Number of studies (31 October 2015) with disabilities at MU



#### 3.2

## Scholarship policies, recognition of talented individuals and collaboration with secondary schools

Scholarship programme types and conditions for their awarding are stipulated by the MU Scholarship and Bursary Regulations. A total of 101 scholarship and bursary programmes were announced in 2015 and a total sum of 514,385,759 CZK was paid out to individual Masaryk University students.

#### Accommodation grant

The awarding of accommodation grants is governed by conditions set out in section 8 of the MU Scholarship and Bursary Regulations. The grant amount per student stood at **2,940 CZK** (1 January to 30 June) and **2,920 CZK** (1 July to 31 December) respectively. In 2015, a total sum of 90,081,760 CZK was paid out in accommodation grants at MU.

#### **Bursary**

Masaryk University also continued to award bursaries, as specified by section 91, subsection 3 of Act No. 111/1998 Coll. on Higher Education Institutions. The bursary amounted to 1,620 CZK per month for a duration of 10 months. In 2015, a total sum of 3,316,140 CZK was paid out to 160-210 eligible applicants.

#### MU Rector's Scholarship Programme in Support of Humanitarian Activities Implemented by MU Students

A scholarship programme focusing on student humanitarian activities was established in 2015. It is designed to support MU students who have chosen to engage in voluntary humanitarian activities of society-wide significance, thus demonstrating their affiliation with values espoused by MU. Eight such applications were submitted to the scholarship committee. All were processed with a positive outcome and a total sum of 38,878 CZK was paid out to the applicants. Supported projects included Medical Help Ghana 2015, volunteer activities and medical services in refugee camps and aid in Ukraine

#### Rector's Scholarship Programme

The MU Rector's Scholarship Programme is designed to support student activities across faculties and even beyond the university. Recognized activities are generally associated with the development of both formal and informal education, the support of strategic objectives and university representation. The Rector's Scholarship Fund disbursed an overall sum of 598,742 CZK in support of 49 projects and undertakings, including:

- » Together project psychology students helping patients in psychiatric hospitals,
- » Dance Hall organized by the Medical Society and the FI Student Union,
- » Student art week,
- » 15th Faculty of Informatics Film Festival
- » MU student participation in the Czech Academic Championships (extreme relay: running, mountain biking, kayaking) – 3<sup>rd</sup> place
- » MU student participation in the 28<sup>th</sup> Summer Universiade in South Korea,
- » MuniMUN project mock UN session,
- » MU student zone at the 2015 Brno Majáles festival.

## 3.2 Scholarship policies, recognition of talented individuals and collaboration with secondary schools

Masaryk University Rector's Award for the Best Students in Master's Programmes

Hana Lipovská – student of the Faculty of Economics and Administration, MU Tomáš Fiala – student of the Faculty of Science, MU

Magdaléna Honcová – student of the Faculty of Arts, MU

Masaryk University Rector's Award for an Outstanding Sports Performance

Jitka Landová – student of the Faculty of Sports Studies, MU

#### Selected external awards presented to MU students in 2015

Lenka Sklenářová – Student and Science 2015, national linguistics competition – 3<sup>rd</sup> place (Faculty of Education, MU)

Monika Stachoňová – Ius et Societas – 1<sup>st</sup> place (Faculty of Law, MU)

Ondřej Volný – Award of the Minister of Education, Youth and Sports for excellent students and graduates in degree programmes (Faculty of Medicine, MU)

Hana Sedláčková – Undergraduate Awards 2015 (also known as the Junior Nobel Prize) – overall 1st place in the Life Sciences (Faculty of Medicine, MU)

Tomáš Slanina – Jean-Marie Lehn Award, chemistry – 1<sup>st</sup> place (Faculty of Science, MU) Hana Lipovská – František Vencovský Award, split 1<sup>st</sup> place (Faculty of Economics and Administration, MU)

Barbora Kosinová – Premio Iberoamericano, 1<sup>st</sup> place (Faculty of Arts, MU)

#### Collaboration with primary and secondary schools

The university is dedicated to strengthening relationships with secondary schools, thus creating space for mutual discussion of common interests shared by university and secondary school students and their subsequent implementation. In addition, collaborations with secondary schools also help gifted students, improve counselling services focusing on prospective students and simplify the successful transition into tertiary education. Long-term cooperation between the university and 70 Czech and Slovak secondary schools thus continued within the framework of the Partnership in Education project. Thanks to the partner schools network, talented students were invited to apply for studies while the quality of secondary school education improved as a result of close ties with the university.

MU also recruited selected secondary school students for the third year of the MU Ambassadors project while university students presented the MU study offer at schools in the Czech Republic and Slovakia and individual faculties organized field-specific activities for gifted students.

A total of 27 academic employee teams from four MU faculties and CEITEC MU took part in the  $\bf Secondary$   $\bf School Scientific Activity project.$ 

## 3.3 Counselling services

#### Collaboration with employers and career fairs

Students and graduates of Brno-based universities were traditionally invited to the ninth annual JobChallenge workshop in November. A total of 89 exhibitors offering job opportunities in a wide range of fields and 21 accompanying lectures drew over 2,000 participants. The Challenge Book, a catalogue published on the occasion of the event, contained a list of participating companies and other advertisers offering job opportunities for recent graduates. In order to prepare participants for what might be their first contact with prospective employers, the university also organized the third annual JobChallenge Conference, subtitled What Employers Want. The event was designed to prepare students for the career fair and help them with self-presentation when addressing their future employers.

The Career Centre provides support services to both commercial entities and MU students. Services for students include e.g. techniques aimed at proper and effective communication with employers. A number of MU graduates' success stories were presented at the third annual JobAcademy conference. The event also featured workshops with various company representatives focusing on information essential for the recruitment of new employees. The accompanying program provided participants with the opportunity to try a sample CV photoshoot and a mock job interview and learn how to cope with analysis paralysis.

Thanks to integration with the Information System, the **new conference website** offered a number of new functionalities including links to Career Centre activities, access to the so-called Career Counselling service and integration with the IS MU Job Market application. MU provided companies and other entities with the possibility to order recruitment assessment centres. This service has been utilized by e.g. Komerční banka and the MU Public Relations and Marketing Office.

The Career Centre established a number of new partnerships. Not only has this allowed partner companies to make use of advertising and recruitment services, it also provided them with the opportunity to meet with students during the course of 16 company workshops. The Career Centre's main partner for 2015 was Komerční banka. In cooperation with the Faculty of Social Studies, the centre prepared a new course on Career Planning and Decision-Making. Ties with international universities were reinforced thanks to MUST WEEK, an international meeting with representatives of university centres from across Europe.

#### Counselling services

Counselling services were provided to MU students in the form of individual consultations by a team of psychologists from the University Advisory Service. Students frequently addressed study-related issues as well as problems of a personal nature. Psychologists met with each student client an average of 3.5 times per year.

Traditional events included the ninth annual Prvákoviny and the second annual Prvákoviny conference. The event provided a platform for first meetings with new classmates and an opportunity to learn from more experienced colleagues, many of whom assumed the role of instructors for the duration of the two-day programme. The Prvákoviny 2015 Conference provided students with advice on how to efficiently deal with study-related matters, how to take advantage of opportunities offered by the university and how to get involved in the organization of activities implemented by MU.

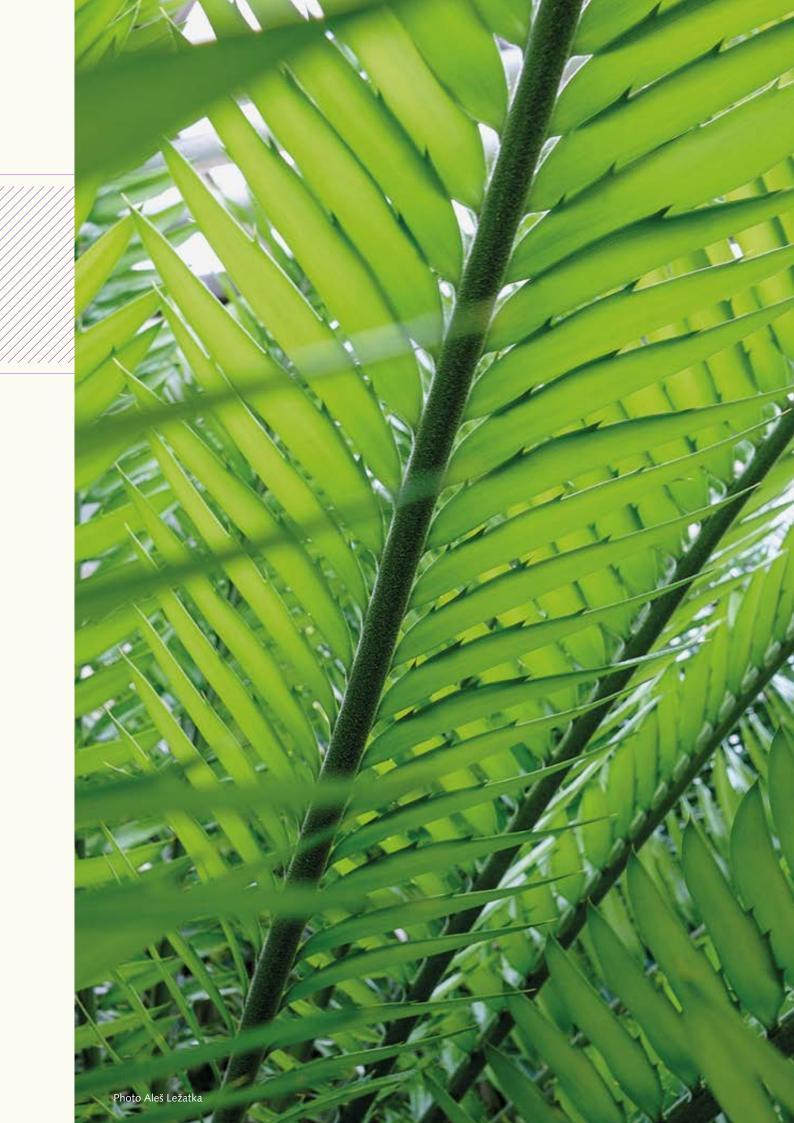
#### **Premature Termination of Studies**

The circumstances, causes and factors involved in academic failure were examined using the Premature Termination of Studies at MU survey. Based on responses from 1,273 respondents, the most common factors influencing premature study termination included different or unfulfilled expectations, insufficient motivation to study and the inability to combine school and work. The survey was updated to include questions regarding whether or not students were involved in work activities during their studies. Almost half of all respondents indicated that they were either employed or involved in private enterprise at the time of study termination; another third occasionally took up temporary jobs. Additional activities potentially affecting study failure were monitored in a similar fashion.

Roughly half of all students with prematurely terminated studies indicated that they were also involved in parallel studies either elsewhere or at MU. Furthermore, four out of ten respondents plan to re-submit an application to MU, though most would likely choose a different field of study.

The survey was complemented by additional data analyses, especially in terms of parallel studies.

The results of these analyses were subsequently used as input for a discussion on specific measures seeking to limit the drop-out rate.



## University research profile

## 4.1 Publication activity and developments in collaboration

Masaryk University scientists published 1,409 (Web of Knowledge) or 1,650 (Scopus) original scholarly texts (texts published in expert journals and collections) in 2015, i.e. a higher number in comparison with the preceding year. In addition, a number of monographs and chapters written by MU scholars were published by prestigious publishers both in the Czech Republic and abroad.

The increase in publication quality achieved by Masaryk University authors is extremely gratifying. In 2015 cutting-edge research results were published in respected journals such as Science, Nature, Chemical Reviews, Cell, Genes & Development, Angewandte Chemie, Proceedings of the National Academy of Sciences of the United States of America and Blood.

According to Web of Science and Scopus, the field-specific stratification of published results has not undergone any dramatic changes in comparison with previous years. In terms of publication frequency, key fields included environmental science, chemistry, physics, molecular and cell biology, oncology and plant sciences while the number of publications in the area of computer science and economics is also on the rise. The increased frequency and quality of humanities and social sciences publications is likewise a positive occurrence. The humanities are currently dominated by fields such as psychology, philosophy and linguistics.

The very fact that many top publications have been written with significant Masaryk University input is extremely satisfactory. This was confirmed by the outcomes of periodic analyses of scientific excellence implemented as part of a regular national assessment of university-produced scientific results. Some fields are already well above average and many others are undergoing a period of dynamic growth.

Scientific output at MU is monitored using bibliometric methods and time-proven indicators suitable for international comparisons, including the **InCites** tool developed by Thomson Reuters. As an example of increasing research quality at MU measured by InCites, an analysis indicates that world-wide field-specific citation reception rose from 86 % (2006–2010) to 125 % (2011–2015) in adjacent five-year periods. The utilization of scientometric methodologies for strategic purposes is gradually growing. Standardized faculty, unit, team and personal analyses were carried out in 2015 on the basis of individual demand.

According to scholarly publications indexed by the Web of Science, Masaryk University's international collaborations primarily targeted scientific units in Germany (11 % of all publications), USA (10 %), Great Britain (7 %), Italy (6 %) and France (5 %). Within the Czech Republic, MU scientists most frequently collaborated with the Academy of Sciences of the Czech Republic (15 % of all publications), Charles University (7 %), Palacký University in Olomouc (5 %) and Brno University of Technology (5 %). The Scopus database provides comparable ranking information. Given the demonstrably higher citation rate reached in cooperation with foreign partners, supporting such collaborative projects remains a key MU strategy.

#### Research Support Award – Masaryk University Rector's Research Awards 2015

Masaryk University Rector's Award for Internationally Recognized Research Results (G. J. Mendel Award)

collective of authors – Chromatin Molecular Complexes research group, Mendel Centre for Plant Genomics and Proteomics, CEITEC MU; Laboratory of Functional Genomics and Proteomics, National Centre for Biomolecular Research, Faculty of Science, MU

Masaryk University Rector's Award for Long-term Excellence in Research

#### Social sciences

Prof. RNDr. Hana Librová, CSc. – environmental studies (Faculty of Social Studies, MIJ)

#### Economics and informatics

Prof. Ing. Ladislav Blažek, CSc. – business economics and management (Faculty of Economics and Administration, MU)

#### Natural sciences and medicine

Prof. Mgr. Jiří Damborský, Dr. – protein engineering and enzymology (Faculty of Science, MU) Masaryk University Rector's Award for Outstanding Research Results Achieved by Young Scientists under 35

#### Social sciences

JUDr. Matěj Myška, Ph.D. – intellectual property law – Faculty of Law, MU

#### Natural sciences and medicine

Assoc. Prof. MUDr. Mgr. Marek Mráz, Ph.D. – immunology and oncology (Faculty of Science, MU and CEITEC MU)

Masaryk University Rector's Award for Extraordinary International Grant Competition Results

Assoc. Prof. Mgr. Richard Štefl, Ph.D. – structural biology (CEITEC MU)

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### Creating conditions for scientific research, research support and research team development

The further development of project support remained a key focus throughout 2015, especially with respect to the Horizon 2020 programme. Significant successes included the third ERC grant ever awarded at MU, this time in the Starting Grants category to lawyer David Kosař. Dr. Kosař is the first recipient of the ERC grant in the field of law in the Czech Republic and also the first recipient of an ERC grant in the social sciences and humanities at MU. His interdisciplinary research brings together aspects of law, political science and sociology in order to focus on how the increased autonomy of higher judicial authorities in European Union countries influences the principle of the separation of powers.

In 2015, MU investigated nearly 400 research projects and 169 specific university research projects. National targeted support providers constituted an essential research funding source. In 2015, MU investigated a total of 230 Czech Science Foundation projects, 38 projects initiated by the Internal Grant Agency of the Ministry of Health, 32 projects announced by the Technology Agency of the CR, 58 MEYS projects (MOBILITY, KONTAKT, Large infrastructures, CZ09, LR, INGO, COST, EUREKA) and a further 26 projects funded by other ministries.

International funding sources currently constitute a relatively small share of the overall available funding, but their importance is extraordinary, especially as such grants significantly contribute to highlighting the university's scientific excellence. The participation of MU scientists in international scientific teams is very important, especially in view of the fact that international cooperation and monitoring of contemporary global developments in individual fields constitutes a basic precondition for high-quality research.

Although the European Commission's Seventh Framework Programme for Research and Development for Innovation was terminated in 2013, 31 projects are still being investigated, most within the Cooperation and People programmes. The implementation of twelve successful projects implemented under the new European Framework Programme for Research, Development and Innovation, i.e. Horizon 2020, started in 2015, with seven projects investigated within Excellent Science (Pillar I), four within Societal Challenges (Pillar II) and one within the Science with and for Society specific objective.

The development of scientific excellence is also promoted by SoMoPro, a regional programme co-funded by EU research and development programmes and aimed at supporting incoming scientists from around the world. Thanks to the high number of successful applications, the programme funded the work of 21 scientists in 2015.

