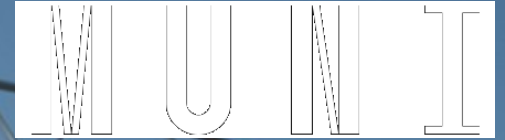




CEITEC

Central European Institute of Technology
BRNO | CZECH REPUBLIC



Jiří Nantl

Brno, 14th March 2019

CEITEC MU Scientific Board Meeting



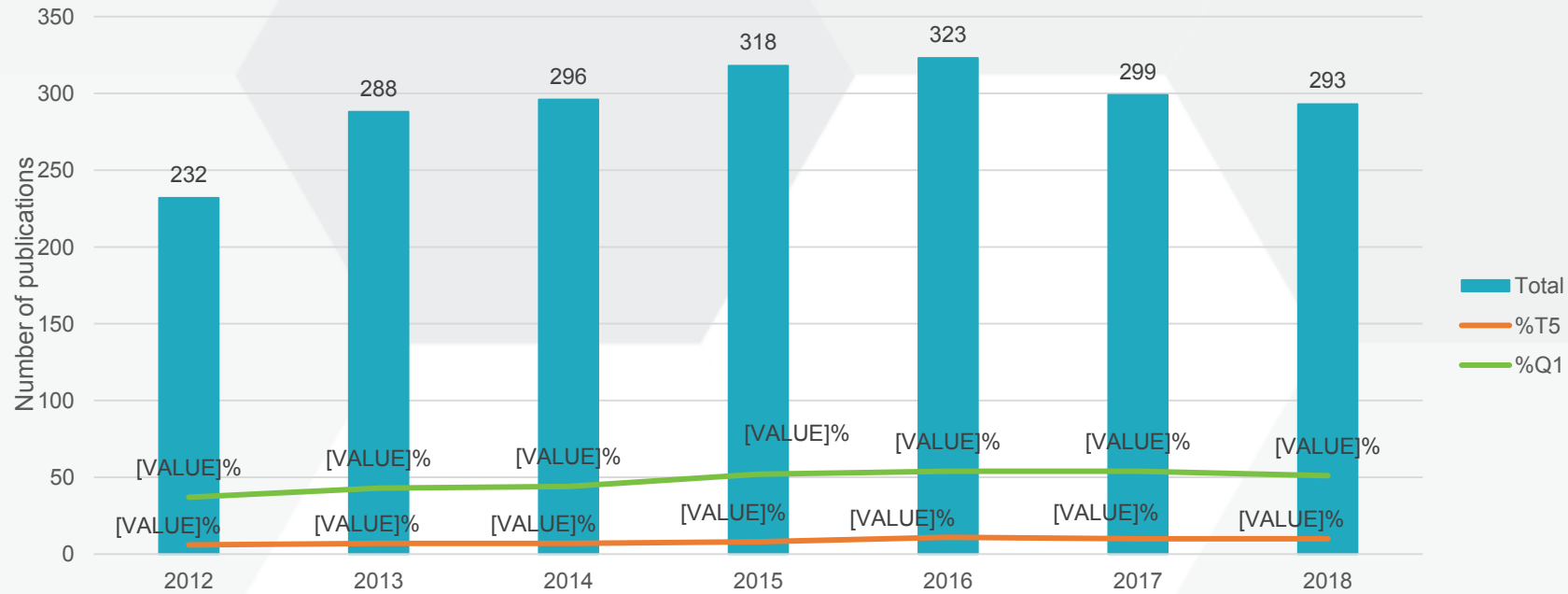
Research Report 2018

Nature Index (NI)

Institution	# results in NI	Proportion of Local Authors According to the NI
1. Academy of Science of the Czech Republic	357	85.56
2. Charles University	253	30.22
3. Masaryk University	80	22.18
4. Palacký University	100	16.05
5. CEITEC	33	9.37
6. University of Chemistry and Technology, Prague	18	8.71
7. University of South Bohemia	27	6.36
8. Silesian University in Opava	12	6.23
9. Czech University of Life Sciences Prague	14	3.26
10. BIOCEV	9	2.90
IST Austria	51	21.62
CEITEC	33	9.37

Publications

Publication Rate 2012-2018*, CEITEC MU



*Completed data from 2017 will be available in 2Q 2019

Q1 and T5 was determined based on Average JIF Percentile

GDCh Communications **Angewandte Chemie**

DNA Structures

Evaluation of the Stability of DNA i-Motifs in the Nucleus of Living Mammalian Cells

Simon Dzatko¹, Michaela Krafčíková¹, Robert Hänsel¹, Lukáš Trantířek¹, Ivan Fiala¹, Tomáš Lojka¹, Daniel Krafčík¹, Jean-Louis Mergny², and Lukáš Trantířek¹

Highly Cited Paper

PDBe: towards reusable data delivery infrastructure at protein data bank in Europe

Saqib Mir¹, Younes Alhroub¹, Stephen Anyango¹, David Berrisford¹, Alice R. Clark¹, Matthew J. Conroy¹, Jose M. Daniels¹, Aleksandras Gutmanas¹, Pauline Haslam¹, Nurul Nadzirin¹, Typhaine Paysan-Lafite¹, S. Smart¹, Mihaly Varadi¹, Gerardo Zanetti-Duca¹, and Lukáš Trantířek^{1,2}

