Report on the Implementation of the Competitiveness Enhancement Program in 2017

(Russian Academic Excellence Project)

Changing the strategy and policy of the University development

Updated University target model by 2020

The University is a **competitive research educational center** in the area of ecological monitoring, sustainable environmental management, green technologies and natural resources processing

Mission

M^3 Monitoring, Mining, Metallurgy

Global Challenges

- Climate change
- Loss of biodiversity
- Natural resources depletion and growth of unrecycled wastes

Internal Challenges

- Geographically remote area and sharply continental climate in combination with hostile environment (“black sky” and “black snow”) in Krasnoyarsk city *(Message of the Russian President to the Federal Parliament as of March 01, 2018)*
- Lack of international visibility and academic reputation due to the short history of the University

Foundations to achieve the target model

1. World-class scientific schools:

- «Dendrochronology» (Eugene Vaganov, Full Member of the Russian Academy of Sciences)
- «Bioluminescence» (Iosif Gitelzon, Full Member of the Russian Academy of Sciences)
- «Biophysics of aquatic ecosystems» (Andrey Degermendzhi, Full Member of the Russian Academy of Sciences)
- «Computational Mathematics» (Vladimir Shaidurov, Corresponding member of the Russian Academy of Sciences)

7 World class laboratories supervised by the leading scientists (for instance, Nobel prize winner prof. Osamu Shimomura), established with the support of the Mega-grants

(Russian Government Resolution №220 as of April 9,2010)

2. Partnerships with the leading Russian and international industrial companies

NORILSK NICKEL

MMC "Norilsk Nickel"

96% of Russian and **20% of** World nickel production

RUSAL

United Company RUSAL

6% of World aluminum production

ROSNEFT

Rosneft Oil Company

40% of Russian oil production

6% of World oil production

RESHETNEV COMPANY

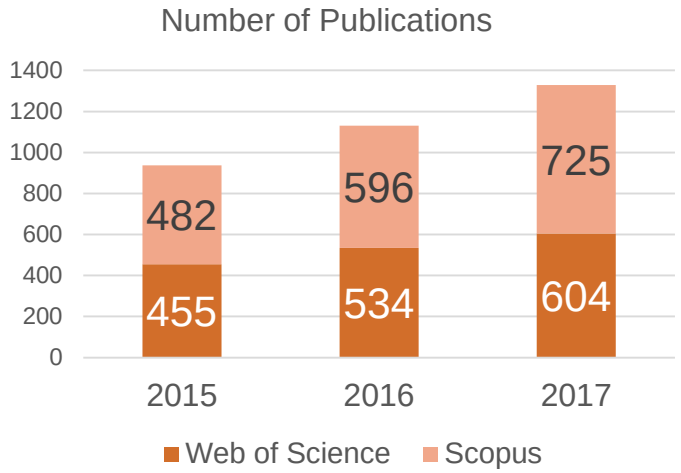
JSC M. F. Reshetnev Informational Satellite Systems