In 2015, MU also investigated projects funded by other prestigious international sources, including e.g. the European Molecular Biology Organisation, with four ongoing projects in the Installation grants category.

The internal MU Grant Agency has traditionally supported research activities carried out by doctoral candidates (see section 1.2) and interdisciplinary research proposals intended for international schemes. Thanks to the Research Support Programme, an additional 5 interdisciplinary research projects were funded (see box below) and the preparation of 10 international projects was initiated.

#### Selected interdisciplinary research projects in 2015

Determinants of Growth of Extremism and Populism in Times of Economic Crisis – Prof. Ing. Antonín Slaný, CSc.

A Generative Historiography of the Ancient Mediterranean: Modelling and Simulating the Diffusion of Religious Ideas and Forms of Behaviour – Mgr. Aleš Chalupa, Ph.D.

Advanced Hybrid Methods for the Study of Transport Processes in Proteins and their Application for Design of Biocatalysts – Prof. Mgr. Jiří Damborský, Dr.

Relations between Humans, Climate and Vegetation in the Post-Industrial Landscape at Different Spatial Scales – Assoc. Prof. Mgr. Michal Hájek, Ph.D.

Development of new MUS81 nuclease inhibitors as chemical biology probe with clinical progression – Assoc. Prof. Mgr. Lumír Krejčí, Ph.D.

#### 4.3 Research infrastructure

Masaryk University plays an important role in the field of research infrastructures, both on a Czech and on a European level. This is evidenced by its involvement in a number of international ESFRI infrastructures. The ESFRI Roadmap 2016, i.e. the roadmap of major European research infrastructures, includes nine projects implemented at MU as part of major European infrastructure projects: ACTRIS, CIISB, Czech-BioImaging, CzechGeo/EPOS, CZECRIN, CZ-OPENSCREEN, EATRIS, ELIXIR CZ and LINDAT-CLARIN.

At the national level, MU is involved in projects funded by the MEYS chapter for research, experimental development and innovation. In 2015, this form of large infrastructure support helped fund eight projects. MU was the primary beneficiary in five cases: ACIU (cell therapy and immunotherapy), CEITEC - open access (open access to shared laboratories within CEITEC for other scientific teams from the Czech Republic), Czech Polar (Antarctic polar station on James Ross Island), CZECRIN (methodological support and implementation of academic clinical trials) and RECETOX (research into toxic substances in the environment). As partner, MU is involved in the CESNET project (large infrastructure development and operation), the CzechGeo/ EPOS project (distributed system of observatory and field measurements of geophysical fields in the Czech Republic – development and operation of the national ESFRI node of the EPOS project) and the LINDAT-Clarin project (development and operation of the Czech node of the pan-European research infrastructure).

MU research teams are involved in 15 research infrastructures linked to the Czech National Roadmap for Large RDI Infrastructures which will be financed from the MEYS budget chapter starting in 2016. In five cases, MU is listed as infrastructure coordinator: CERIT-SC, CIISB, CzechPolar 2, CZECRIN and RECETOX. In addition, MU research teams function as partner institutions in the case of the following infrastructures: ACTRIS, CEITEC NANO, Czech-BioImaging, CzechGeo/EPOS, CZ-OPENSCREEN, EATRIS-ERIC, ELIXIR CZ, LINDAT-CLARIN and NCMG.

#### Brief description of projects featuring MU as the main beneficiary

CERIT-SC – An e-infrastructure established following the transformation of Supercomputing Centre Brno, currently part of the Institute of Computer Science and a node of the National Grid Infrastructure of the Czech Republic. It combines elastic computing and storage capacity with the corresponding services and expertise, thus complementing the production-oriented sources of other parts of the Czech national e-infrastructure project. It is dedicated to systematic participation in the research activities of its users, supplying ICT expertise essential for the implementation of ex-

cellent research and development in all scientific disciplines. By efficiently utilizing available ICT resources CERIT-SC significantly accelerates the research and development activities of its users, thereby providing the CESNET research infrastructure with additional expertise.

CIISB – Distributed research infrastructure of shared laboratories operating within the capacities of the CEITEC and BIOCEV research and development centres. The CIISB provides expertise and access to technologies essential in the field of integrative methods for the structural analysis of biologically significant cell components and macromolecules at various resolution levels. It comprises ten shared laboratories which provide equipment, expertise and access to the latest technologies for sample preparation, characterization and structural analysis.

CzechPolar2 – A project supporting field research on James Ross Island and in adjacent parts of Antarctica. The extremophilic organisms laboratory examines the properties of organisms living in extreme polar conditions by simulating the conditions of their natural habitat. The infrastructure provides the Czech as well as the international research community with a unique opportunity to conduct multidisciplinary research of the polar regions which are currently subject to as yet unexplored environmental changes.

CZECRIN – A project providing research, knowledge, methodology and service support for academic clinical trials (Investigator Initiated Trials – IIT), thus creating an interoperable collaborative network of academic clinical research centres in the Czech Republic. Key areas include regulatory and knowledge support, i.e. quality assurance associated with accreditation procedures and complete IIT documentation, clinical application support focusing on biometrics, monitoring, pharmacovigilance and systematic educational programmes with comprehensive IIT coverage, and research and development activities including the production of advanced therapy medicinal products (ATMP).

RECETOX – A project focusing on the environment and its impact on human health. Multidisciplinary research of factors affecting human health analyses human and environmental exposure to toxic substances, their effects and associated environmental and health risks. The research capacity of three central units (trace chemical laboratories, environmental monitoring studies and epidemiological studies) offer a range of interdisciplinary expertise in environmental sciences, biomedicine, biostatistics and informatics.

In addition, MU launched three research infrastructure projects within the European research framework programme Horizon 2020 in the Research Infrastructures objective of the Excellent Science pillar: iNEXT, West-Life and ELIXIR-EXCELERATE (ELIXIR infrastructure development focusing on life sciences data storage, analysis and utilization).

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### Qualification development and academic employee structure

Academics and research workers accounted for 53 % of all university employees in 2015. The number of international employees in these categories remains unchanged and stands at over 10 % (265, recalculated number – internationals). A gender-based breakdown indicates that there are slightly more men among academic employees (nearly 58 %).

In 2015, a total of **48 successful habilitation procedures** took place at MU. University employees accounted for 65 % of these while the remainder was composed of external candidates. Newly appointed associate professors included 77 % men and 23 % women with a mean age of 43 years.

In 2015 the Masaryk University Scientific Board approved four proposals for appointment to professor, all of which were subsequently submitted to the Minister of Education, Youth and Sports. All four nominees were MU employees. In 2015, a total of seven MU employees were appointed professors.

#### Academic employee awards granted in 2015:

#### Masaryk University Rector's Award for Outstanding Teachers

JUDr. Pavel Salák, Ph.D. – Faculty of Law, MU Assoc. Prof. RNDr. Jiří Dostál, CSc. – Faculty of Medicine, MU

Assoc. Prof. RNDr. Zdeněk Bochníček, Dr. – Faculty of Science, MU

Prof. PhDr. Petr Osolsobě, Ph.D. – Faculty of

Assoc. Prof. PhDr. Jiří Poláček, CSc. – Faculty of Education, MU

Ing. Daniel Němec, Ph.D. – Faculty of Economics and Administration, MU

Assoc. Prof. RNDr. Jiří Barnat, Ph.D. – Faculty of Informatics, MU

Mgr. Miroslav Šipula – Faculty of Social Studies,

PhDr. Jan Cacek, Ph.D. – Faculty of Sports Studies, MU

#### Masaryk University Rector's Award for Outstanding Creative Activity

Mgr. Peter Milo, Dr. phil. – Faculty of Arts, MU Frühmittelalterliche Siedlungen in Mitteleuropa. Eine vergleichende Strukturanalyse durch Archäologie und Geophysik

#### MU medals:

#### Silver medal

Prof. RNDr. Pavel Prošek, CSc. – Faculty of Science, MU

#### Bronze medals

Prof. RNDr. Miroslav Bartušek, DrSc. – Faculty of Science, MU

RNDr. Jan Švancara, CSc. – Faculty of Science, MU

#### Selected external awards presented to MU employees in 2015:

Assoc. Prof. RNDr. Josef Trna, CSc. – University of Wrocław Commemorative Medal, awarded by Rector Marek Bojarski for long-term research, design and publication collaboration (Faculty of Education, MU)

JUDr. Stanislav Kadečka, Ph.D. – Lawyer of the Year 2015, winner of the Administrative Law category (Faculty of Law, MU)

Prof. MUDr. Miroslav Hirt, CSc. – Honorary Medal of the Czech Medical Association of J. E. Purkyně (Faculty of Medicine, MU)

Assoc. Prof. MUDr. Michal Mašek, CSc. -

Assoc. Prof. MUDr. Kamil Typovský, CSc. Commemorative Medal, awarded by the Czech Trauma Society for lifetime achievement (Faculty of Medicine, MU)

Assoc. Prof. Mgr. Richard Štefl, Ph.D. – CSF Chair Award; Neuron Impuls Prize 2015; ERC Consolidator Grant (CEITEC MU)

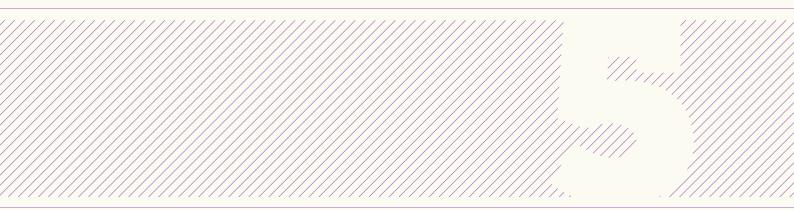
Prof. RNDr. Pavel Prošek, CSc. – City of Brno Award (Faculty of Science, MU)

Assoc. Prof. Ing. Vladimír Šindelář, Ph.D. –
Werner von Siemens Excellence Award
(Faculty of Science, MU)

Prof. RNDr. Hana Librová, CSc. – City of Brno Award (Faculty of Social Studies, MU)

#### Honorary doctorates conferred in 2015:

Thomas A. Henzinger (Austria) – eminent scientist in the field of automated formal verification of computer systems, author of fundamental scientific works in the fields of hybrid systems, temporal logics and game theory, holder of a wide range of awards for contributions to research in his field



## Innovation and technology transfer

### 5.1 Technology Transfer Office

The Technology Transfer Office is a university-wide unit tasked with ensuring MU intellectual property protection, exploiting the commercial potential of viable MU research and development results and locating opportunities for their real-world utilization.

In 2015, the TTO helped complete the three-yearlong MU Technology Transfer project implemented with RDIOP support. The project facilitated the professionalization of technology transfer activities and the stabilization of services designed for scientists and commercial partners. The TTO itself focused on the efficient implementation of the actual intellectual property transfer while also providing MU research teams with links to industrial partners. Hundreds of consultations were provided to scientists and companies and over 300 contracts were processed. The project facilitated the specification of internal procedures and enabled the development of a stabilized technology transfer environment – which MU will continue to benefit from in the future. Among other things, the project includes authentication technology support designed for MU research teams and acquired by the TTO from the TACR Gama programme. The TTO is also involved in the international INSPIRE project as well as in a number of additional project applications.

In July 2015 the university joined the Confederation of Industry of the Czech Republic in order to continue an existing informal collaboration. Membership should provide the university with even greater opportunities for partnerships with various industries. The TTO has been designated the university's contact point for matters associated with the confederation.

In order to meet the university's strategic objective in terms of developing methodological support for the protection of intellectual property and technology transfer, the TTO supplemented its existing activities with a range of thematic workshops. TTO employees also participated in teaching, sharing their knowledge and skills with students in courses such as Research and Development in Practice, Pedagogical and Scientific Work Legal Protection and R&D Results and Intellectual Property Protection for Non-Lawyers. An information brochure in both Czech and English on research data handling at MU was published in 2015.

In 2015 the TTO also organized the largest event in university's history dedicated to presenting science endeavours and research results – from inventions and technical solutions to applications, projects and methodologies. The first MU Business Research Forum was held on 30 April 2015 in the CEITEC MU building and hosted nearly 300 representatives of companies, public institutions and research teams. The event took place under the auspices and in the presence of Petr Vokřál, Mayor of the Statutory City of Brno. The undertaking was conceived and implemented as part of the university's ongoing efforts to generate results applicable in practice and showcase its readiness to cooperate with industry partners.

In accordance with the MU Strategic Plan, the TTO continued to facilitate meetings between contact persons from university economic units in order to help strengthen ties between the TTO and individual units. The unit continued to carry out a range of PR activities, issuing the INTERFACE newsletter and organizing a TT DAY for over 500 participants at the Vida! science centre to promote MU technologies and inventions.

MU intellectual property protection	2013	2014	2015
Submitted			
Patent applications (Czech Republic)	11	7	7
Patent applications (international)	5	4	7
Utility model applications	10	14	5
Industrial design trademark applications	0	0	0
Trademark applications	4	3	3
Awarded/registered			
Patents (Czech Republic)	5	8	8
Patents (international)	3	2	4
Utility models	5	17	9
Industrial design trademarks	0	0	0
Trademarks	2	3	5

#### 5.2 Knowledge transfer and utilization of research results

Commercialization projects successfully implemented in 2015 include the invention of a growing total knee replacement designed specifically for paediatric patients with cancer. Masaryk University (inventor Assoc. Prof. Pavel Janíček of the Faculty of Medicine) presented the project in collaborated with Beznoska Ltd. The invention is protected by a utility model registered in February 2015. Subsequently, in July 2015, the invention was scheduled for commercial usage and a contract was concluded between the university and the corporate partner in order to – among other matters – clarify commercialization income.

The CTT is also tasked with the protection of intellectual property at MU. In connection with this role, the centre managed to register MU trademarks for the Brno Arts Week, Journal of Law and Technology, S dětmi v pohodě, Na hřišti i na vodě být s dětmi vždy v pohodě and a trademark protecting the CEITEC designation

Protection of relevant results was ensured by filing 7 new patent applications in the Czech Republic, 7 international patent applications, 5 utility model applications and 3 trademark applications. 2015 was a record-breaking year in terms of the number of patents granted. MU successfully registered a total of 12: eight Czech and four international (Australia, USA, Japan, China).

The TTO also supported the creation of ADVECOPLAS Ltd., a plasma technology spin-off company.

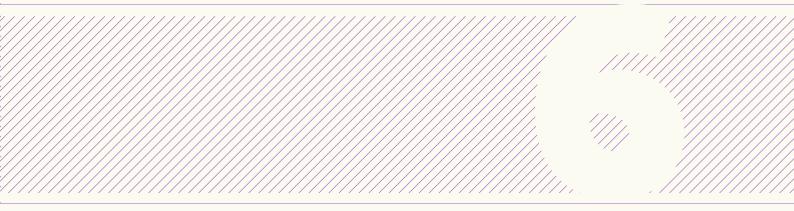
During the second half of the year the technology transfer department processed over a hundred applications, most frequently submitted by employees of the Faculty of Science, CEITEC and RECETOX.

The first **Proof of Concept** call for projects was issued at the end of the year in collaboration with the Technology Agency of the Czech Republic. Three successful projects – each worth nearly 800,000 CZK – were thus able to access funding necessary for the validation or development of early stage technologies. This scheme was implemented in accordance with the MU Strategic Plan 2011–2015 which calls for the establishment of a transparent internal support system for the full achievement of research results. PoC administration has been assigned to the TTO, with TA CR Gama support planned for 2019.

The Transfera.cz association, which became a single operational platform for the transfer of knowledge and technology into practice, launched its first activities in the spring of 2015. The organization emerged following a transformation of the Association of Knowledge Transfer Organizations and Professionals (AKTOP) and aims to defend the interests of the transfer community while cultivating an environment encouraging further developments in the field. The association is headed by a board of seven directors who elected the TTO director Eva Janouškovcová as chairperson.

Overall MU revenue from technology transfer in 2015 amounted to 60,857 million CZK. This sum includes contracted research (59.630 million CZK), consultation and counselling fees (597,000 CZK), revenue from educational courses organized for application sphere entities (232,000 CZK) and revenue from licensing agreements (398,000 CZK).





## External communication

### Communication with prospective students and graduates

In 2015, the university continued to develop contacts with its alumni. In addition to utilizing a range of electronic communication tools (website, Facebook, e-mail), a new distribution system brought the printed Graduate newsletter to alumni in the Czech Republic and abroad. A range of new benefits provided to MU Alumni Card holders has led to an increase in their numbers to a total of 2,000. In 2015, the university continued its close cooperation with the MU Alumni Network. The university provides the association with facilities and university representatives also serve as members of its board of trustees. Among other activities, the MU Alumni Network provided a total of 57,950 CZK in financial support for student projects within the framework of the TGM Grant.