Highly Cited Paper

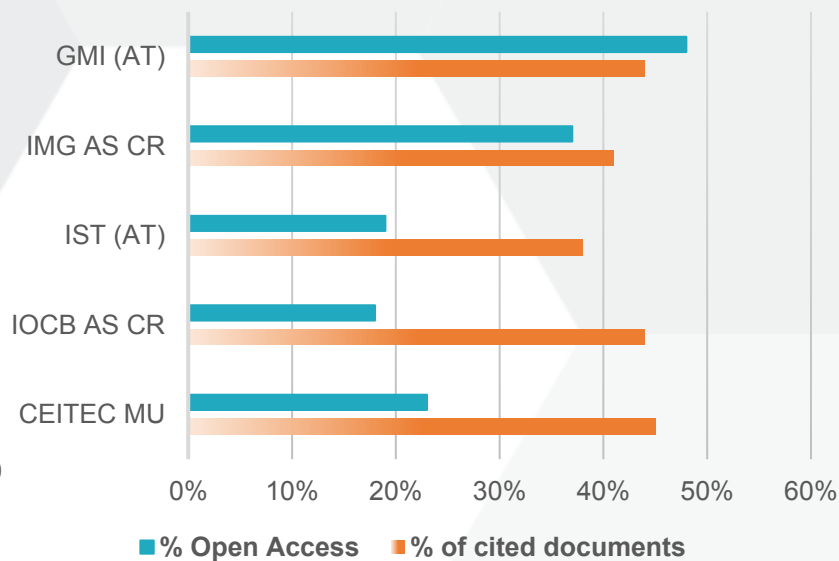
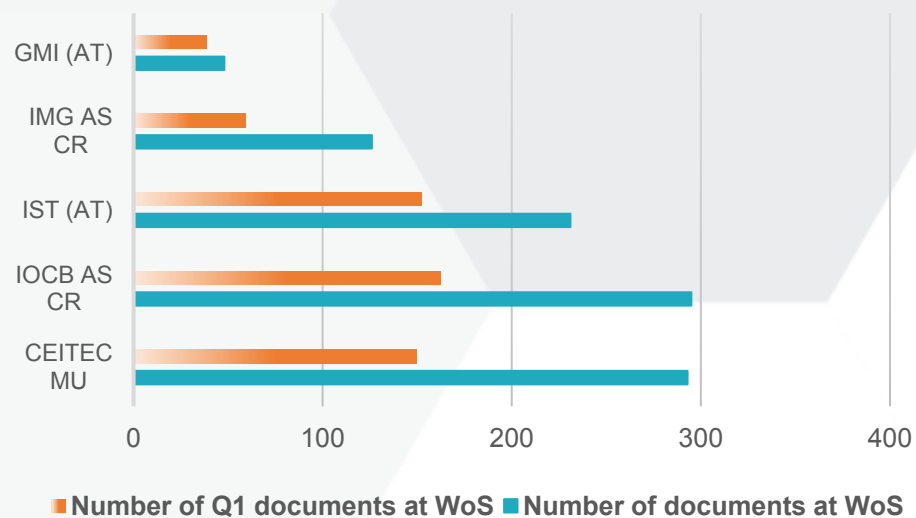
TOOLS FOR PROTEIN SCIENCE

PDBsum: Structural summaries of PDB entries

Roman A. Laskowski¹, Radka Svoboda¹, Lukáš Trantířek¹, and Lukáš Trantířek¹

Highly Cited Paper

Publication Analysis 2018



Institution	# of docs at WoS	% of WoS docs in Q1	Highly cited papers	# of citations of the docs	Average # of citations per doc	% of cited docs	h-index	% Open Access
CEITEC MU	293	51%	3	342	1.1	45%	7	23%
IOCB AS CR	295	55%	1	295	0.9	44%	5	18%
IST (AT)	231	66%	3	258	1.1	38%	6	19%
IMG AS CR	126	47%	0	138	1.1	41%	5	37%
GMI (AT)	48	80%	2	74	1.5	44%	5	48%