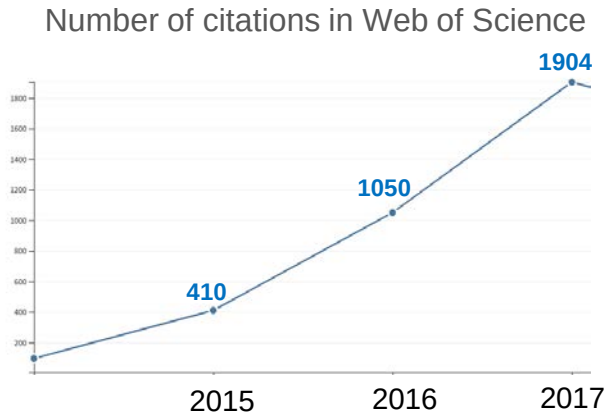
75% of Russian satellites

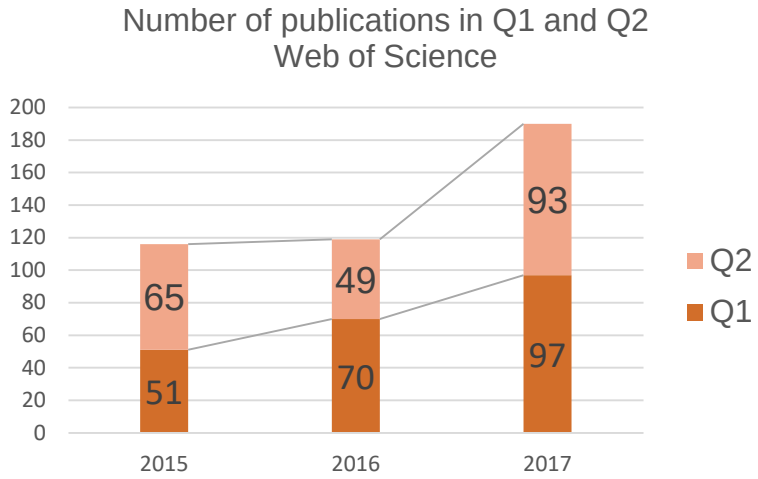
Most significant qualitative achievements

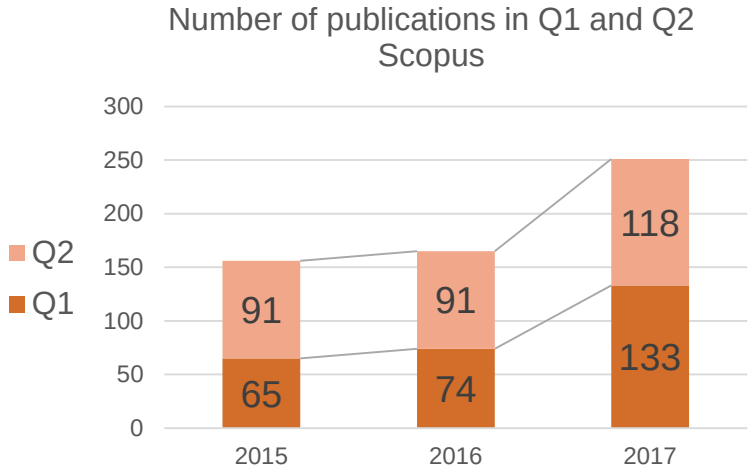
1. Growth of the **scientific publications' quality and quantity**

	Plan	In fact
Number of publications in Web of Science per 1 faculty member (for 5 full years)	0,81	0,96
Average citation rate in Web of Science per 1 faculty member	1,86	2,08