In 2015, MU continued to cooperate with major corporate partners such as Esox, Heineken, Komerční banka, Neovize, Reehap and Raiffeisenbank. Thanks to long-standing relationships, these partners supported selected university activities and helped promote various projects in the field of both studies and career development.

The wide range of information activities focusing on prospective Masaryk University students applying for studies in Czech degree programmes included presentations at educational trade fairs in Prague, Brno, Bratislava, Nitra and Košice as well as informative calls by current MU students at dozens of Czech and Slovak secondary schools. These events are specifically designed to provide university representatives with the opportunity to inform applicants about study options. Prospective students may also acquire important information from multimedia presentations or a specially prepared Study at Muni magazine which includes a list of all fields of study and a range of additional materials. A range of activities including a conference were prepared by the university for the so-called MU Ambassadors, i.e. active secondary school students tasked with spreading information about Masaryk University to their classmates.

Study-related news were also available from a range of online channels. Up-to-date information for applicants is presented e.g. at facebook.com/StudujNaMuni as well as in monthly newsletters. Furthermore, the university organized a joint university-wide open day for all secondary school students while open days and other field-specific events for prospective students were held by individual MU faculties. The university supported – and co-organized – the national secondary school tic-tac-toe competition pIšQworky. All nine faculties published electronic newsletters detailing study opportunities in order to inform and motivate admitted applicants to enrol in studies.

## 6.2 Public image and popularization activities

In addition to its educational mission, the university also plays a cultural and social role. For example, the Dark Blue World programme, focusing on the story of MU during World War II, was held in commemoration of the 70<sup>th</sup> anniversary of the end of World War II. The anniversary was also marked by the installation of four commemorative plaques with the names of university-affiliated victims at the former Sušilovy dormitories (present-day Klácelova halls of residence).

The 2015/2016 academic year began with an early premiere showing of The Brand New Testament, followed by an announcement of white and red university wines in November and the traditional Christmas concert held in cooperation with the university student orchestra Collegium Musicum in December.

Traditional social events included **Dies academicus**; the ceremonial occasion was used to present the annual **Rector's Awards** to MU researchers and students. The honorary degree of Doctor of Informatics was presented to Professor Thomas A. Henzinger, a prominent scientist in the field of formal methods for the automatic verification of computer systems.

Student Seventeen, a commemorative event held on November 17 in collaboration with the MU Alumni and Friends Association, marked the anniversary of the Velvet Revolution. Documentary screenings of The Living Dead and The Power of Good were followed by a lantern procession organized by the Faculty of Arts Students' Endowment Fund and a Freedom Lecture debate on Humanity vs Barbarity. The debate featured guests Rainer Höss, grandson of Rudolf Höss, commander of Auschwitz, and Tal Bashan, an Israeli journalist whose grandmother died in the Theresienstadt concentration camp and whose mother survived internment in Theresienstadt and Auschwitz.

In March, the university held a grand opening of the renovated Faculty of Law library and archives. In April, the Institute of Computer Science launched the so-called Cybernetic polygon, a special-purpose workplace for use e.g. by the National Security Authority. In September, another grand opening took place, this time at the Centre for the Advancement of Research in the Liberal Arts (CARLA).

Student activities supported throughout the year included especially university-wide events organized fully or in part by the Masaryk Student Union. The university supported the MUse Days student art festival and the Brno Majáles and engaged the Brno University of Technology in the first annual coxed eight rowing competition on the Svratka River in September and on the ice for the university hockey match in November. The university also participated as partner at the student association fair and the Masaryk University student ball.

The second year of MASARYK jUNIVERSITY – **MjUNI** for short – welcomed 170 junior students aged 9 to 14. The ceremonial matriculation was held at University Cinema Scala in the presence of university management representatives and parents.

## 6.2 Public image and popularization activities

Masaryk University Press issued 72 textbooks and 301 scholarly publications under the Munipress label. Key projects included the publication of an original textbook titled Data Analysis in Social Sciences (using SPSS) and a Czech translation of The Emperor of All Maladies: A Biography of Cancer, a best-selling book by Siddhartha Mukherjee. The concept and scope of such publications clearly surpass the somewhat limited academic readership and the publishing house thus confirmed its interest in expanding its production in order to cater to a wider public.

In addition to non-periodical publications, MU also issued **54 scientific journals**. A total of 578 DOI codes with the MU prefix were allocated, mostly to journal articles, and 5 new journals were incorporated into the system, currently utilized by 19 journals.

Masaryk University Press continued to develop support for **Open Journal Systems**, an open source platform used – with varying degrees of active involvement – by 14 academic journals. The virtual reading room **Munispace** was expanded to provide users with access to OA resources. Of the over 400 publications now found in the reading room, 200 are sourced publications and the remainder is linked to at original locations. The number of users increased to over 1,000 per month following the official launch in February 2015.

In 2015 the Masaryk University Press submitted a pilot batch of 96 monographs to the worldwide scientific publication database EBSCO.

The publishing house presents MU and its publication activities at specialized book fairs and various professional events including e.g. the co-hosted **Brno University Publishers** exhibition held at the Museum of Literature in Moravia.

Throughout the year, Mendel Museum focused on events celebrating the 150<sup>th</sup> anniversary of Mendel's famous lectures, i.e. the actual beginning of genetics. The year of celebration took place under the auspices of the prime minister of the Czech Republic, Rector of MU and the Czech Commission for UNESCO. Celebrations were launched with a lecture by Sir Michael Stratton, FRS, director of the Wellcome Trust Sanger Institute. An exhibition of Mendel's original manuscripts, on loan from the archives of the University of Illinois, opened simultaneously. The museum also helped organize an exhibition on Mendel's work in the State Darwin Museum in Moscow.

The festive year culminated with two conferences, the first of which focused specifically on Mendel's research of peas and bore the name Research into Plant Genetics. The second event, Brno Medical Genetics Week, was one of the most extensive events dedicated purely to medical genetics in the Czech Republic. Among many other guest lecturers, the traditional Mendel Lectures cycle hosted three Nobel prize winners in 2015.

#### 6.3 MU in the media

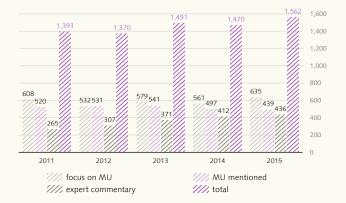
In terms of the overall number of mentions within a five-year period, Masaryk University's representation in the media in 2015 was **record-breaking**. A great deal of interest was generated by the choice of Rector and the dispute regarding the appointment of professors, an issue once again addressed in earnest by MU. A number of the university's **political scientists** were frequently cited in various media channels.

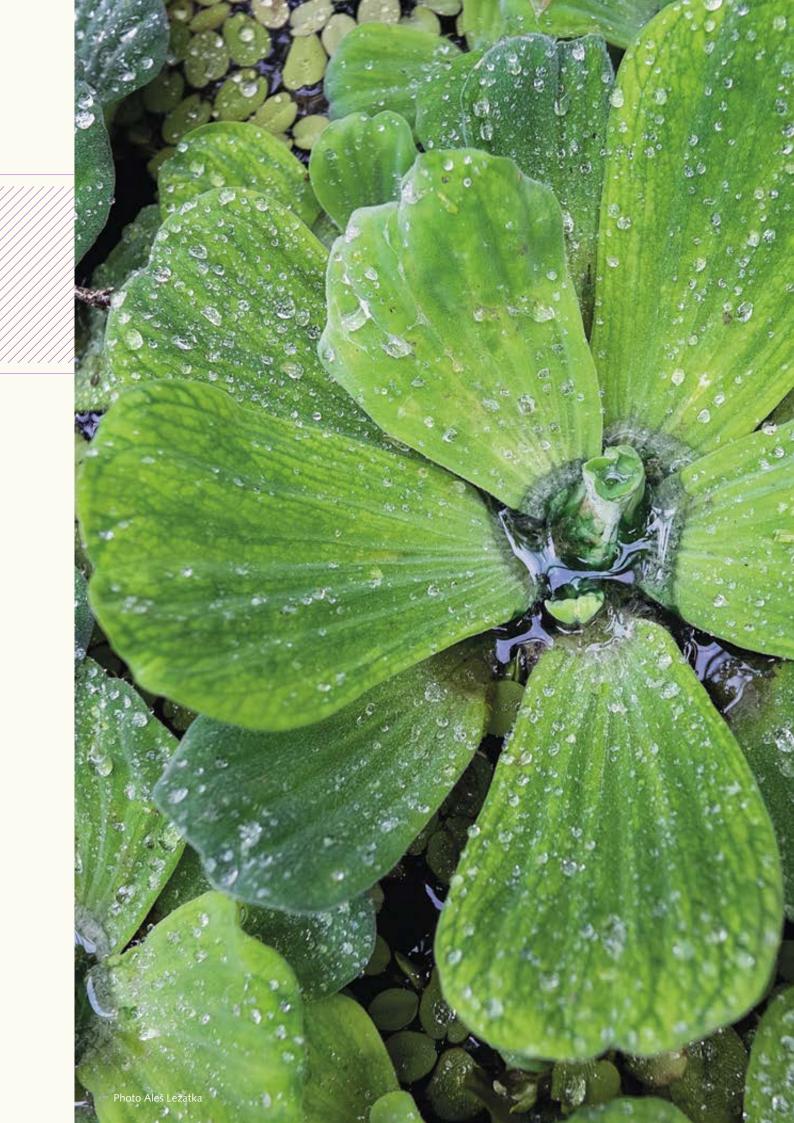
The media response to a number of scientific discoveries was also significant, especially with respect to research conducted in Antarctica, but also regarding the Dynamics of Change in Czech Society project jointly investigated by experts from the Faculty of Social Studies and ASCR. The university was also perceived as an institution actively engaging in humanitarian aid and volunteer activities associated with the refugee crisis. As in previous years, the traditional university hockey match generated a significant amount of media coverage. In addition to scientific achievements, the university was more frequently mentioned as an educational institution.

Masaryk University is traditionally strong in regional media, with the number of mentions close to an upper feasibility limit. In 2015, MU was also popular in the national media, especially in Lidové noviny, Hospodářské noviny, MF Dnes and Radiožurnál. An increase in the number of mentions was likewise achieved in the case of magazines.

The prevailing tone of such reports tended towards neutral or positive mention, e.g. in connection with scientific achievements. Media coverage was most extensive in the case of the Faculty of Social Studies, primarily thanks to various expert commentaries. The Faculty of Arts and Faculty of Medicine were also frequently cited in connection with scientific discoveries and to some extent also with respect to expert commentaries. Frequently cited persons included Rector Mikuláš Bek and experts from the Faculty of Social Studies.

Graph 8 MU publicity by article type





Strategic partnership network, collaboration with enterprises and employability

#### 7.1 Central European Institute of Technology – CEITEC

The Central European Institute of Technology – CEITEC aims to create a centre of scientific excellence focusing on the life sciences and advanced materials and technologies with the objective of developing into an important European centre of science and scholarship and providing world-class scientists with state-of-theart working conditions.

CEITEC's international significance is best evidenced by its participation in strategic partnerships across Europe. Membership in the EU-Life consortium, an association of thirteen top European life sciences institutes, is a clear indication of the fact that the charted course is helping CEITEC maintain its position among recognized scientific institutes. Official collaborations also include partners such as the University of Vienna, Campus Science Support Facilities Vienna and the University of Florida.

In 2015, CEITEC and EU-Life launched the investigation of a rather unconventional project: **LIBRA** is dedicated to increasing the number of women in science, especially at managerial positions. In order to achieve this goal, the project will directly support women in science and research while actively removing gender-based barriers and prejudice.

Furthermore, CEITEC hosted the second annual Creating Life in 3D conference, this time in collaboration with the International Clinical Research Center (ICRC). The three-day conference was attended by nearly three hundred participants including a significant number of internationals.

CEITEC even assumed a leading role in R&D HR activities, organizing the first ever National Academic HR Conference, which focused primarily on the intended and unintended consequences of research internationalization in the Czech Republic, thereby initiating a key debate about personnel policies at academic institutions.

All 10 shared laboratories which are part of the CEITEC – Open Access project were fully operational and available to external users by the end of 2015. These core facilities are among the best equipped in Europe and therefore act as a source of new national and international collaborations. The laboratories were also included in the Czech research infrastructure roadmap VI. Their operating expenses will be covered by projects funding until 2019, as per a relevant government decision.

CEITEC's shared laboratories are also part of various national and international scientific infrastructures and organizations including INSTRUCT, Euro-BioImaging, ELIXIR, EATRIS, ARBRE, ABRF and EuroNanoLab.

By the end of the year, the entire CEITEC construction phase, implemented as part of RDIOP, was completed. All monitored indicators were accomplished, many several times over

An international tender procedure seeking to fill the position of scientific director, i.e. someone capable of leading the entire science consortium towards greater integration in the European and global research area, was held in 2015. Long-standing CEITEC director Prof. Jaroslav Koča was eventually appointed to the position.

### 7.2 Collaboration with hospitals

Teaching in medical and health-related fields of study is inextricably tied to a close cooperation with two university hospitals located in Brno and with other major healthcare institutions in the region. In addition to a strategic cooperation with university hospitals, with whom the Faculty of Medicine shares a number of clinics and institutes, Masaryk University also focused on its ties to the Masaryk Memorial Cancer Institute and the Trauma Hospital of Brno.

The number of university hospital clinics was reduced by two (namely the Department of Ophthalmology and Optometry at St. Anne's University Hospital and the Department of Dermatology at University Hospital Brno), leaving a total of 49. The reduction was caused by optimization efforts designed to streamline the operation of medical services at faculty hospitals. Teaching activities thus shifted to the Department of Dermatology at St. Anne's University Hospital and the Department of Ophthalmology and Optometry at University Hospital Brno.

The Faculty of Medicine has long maintained a contractual relationship with more than a hundred hospitals and outpatient healthcare facilities in the Czech Republic and approximately thirty such facilities in Slovakia. Thanks to these contacts, students may acquire professional experience close to home, especially during the holidays.

A unique collaboration with the **Jihlava Hospital** is helping sixth-year students of General Medicine participate in a pre-graduation practice week in a regional hospital and thus acquire a broader range of practical experience. A framework agreement with the **Agel** group was also concluded in 2015; the new scheme is designed to provide students of medical and non-medical fields with internships at the group's workplaces in the Czech Republic.

In collaboration with joint medical units, Masaryk University also participated in the organization of certification procedures authorized by the Ministry of Health of the Czech Republic. A total of 142 medical doctors from 14 fields attended the certification procedure. In accordance with a public service agreement with the Ministry of Health, the Faculty of Medicine recorded 1,183 participants of specialized education courses. The faculty also provided the necessary expertise for the theoretical section of a dedicated training for physicians enrolled in specialized education.

The university and affiliated faculty hospitals also intensified their collaborative activities in the science and research area. While a total of ten research projects were implemented in collaboration with the University Hospital Brno, the university also participated in an additional eight joint research projects with St. Anne's Faculty Hospital in Brno. Two projects were implemented in collaboration with the Masaryk Memorial Cancer Institute

## 7.3 Collaboration with national and regional institutions

In addition to its role as an educator, Masaryk University is also dedicated to spreading knowledge among the general public. The university is thus involved in various regional projects of cultural, scientific and social significance. In order to participate in such projects, MU has developed a donation and sponsorship system available at www.darujmuni.cz. Thanks to this donation mechanism, the university is able to acquire funding for supporting humanitarian and charitable student and employee activities in the area of psychological and social counselling, purchase medical supplies for affected areas in Ukraine and Ghana, develop a variety of social and cultural events in University Cinema Scala and purchase essential learning aids for children from socially disadvantaged families who wish to participate in MjUNI, the children's university project.

Activities organized by the Alumni and Friends of Masaryk University also contributed to the development of collaboration throughout the region. The TGM Grant financially supported active MU student projects focusing on the development of civic society.

Experts from the FSS, FEdu and FEA initiated the shared housing project Symbios which aims to help homeless people return to normal life. The project, which also allows selected MU students to work with socially disadvantaged people, will be implemented in cooperation with the Brno City Municipality and a network of partners, including e.g. IQ Roma Service and Nesehnutí.

As the first Czech university to do so, MU signed a memorandum of cooperation with Wikimedia Czech Republic, i.e. the Czech branch of the Wikimedia Foundation, responsible for the operation and development of Wikipedia. Both parties agreed to complete and edit all university-related Wikipedia entries.

Thanks to a cooperation agreement with **Red Hat** and **Y Soft**, doctoral candidates of the Faculty of Informatics are now eligible for a double scholarship. The partner companies will support four selected doctoral candidates with an amount of 10,000 CZK per month for four years.