CEITEC MU Awards 2018

Exceptional Scientific Contribution

Kostas Tripsianes



Helène Robert Boisivon



Pavel Plevka



Richard Štefl



Lukáš Trantírek



Event of the Year



External Awards

Rector's Award

Terezie Mandáková



Neuron Award

Marek Mráz



Discovery Award

Gabriela Pavlasová



Mráz

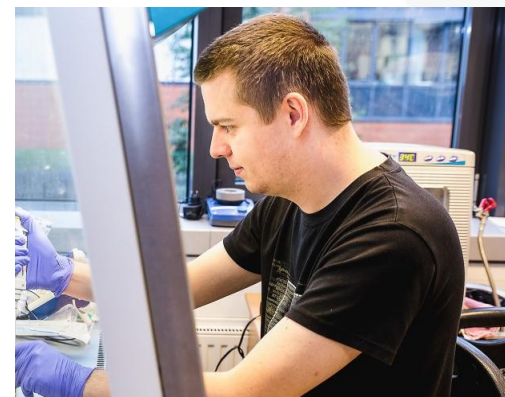
Petr Sedmera Prize

Jan Novotný, Martin Sojka,
Marek Nečas and Radek Marek



Jean-Marie Lehn Prize for Chemistry

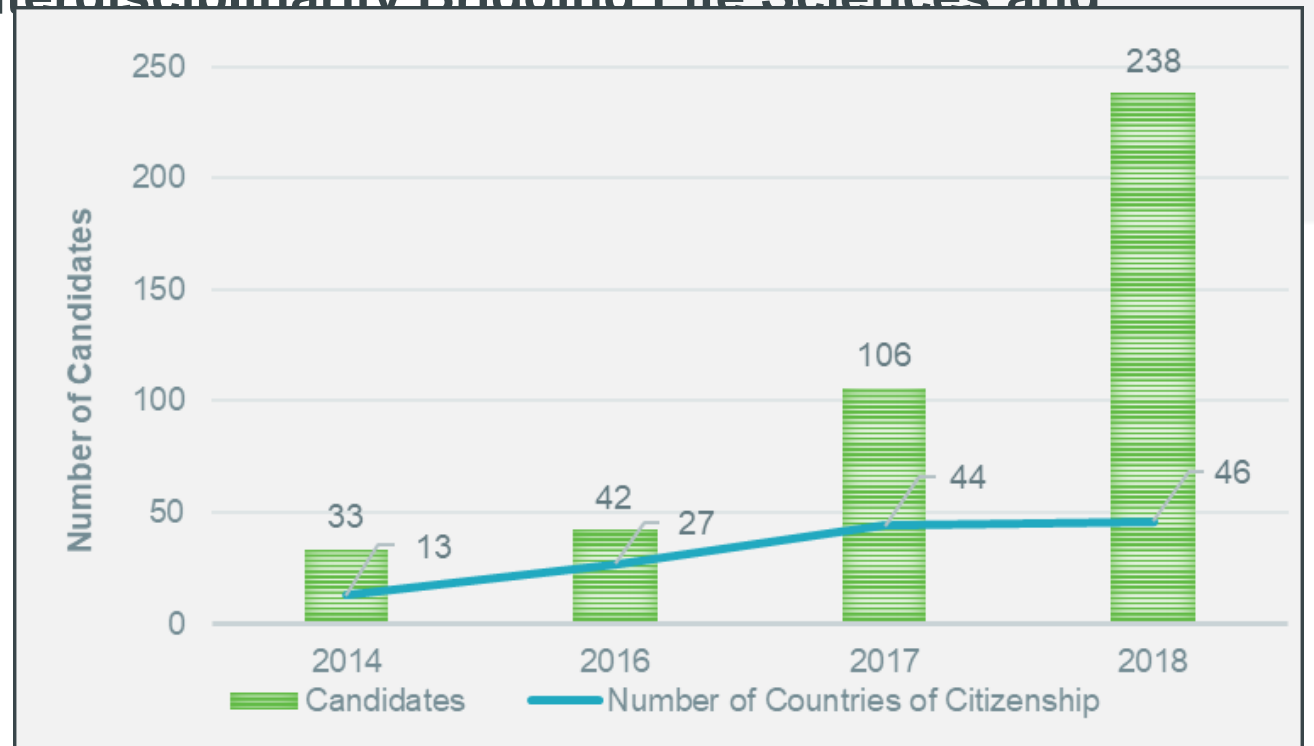
Zdeněk Farka



CEITEC PhD School

Major achievements:

- **Accreditation of PhD Programme** - Biomedical Sciences - specialisation Molecular Medicine (Faculty of Medicine) - Dec 2018
- **Establishment of CEITEC Student Committee** - Autumn 2018
- **BRIDGE Fund - Fund for PhD Student Interdisciplinarity Bridging Life Sciences and Materials Sciences** - March 2018
- **Increasing Number of Candidates in Admission Process**



Postdoctoral Programme

Postdoc Peer Committee

- Formed in 2018
- To support postdoctoral community
- To create fit-to-purpose training and events
- To involve the into institutional governance

Postdocs at CEITEC MU in Numbers

- 47 researchers
- 77 % foreigners
- Gender balance: 24F/23M
- 16 nationalities



Chair of the PPC
Michael Christopher Owen

Training and Mentoring

- Expanding training portfolio for researchers in all stages (primarily for early-stage ones)
- Soft skills and transferable skills courses
- Career development events and courses

Plan for 2019

TITLE OF THE COURSE	TARGET GROUP	DATE
Applied Research Funding Landscapes	all	5th February
MSCA-IF for Supervisors	RGLs, postdocs (supervisors)	19th February
Creative Thinking for Science Leaders	RGLs	26th February
Effective Career Choice and Networking for PhD Students	PhD students	26th February
Career Paths for Postdocs	postdocs	27th February
Positive Self-Presentation and Networking for Career Success	postdocs	27th February
GAČR Info Day	all	5th March
Science Communication Course: Present your research results with confidence (Part I)	PhD students, postdocs	5th March
Science Communication Course: Present Your Research Results with Confidence (Part II)	PhD students, postdocs	April
From Idea to Startup	PhD students, postdocs	April
MSCA-IF for Applicants	all	April
Excursion to Biotech Company	PhD students, postdocs	May
Life After PhD	PhD students, postdocs	May
AZV Info Day	all	May
Hands-on MSCA-IF	postdocs	May
European Commission: Science Communication	all	May
Open Science Workshop	all	May
Mentoring Workshop (mentors)	RGLs, postdocs (supervisors)	June
Science Communication Course: Present Your Research Results with Confidence (Part III)	PhD students	June
Life After PhD	PhD students, postdocs	June
Welcome Info PhD Day	PhD students	September
Excursion to Biotech Company	PhD students, postdocs	September
MSCA RISE & ITN Info day	all	September
Time Management	RGLs	October
Life After PhD	PhD students, postdocs	October
How to write a competitive proposal?	all	October
Visual Communication in Science	postdocs, RGLs	November
Life After PhD	postdocs, PhD students	November
Funding opportunities for Postdocs	postdocs	November

Neuroimaging: Mapping the function and structure of brain

November 14-16
CEITEC MU
University
Campus
Bohunice, Brno

The course will cover these topics:
 • Principles of functional magnetic resonance imaging (fMRI)
 • Acquisition of fMRI data: dealing with confounds in fMRI practice: from the acquisition of the experiments and measurements
 • Functional and effective brain connectivity with fMRI
 • Neuroimaging methods and their application: functional brain mapping
 • Diffusion imaging
 • Descriptive and analysis of fMRI data
 • Small-scale measurement of physiological signals (EEG, ECG, breathing, Land fMRI, physiological signals)

CEITEC

processing of electrophysiological data for usage in the consequent fMRI analysis
 • Specifics of animal MRI studies
 • Neuroimaging for access to services provided by MRI lab at SA ASCN and MARI, CEITEC MU

There will be two types of practical sessions:
 1) Measurements in CE MARI (Measurements with equipment available in MRI lab, and accompanying electrophysiological data)
 2) Data analysis (processing of data in Matlab, SPM12 environment)
 The course is for free but it is necessary to make a reservation due to limited capacity.
 For more details please send email to michela.hahn@ceitec.muni.cz



Summer Course on RNA Protein Interactions

September 17-21, 2018
CEITEC MU, University Campus Bohunice
Kamenice 5, Brno, Czech Republic

September 17-21, 2018

CEITEC MU, University Campus Bohunice

Kamenice 5, Brno, Czech Republic

Summer course is dedicated for PhD students who are focused on basic and advanced methods to study RNA biological and functional properties. Lectures will focus on the most up to date discoveries in the RNA field and the practical part will allow students to learn various approaches to study RNA functions, such as RNA quantification or protein-RNA interaction.

CS SPEAKERS

FuVio Bono
Max Planck Institute for Developmental Biology, Göttingen

Andrew Carter
MRC Laboratory of Molecular Biology, UK

Wojciech P. Galetz
EMBL, Genoa, IT

Julian König
Institute of Biophysics, Göttingen

Claudia Kutler
Kavli Institute, USA

Denis Lafontaine
USC Cancer Research Center, USA

Matthias Schaefer
Medical University of Vienna, Austria

Hana Macklovská
Cahova

David Stanek
Institute of Molecular Biology of the Czech Academy of Sciences, Brno

Javier Martínez
Instituto de Biología Molecular, CSIC

Leo Valsek
Institute of Biophysics, Göttingen

CS ORGANIZERS

Sopanka Vanková
muni@ceitec.muni.cz

Peter J. Lukavský
p.lukavsky@ceitec.muni.cz

More information and registration at: rna-protein-interactions.ceitec.cz

epENDOR ALCHIMICA Roche

EUROPEAN UNION

without Integrating Biology

CIISB [AS0210A]