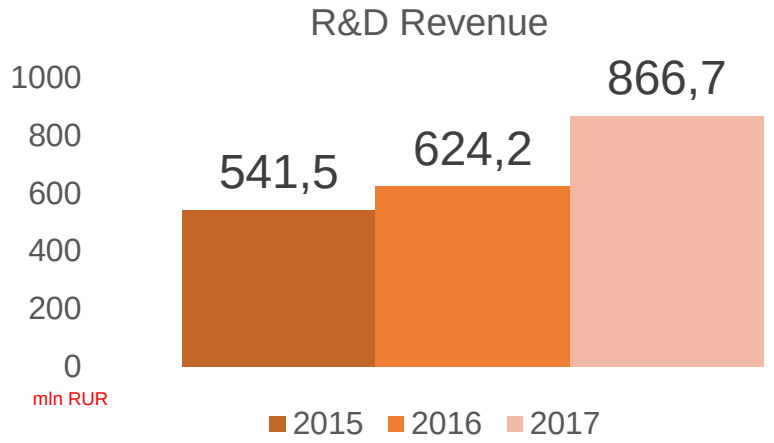








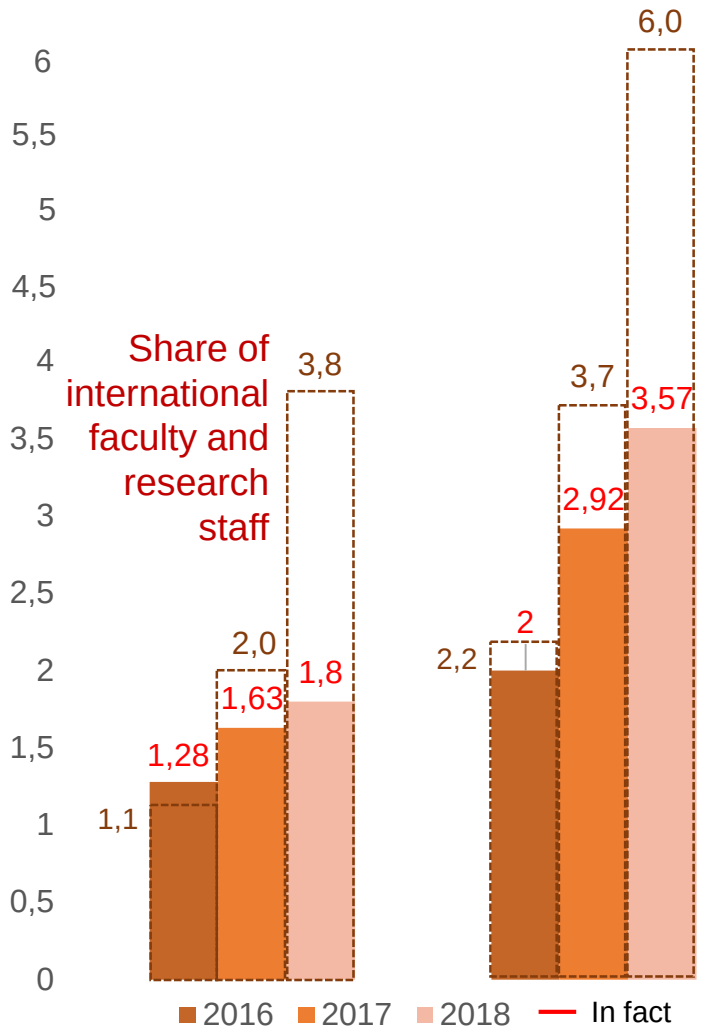
2. Demand for the University's R&Ds in 2017 caused **the 60% increase in the R&D revenue** compared with 2015



SibFU is a **leader** among other Russian universities in the amount of financial support within the ***Federal Technological Planform "National Informational Satellite System"***

НИСС
Технологическая платформа

Gaps Analysis



Share of international students

The KPIs of share of the international students and international faculty and research staff have not been achieved. However, annually we have **20% growth of the internationalization KPIs** in comparison with the previous results **(in particular due to targeted recruiting of international students by request of industrial partners)**

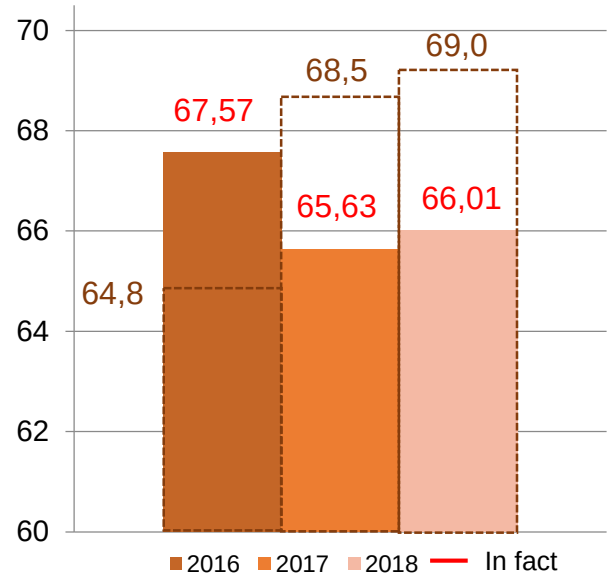
THE WORLD UNIVERSITY RANKINGS **2017** 800+ **2018** 1000+

The University failed to enter ***THE*** top-600 universities

In 2017 SibFU entered ***THE*** 800+, and there is a positive dynamics in the area of **INDUSTRY INCOME**, RESEARCH, CITACIONS, INTERNATIONAL OUTLOOK