In 2015, MU continued to cooperate with major corporate partners such as Esox, Heineken, Komerční banka, Neovize, Reehap and Raiffeisenbank. Thanks to long-standing relationships, these partners supported selected university activities and helped promote various projects in the field of both studies and career development.

In addition, university buildings are being opened for the benefit of the general public, with MU organizing various **events** and **exhibitions** focusing on the work of contemporary regional artists. For example, the Faculty of Education conducted a series of readings featuring e.g. Kateřina Tučková and Vít Slíva.

#### 7.4 University Centre Telč

The development of regional educational opportunities is a significant component of Masaryk University's long-term policy. In essence, it reflects the national policy of balancing education levels across all regions of the Czech Republic. University Centre Telč is a concrete manifestation of this approach.

The Institute of Theoretical and Applied Mechanics ASCR (ITAM) continued to function as a key partner in the university's efforts. The focus of the partnership agreement was the establishment of the Central European Centre for Cultural Heritage (CECECH) based in Telč. The collaboration between the university and ITAM expanded in connection with the development of Centre of Excellence Telč (CET), a state-of-the-art research institute providing MU students, educators and scientists with essential research facilities.

The local branch of the National Heritage Institute (NHI) was another important partner. On 16 October 2015 it helped launch another three-year-long University of the Third Age course entitled Cultural Heritage – A Pillar of National Identity II, focusing on the characteristics and specifics of heritage foundations in individual regions. Lecturers included e.g. NHI general director Naděžda Goryzcková, Department of Conservation director Jiří Vajčner and Telč NHI director Martina Indrová. The course was attended by 83 students, a record-breaking number in the history of U3A in Telč.

The annual French-Czech Academy of Music was held in cooperation with the city of Telč and with the support of the Vysočina Region, Ministry of Culture and the French Institute in Prague. While the project is scheduled to undergo a certain degree of transformation due to changes in management, the overall concept remains the same. Courses will continue to be headed by both Czech and French teachers. The Telč Academy became part of the European cultural project Creative Europe and acquired three new partners: Chamber Music Academy in St. Cézaire (France), Master Class Pila (Poland) and Donau-Universität Krems (Austria). The duration of the event was extended to a full two weeks. Like in previous years, the UCT provided students with accommodation, catering and classrooms.

In cooperation with the **Donau-Universität Krems** (DUK), the DUK Board of Trustees enabled its students to participate in examinations at UCT.

The newly appointed **University Centre Programme Board** has been tasked with the intensive development of UCT activities specifically aimed at individual MU units.

#### 7.5 Graduate employment and collaboration with employers

Two major graduate surveys took place in 2015. The first focused on recent graduates while the second was designed to collect information on graduates who completed their studies 1 to 2 years previously.

A total of 39 % of all full-time long-cycle Master's and full-time Master's studies graduates participated in the nine-teenth annual Recent Graduate Survey. Results indicated an increase in graduates employed prior to their final examination (58 %), with 40 % of these graduates continuing to work in a position they were employed in during their studies. MU graduates found work mostly in Brno, Prague and the South Moravian region. Over half of all employed graduates found work in a city they had originally planned to live in, one fifth moved due to work-related reasons and 18 % commuted. Graduates continued to find jobs in the field they graduated from; the employment rate stands at approximately 85 %.

The proportion of recent graduates who found the job search process either very difficult or difficult decreased slightly, which is associated with a decrease in the number of students unsuccessfully looking for work during their final examination period (down from last year's 73 % to 61 %). Graduates also reported an increase in gross starting salary, which amounted to an average of 26,000 CZK.

The second university-wide survey focused on Master's studies graduates one to two years after graduation. Of the MU graduates who completed the questionnaire, 88 % were either employed or involved in private enterprise. The remainder included mostly non-workers (maternity leave, postgraduate or further studies, international placements, etc.), and currently unemployed graduates (2 %, i.e. 40 persons). The number of unemployed respondents corresponded to the unemployment rate in the university graduate population in the Czech Republic (2 % as of Q2 2015).

Survey results included a comparison with data provided by the Labour Office. According to available data, the unemployment rate of 6 % for Masaryk University graduates in April 2014 was somewhat above the national average of 5 %. Similar levels were registered by the University of Ostrava and University of Pardubice. Slightly better graduate employment rates were reported by Palacký University, University of West Bohemia, University of Hradec Králové and Jan Evangelista Purkyně University in Ústí nad Labem.

As in the case of recent graduates, the number of graduates with one to two years of experience who found the job search process either very difficult or difficult decreased (from 36 % to 25 %). First jobs were most frequently to be found in Brno (48 %) and Prague (11 %). Comparisons between recent and experienced alumni may also be made with respect to the percentage of graduates working in a field they studied (85 % versus 80 %). Graduates of the Faculty of Medicine are most likely to work in the field they studied

The survey also focused on wage differences between men and women and found that the total gross monthly difference in pay between men and women stands at 27%. Dissatisfaction with wages is traditionally most pronounced among young doctors, lawyers and teachers; on the other hand, computer programmers as well as FSS and FEA graduates tend to be more content in this respect.

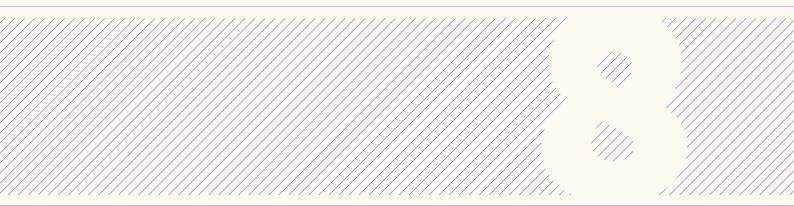
#### Key graduate survey statistics

#### Completion of Studies at Masaryk University – Past and Future – Graduate Destination Survey

- » 58 % of all graduates were working during their final examination period or knew where they would subsequently work; 40 % of these graduates continued to work in a position they were employed in during their studies.
- » 87 % of all currently working graduates (or those who knew where they would subsequently work) perceived their jobs as promising.
- » Graduates with Slovak citizenship most frequently found work in Brno (46 %, compared to 52 % in 2014) and in Slovakia (26 %, compared to 23 % in 2014).
- » The average gross starting salary (recalculated to full-time) stood at 26,005 CZK; Faculty of Informatics graduates earned the highest salaries (45,162 CZK) while the lowest were found at the Faculty of Law (18,480 CZK).
- » The most common non-work activities included doctoral studies at MU (89 graduates) or at other universities (13 graduates) or further studies at MU (22 graduates).
- » 24 % of all respondents did not have a job at the time of graduation and 39 % of this group never attempted to find work.

#### Graduate Destination Survey 2013–2014

- » 88 % of graduates were employed (or involved in enterprise) within 1–2 years after graduation.
- » 30 % of graduates started working during their studies.
- 40 % of working graduates found work within one month or more after graduation; the average job seeking interval stood at 4.5 months, a period of 2 months was most frequently the case.
- » 58 % of graduates are working for their first employer.
- » 6 % of graduates are currently not working but were working previously.
- » Fewer than 5 % have never worked.
- » Non-working graduates (203 persons) include 14 % unemployed and 43 % on parental leave. A full third of this group includes persons enrolled in further studies.
- » Graduates who switched jobs following graduation tended to leave Brno (approximately 10 %, usually for Prague or abroad), move into the public sector and acquire positions in their field of study.



## Institutional efficiency

#### 8.1 Financial control

#### Internal control system establishment, maintenance and efficiency

The Masaryk University internal control system is a financial control system established in accordance with Act No. 320/2001 Coll. on Financial Control in Public Administration, as amended, and Decree No. 416/2004 Coll. An internal audit forms a second key component.

The efficiency of the internal control system at MU is ensured especially by an integrated methodology framework, clear allocation of roles and competencies in all project management areas and a transparent risk management system. Additional strengths include a highly functional electronic workflow and electronic financial inspection system.

Internal auditing is performed in accordance with the above mentioned Act on Financial Control, the MU internal auditing statute and international auditing standards. In addition to standard auditing activities, focusing primarily on financial and project management including internal process risk and evaluation management, internal auditing also includes continuous monitoring and periodic internal control system and MU control management evaluation. Project audits, including audits of operational programme projects, are subject to verification – including the transparency of project management settings - in order to provide a guarantee of the fact that all policies and procedures ensuring compliance with regulations are transparent and sufficiently adept at eliminating risk. As in previous years, nearly 80 % of all auditing activities carried out in 2015 focused on RDIOP project audits; the overall audited volume - with the exception of public contracts - comprised approximately 760.2 million CZK (of which capital expenditures accounted for 82 %). No apparent risk potential was established, as confirmed by the outcomes of public administration inspections.

In 2015, a sum of approximately 1.9 billion CZK was inspected by 16 control subjects as part of 151 external inspections and project audits. CZK. Of these, 66 % comprised operational programme projects. A breach of budgetary discipline was established in no more than 0.1 % of sample materials (worth approximately 5.7 billion CZK) inspected in the 2011-2015 period.

In view of internal auditing outcomes, management control and external controls, it may be said that the key financial control requirements, i.e. the four eyes and two signatures principles, have been met throughout the entire financial operation procedure and that risk has been kept at a reasonable minimum.

#### Information about suspicion of possible corruption and proven corruption cases

No corruption was identified at Masaryk University.

#### 8.2 Economic and financial management

Masaryk University's total non-capital earnings for 2015 stood at 6,460 million CZK (i.e. a slight decrease of 7 million CZK in comparison with 2014) with costs amounting to 6,394 million CZK. MU management registered an economic result of 66 million CZK after tax (i.e. 1 % of total MU revenue).

In 2015 the non-capital contributions and subsidies from the Ministry of Education, Youth and Sports totalled 3,012 million CZK (an interannual increase of 5 %) while contributions and subsidies from other state budget chapters and local authority budgets stood at 491 million CZK (an increase of 19 %) and a sum of 310 million CZK was gathered from abroad (increase of 74 %). Funding from EU Structural Funds decreased from 1,204 million CZK to 750 million CZK (i.e. an interannual decrease of 36 %). Public resources from the national budget and from abroad contributed a total of 4,585 million CZK (interannual decrease of 2 %). Non-capital investment funding provided by the Ministry of Education, Youth and Sports in 2015 for institutional support amounted to 2,257 million CZK, i.e. 35 % of total MU revenue. Non-capital subsidies for teaching activities (indicators A+K) stood at 1,728 million CZK (an increase of 5 %); MU received an additional 529 million CZK in targeted institutional support (an increase of 0.5 %).

A total of 28 million CZK worth of non-capital subsidies for student accommodation and catering was also provided by MEYS (interannual decrease of 5 %).

Allocated non-capital research and development funding (normative and targeted) amounted to 1,815 million CZK (interannual increase of 13 %): a total of 796 million CZK was provided by the Ministry of Education, Youth and Sports (interannual increase of 5 %), 442 million CZK came from the national budget as well as local and regional authority budgets (up by 16 %); international research received an additional subsidy of 125 million CZK (interannual increase of 84 %) and RDIOP subsidies amounted to 453 million CZK (interannual increase of 14 %). Non-capital research and development funding amounted to 28 % of total Masaryk University revenue in 2015.

MU revenue from non-public sources amounted to 1,996 million CZK in 2015 (an increase of 6 % compared to 2014): 1,850 million CZK comprised revenue from principal university activity (interannual increase of 6 %) and 146 million CZK from supplementary activities (interannual decrease of 15 %). Self-generated income and income from supplementary activities amounted to 30 % of the total non-capital revenue.

An inventory conducted by MU in 2015 shows total assets with a purchase value of 16,338 million CZK (i.e. an interannual increase of 6 %): 16,018 million CZK in long-term tangible assets (up by 6 %) and 320 million CZK in long-term intangible assets (up by 7 %). Total depreciation of assets amounted to 5,161 million CZK. The total degree of depreciation stands at 32 %.

#### 8.3 Internal regulations

The following Masaryk University internal regulations were updated in 2015:

- » As of 1 April 2015, the amended MU Internal Wage Regulations entered into effect, including changes to wage rates for individual academic and nonacademic positions.
- » As of 1 September 2015, MU Statutes were updated, introducing a new provision adjusting study-related fees

## 8.4 Professionalization of support activities

MU continued to focus on improving Research & Development Office employees' knowledge in the project support area, in particular with respect to Horizon 2020; these employees subsequently provided MU researchers with professional consultation services and helped them develop project applications. In 2015 the Research & Development Office also organized information campaigns associated with various grant schemes (Grantsweek, MSCA, ERC, etc.).

The Marie Skłodowska-Curie Actions: Your gateway to an exciting research career offered theoretical and practical information on participation in the Horizon 2020 mobility programme in support of development and career growth. The first annual Grants Week event provided researchers and doctoral candidates with timely and comprehensive information on national and international grant opportunities as well as with practical information on preparing successful project proposals. The event featured speakers from 27 countries and nearly 600 participants. Additional workshops focused on the drafting of successful project applications for the ERC Horizon 2020 programme in support of excellent research.

The Office for Development of the Rector's Office provided support for Structural Fund projects throughout the implementation, transition and sustainability phases. With the beginning of the active phase of a new programme period, focus shifted to a comparison of project templates and the customization of specific call announcements and subsequently to actual calls for 2015 and 2016. The Office for Development coordinated and supported the activities of ESIF working groups at MU.

In addition, department employees continued to focus on their own methodological activities, including intensive work on guidelines for the new MU programming period and feedback on MEYS methodological materials. Besides ESIF, the department is also responsible for the administration of centralized and internal development projects and MU Development Fund projects.

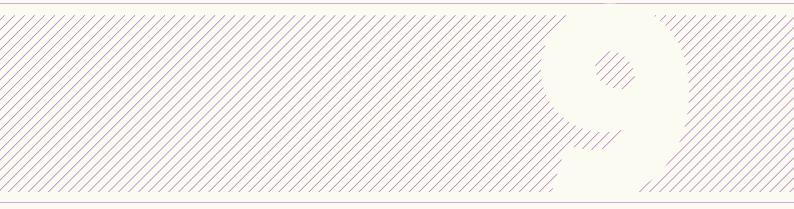
## 8.4 Professionalization of support activities

The **Public Tender Office** of the Rector's Office provides individual MU economic units with the following services:

- » administration of tender procedures for suppliers of works, services and supplies pursuant to Act No. 137/2006 Coll., on Public Procurement, as amended, and tender procedures governed by grant programme regulations (especially RDIOP and ECOP),
- » provision of central purchases carried out using dynamic purchasing systems and framework contracts.
- » coordination of the use of electronic tools for public procurement (E-ZAK),
- » methodological support in the form of statement preparation and methodological sheet publication regarding the interpretation of Public Procurement Act and grant programme provisions, methodological support associated with the organization of regular MU procurement administrator meetings.

In 2015, the Public Tender Office launched 206 procurement procedures, allocating public contracts with an estimated value of nearly 400 million CZK excluding VAT. Contracts were successfully concluded in 178 cases. The total value of contracts concluded in 2015 exceeded 237 million CZK excluding VAT. Savings achieved in comparison with projected costs exceeded 66 million CZK excluding VAT, i.e. nearly 22 %.

All public contracts were processed by the E-ZAK system in order to ensure maximum transparency and facilitate potential review procedures associated with public tenders announced by the university.



# Employees and the work environment

#### 9.1 Employees and the work environment

The number of Masaryk University employees exceeded 5,000 in 2015; the university thus remained one of the largest employers in South Moravian region. The total number of employees decreased slightly at the end of the year due to the completion of major European programming framework projects, i.e. ECOP and RDIOP. However, thanks to the university's planned involvement in new programming research and development frameworks, new positions will continue to open throughout 2016, especially for young postdoc researchers and researchers from abroad. The university maintains a relatively balanced employee gender structure (52 % women, 48 % men).

Despite a slight decline, average wages at MU remained very high compared to average wages in higher education: average monthly wage at MU reached 44,188 CZK while average monthly wage among academic employees stood at 56,092 CZK. Collective bargaining with trade union representatives led to a blanket increase in all wage rate categories by 5 % as of 1 April, carried out by increasing the share of guaranteed wage components in the total wage amount.

All existing employee benefits were maintained. A total sum of 14.5 million CZK was distributed among employees in pension and supplementary pension scheme contributions. MU also disbursed a total sum of 27.7 million CZK in meal vouchers and spent approximately 464,000 CZK on preventive care, including voluntary preventive vaccinations against influenza and encephalitis.

Masaryk University is dedicated to developing an internal support system for periodic employee evaluation. The necessary methodologies were prepared in 2015 and the Information System launched an application which provides MU employees with the necessary technical and administrative support. The university thus aims to obtain an objective and comprehensive overview of overall employee performance.