BioSAXS practical course 2018

24-25 September 2018
Room 211, building A35
CEITEC MU

Lecture:

Introduction to BioSAXS
Monday Sep 24th 10:30AM; A35 211

Practicals:

- SAXS data acquisition
- SAXS table 1
- Ab initio modeling
- Evaluation of scattering from atomic models
- Rigid body modeling

Programme:

You can find the program on website: <https://www.ceitec.eu/saxs-workshop347/>

Register at: kluemler@sci.muni.cz

Registration deadline is September 17, 2018

CEITEC

EUROPEAN UNION

without Integrating Biology

CIISB [AS0210A]



Grants & Funding

New Horizon 2020 Projects:

EUROPEAN RESEARCH COUNCIL

- LeukemiaEnviron, Marek Mráz

WIDENING FELLOWSHIPS

- Panagiotis Alexiou (GL), Jaclyn Quin (O'Connell RG)

MSCA-RISE

- RNADIAGON (Ondřej Slabý as coordinator, 6 partners)

HEALTH

- MyPal (Šárka Pospíšilová as partner)

RESEARCH INFRASTRUCTURES

- EPIC-XS (Ondřej Slabý as third party)



Grants & Funding

National Funding Highlights:

- **27 approved GAČR grants** (43% success rate)
 - twice the usual number of awarded projects
 - including 2 EXPROs (2 M€ for 5 years): Plevka, Trantírek
- **2 OP VVV Long-Term Inter-Sector Collaboration Grants** awarded
 - SINGING PLANT (coordinated by Jan Hejátko, with PSI)
 - A-C-G-T (coordinated by Šárka Pospíšilová, with IAB and Genomac)

Strategy:

- Individual funding strategies
- Clear expectations on international grants
- Regular and predictable infodays and trainings
- Focus on ERC, MSCA grants



Budget Spending 2018
Budget Plan 2019

Budget Spending 2018 + Budget Plan 2019

Financial Results 2018

- Net profit after taxation 7,9 mil. CZK
- Surplus of institutional sources 46,1 mil. CZK

Budget Plan 2019

- Growth of institutional sources by 2,3 %
- Decrease of total planned expenditure in comparison to 2018 spending (lower investment and international grants)
- Stable budgets of research groups
- Lower allocation of NPU-II project by 7,7 % due to decrease of external sources

Adjusted Profit and Loss Account

1.1.2018- 31.12.2018

Revenue (Million CZK)	2018-Reality			
	Total	%	Statutory Activities	Supplementary Activities
Subsidy and public grants	707,4	66,2%	707,4	0,0
Revenue from sales of own products and services	16,7	1,6%	1,0	15,7
Funds-spending	63,7	6,0%	63,7	0,0
Income for depreciation	280,5	26,3%	280,5	0,0
Total Revenue	1 068,3	100,0%	1 052,6	15,7
Expenditure (Million CZK)	2018-Reality			
	Total	%	Statutory Activities	Supplementary Activities
<i>Personal expenditure</i>	289,6	27,3%	288,97	0,63
Salaries	204,5	70,6%	204,03	0,43
Expenditure on agreement outside the empl. relationship	12,0	4,2%	11,99	0,05
Social security, health and social insurance incl. social fund	73,1	6,9%	72,95	0,15
Consumption of material	71,7	6,8%	68,54	3,21
Repairing and maintenance	20,7	2,0%	20,38	0,34
Travel expenditure	19,6	1,8%	19,45	0,10
Consumption of energy	23,1	2,2%	23,09	0,00
Scholarships and bursaries	6,1	0,6%	6,05	0,01
Other expenditure incl. Services	93,8	8,8%	90,42	3,40
Transfers to partners	136,9	12,9%	136,94	0,00
Depreciation and amortisation-non public	3,7	0,4%	3,75	0,00
Depreciation and amortisation-public	280,5	26,5%	280,45	0,00
Levy to central university funds	52,0	4,9%	52,00	0,00
Funds-accumulation	62,7	5,9%	62,70	0,00
Total Expenditure	1 060,4	100,0%	1 052,7	7,70
Profit/Loss Before Taxation	7,9		-0,15	8,02