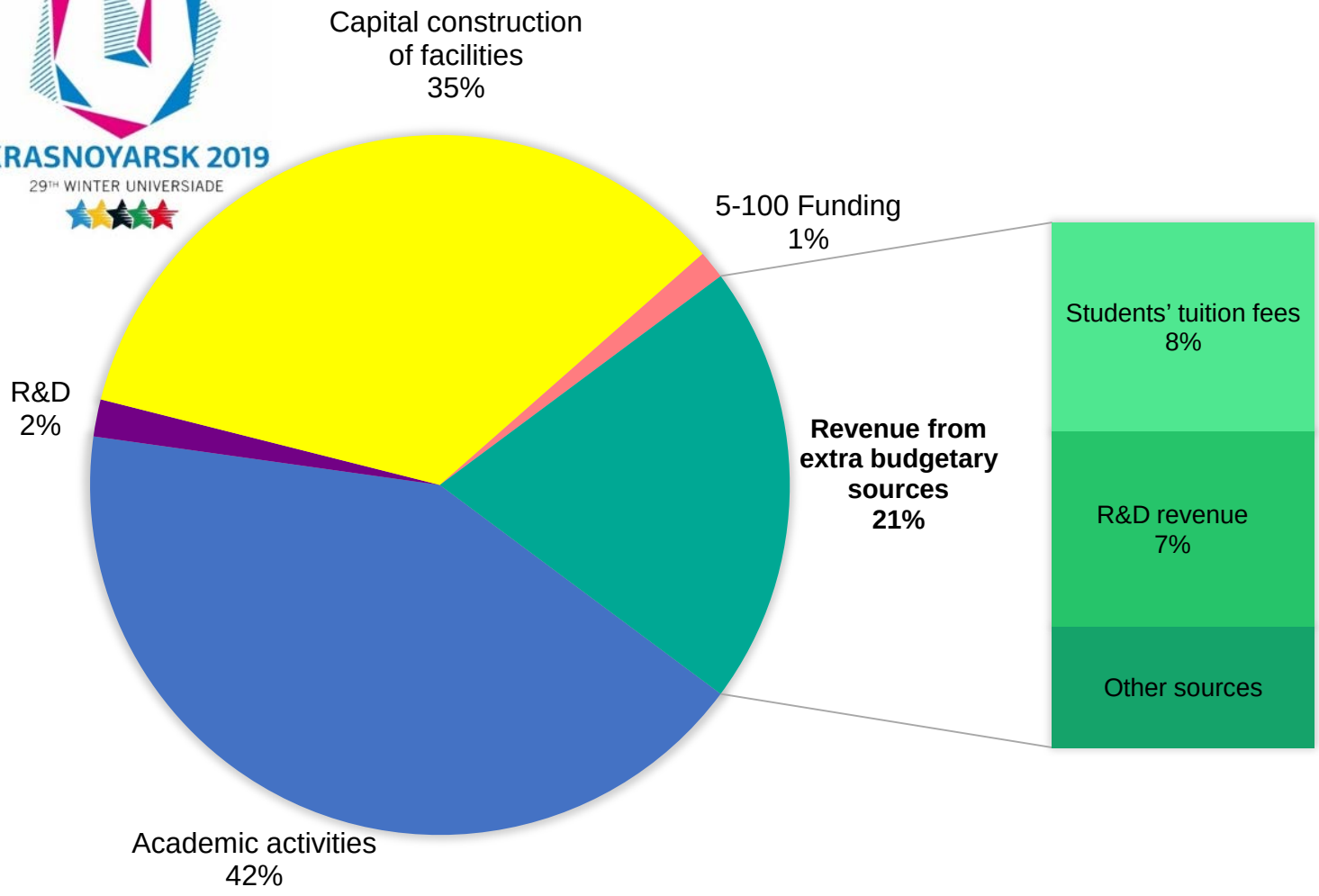
QS WORLD UNIVERSITY RANKINGS 4★ RATING **2018** 800+

By the results of 2018 SibFU entered **QS 800+** and we have **4 *QS* stars**



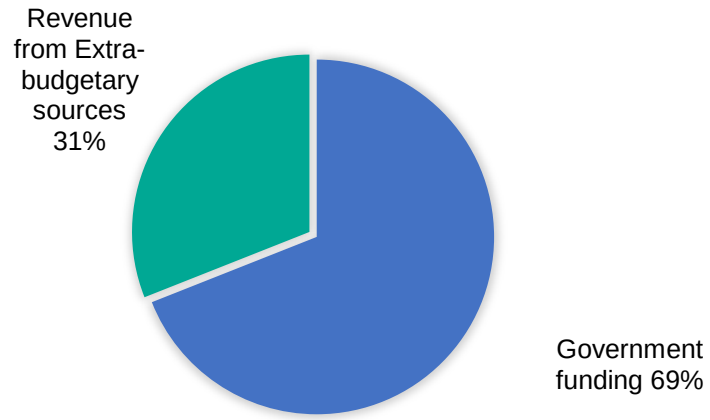
Average Unified State Exam grade has decreased : talented students prefer to go to Moscow and St. Petersburg universities, bad environmental conditions in the city is one of the reasons

Gaps Analysis



***The share of the University revenue from extra-budgetary sources has reached* 21,4%** (33% planned by the Roadmap). This is caused by a significant share of the Government funding for capital construction of the facilities for the XXIX World Winter Universiade 2019