Masaryk University regularly recognizes employee excellence, presenting them with e.g. the MU Rector's Awards or even Masaryk University medals. A total of 28 Rector's Awards were conferred in 2015 as were two bronze medals and one silver medal. Additional awards were also presented by individual MU faculties. All MU directives associated with MU awards, i.e. those dealing with honorary doctorates, medals and Rector's Awards, were updated in 2015.

Furthermore, the revised Masaryk University Academic and Professional Employee Code of Ethics was released in December. Key changes to the code include an overall strengthening of its legal powers and the establishment of the MU Equal Opportunity Panel, tasked with supervising the implementation of and compliance with the principles of non-discrimination and equality throughout the university.



## Infrastructure and corporate services

## 10.1 Investment programme implementation

The investment programme which implements the Masaryk University Strategic Plan is based on Programme 133 210 issued by the Ministry of Education, Youth and Sports of the Czech Republic.

Sub-programme 133 21J includes two investment construction activities.

The first part of the 133 21J sub-programme includes the renovation and expansion of the historic Faculty of Arts complex at Arna Nováka Street, worth a total of 428 million CZK and scheduled for completion in 2018. Allocated state budget subsidies amount to 408 million CZK; an additional 20 million CZK will be provided by MU. The completion of buildings with a total area of 10,300 m² will be the final phase of a complete renovation of the Faculty of Arts.

Design work finally started in 2015 following the resolution of issues associated with the selection of a chief designer. Project documentation required for the issuance of a building permit was completed and a building permit application was submitted. Costs disbursed in 2015 amounted to 1.2 million CZK.

The expansion and renovation of the Faculty of Law library was completed in January 2015. Following a successful inspection procedure, the library was subsequently opened in March. An area of 3,116 m² was successfully renovated. Total cost amounted to 65 million CZK and included 59 million CZK worth of state subsidies and 6 million CZK of internal funding. Costs disbursed in 2015 amounted to 18 million CZK.

#### 10.2

## University Campus Bohunice development and building management efficiency

The basic construction phase of the Central European Institute of Technology CEITEC project was completed within budget.

The original project was expanded in 2015 to include two additional construction sub-projects, i.e. the A2 building greenhouse renovation worth 34 million CZK and helium evaporation detection in NMR laboratories worth 7 million CZK. The CEITEC project was financed from EU Structural Funds, RDIOP and from Masaryk University's own resources.

Central Facility Management has expedited the gradual implementation of procedures and tools for integrated management of the work environment, employees and work activities so as to achieve a more efficient operation and management of buildings and technologies within MU. These tools and procedures are and will be implemented at individual constituent parts of MU as required in such a way as to first accommodate activities and areas common to all MU constituent parts.

#### Key activities in 2015 – content and outcomes:

- » Operation, management, update and expansion of the building and technology documentation system and exterior areas documentation system;
- » Provision of data and building technology documentation for new applications and uses;
- » Technology documentation system data sharing using the web-based KOMPAS application;
- » BMS MU operation and development;
- » BMS MU expansion, inclusion of additional buildings and functions;
- » BMS MU user support;
- » Operation and continued development of a building technology systems supervision system:
- » Improvement of security and MU technological network performance;
- » Operation, administration and servicing of non-backbone sections of the MU network;
- » Investment activity support for MU building technologies;
- » Enforcement of BACnet and BMS MU standards in all construction and renovation projects at MU:
- » Invocation and processing of claims associated with building technologies;
- » MUNI BACnet Lab operation;
- » CAFM Archibus system operation and development.

#### 10.3 Subsidized investment development

Scientific, research and educational infrastructures are scheduled for completion within the framework of the Research, Development and Education Operational Programme.

The comprehensive Masaryk University Simulation Centre project will provide a platform for the utilization of advanced simulation medicine features in mainstream teaching, thereby helping MU attain a competitive advantage in the education marketplace. The Simulation Centre will target both medical and as non-medical fields.

Its architectural design and location – replacing the existing UCB Morphology Centre parking lot – will complete the east side of the campus complex. Expected construction costs amount to 438 million CZK. A tender for a general designer was announced in 2015.

The RECETOX specimen bank project constitutes a construction addition to the existing A29 CETOCOEN building at the UCB. The new research infrastructure will help support European environmental policy. The project will result in the construction of an environmental and biological sample bank, including handling laboratories and staff workspace. From a construction point of view, the facility will comprise two underground floors between the existing A29 building and the INBIT building. Presumed construction costs amount to 76 million CZK. A tender seeking a chief designer was announced in 2015.

The renovation and expansion of the Botanická Street complex will provide the necessary facilities for the development of cooperation in education, research and innovation in ICT. The first construction phase will focus on the completion of the D wing; a project application will be submitted as part of the Research, Development and Education Operational Programme. Presumed construction costs amount to 320 million CZK. A tender seeking a chief designer was announced in 2015.

In addition to the above mentioned projects and programmes, Masaryk University itself also financed 34 small-scale investment projects worth a combined sum of 75 million CZK. Key projects included the renovation of the A1 block of the Vinařská halls of residence (35 million CZK), overhaul of electrical wiring at the Vinařská canteen (3 million CZK), increased electrical capacity and backup at the Faculty of Science complex at Kotlářská Street (3.6 million CZK), corridor and restroom renovation on the 4th floor of the Rector's Office building (3 million CZK), construction and interior modifications of classrooms and air-conditioning fittings at the Faculty of Economics and Administration (4.5 million CZK) and additional air-conditioning at the A33 building at the Faculty of Sports Studies (3.4 million CZK).

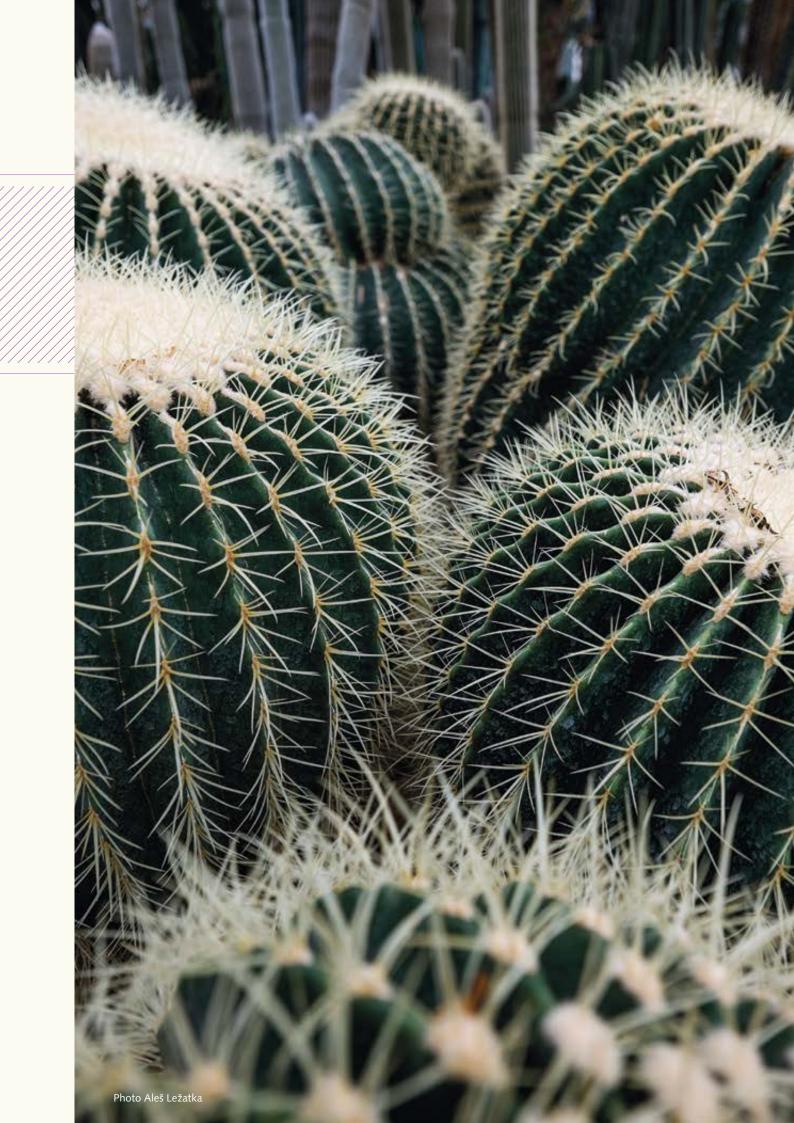
#### 10.4 Student and employee services

Accommodation and catering-related issues are administered by the MU Accommodation and Catering Services, a facility which serves students, employees, university guests and the general public. In accordance with the Strategic Plan 2015 update, the ACS focused on improving management efficiency and service quality. A significant surplus acquired in the past year will facilitate more extensive investments into the renovations and repair of dormitory buildings. The ACS is the largest provider of catering services for students among public universities in the Czech Republic. Income from commercial activities in the field of hotel accommodation and catering services constitutes a significant source of ACS funding.

Twelve MU halls of residence (4,024 places) are spread around Brno, including the newly built Campus Residential Area (70 apartments) in Bohunice. A total 244 places in UNI hotels are reserved for the public, MU employees and visiting lecturers. Masaryk University students and employees were also given the opportunity to use the University Centre Šlapanice and the educational and recreational centre in Cikháj, located in the Žďárské vrchy area. The total renovation of the A1 building at Vinařská Halls of Residence was successfully completed during the spring semester, resulting specifically in drastically improved fire safety standards. The modernization of additional student housing facilities is proceeding according to plan.

Student and staff catering is provided by fifteen facilities: four main canteens (FEA, Rector's Office, Veveří, ACADEMIC Restaurant), seven cafeterias, one café, one pizzeria, the Academic Canteen and the Academic Club. Weekend and holiday services are ensured by the Academic Restaurant located in the Campus Square shopping centre and by Pizza Nostra at Kounicova Street halls of residence.

The overall combined capacity of all MU catering operations is over 10,000 meals per day. According to the type of facility, the daily offer includes meaty dishes as well as gluten-free, vegetarian, lactose-free and local foods, all of which are advertised on site on LCD screens in Czech and English, on the MU website and on mobile devices via MobilKredit software.





#### 11.1 Information infrastructure development and information systems

The information infrastructure managed by the MU Institute of Computer Science relies on over 135 km (over 11,000 km of fibre) of optical cable network. The university backbone currently exhibits a transfer rate of 10 Gbps. The backbone connects to networks in various locations and buildings with 21,000 centrally managed outlets, 420 active routers and switches and over 900 wireless access points. Wireless internet access now covers virtually all university locations. MU operates the international eduroam protocol in order to provide teachers, students and international visitors with easy access to its network (33 % of its 63,000 users came from outside the university in 2015).

With regard to long-term efforts aimed at providing cutting-edge network infrastructure corresponding to the latest trends, a tender for new high-speed active elements reinforcing the MU backbone network was announced at the end of 2015. These elements will not only increase transmission capacity, but also support the future deployment of the latest technologies, namely software defined networking (SDN), in order to facilitate greater network flexibility and adaptability.

During the first half of 2015 the university also managed to transition to a **new voice network technology** system, which involved the transfer of more than 6,500 telephone extensions, wiring approximately 19 thousand jumper wires and commissioning 33 new exchanges in 22 locations. Given the size of the network and the limited time available, this voice system transition was one of the most extensive ever to take place in the Czech Republic.

Computing, storage and cloud services are provided to individual users thanks to a centrally managed e-infrastructure. Approximately 470 virtual servers host various university services and systems and provide an overall storage capacity of over 1 PB. Ongoing integration with Microsoft Office365 continued to facilitate the gradual centralization of services for collaboration and communication support within MU. Infrastructure developed within the CERIT-SC centre is also available at MU. The centre provides over 4,800 computing cores, including the unique SGI UV2 with 6 TB of RAM and 4 PB of storage capacity.

The CSIRT MU security team coordinates security across MU IT infrastructure, continuously monitoring and tracking the occurrence of security incidents and focusing on timely automatic detection and subsequent neutralization. Approximately 82,000 incidents were detected and processed in collaboration with local university administrators in 2015. The consolidation of authentication and authorization infrastructure using the Perun system jointly developed with CESNET also continued throughout the year.

The MU Economic and Administrative Information System provides comprehensive university-wide support for economic, personnel and operational activities. It consists of two closely interconnected subsystems: EIS MAGION, supplied by Magion System, and Inet MU, developed by the ICT MU. Magion EIS is intended for users of the university's economic and personnel departments (800 active users). Inet MU is designed for the entire university community (27,000 active users) and is being developed as an extension of EIS MAGION, providing it with comprehensive additional functionality in key areas (economics, asset management, human resources and wages) as well as in areas such as science, research and operational services. The system processed a total of 625,000 electronic documents, with over 60 % of all electronic agenda documents undergoing electronic approval; the financial turnover of the online SUPO payment system totalled 130 million CZK.

EIS Magion development takes place in cooperation between seven universities participating in the MagNet network, coordinated by MU. In 2015, the network launched a systematic collaboration with a group of 12 universities jointly operating the iFIS economic system. New features were added to Magion in all areas, including comprehensive support for VAT settlement on property associated with automating accounting processes, system support for electronic service sales abroad and VAT inspection reports. The latter two have also been integrated into the IS MU Shopping Centre. Automatic transmissions of personnel and payroll data from Magion to the ExIS managerial system now provide comprehensive wage overview information.

Inet development focused on the paperless office, with the following applications developed in 2015: electronic economic document financial inspection, annual holiday schedule confirmation, comprehensive asset disposal workflow, project proposal approval, personal digital certificate document signing, academic qualification procedure document processing and the Jobs. MU system for efficient online job applicant management. Along with the Inet paperless office, a pilot a mobile application was also developed: the mobile signature book. Several agendas were modified in connection with the transformation of the telephone exchange and the university's change of mobile network operator.

The Inet asset management agenda was expanded to include an R&D instrumentation administration feature facilitating equipment time planning and booking. Asset management systems Magion and Inet are supplemented by the web-based GIS Compass. The proprietary building documentation system is available via Inet, IS MU and www.muni.cz for the benefit of the university community and the general public. The recently introduced technology documentation system module is specifically designed for the management and visualization of MU technological equipment.

#### 11.2 Masaryk University Information System

The Faculty of Informatics-based ICS is responsible for all study-related administrative procedures at the university; the MU Information System may be accessed at http://is.muni.cz/. The system comprises a number of administrative and communication services, electronic study support, science and research services, alumni services, online Shopping Centre, thesis, publication and document depository and a register of electronic applications and administrative tasks.

The study administration agenda underwent significant developments in 2015. In addition to an overhaul of the final examination register, development of new survey-related functionality and expansion of filing services to include dozens of new features facilitating the work of individual users, a range of developments associated with the computerization of various services and processes have been implemented in an effort to implement a fully paperless university.

#### Study administration support

The final examinations agenda was expanded to include a range of new features. Thanks to integration with the Bureau application, students may now submit a request for an exceptional final examination date; furthermore, the full history of granted or rejected examination dates is filed in the IS MU. Additional features include the option to pre-define committee membership, pair committees and dates, automatically check entered dates in sequence and interactively change the order of students associated with a given date.

New developments in the Studies, Term Calendar, List of Topics and Study Materials applications have provided users with simplified orientation, convenient design, new bulk editing options, controls, interactivity, bilingual interfaces and other benefits. Students with multiple active studies will now find all examination dates in one place, which should simplify their examination schedule planning process. Moreover, all studied courses, grades and recent study-related events are also neatly arranged in a dedicated application. The newly featured right-hand panel on the IS MU homepage now provides a quick overview of forthcoming university events and forum posts.

#### Science and research

The **Publications** application was significantly transformed in 2015. A great deal of attention was devoted to highlighting the link between publications, research outcomes and associated projects. The **University Repository** now provides users with improved search functionality and the option to search for recent publications only. The Repository section now allows users to upload research data files, e.g. as supplements to specific publications.

#### E-learning

Thanks to a new publicly accessible e-learning catalogue, samples of study materials – which otherwise serve students enrolled in specific courses – may be viewed by anyone. The Elportal (http://is.muni.cz/elportal/) underwent a significant update, complete with new graphics and responsive design.

The electronic testing ROPOT application now allows teachers to inspect application settings prior to the launch of a testing session while students may view test answers immediately after saving a completed test.

The integrated **external service ownCloud** facilitates the synchronization of files between user computers or mobile devices and the IS MU.

The fifth annual Open Space Conference on IS MU E-learning: Electronic Testing was held in 2015.

#### **MU Shopping Centre**

In 2015 the MU Shopping Centre reached a turnover of 159 million CZK while its total turnover reached 1.03 billion CZK over an eight-year-long operation period. Recently implemented functionality facilitates the sale of electronic services both within and outside of the Czech Republic; in the latter case, payment of value added tax must be made in the customer's home EU member country. In order to provide this service, the Shopping Centre now includes financial support services including Mini One Stop Shop (MOSS). A pilot operation executed in late 2015 tested the sale of e-learning courses.