Balance of Funds 1.1.2018- 31.12.2018

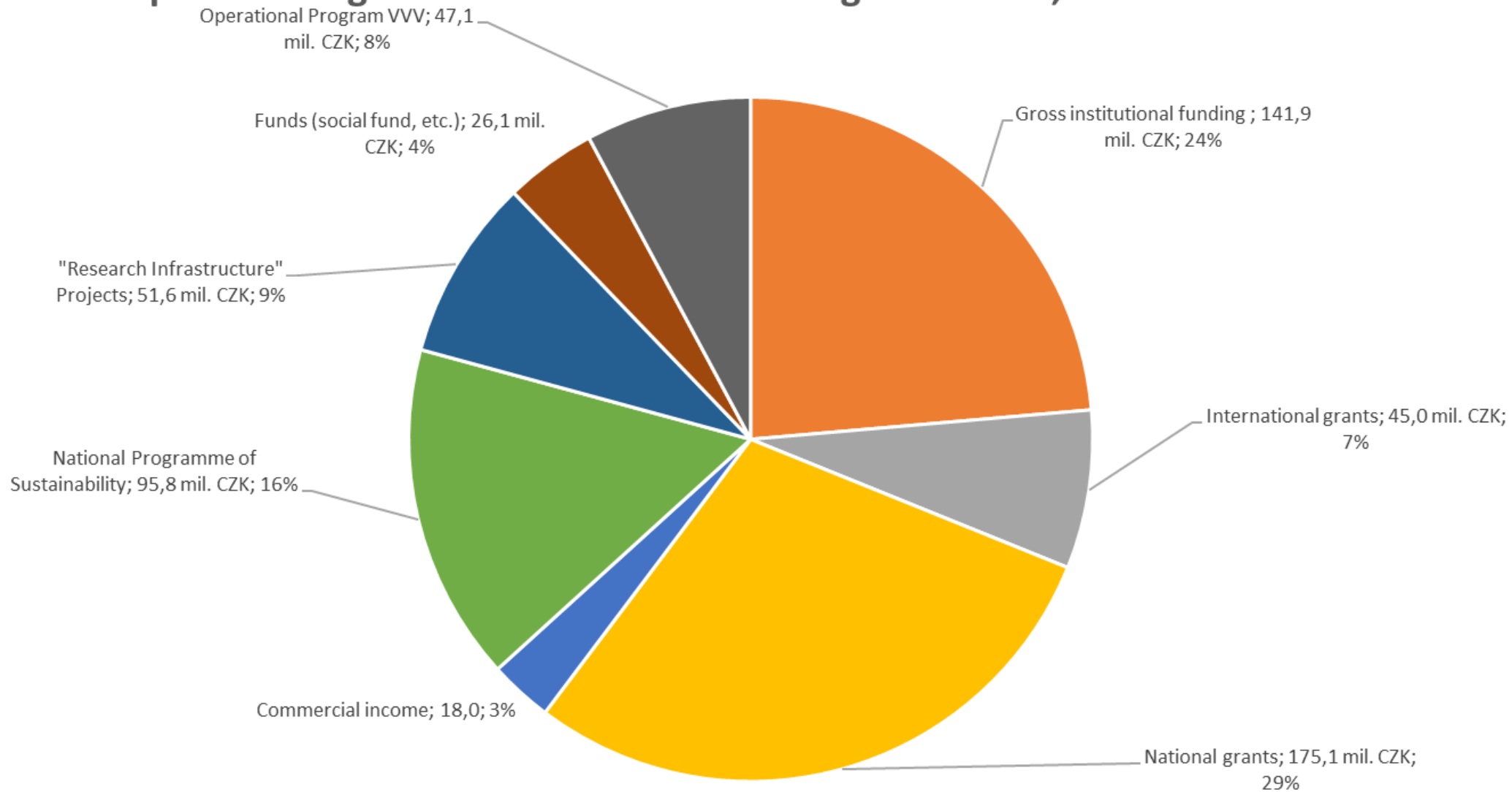
Balance of Funds (Million CZK)	Initial Balance		Accumulation		Spending	Balance
	As of January 1 2018	Total (+)	Of Which: Assigned Income (+)	Of Which: Transfer from/to Other Fund (+/-)	Total (+)	As of December 31 2018
	(a)	(b)	(c)	(d)	(e)	(f) f=a+b-e
<i>Reserve fund</i>	19,40	4,44	4,44			23,84
<i>Fund for operational purposes</i>	26,70	19,94		19,94		46,64
<i>Social fund</i>	2,50	2,04		2,04	1,10	3,44
<i>Fund for earmarked financial resources</i>	95,50	47,40		47,40	62,70	80,20
of which: national and foreign grants	84,60	21,29		21,29	62,75	43,14
of which: institutional sources	10,90	26,11		26,11		37,01
<i>Capital assets regeneration fund</i>	12,78	1,8	1,8			14,58
Total Funds	156,88	75,62	6,24	69,38	63,80	168,70

Budget Spending 2018 + Budget Plan 2019

Structure of Revenue

Revenue (Million CZK)	2018				2019	
	Plan		Reality		Financial Outlook	
	Total	Contribution to Institutional expenditure (charged at end of the year)	Total	Contribution to Institutional expenditure (charged at end of the year)	Total	Contribution to Institutional expenditure
Non-Investment						
Gross institutional funding	138,6	38,6	138,6	18,0	141,9	15,0
International grants	98,4	14,2	81,1	16,6	45,0	11,1
National grants	160,8	32,7	162,9	33,2	175,1	35,6
Other (financial gifts, penalties)	0,0	0,0	0,0	0,0	0,0	0,0
Commercial income	10,0	1,5	7,3	2,2	18,0	2,7
National Programme of Sustainability	116,5	29,3	103,2	28,1	95,8	23,2
"Research Infrastructure" Projects	46,9	9,8	47,4	9,6	51,6	9,8
Funds (social fund, etc.)	0,0	0,0	1,1	0,0	26,1	26,1
Operational Program VV	42,7	8,8	39,4	6,7	47,1	9,7
Total Non-Investment Revenue	613,9	134,9	581,0	114,4	600,6	133,2
Investment						
Investment Revenue	130,6		132,1		40,0	
Total Revenue (Investment and Non-Investment)	744,5		713,1		640,6	