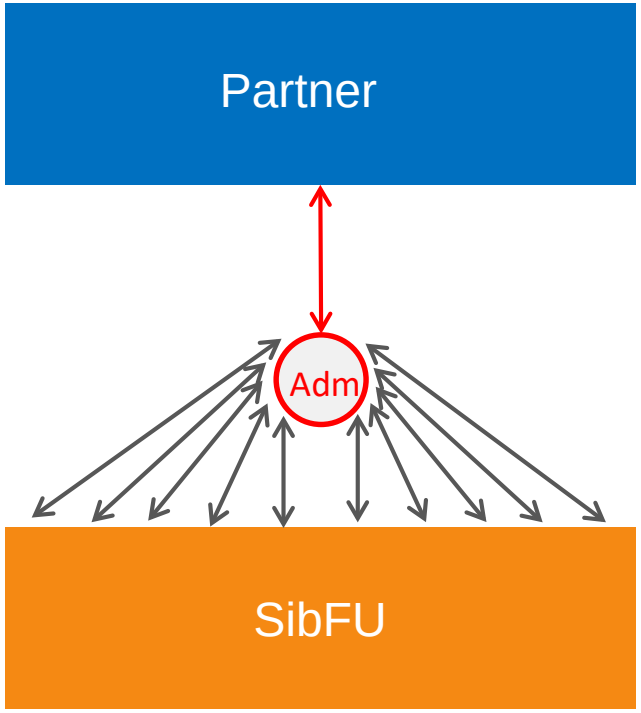
If the Universiade funding is not taken into consideration this KPI is **31%**



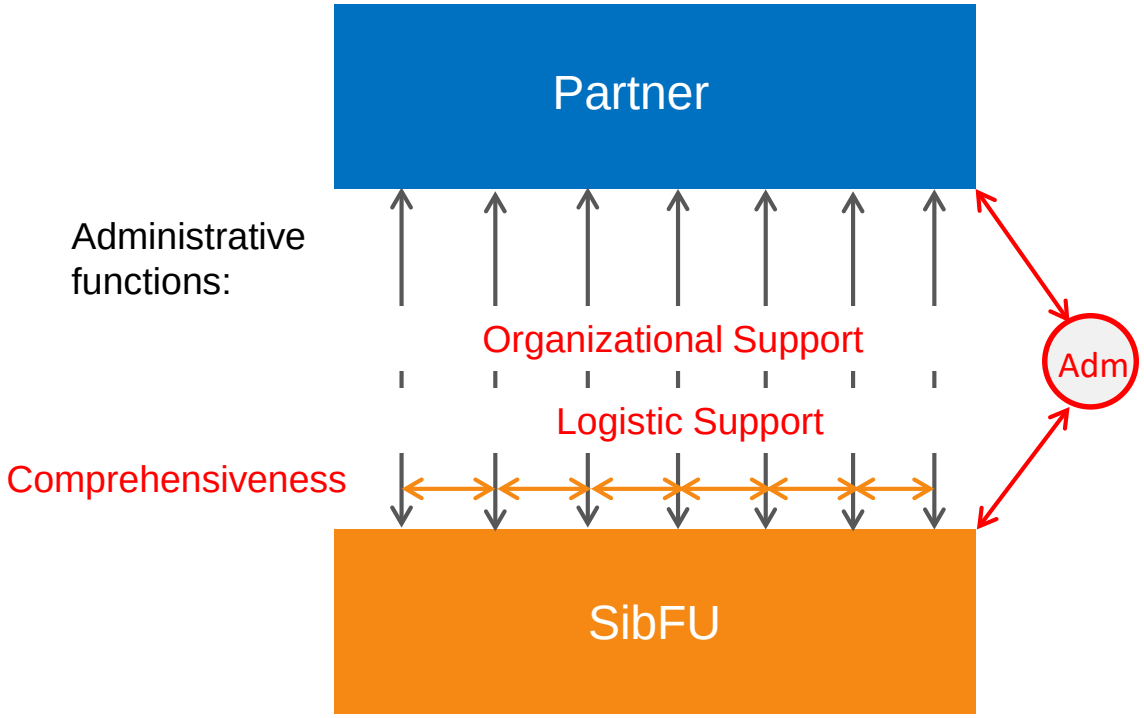
Activities to overcome existing gaps

Scientific Technical Council of the Competitiveness Enhancement Program:

consists of professors and associate professors with ***h-index > 11*** *(14 persons)*
and annual **R&D revenue** over ***50 million rubles*** (13 persons, 5 of them has a high ***h-index***)