#### **Document Office and Document Service**

The Bureau application registered 126,445 files comprising 142,530 documents in 2015. A total of 22,782 users were actively engaged in working with these documents. A new Rector's directive now allows students to submit applications and requests through the IS MU. Additional improvements include a dedicated section for important documentation and expanded automated and mass file processing services. The documentation inspection process was accelerated thanks to a personalized function capable of displaying relevant information only. A preview commenting function also helps authorized users process documentation more efficiently. A dedicated mass electronic document signing application accelerates and simplifies the decision-making process, especially as it is also available on mobile devices.

#### 11.2 Masaryk University Information System

#### Inter-university projects and plagiarism detection

The IS MU development team remains responsible for the operation and further development of the Theses, Odevzdej.cz and Repozitar.cz plagiarism detection systems used by 49 participating institutions. In 2015 the development team focused on revising similarity displaying modes and modernizing the online interface.

In cooperation with 13 public universities, the MU Division of Records Service and the IS MU team managed an inter-university project focusing on the long-term storage and archival of digital documents which included the publication of methodologies for the benefit of additional institutions.

#### Information System in numbers in 2015:

- » Number of users: 60,858
- » Number of visits: 880,109,324
- » Number of e-applications: 54,713
- » Maximum number of users per day: 33,024
- » Maximum number of pages in the system opened in one day: 4,376,853
- » Maximum server performance: 1,375,620 requests processed per hour
- » Total number of scripts (individual programmes) in the system: 2,621
- » Recorded source code modifications: 6,270
- » Total number of publication entries: 976,651 (197,051 listed in the Information Register of R&D Results)
- » Help section: 1,478 questions in 145 sections
- » As of 31 December 2015, the IS MU data pool held ca. 95 million files amounting to a total of 18.5 TB

#### 11.3 Masaryk University libraries

Library and information services are provided by an extensive network of libraries coordinated by the **Library Information Centre**, affiliated with the **MU Institute of Computer Science**. This network includes eight faculty libraries, one library operated by the Support Centre for Students with Special Needs, one library operated by the University Centre Telč and dozens of department and field-specific libraries. Library services are supported by the Aleph-MU library system, which provides services to both librarians and users. At the end of 2015, the system registered 53,452 users and 664,947 individual loans. The university library collection contained 1,846,205 physical library units, of which 41,774 were added within the past year.

In 2015, a range of library processes were extensively modernized: MU introduced an electronic user registration system with smart cards for external users, unified lending rules for all faculty libraries and a central long-term debt collection system implemented with the support of the Rector's Office legal department, remote receivable payments through the SUPO account, a new e-book records methodology and new Resource Description and Access cataloguing rules. The discovery, muni.cz service, a central point for scientific search at MU, was significantly improved.

The ongoing renovation process and adaptation of library spaces to user needs continued throughout the year. The extensive refurbishment of the Faculty of Law library and archives was finalized; the modernized and extended library and study spaces were also integrated with the European Documentation Centre. The Faculty of Arts library was altered to include group study rooms and renovation activities associated with the preparation of similar facilities also took place at the Faculty of Science library.

2015 was the first year of the mandatory sustainability phase with respect to electronic information resources acquired in previous years thanks to RDIOP projects. Simultaneously, MU libraries were actively involved in the development of **CzechELib**, a new system designed to ensure access to key electronic information resources for research, development and education in the form of a national licensing centre, to be implemented through systemic individual projects within the framework of the Research, Development and Education Operational Programme.

A recently published MU Library Guide will provide users with an overview of library and information services. Successful projects were implemented in collaboration with Masaryk University Press, particularly in areas such as digitization support, introduction of global DOI/CrossRef identifiers, editorial support for university journal publishing via the Open Journal System and access to university publications within the library system and the discovery.muni search service.

#### 11.4 Masaryk University Archives

Throughout the year, the Masaryk University Archives focused on the selection of archival materials in various discarding and other proceedings. MU units held 17 discarding proceedings which resulted in the acquisition of 128 metres of materials. A total of 63 metres of archival materials were obtained, mainly from the Faculty of Arts, Faculty of Education, Faculty of Science and Faculty of Social Studies; acquired documents included primarily theses, study materials and other materials of an official nature. The MU Archives also received additional documentation from the Czech Rectors Conference (CRC), the only national institution currently making use of the university archive. Acquisitions conducted outside of discarding proceedings were relatively successful, with over 24 metres of archival materials obtained. New additions included the personal collections of Jan Firbas, Rudolf Musil and Jaroslav Bauer while the collections of Vladimír Spousta and Ivan Dorovský were expanded. Thanks to an agreement on safekeeping, the Archives also managed to acquire the valuable personal collection of canon law professor František Kop. The number of required copies of publications issued by the university - collected from the university publishing house - is steadily increasing; the total number of such volumes has exceeded 10,000.

An extensive sorting operation, largely focusing on the organization and processing of approximately 125 metres of new acquisitions to incomplete collections, took place in 2015. A total of 144 metres of materials were processed. Collections thus inventoried and opened for the public include the personal collections of Otakar Borůvka, Zdenek Kudělka, Radislav Hošek, Matyáš Lerch and the amended collection of Vladimír Úlehla.

The Archives continue to maintain a high collection processing rate: 92 % of all materials have been processed, of which 48 % have been inventoried. In addition, 81 % of all materials are publicly accessible and a further 8 % are partially accessible. A total of 46 researchers visited the archives in 2015, including 2 international researchers. In addition to routine information provision services and small-scale inquiries, the Archives also conducted 205 searches for official use and 42 searches for private use.

An exhibition held on the occasion of the opening ceremony for the newly renovated Faculty of Law library featured parchment documents and other materials previously discovered encapsulated in the faculty's foundation stone. The Archives provided documentation on the painter Jiří Kars from the personal collection of Antonín Friedl for the Caught by the Night: Czech Artists in France 1938–1945 exhibition which took place in the Gallery of Fine Arts in Cheb and subsequently in the Moravian Gallery in Brno. The Archives also recently joined the South Moravian Regional Office in organizing an open day event which included lectures and tours of the archive facility.

## 11.5 Provision of information pursuant to Act No. 106/1999 Coll. on Free Access to Information

Due to the character of Masaryk University as a public higher education institution, the provision of information is one of its most important (and in some areas most frequent) functions.

The vast majority of information provided had been requested in person from MU employees according to a given individual's responsibility for areas in which the information was requested; in accordance with section 13 of the Act, such requests have not been recorded. Requests processed in this manner include e.g. 774 requests for information sent to the default MU e-mail address info@muni.cz and an additional 3800 requests sent to prihlaska@muni.cz, an address dedicated to communication with applicants for studies.

Written requests are subject to regulations set up in accordance with section 5, subsection 1, letter b) of the Act. For more information see http://www.muni.cz/general/information\_providing/mu\_regulations.

A total of 12 written requests concerning the provision of information were filed in 2015. All requests were processed within the statutory period.

No court motions or proceedings associated with potential failure to provide information by MU in accordance with the Act were recorded in 2015. Likewise, neither MU nor any of its employees were subject to any sanctions for potential violations of the Act.





# Faculties and university institutes



#### 12.1 Faculty of Law

#### Studies and degree programme development

The faculty's core field of study is Law, implemented within the Law and Legal Science Master's degree programme Bachelor's degree programmes focus primarily on public administration (Public Administration and Theory, Practice of Criminal and Administrative Procedure) and on specializations in various legal areas (Commercial Law Studies, International Commercial Law Studies, Senior Officer of Justice). This study offer reflects a demand for specialists versed in a specific field of law who are, however, not required to have a comprehensive legal education. The above-mentioned programmes and fields of study are thus in constant demand.

On the other hand, the Master's Public Administration field of study of the Public Administration degree programme reflects a demand for specialists dedicated to the legal aspects of public administration and governance. Demand for this programme is traditionally highest (relative to the extent of the programme); it is also the most selective.

Doctoral programmes are implemented in traditional as well as in foreign language fields of study (Prawo Finansowe i Nauki Finansowe, International Private Law, International and European Law) and in a new field entitled Law Information and Communication Technologies.

Successful faculty undertakings include summer school events dedicated to inheritance law through the ages and commercial law as perceived by the economic analysis of law and as well as the Autumn School of Legal Writing 2015. Traditional LL.M. and MPA degree programmes were implemented in collaboration with Nottingham Trent University while Introduction to English Law and the Law of the European Union was held in cooperation with the British Law Centre.

In the international relations area, most outgoing students make use of the Erasmus+ programme (approximately 120 students) while a smaller number travel abroad on the basis of bilateral agreements (6 students). The number of available contracts has increased, providing students with a greater offer of attractive destinations and increasing the overall number of participants. The faculty offers its students as well as incoming internationals over 90 courses taught in foreign languages.



A total of 10 scholarship programmes include an extraordinary scholarship for students providing legal assistance to applicants for international protection and other groups of foreigners.

#### Science and research

The faculty's efforts in the area of implementation and acquisition of prestigious research grants included projects of the Seventh Framework Programme and other community programmes. A total of seven Czech Science Foundation projects and several new projects were investigated. The awarding of a European Research Council (ERC) grant was a unique achievement, unparalleled in the Central European law and humanities area.

The completely renovated faculty library was opened in March. Throughout the year, new works were added to the faculty's open access Scientific Web Portal, to be found at www.science.law.muni.cz. The faculty ranked among the very best in a nationwide science and research quality evaluation.

Several well-established international scientific conferences were held, including Days of Law, Cyberspace and COFOLA.

#### Faculty development and collaboration with professional and regional partners

The faculty collaborates with selected secondary schools (especially in the South Moravian region) and the dTest organization (teaching consumer rights in secondary schools), also focusing on accredited teaching (Public Defender of Rights, Chamber of Executors of the Czech Republic, League of Human Rights, Havel, Holásek & Partners, Allen & Overy, Pro Bono Aliance), professional practice and provision of legal advice to immigrants. Cooperation with alumni has undergone a certain renaissance with the formation of alumni groups on Facebook and LinkedIn and the organization of meetings with prominent graduates.



## 12.2 Faculty of Medicine

#### Studies and degree programme development

In 2015, the faculty successfully re-accredited the General Medicine Master's field of study. All courses with amended or innovated (e.g. Theoretical Bases of Clinical Medicine) content were subsequently overhauled in order to ensure teaching excellence at the Faculty of Medicine. The process was conducted in accordance with the outcomes of the OPTIMED project, designed to interlink all courses in such a way as to optimize pre-defined learning outcomes. Emphasis was placed on an interdisciplinary approach to teaching, interdisciplinary discussions of course content and especially of education continuity and efficiency, development of innovative teaching materials, elimination of duplication and teaching inconsistencies, definition of essential requirements for the student evaluation of teachers, etc.

The P-Pool programme (i.e. an undergraduate programme for motivated students with extended medical science education) was further developed. Groups of talented students were involved in extended learning modules, which, in addition to the standard curriculum, included a range of scientifically-oriented activities implemented from the beginning of their studies. Positive programme results were presented at the first annual meeting of students, faculty management representatives and programme supervisors. The programme received positive feedback from both students and teachers. A range of clinical student topics as well as future support provided by the director of St. Anne's Faculty Hospital were discussed. The vertical expansion of the P-Pool project in preparation for the Research, Development and Education Operational Programme will also include efforts aimed at achieving closer contact with talented students and their teachers during their studies at the Faculty of Medicine.



#### Science and research

Further improvements in science and research project support were achieved by the Faculty of Medicine in 2015 as a result of its participation in the new Agency for Healthcare Research. Faculty employees submitted dozens of projects in the first announced call. Several Research, Development and Education Operational Programme projects for the 2016–2020 period were being prepared throughout the year.

The university SIMU project was developed independently. Forthcoming updates will focus on 1-11 projects (Rector's Office) and others.

Wide-ranging discussions of R&D priorities included a group of two dozen academics responsible for producing a bulk of the faculty's internationally recognized scientific results. Their conclusions have been incorporated into the Faculty of Medicine Strategic Plan for 2016–2020. This concept was first introduced at a conference focusing on the development of the Faculty of Medicine in 2015–2018.

### Faculty development and collaboration with professional and regional partners

A conference focusing on personnel issues produced a detailed analysis of the faculty's employee structure and specific outcomes subsequently implemented into its long-term personnel policy. Emphasis was placed on providing support for young research groups in order to stimulate a realistic, flexible and authentic scientific cultivation of undergraduate students within and outside the P-Pool, and on supporting the quality of graduate students.

Accelerating the development of young associate professors remains a key priority; this strategy presents the only viable short-term solution to the demographic problem affecting associate professors and professors at the Faculty of Medicine. A two-speed faculty plan was formulated: the faculty will support excellence in teaching and research while maintaining the best possible level of quality throughout all teaching departments.



## 12.3 Faculty of Science

#### Studies and degree programme development

A total of 37 accredited degree programmes were available at the Faculty of Science in 2015, including 16 Bachelor's programmes, 12 Master's programmes and 9 doctoral programmes. Programmes accredited in English included 2 Bachelor's studies programmes, 3 Master's programmes and all 9 doctoral programmes. The faculty provides interfaculty study opportunities in collaboration with the Faculty of Education, Faculty of Arts, Faculty of Informatics and Faculty of Sports Studies. Inter-university collaborations included the Advanced Materials and Nanosciences doctoral programme implemented with the Brno University of Technology and the Life Sciences doctoral programme implemented with the Mendel University in Brno.

Of the faculty's 179 outgoing students, 140 made use of the Erasmus programme. The faculty welcomed 77 incoming students including 33 Erasmus programme participants.

Student scholarships are provided on the basis of the Faculty of Science dean's scholarship programme; the most significant share of scholarship funding targets research, development and innovation (over 20 million CZK). The faculty also provides merit-based scholarships, representation-oriented scholarships and scholarships in support of study-related activities.

In order to improve conditions for students – especially in periods between lectures – the faculty spent 2 million CZK on the construction of leisure-time facilities, including two new group study rooms, within the Central Library facility at the Kotlářská Street complex.

#### Science and research

Over 250 projects from various providers (including internal MU projects) were investigated by faculty employees in 2015. The faculty may thus be said to have achieved a certain measure of success with respect to attracting institutional and special-purpose science and research funding, in turn reflected by the faculty's research outcomes as recorded by the nationwide research register. The development of two regional research centres (CEOCOEN and CEPLANT), financed by EU Structural Funds (within the RDIOP framework),



continued with the help of funding from the National Sustainability Programme. The investigation of RDIOP project BioTechMed was finalized in 2015. Three projects promoting excellence in primary research funded by the Grant Agency of the Czech Republic were investigated; in addition, the faculty functioned as principal or co-principal investigator in three large research, development and innovation infrastructure projects.

Though project funding, which primarily facilitates research at the Faculty of Science, is accompanied by a heavy administrative burden, a decentralized organizational structure provides the faculty with efficient management tools. In late 2015, scientists began to prepare projects designed for the new Research, Development and Education Operational Programme which should facilitate the further growth of excellent research at the Faculty of Science.

### Faculty development and collaboration with professional and regional partners

In 2015, the faculty invested over than 67 million CZK in new research equipment and the overhaul or technical assessment of existing instrumentation. Several research teams were expanded to accommodate prospective employees coming from abroad. Centralized faculty resources were employed in support of habilitation and professor appointment procedure applicants; the programme met with great interest, especially among young scientists.

The faculty traditionally emphasizes work with secondary school students as well as the popularization of science, organizing e.g. the mathematical correspondence seminar BRKOS and the educational e-course for future chemists ViBuCh as well as follow-up workshops for successful applicants. The faculty is also involved in the Secondary School Scientific Activity contest organized by the South Moravian region and the South Moravian Centre for International Mobility. Faculty employees regularly work as contest supervisors. The public-access botanical garden, located in the Kotlářská Street faculty complex, has been supplemented with a newly developed geology park.



## 12.4 Faculty of Arts

#### Studies and degree programme development

A great deal of attention was devoted to the development of small-scale fields, i.e. Vietnamese, Chinese, Japanese and South Slavic languages, all of which may be considered as strategically significant.

Newly accredited fields included Catalan Language and Literature (single-subject Bachelor's and double-subject studies) and Master's fields such as Culture Studies of China (single-subject studies) and North American Cultural Studies (single-subject studies).

Although the number of fields accredited in English is not exceedingly high, interest in studies at the Faculty of Arts among international students is steadily growing.

The Master's double degree French Language and Literature studies, jointly implemented by the faculty in collaboration with the Université Paris-Est Créteil, were successfully completed by three students.

Funding provided by the internal development project supported the creation of 21 new foreign-language courses (20 in English and one in French) open to both foreign and domestic students.