Expected budget 2019 - Sources of funding - total 640,6 mil. CZK

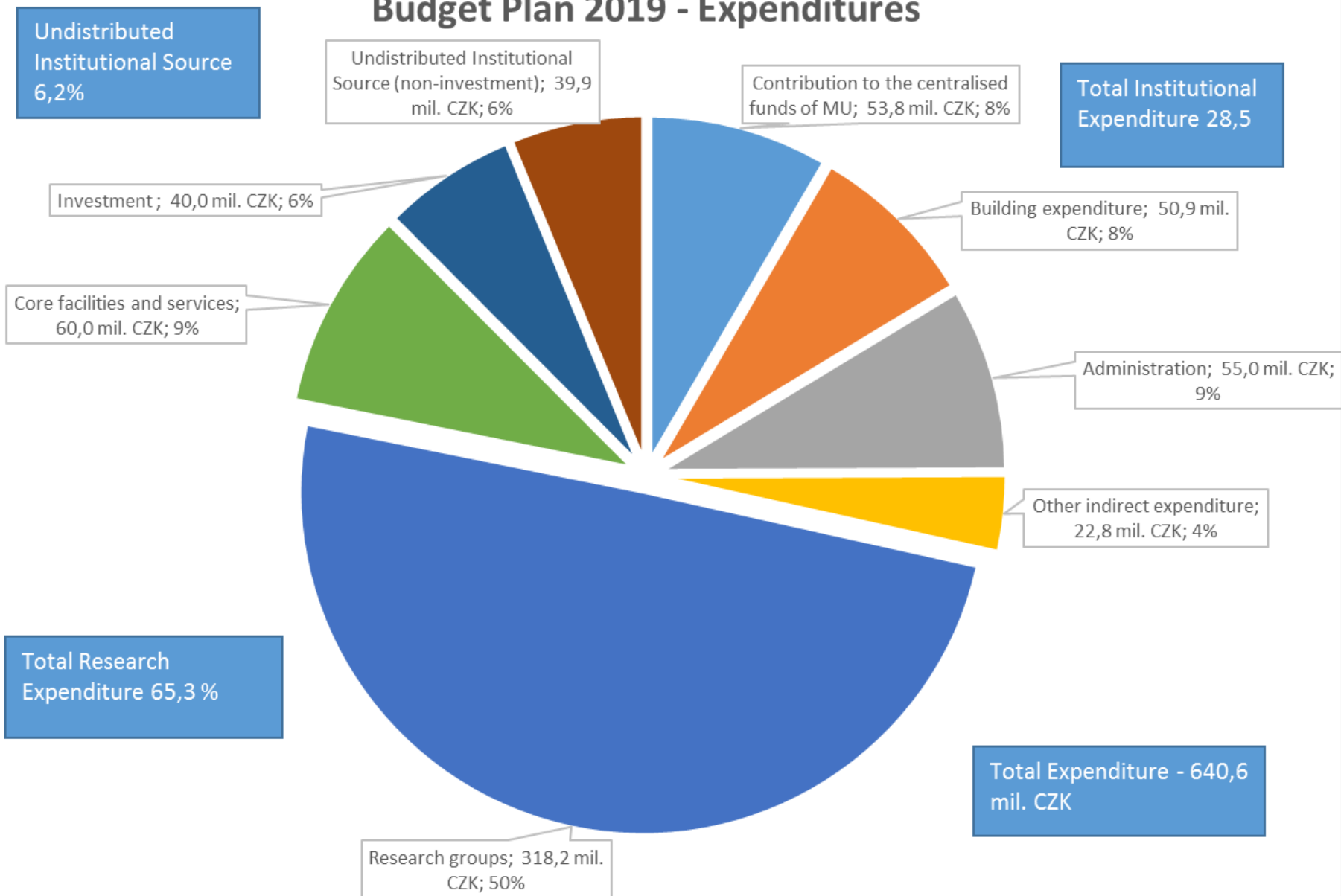


Budget Spending 2018 + Budget Plan 2019

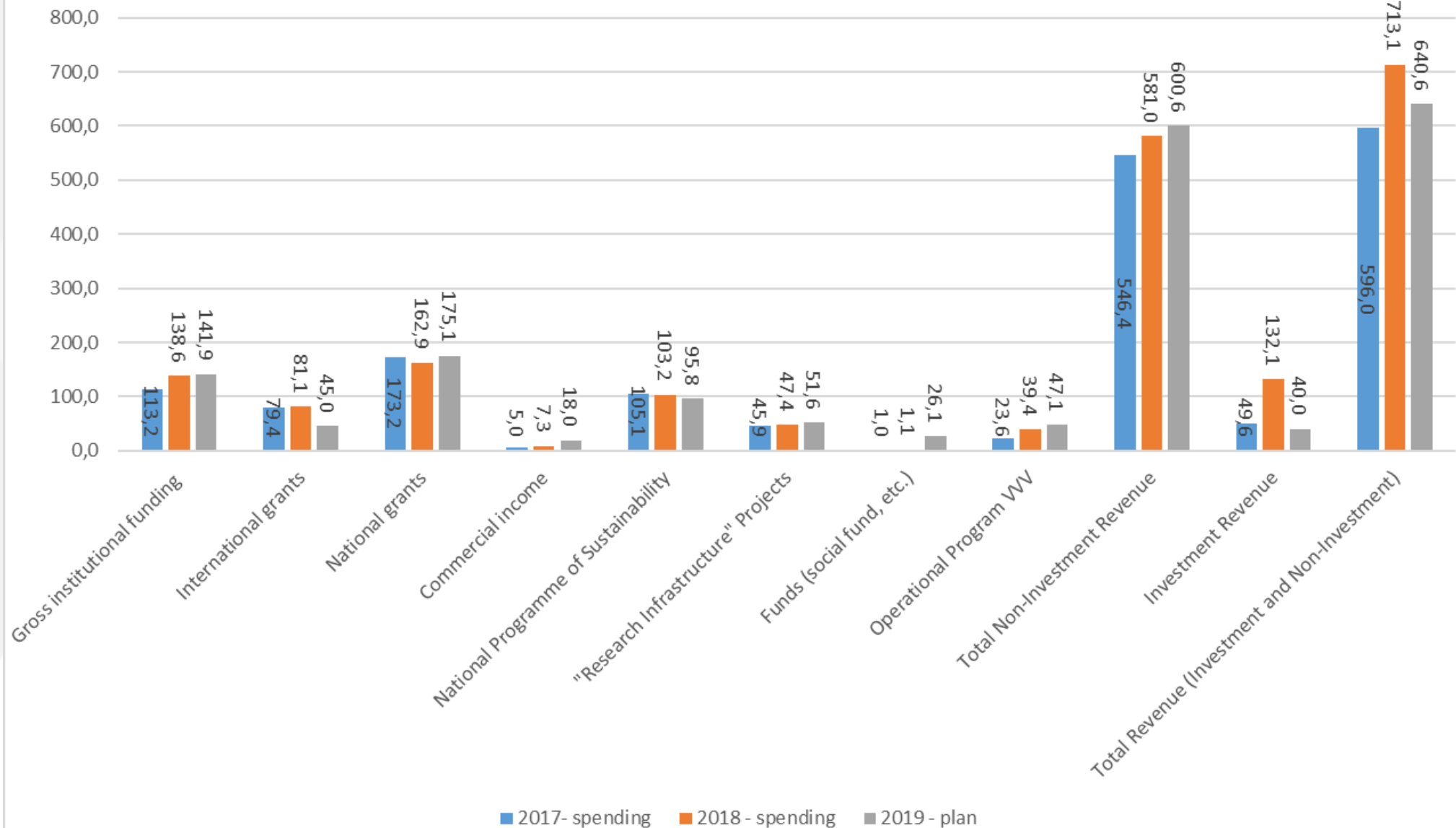
Structure of Expenditure

Expenditure (Million CZK)	2018		2019
	Plan	Reality	Plan
Total Institutional Expenditure (Non-Investment and Investment)	186,9	166,4	182,5
Non-Investment	186,9	166,4	182,5
<i>Contribution to the centralised funds of MU</i>	52,0	52,0	53,8
Building expenditure	48,7	41,1	50,9
Administration	53,6	51,7	55,0
Other indirect expenditure	32,7	21,6	22,8
Investment	0,0	0,0	0,0
Total Research Expenditure (Non-Investment and Investment)	517,6	500,6	418,2
Non-Investment	387,0	368,5	378,2
Research groups	346,8	315,3	318,2
Core facilities and services	40,2	53,2	60,0
Investment	130,6	132,1	40,0
Total Non-Investment Expenditure (Research + Institutional)	573,9	534,9	560,7
Total Investment Expenditure (Research + Institutional)	130,6	132,1	40,0
Undistributed Institutional Source (non-investment)	40,0	46,1	39,9
Total Expenditure (Institutional, Research, and Undistributed Institutional Source)	744,5	713,1	640,6