One-channel hierarchical interaction



Networking project interaction

Professor comes to professor, not to an administrator

Activities to overcome existing gaps

KPI 2,3: Enhancing publication activity

- Improving the system of performance-based employment contracts
- Getting rid of so-called “rubbish publications”
- Giving up to purchase publications
- Implementing the project ***«Learn to read and write science»*** (39 persons in 2017=39 scientific papers) and translation assistance system ***«Proof reading»***

KPI 8: Increasing the number of Master and PhD students from other universities

- Changing the system of entrance exams for Master programs: abandoning tests in disciplines, introducing **portfolio approach**
- Introducing online courses and distance learning technologies to create comfortable learning conditions for adults
- Increasing scholarships to Master students doing their degree in the University’s strategic priority areas
- Graduate transition from Master programs realized at the Schools and Chairs to Master programs realized in **project approach**

KPI 4,5: Forming international environment

- Refusing from certain educational markets and focusing on prospective markets such as Kyrgyzstan, Kazakhstan, Tajikistan, China, etc., developing the roadmap of promoting SibFU in China via Sino- Russian Association of Economic Universities and Association of Sino-Russian Technical Universities
- Recruiting international students via **industrial partners**
- Creating attractive living conditions and organizing adaptation courses
- Developing and providing academic programs in English in areas and levels of education, demanded at the market
- Promoting SibFU at large international educational portals and participating in international exhibitions
- Taking advantage of the interest to research objects and to interaction with the leaders of SibFU World-class scientific schools (professor visits another professor)
- Courses oriented at teaching to apply for grants: «нет аспиранта без трэвэл-гранта»

→ **KPI 1: Enhancing SibFU positions in international rankings**

Activities to overcome existing gaps

KPI 6: Attracting talented students

- Increasing scholarships to students with high USE grade and winners of Russian Olympiads
- Developing the system of financial support for international students (KPI 4) (who can push out applicants with low USE grade)
- Compensating travel expenses to students with high USE grade from other regions (once), reducing the tuition fees for fee-paying students with high USE grade, providing more comfortable living conditions for talented students in a special dorm (Tesla village)

KPI 7: Increasing the share of revenue from extra-budgetary sources

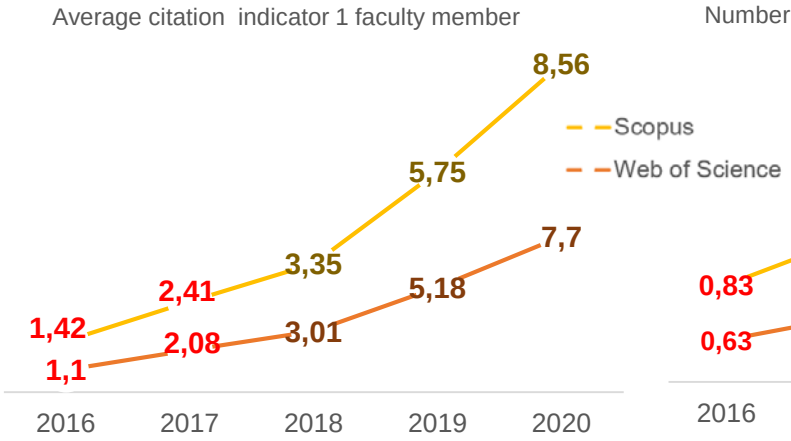
- Introducing internal ranking system to determine KPIs taking the Schools' specialization and advantages into consideration:
  - Cluster of Natural Sciences: publications in top-rated scientific journals, leading scientific schools
  - Cluster of Social Sciences and Humanities: attracting students with high USE grade, large share of revenue from fee-paying students
  - Cluster of Engineering: increasing R&D revenue
- Developing academic programs based on professional standards in cooperation with industrial partners
- Shutting down academic programs if there is no demand and developing new ones according to the labor market demands
- Developing new PhD programs and involving industrial partners' employees to study