Collaboration agreements concluded in 2015: Národní univerzita Ostrožské akademie; Přikarpatská národní univerzita V. Stefanyka; Ludwig-Maximilians-Universität München; Kazan Federal University; Institut Ramon Llull, Barcelona; College of Humanities, National Chi Nan University.

A new application dedicated to simplifying the learning agenda was introduced for processing electronic applications for study mode changes, study interruptions, studies abandonment notifications and study interruptions ex officio. In 2015 faculty scheduling was first carried out using the UniTime programme. The internationalization of studies was supported by the announcement of a new scholarship programme offering compensatory aid to Erasmus+ programme participants.

#### Science and research

The dean's grant scheme provided funding for 24 assistant professors preparing for their habilitation procedures.

In 2015, the faculty also provided financial incentive in support of publishing activities in prestigious international publishing houses. Supported publications included 10 monographs (an additional 23 monographs are to be published), 13 chapters in monographs (31 to be published) and approximately fifty research papers.

Throughout the year, the faculty's grant policy focused on new proposals aimed at collaborations between ac-



ademic and application spheres. Significant financial support was provided to projects and units with significant applied research potential, including East Asian Studies, Hume lab – Experimental Humanities Laboratory and the Division of Information and Library Studies.

### Faculty development and collaboration with professional and regional partners

Cooperation with various industrial partners was bolstered thanks to involvement in the CRP13 + Creative Industries project, an undertaking heavily relying on the faculty's responsibility and administration skills. The project is designed to strengthen links between art-oriented fields at the Faculty of Arts, Faculty of Education and cultural institutions. Faculty cooperation with regional secondary schools continued thanks to the INTERES project, held under the auspices of the Division of Information and Library Studies. Proceeds from the faculty's traditional Christmas charity second-hand sale were sent to the Tabita home hospice organization.

#### Key grants awarded in 2015:

- » Frontier, Contact Zone or No Man's Land? The Morava-Thaya Region from the Early to the High Middle Ages, international Czech Science Foundation project, principal investigator Prof. Mgr. Jiří Macháček, Ph.D.
- » Demonstrating the Functions of Awe in Religious Systems: Empirical and Computational Approaches, project Max Planck Gesselschaft, principal investigator Mgr. Radek Kundt, Ph.D.
- » European Studies and Research in Adult Learning and Education, project LLP Erasmus, principal investigator Assoc. Prof. Mgr. Petr Novotný, Ph.D.

#### Notable projects investigated at FA in 2015:

- » Centre for Cross-Disciplinary Research into Cultural Phenomena in Central European History: Image, Communication, Behaviour, principal investigator Prof. Mgr. et Mgr. Tomáš Knoz, Ph.D. (CSF)
- » A Generative Historiography of the Ancient Mediterranean: Modelling and Simulating the Diffusion of Religious Ideas and Forms of Behaviour, principal investigator Mgr. Aleš Chalupa, Ph.D. (GA MU)



## 12.5 Faculty of Education

#### Studies and degree programme development

The faculty implemented a total of 76 fields of study. Interfaculty studies included selected field of study combinations implemented in collaboration with FEA, FA, FSpS and FSci. The faculty welcomed 54 incoming international students. The number outgoing students who completed an international study or work placement in 2015 stood at 168.

#### Science and research

An increase in scholarship programmes funding primarily targeted talented doctoral candidates, facilitated the presentation of creative activities and supported study-related placements in the Czech Republic and abroad. A new scholarship programme in support of Erasmus+ mobility was introduced. The development of a comprehensive training module for pedagogical, psychological and teaching competences was initiated; the module will be offered in English.

The faculty organized a total of 15 conferences in 2015, of which 10 featured international participants.

The investigation of 12 Czech Science Foundation research projects continued throughout 2015, as did work on 19 projects funded by the Masaryk University Development Fund and four development projects financed by MEYS. Six Education for Competitiveness Operation Programme projects were also investigated. In addition, the faculty participated in the investigation of the following university-wide ECOP projects: Employment of Newly Graduated Doctors of Science for Scientific Excellence and Employment of Best Young Scientists for International Cooperation Empowerment. Ten specific research projects and three interdisciplinary research projects received support from the MU Grant Agency. The faculty also participated in projects announced by the Ministry of Culture. Faculty academics were involved in international cooperation dedicated to investigating various Erasmus +, FP7, TEMPUS, Mobility 7AMB, AKTION and International Visegrad Fund projects.

A collective of authors headed by Assoc. Prof. PhDr. Michaela Píšová, Ph.D., was awarded first place in a competition organized by the Czech Education Research Association. Assoc. Prof. RNDr. Josef Trna, CSc., was presented with the University of



Wrocław commemorative medal. Academic sculptor Assoc. Prof. Jiří Sobotka won an art competition announced by the Brno City Municipality for sculptures of poet Jan Skácel. Students Michaela Čevelová and Eva Palánková received the Extraordinary Jury Award at the national Ars Poetica event.

### Faculty development and collaboration with professional and regional partners

Recently renovated facilities at Poříčí Street 9 include a leisure-time space, conference room, room for parents and children, kitchen and bistro. The new facilities have significantly expanded space available to students.

In March 2015, the Department of Social Education organized an aid collection of daily-use items for affected families in Ukraine.

The new Bachelor's studies course Initial Teacher Training provides students with experience tutoring children from socially disadvantaged backgrounds.

In October 2015, the faculty saw the establishment of **Otevřeno**, a **student initiative** which aims to improve teacher training and actively participate in discussions on innovation in the area at MU and beyond.

As a result of changes to the faculty organizational structure, the Centre for Information and Communication Technologies and the Lifelong Learning Centre will function independently in the future.

The Institute for Research in Inclusive Education organized a seminar on helping people with autism, which was attended by over 400 parents, teachers and counselling specialists and which became the biggest gathering of its kind in the country. Participants discussed applied behavioural analysis and additional steps designed to improve the lives of people with autism. The full-day event featured speeches by Karola Dillenburger of the Queen's University in Belfast, Mickey Keenan of the British Psychological Society and the Slovak expert Zuzana Maštenová.



# 12.6 Faculty of Economics and Administration

#### Studies and degree programme development

For several years in a row, the gradually declining demographic curve has been affecting the number of students enrolled at FEA. This annual decline was thus reflected in the admission procedure for the 2015/2016 academic year. However, the resulting lower number of students per teacher is fully in line with the long-term aim of improving teaching quality.

In 2015 the Faculty of Economics and Administration managed to expand the range of fields of study offered in English. Two new Master's degree programmes in English were launched in the 2015/2016 academic year: Economics and Public Economics and Administration. Interest in these studies among international students has been quite significant from the very beginning and a rising tendency is clearly visible.

A new scholarship programme in support of international students enrolled in full-time studies at the Faculty of Economics and Administration was announced in 2015 in order to reduce any economic and social barriers encountered by students on arrival.

#### Science and research

The Faculty of Economics and Administration continued to expand its scientific and grant-related activities throughout the year. At the international level, it contributed to the investigation of the prestigious FP7 grant ITSSOIN - Social Innovation and Civic Engagement. The MU Grant Agency supported 14 specific research grant projects and two interfaculty Research Support Programme grant projects. A further four projects successfully applied for funding under the dean's scientific team support programme.

The faculty once again successfully increased the amount of science and research funding allocated in 2015. Funding for four research and development projects in the primary research area was obtained from the Grant Agency of the Czech Republic. Applied research projects included three projects investigated in collaboration with the Technology Agency of the CR: Optimization and Improvement of Competitive Tendering in the Passenger Railway Transport in the Czech Republic according to EU Directives (OMEGA



programme), Evaluation of the Efficiency of Municipal Expenditures and Private Entities in the Field of Waste Management in Relation to the Amount of Fees and Equipment Costs (BETA programme) and Knowledge Management in Local and Regional Development (BETA programme).

Scientific potential is also being developed in the form of specialized institutes. Three such institutes, dedicated to research team quality development, were established at the faculty in the past year: Institute of Transport Economics, Geography and Policy, Centre for Non-Profit Sector Research and Institute for Tourism Research.

### Faculty development and collaboration with professional, regional and international partners

In 2015, the Faculty of Economics and Administration completed the investigation of development projects supported by EU Structural Funds. In cooperation with international partners, the faculty also managed to implement research and development projects funded by the Visegrad Fund and Horizon 2020, participating in the implementation of the new 2014–2020 programming period in the case of the latter. Furthermore, in collaboration with Charles University, the faculty also prepared a pilot project focusing on the development of cooperation in the field of non-profit sector research.

Ongoing projects interconnecting studies and practice include the Partnership project held in collaboration with the Top Students Centre – TopSec and dedicated to providing internship opportunities for students.

At the international level, FEA continued to participate in long-term cooperations with many partners. In 2015, the faculty established cooperation with the Academy of Public Administration under the President of the Republic Kazakhstan, the Baltic International Academy (Latvia) and the Taras Shevchenko National University of Kyiv (Ukraine).



## 12.7 Faculty of Informatics

#### Studies and degree programme development

The combined number of Bachelor's and Master's students at the Faculty of Informatics in 2015 stood at 2,131. The number of students from Slovakia is stable and constitutes approximately 50 % of the student body. The Security of Information and Communication Technologies degree programme was newly accredited in English. The faculty's field structure, however, remains stable in the long-term. Prospective Bachelor's degree students were presented with a choice of 13 fields of study (including three interfaculty fields) in three degree programmes. Potential Master's degree students were offered a total of 18 fields of study (including one interfaculty and three English-language fields), likewise in three degree programmes. The doctoral studies offer included two fields of study in one degree programme.

Popular Bachelor's fields of study include Applied Informatics (40 % of all newly enrolled students), Computer Graphics and Image Processing (13 %), Computer Systems and Data Processing (approximately 11 %) and Computer Networks and Communications (11 %). Among Master's degree programmes, the greatest amount of long-term interest has been traditionally generated by Applied Informatics (35 %) and Service Science, Management and Engineering (20 %).

A number of changes in the teaching of practical programming at the Bachelor's level were discussed and prepared for the 2016/2017 academic year. Educational innovation took place mainly at course level and included both continuous content innovation and updates to teaching methods in the case of existing courses.

Outstanding students were awarded scholarships reflecting their academic performance (135 students in 2015) while talented first-year students received a motivational scholarship (approximately 40 students). Additional student incentives include e.g. creative scholarships, mobility fellowships and extraordinary scholarships.

#### Science and research

In October 2015 an honorary doctorate proposed by the faculty scientific board was awarded to Prof. Thomas Henzinger, director of IST Austria. The Rector's Award for Outstanding Artistic Activity was presented to FI lecturer MgA. Helena Lukášová, ArtD. The Rector's Award for an Outstanding Doctoral Thesis was presented to RNDr. Moslem Amiri, Ph.D.

In May 2015, the Masaryk University CERIT Science Park expanded to include the KYPO Cyber Exercise  $\vartheta$ 



Research Platform, a unique environment for the analysis of situations threatening the security of critical information infrastructures. At the turn of June and July, the faculty organized the Central European Olympiad in Informatics while the traditional MEMICS scientific workshop for doctoral candidates – with international participation and proceedings published by Springer Verlag – took place in October.

In 2015, faculty employees managed to acquire 5 standard CSF projects (including 2 as co-investigators), and 3 additional grants from other providers (MEYS – COST, MEYS – Mobility Austria, MEYS – Norwegian funds).

### Faculty development and collaboration with professional and regional partners

In 2015, the number of successfully defended theses prepared in cooperation with industrial partners once again exceeded 100 (49 Bachelor's and 65 Master's). Furthermore, faculty cooperation with industrial partners focused both on partners with small numbers of successfully defended theses and on the conclusion of new partnerships, emphasizing potential for successful future cooperation. These activities led to the registration of 11 new members of the faculty's Association of Industrial Partners (AIP); one company was promoted to the strategic cooperation partner category. By the end of the year, the AIP included 29 companies:

- » 5 companies in the Strategic Partner category,
- » 9 companies in the Partner category,
- » 15 companies in the SME Partner category.

A total of 16 talented students were granted the opportunity to work as student researchers in FI laboratories thanks to a competition announced by the AIP in collaboration with partner companies.

The launch of operations at the CERIT SP industrial park was conducted according to plan and three quarters of all available spaces were occupied by early 2016, with 90 % of the leased area scheduled for full occupancy by late spring. CERIT SP hosted a successful cyber security exercise entitled Cyber Czech 2015 as well as a number of additional training courses for state authorities and commercial partners.

The faculty also focused on cooperation with secondary schools, specifically with five selected schools in Brno. Over 500 secondary schools throughout the Czech Republic and Slovakia received information brochures about studies at FI, laboratories and leaflets about the faculty's correspondence seminar. Faculty teachers lectured at approximately 10 secondary schools.



## 12.8 Faculty of Social Studies

#### Studies and degree programme development

While a slight increase in the number of applications for Bachelor's studies was registered in 2015, the faculty continues to maintain a highly selective approach. The same is true of the Master's programme, where a substantial number of applicants hail from other universities.

The faculty offers seven Master's fields of study taught fully in English, three of which are implemented in cooperation with international institutions. Moreover, all doctoral programmes at the faculty are likewise accredited in English. 56 Master's students and 11 doctoral candidates were enrolled in English programmes, suggesting a high demand for such studies.

International mobility constitutes a second trending area. A total of 251 outgoing students participated in placements abroad, of which 195 were carried out thanks to the Erasmus+ programme. The number of incoming students also increased significantly to a total of 206 in 2015. The Fulbright Distinguished Chair continued to contribute to the improvement of teaching quality at the faculty.

#### Science and research

While research naturally takes place at individual departments, a great deal of research activity is concentrated at four specialized units: the International Institute of Political Science, Institute for Research on Children, Youth and Family, Office for Population Studies and the Institute for Public Policy and Social Work. The units are all financed from institutional support sources, Czech Science Foundation research projects and European and other international projects.

A number of experts also successfully participated in international research teams investigating EU programmes. Five FP7 and H2020 projects were investigated: NEUJOBS – Employment 2025: How Will Multiple Transitions Affect the European Labour Market; bEUcitizen – All Rights Reserved? Barriers towards EUropean CITIZENship; CITISPYCE – Combating Inequalities through Innovative Social Practices of and for Young People in Cities across Europe; NEGOTIATE – Negotiating Early Job-Insecurity and Labour Market Exclusion in Europe and CATCH-EyoU – Constructing Active Citizenship with European Youth: Policies, Practices, Challenges and Solutions.



A range of research projects were implemented with the support of various Czech agencies and institutions, including the Czech Science Foundation (22 projects), Czech-Norwegian Research Programme (1), COST (1), Ministry of Culture (1), Ministry of the Interior (1), Ministry of the Environment (3), specific research projects (12) and the MU Research Support Programme (5).

### Faculty development and collaboration with professional and regional partners

Key faculty activities taking place throughout the year included traditional conferences, summer schools and workshops. In cooperation with the International Institute of Political Science, 50Hertz Transmission GmbH and the ČEZ Group, the Department of International Relations and European Studies organized the fourth annual energy security summer school dedicated to the Energy Policy of the EU and its Position in the Global Energy Environment. The International Institute of Political Science held an international conference on Science and Research in the Humanities as part of the traditional Czech-Germany Day event. The Department of Media Studies and Journalism co-organized the first annual Czech-Slovak Summer School of Ethics And Media in collaboration with the University of Prešov. The fifteenth annual international conference Identities in Conflict - Conflict in Identities was organized by the Department of Sociology. The Department of Environmental Studies and Department of Political Science co-organized a workshop titled The Disappearing of Politics. Moreover, the Department of Environmental Studies co-organized the Výkvěty student conference and the Ekofilm festival and students of the department held the Lesem summer school, an event specifically targeting secondary school students. As in previous years, students were provided with access to internships in Czech media as well as with short and long-term placements abroad.



## 12.9 Faculty of Sports Studies

#### Studies and degree programme development

A total of 1,323 students in 12 fields of study were enrolled at the Faculty of Sports Studies in 2015; 374 graduates successfully completed their studies. The newly opened field of Applied Kinesiology welcomed its first batch of students. The faculty implemented interfaculty double-subject studies for physical education teachers in collaboration with the Faculty of Education, Faculty of Arts, Faculty of Social Studies and Faculty of Science. The Management in Sport interfaculty single-subject studies were held in cooperation with the Faculty of Economics and Administration.

The drop-out rate at the Faculty of Sports Studies was among the lowest at MU. Popular Bachelor's fields of study included Management in Sport, Physiotherapy and the Coaching specialisation. Demand for Master's studies was balanced across the field offer. In 2015, the number of applicants from other universities increased to a full third of all prospective students applying for Master's studies at the faculty. The faculty offers a total of 6 scholarship programmes.