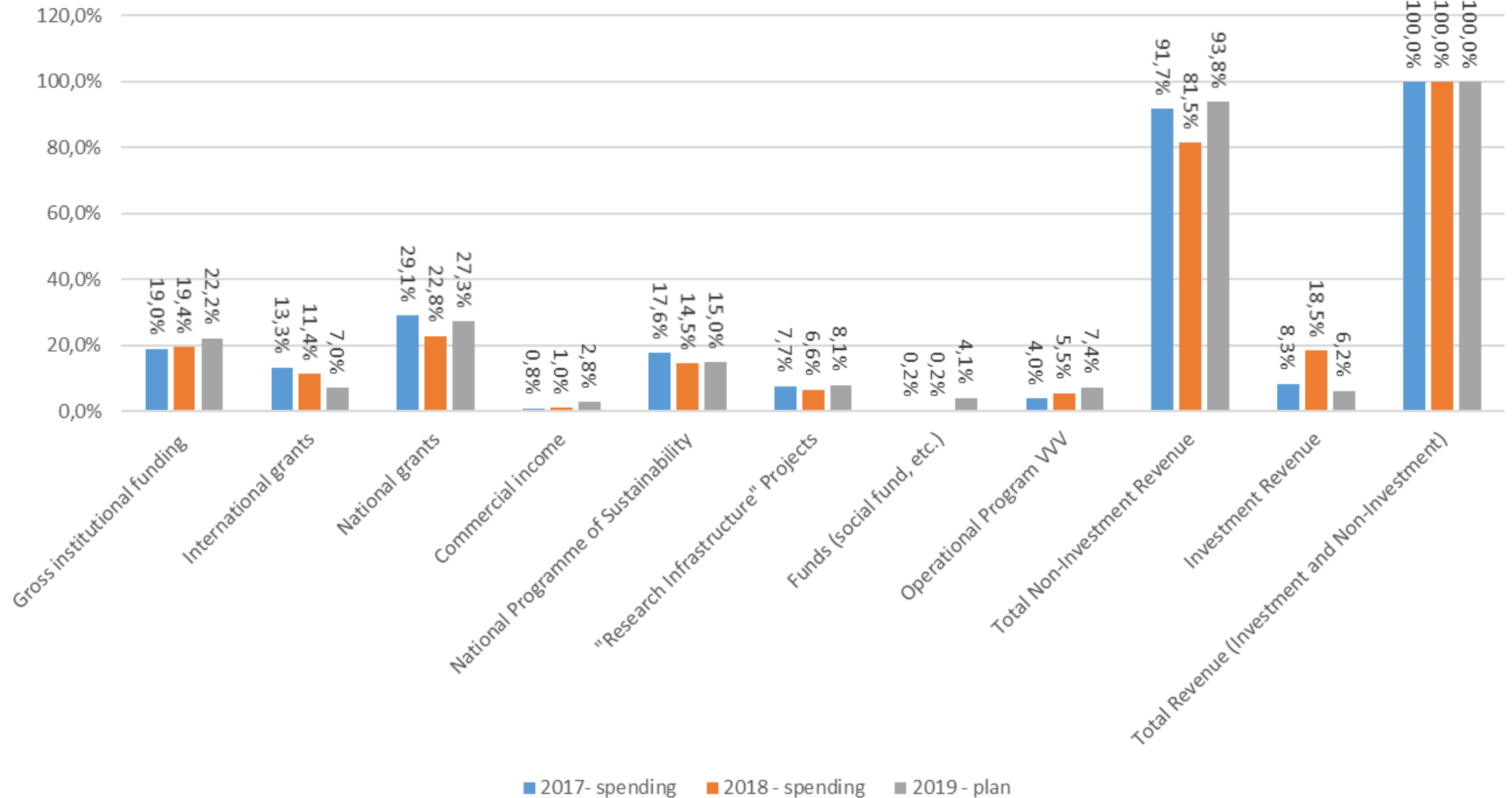
Budget Plan 2019 - Expenditures



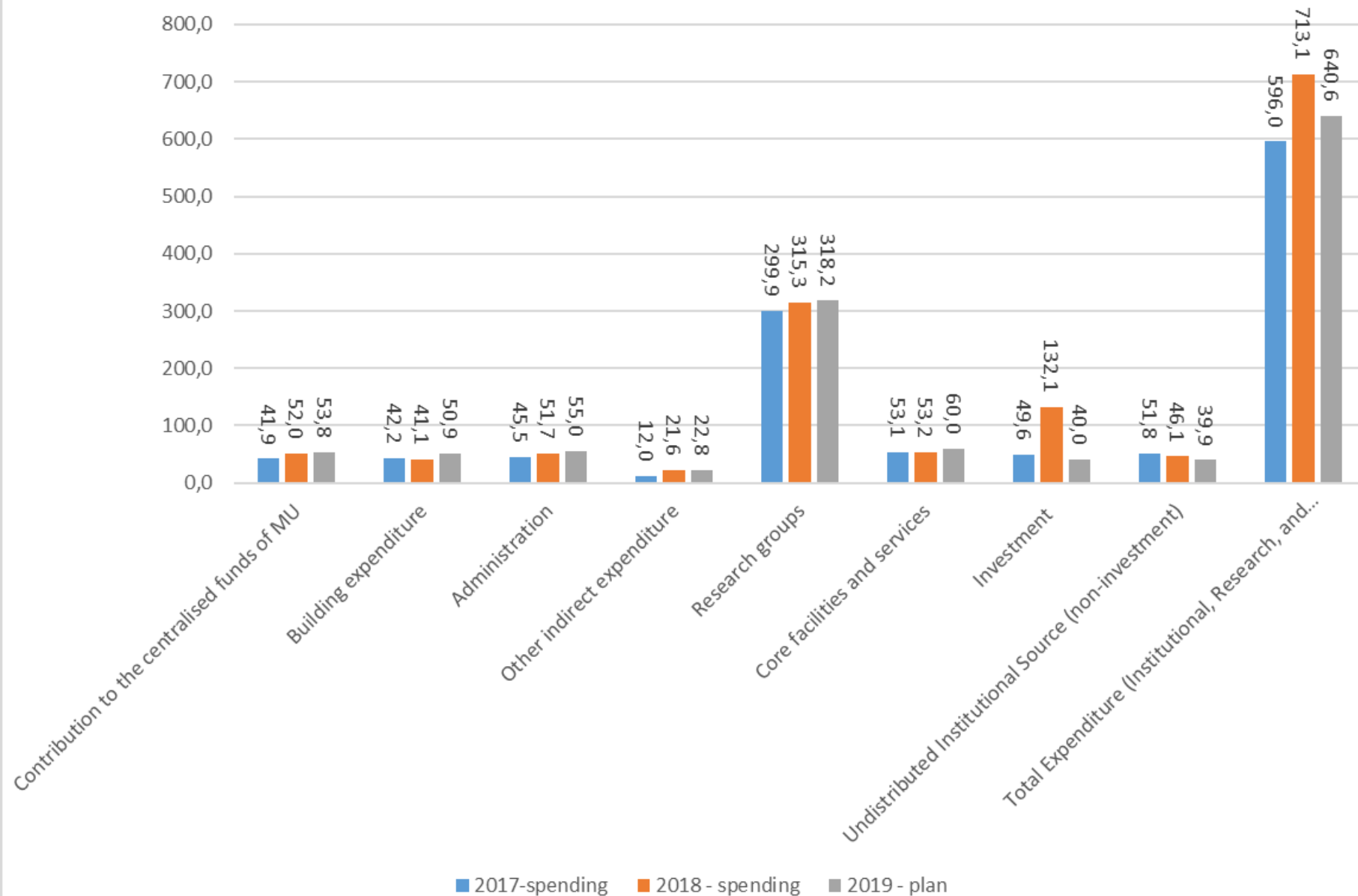
Sources of Revenue (mil. CZK)