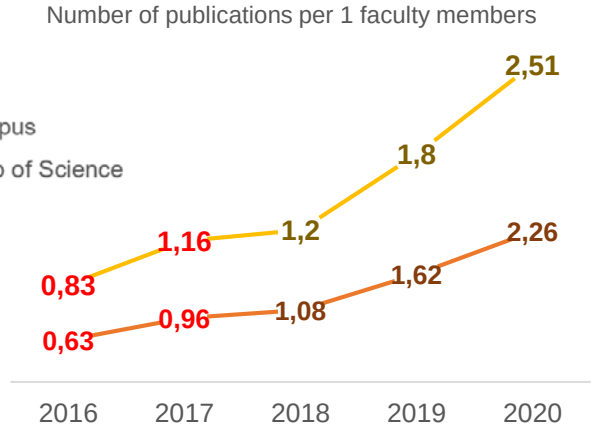
KPI 9 Increasing R&D revenue

- Expanding networking interaction with the industrial partners: MMC Norilsk Nickel, RUSAL, JSC M. F. Reshetnev Informational Satellite Systems, Radiosvyaz, Polus LLC, JSC Krastsvetmet, Federal Medical Biological Agency of Russia, Sberbank, etc.
- Opening joint PhD programs with the Russian Academy of Sciences
- Establishing a Regional Center of Shared Use of Instruments in cooperation with Krasnoyarsk Center of Standardization and Metrology of the Federal Agency for Technical Regulation and Metrology (***Rosstandart***). Entering the market of *metrology and assaying*
- Interacting with Krasnoyarsk Regional Government via special requests and orders from Regional ministries for the benefit of local small and medium businesses

Expected Results

1. High KPIs in publication activity and citation (≈9 citations, >2 papers in Web of Science and Scopus per 1 faculty member)



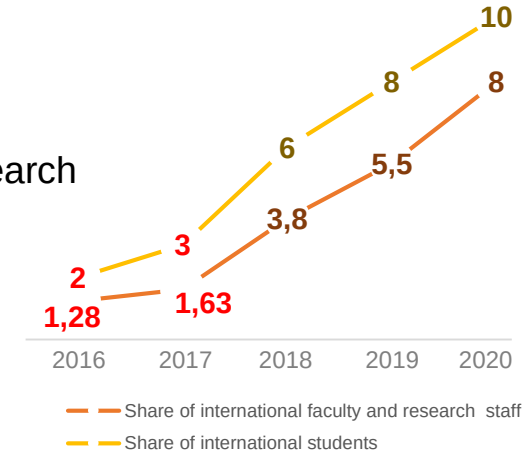


2. Entering TOP-200 in QS Environmental Sciences, QS Earth & Marine Sciences

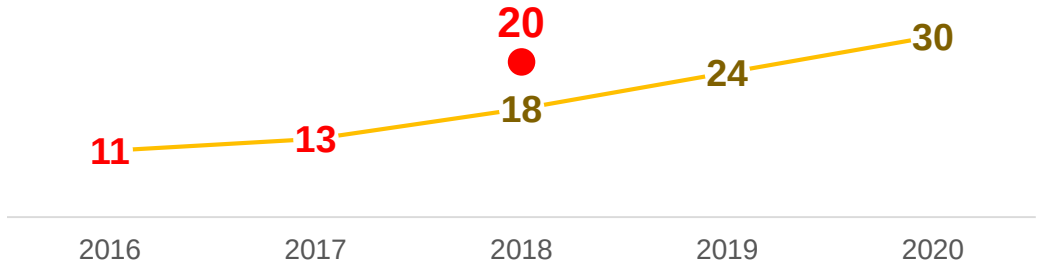
3. Share of international students 10%

4. Share of international faculty and research staff >8%

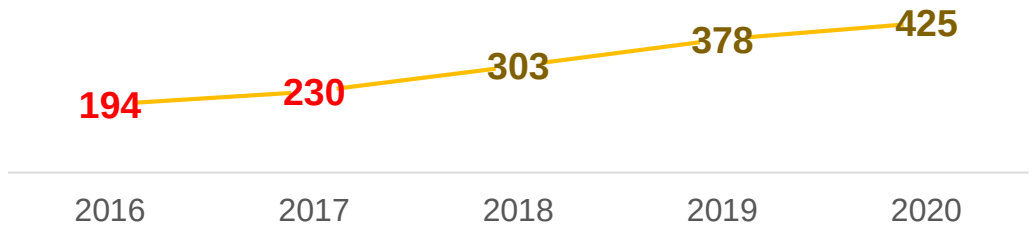
5. Average USE grade 75



6. Share of Master and PhD students from other universities 30%



7. R&D revenue >425 thousand rubles per 1 faculty member



8. University revenue from extra-budgetary sources 41%