Of the 62 students enrolled in doctoral programmes, 5 successfully completed their studies in 2015.

#### Science and research

The faculty was granted MEYS accreditation for habilitation and professor appointment procedures in **kinanthropology** for the upcoming period. Five habilitation procedures were initiated in 2015 and three were successfully completed.

In collaboration with the Faculty of Kinesiology (University of Zagreb), the faculty organized the 10<sup>th</sup> Sport and Quality of Life international conference, attended by 150 participants from over 10 countries. The conference included two satellite symposia: the Martial Arts and Combat Sports IMACSSS Symposium and the Sports Injuries Satellite Symposium.

Two ECOP projects were successfully completed in 2015: Employment of Best Young Scientists for International Cooperation Empowerment and Increasing the Capacity of Lecturers Teaching Kindergarten and Primary School Staff in the Area of Physical Propedeutics (Gymnastics and Dance) and Personal Development.



The faculty also investigated 19 development projects and 10 specific student research projects focusing on current topics such as the impact of physical activity on patients with cancer or self-defence practices for people with disabilities. A total of 29 doctoral candidates were actively engaged in the projects.

### Faculty development and collaboration with professional and regional partners

In 2015 the Faculty of Sports Studies collaborated with a number of international institutions and signed new inter-institutional agreements with the Polytechnic Institute of Santarém and the Vasile Alecsandri University of Bacău. 50 students, 11 academics and 5 non-academic employees took advantage of the faculty's mobility programmes.

The offer of courses taught in English was expanded, which led to an increase in the number of incoming international students to a total of 41. Thanks to mobility and development projects, 18 international academics participated in faculty teaching activities.

Thanks to a collaboration with the TTO and the South Moravian Innovation Centre, faculty representatives were able to take part in the first edition of the MU Business Research Forum, held in April 2015.

Educational, sporting and charitable events held in cooperation with regional partners included e.g. Children's Day and the Regional Special Olympics for Mentally Disabled Athletes. The faculty also organized several lectures of prominent figures from areas such as sport, nutrition and health.

A total 51 courses for professionals as well as the general public were organized by the Lifelong Learning Centre. Popular courses included education for coaches 2<sup>nd</sup> class, wellness activities and nutrition trend seminars for sports fans and the general public. Contractual collaboration with several sports federations was launched, including with the Football Association of the Czech Republic, Czech Figure Skating Association, Czech Futnet Association, Czech Floorball Union and the Czech Rugby Union.

In September 2015 the faculty held the fourth annual international summer school of martial arts focusing on Okinawa karate and Brazilian jiu-jitsu.



#### 12.10 Central European Institute of Technology

CEITEC MU, part of the CEITEC scientific centre of excellence, has been an independent Masaryk University institute for five years. By the end of 2015, RDIOP funding had helped finance two European-grade scientific facilities, both in terms of infrastructure and work capacity. In the coming years, financial support from the National Sustainability Programme II (CEITEC 2020) will help stabilize and maintain the project's sustainability.

Suitable research conditions also helped to increase the number of publications to nearly 300 in 2015, with 78 % of all publications appearing in journals with an impact factor above the median in a given field and a full 60 % published in journals ranked in the first quartile. The quality of scientific output places CEITEC MU on par with specialized institutes of the Academy of Sciences, i.e. among leading research institutions in the Czech Republic.

A second important indicator of the level of research and the ability to ensure the sustainability of research funding is the capability to acquire key grants. In 2015 Richard Štefl successfully received the extremely prestigious ERC Consolidator Grant. He thus became only the second ERC grant holder at Masaryk University. Furthermore, the successful submission of three projects in the first announced European H2020-Twinning call yielded funding in a total volume of 47 million CZK. The strategically important projects will help connect MU with top European research institutions. Additional significant achievements include two research infrastructure projects and two prestigious Marie Sklodowska-Curie Actions projects. The international LIBRA project (H2020), dedicated to promoting the role of women in science and research and the removal of gender-based barriers and prejudices, was also launched in 2015

Besides a number of international achievements, the approval of six research infrastructure projects submitted in calls announced by the Ministry of Education was a resounding success. These projects included all 8 shared CEITEC MU laboratories, all of which were subsequently included in the Czech research infrastructure roadmap. Shared CEITEC MU laboratories thus acquired the necessary funds to cover their operating costs until 2019 and will therefore be able to continue providing the scientific community with open access services.



In connection with the achievement of fully operational status by all shared laboratories, MU signed a Memorandum of Understanding with the Vienna Biocenter Core Facilities. The VBCF is a publicly funded non-profit research institute based at the Vienna Biocenter. Cooperation will cover several areas including education, joint projects and the coordinated utilization of research infrastructure.

MU was also involved in a total of four ESFRI projects in 2015. Collaborative activities are implemented both as national consortia with Czech institutions and on and international level where CEITEC MU participates in the coordination of various activities while providing access to the international scientific community.

In 2015, MU hosted several major international scientific events. The EMBO conference on Signalling in Plant Development, which attracted participants from 24 countries to Brno, may be considered the most prestigious scientific event of the year. Nevertheless, equally important international scientific events included the EMBO Practical workshop Analysis of non-coding RNAs: per aspera ad astra, Summer School – A Practical Course in Three-Dimensional Electron Microscopy or first annual Workshop on TP53 Analysis in CLL. The mere possibility of organizing such prestigious scientific events and the participation of internationally recognized experts confirmed that CEITEC is gradually finding its place on the European map of science and research.

In late 2015, the position of CEITEC MU director was vacated by professor Jaroslav Koča and the university institute entered the new year under the leadership of Jiří Nantl, whose key tasks will include the further reinforcement of the university's strategic R&D position.



## 12.11 Institute of Computer Science

The ICS plays two complementary roles at MU. On one hand the institute is responsible for maintaining the university's comprehensive e-infrastructure (computer and telephone networks and components, servers, computing and storage capacities – gradually transformed into a university-wide cloud infrastructure) and for operating all economic, personal, geographic and related information systems. On the other hand, it also carries out independent research in areas such as cyber security, e-infrastructures and related applications and services.

The institute also operates CERIT-SC, listed in the national roadmap for large research, development and innovation infrastructures and tasked with the development of a national e-infrastructure and its integration into the international community as well as close collaboration with research teams from various fields in order to ensure the flexible and efficient use of computing and storage capacities.

The ICS is subdivided into five divisions: computing and storage infrastructure, communication infrastructure, information systems, customer care and human resources and economics. In 2015, the institute employed up to 150 employees (30 % women), of whom 27 persons held a Ph.D. or equivalent title and five employees held the academic title of associate professor or professor. Though the ICS runs no accredited degree programme of its own, over 30 of its employees are involved in regular teaching, especially at the Faculty of Informatics. During the year the ICS coordinated two ECOP projects focusing on teaching support: E-learning Resource Sharing Environment and Digital Atlases as Pathology Teaching Support.

As part of its responsibility for operating the comprehensive MU information infrastructure (excluding agendas operated by the IS MU), the ICS continued to work on a unified technological platform for the online presentation of the entire university (www.muni. cz website) and its individual components, i.e. from faculties to smaller organizational units and projects.

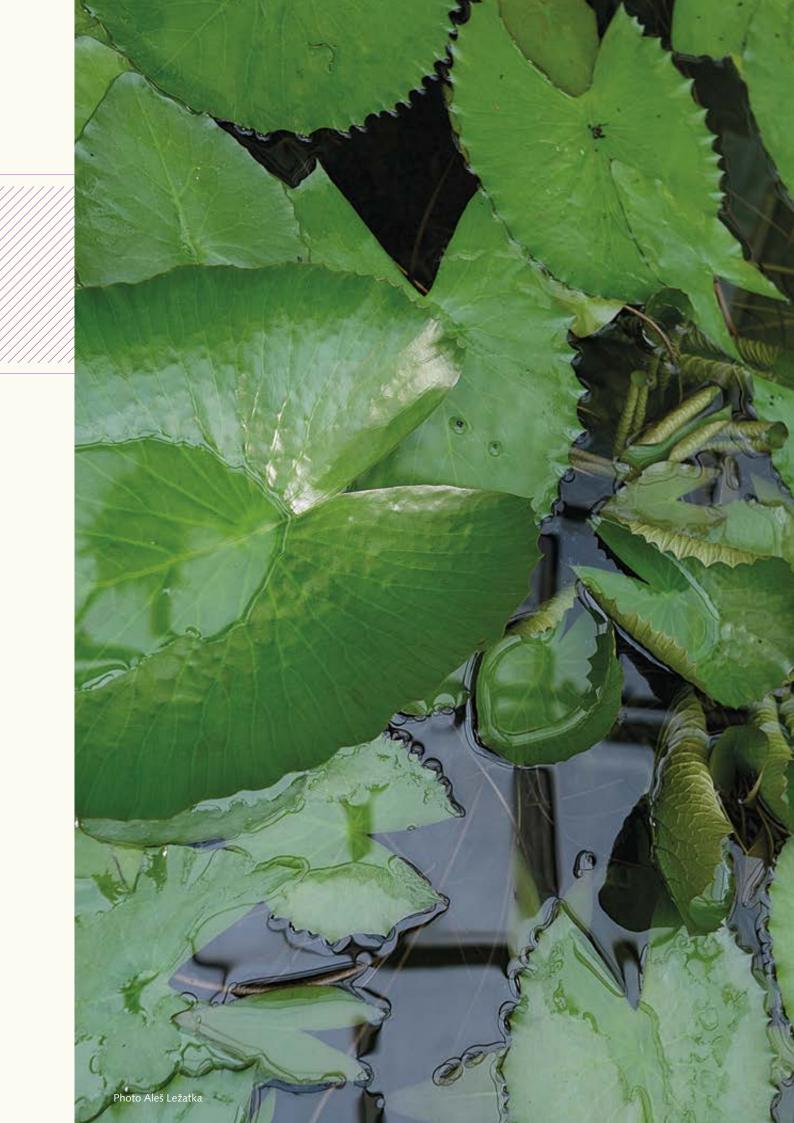
The uniweb platform facilitates the rapid implementation of new websites in a corresponding graphical manner in line with the university's requirements, using a web centre technological platform in order to help ensure a unified corporate identity while minimizing implementation and operational costs. The number of registered system users has grown to 17,500.

The ICS also operates the **University Computer Centre** and provides operational support for over 2,500 computers located in central and faculty computer rooms as well as employee computers at several faculties. Economic and human resources management systems include nearly 3.5 million documents, allowing for the vast majority of agendas to be handled electronically.

The Institute of Computer Science plays an important role as an expert guarantor of large tenders for IT and AV equipment. External services provided by the institute include the MEYS Student Register and medical data storage databases for hospitals in the South Moravian region, developed and operated within the framework of the long-term MeDiMeD project. Continued intensive cooperation with the National Security Authority, Ministry of Interior and the Police of the Czech Republic included activities such as the opening of the KYPO Cyber Exercise & Research Platform, a unique environment for research and development of methods of protection against attacks on critical infrastructure.

The research unit primarily focuses on cyber security and comprehensive e-infrastructures and their utilization. This is supported by its involvement in national and international interdisciplinary projects aimed at cooperation with other research infrastructures and national authorities.

In 2015, two H2020 projects were launched with the participation of ICS (ELIXIR EXCELERATE and West-Life) while the institute continued to work on other international projects (SDI4Apps, Thalamoss and the Czech CyberCrime Centre of Excellence), two new large infrastructure projects (CERIT-SC and ELIXIR CZ) and two new projects funded by the Ministry of Interior. The ICS was involved in the investigation of a total of 29 projects including 3 contract research projects.



## List of abbreviations

Medical Imaging

Distributed system of observatory and field measurements of geophysical fields in the Czech Republic, developed and operated by the national node of

National Infrastructure for Chemical Biology

European Infrastructure for Translational Medicine

Education for Competitiveness Operational Programme European Clinical Research Infrastructure European Clinical Research Infrastructures Network– Integrating Activity

the pan-European project EPOS

CzechPolar 2 Czech Polar Research Infrastructure
CZECRIN Czech Clinical Research Infrastructure
CZ-OPENSCREEN

Digital Object Identifier

Donau Universität Krems

CzechGeo/EPOS

DUK

EATRIS

ECRIN-IA

ECOP ECRIN

UNIVERSITY	Association of Industrial Dartners	ECTS	European Credit Transfer and Accumulation System
AIP BMS	Association of Industrial Partners Building Management System	ELIXIR	European Life-Sciences Infrastructure for Biological Information
CARLA	Centre for the Advancement of Research in the Liberal	EMAIL	Academic Mobility between EU and Israel
CARLA	Arts	EMBO	European Molecular Biology Organization
CEITEC	Central European Institute of Technology	EPOS	European Plate Observing System
CEPLANT	R&D Centre for Low-Cost Plasma and Nanotechnology	ERC	European Research Council
CEI E/IIII	Surface Modifications	ESFRI	European Strategy Forum on Research Infrastructures
CERIT	Centre for Education, Research and Innovation in ICT	ESIF	European Structural and Investment Funds
CERIT-SC	CERIT Scientific Cloud	EUA	European University Association
CESEB	Centre for Experimental, Systematic and Ecological	EULETA	European Legal English Teachers' Association
02022	Biology	F	Full-time studies
CETOCOEN	Centre for the Study of Toxic Substances	FB	Facebook
CIC	Centre for International Cooperation	FP7	Seventh Framework Programme
CSIRT-MU	Computer Security Incident Response Team	IATEFL	International Association of Teachers of English as a
EIS	economic information system		Foreign Language
FA	Faculty of Arts	IMPACT	Innovation, Methodology and Quality of Language
FEA	Faculty of Economics and Administration		Education and Training in Foreign Languages in the
FEdu	Faculty of Education		Tertiary Sector in the Czech Republic
FI	Faculty of Informatics	iNEXT	Infrastructure for NMR, EM and X-rays for Translational
FISU	Faculty of Informatics Student Union		Research
FLaw	Faculty of Law	INSPIRE	International Science Promoting Innovation and
FMed	Faculty of Medicine		entREpreneurship
FSci	Faculty of Science	INV	capital (investment) funds for the reproduction of fixed
FSpS	Faculty of Sports Studies		assets
FSS	Faculty of Social Studies	ISEP	International Student Exchange Program
GAMU	Grant Agency of Masaryk University	ITAM	Institute of Theoretical and Applied Mechanics of ASCR
ICS	Institute of Computer Science	JCWW	South Moravian Centre for International Mobility
IS MU	Masaryk University Information System	KITE	Knowledge, Integration and Transparency in Education
KYPO	Cybernetic Proving Ground	LLP	lifelong learning programme
LC	Language Centre	LPT	Learning potential test
MeDiMed	Metropolitan Digital Imaging System in Medicine	MC	Ministry of Culture
MU	Masaryk University	ME	Ministry of the Environment
MUDF	Masaryk University Development Fund	MEYS	Ministry of Education, Youth and Sports
RECETOX	Research Centre for Toxic Compounds in the Environment	MI	Ministry of Interior
SCSSN TTO	Support Centre for Students with Special Needs	NCMG	National Centre for Medical Genomics
UCB	Technology Transfer Office	NEI NHI	non-investment funds
UCT	University Campus Bohunice University Centre Telč	NSA	National Heritage Institute National Security Authority
001	Oniversity Centre reic	OA	Open Access
GENERAL		OECI	Organisation of European Cancer Institutes
ACIU	Advanced Cell Immunotherapy Unit	PB	petabyte
ACTRIS	Aerosols, Clouds, and Trace gases Research InfraStructure	PoC	Proof of Concept
71011113	Network	PU	Palacký University
ASCR	Academy of Sciences of the Czech Republic	R&D	Research and development
BACnet	Building Automation and Control Network	RDIOP	Research and Development for Innovation Operational
BIOCEV	Biotechnology and Biomedicine Center of the Academy of		Programme
	Sciences and Charles University in Vestec	RIV	Information Register of R&D Results
BRF	Business Research Forum MU	SGI	Silicon Graphics International
BUT	Brno University of Technology	SMIC	South Moravian Innovation Centre
С	Combined studies	SMR	South Moravian Region
CASAJC	Czech and Slovak Association of Language Centres	SoMoPro	South Moravian Programme for Distinguished
CECECH	Central European Centre for Cultural Heritage		Researchers
CercleS	European Confederation of Language Centres in Higher	SP	strategic plan
	Education	TACR	Technology Agency of the Czech Republic
CESNET	Czech Education and Scientific NETwork	U3A	University of the Third Age
CET	Centre of Excellence Telč	UN	United Nations
CIISB	Czech Infrastructure for Integrative Structural Biology		
COST	European Cooperation in Science and Technology		
CRC	Czech Rectors Conference		
CSF	Czech Science Foundation		
CU	Charles University in Prague		
Czech-Biolm			
	National Research Infrastructure for Biological and		

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