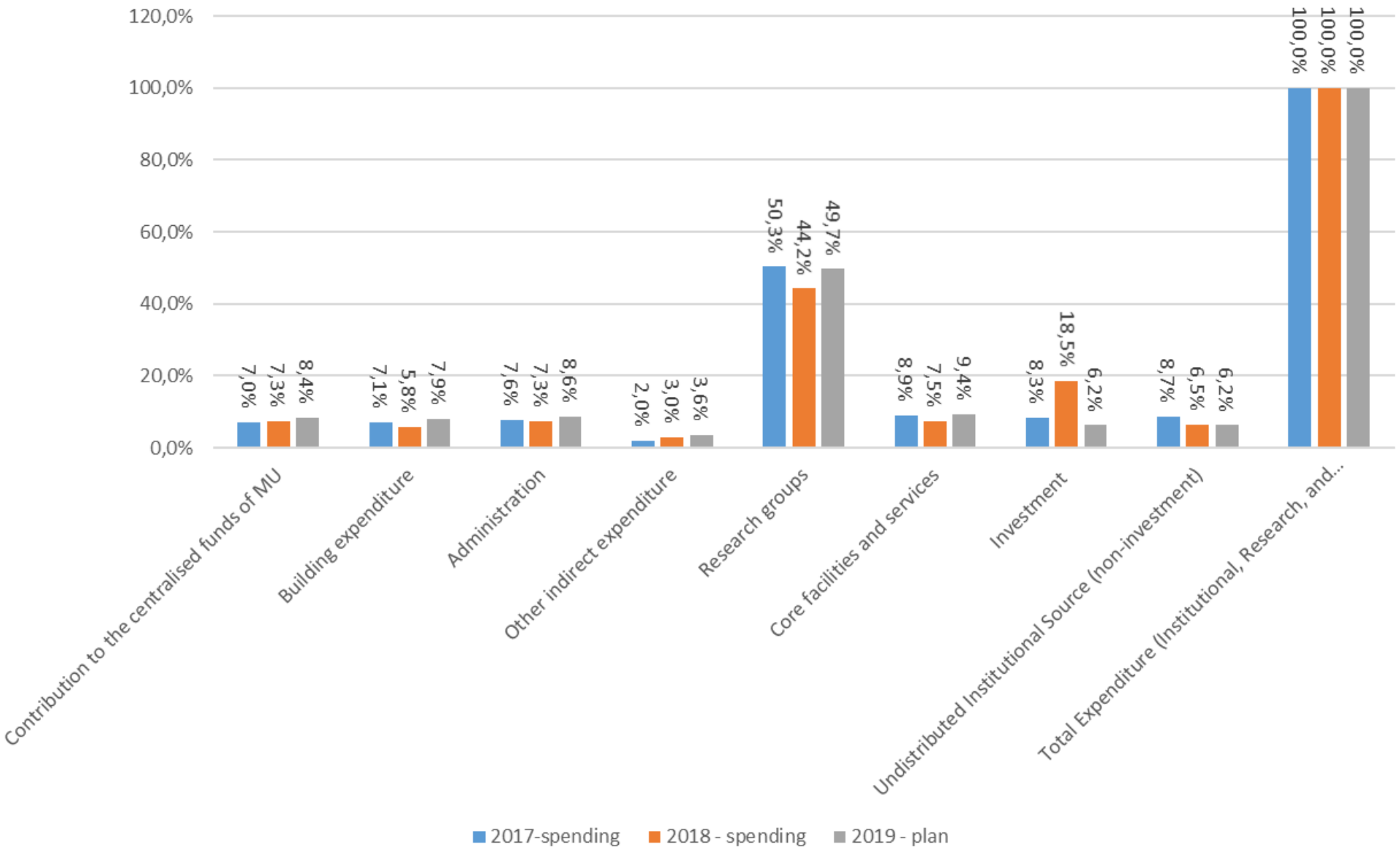
Sources of Revenue (%)



Structure of Expenditure (mil. CZK)



Structure of Expenditure (%)



Financial Outlook After 2020

- End of sustainability period in 2020.
- Discontinuity of funding on national level after 2020 – risk that institutional funding will not match outage of NPU project.
 - Uncertain future mechanism of distribution of institutional funds at MU.
 - End of funding via NPU project in 2020. Outage of approx. 100 mil. CZK in 2021.
 - Institutional funding probably will not be sufficient to cover the deficit of NPU project in 2020. The total budget deficit may exceed 30 mil. CZK in 2021.
- Accumulation of financial reserve exceeding 100 mil. CZK to overlap the transitional period post 2020.
- Structural changes of CEITEC MU after 2020 will be necessary.
 - Decrease in number of research groups (to be planned over 2019)

Thank you for your attention.

