



**FOUNDED** in 1896 as Tomsk Technological Institute (TTI) of Practical Engineers. The Institute was opened in 1900 by the Russian Emperor Nicholas II

**CATEGORY:**  
National Research Tomsk Polytechnic University.  
Awarded in 2009

**WINNER OF THE COMPETITION** on Competitiveness  
Enhancement of the Leading Russian Universities among Global Leading  
Research and Education Centers – 2013



<b>6</b> Engineering Schools	<b>2</b> Research Schools	School of Core Engineering Education	School of Engineering Entrepreneurship	TPU Lyceum	Reserve-Officer Training Department

2

## RANKINGS

**THE WORLD UNIVERSITY RANKINGS**  
501-600

**THE WORLD UNIVERSITY RANKINGS**  
Physical sciences  
251-300

Engineering and technology  
201-250

**QS WORLD UNIVERSITY RANKINGS**  
373

**QS WORLD UNIVERSITY RANKINGS**  
*by subject*

Engineering & Technology  
277

- Engineering – Electrical & Electronic
- Engineering – Mechanical, Aeronautical & Manufacturing
- Physics & Astronomy

**ACADEMIC RANKING OF WORLD UNIVERSITIES**  
SINCE 2003

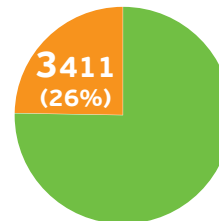
Instruments Sciences & Technology  
201-300

**ACADEMIC RANKING OF WORLD UNIVERSITIES**  
SINCE 2003

901-1000

**ЭКСПЕРТ РА**  
РЕЙТИНГОВОЕ АГЕНТСТВО

7<sup>th</sup> in Russia  
1<sup>st</sup> among nonmetropolitan universities



**13,044**  
students and post-graduates

international students from 48 countries



**1,712**  
staff members



**170,000**  
graduates

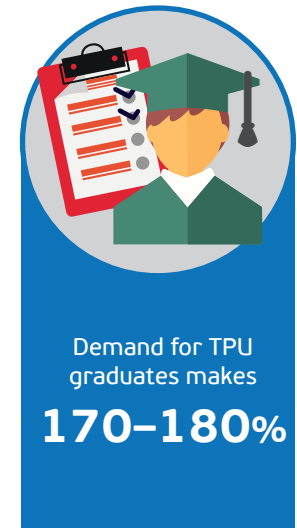
## EDUCATIONAL TRAJECTORIES

- BSc
- MSc
- PhD
- DSc



SCHOOL OF CORE ENGINEERING EDUCATION	RESEARCH SCHOOLS		<ul style="list-style-type: none"> <li> Researchers - PhD-holders</li> <li> Publication activity</li> </ul>	
	HIGH ENERGY PHYSICS	CHEMISTRY & APPLIED BIOMEDICAL SCIENCES		
	<ul style="list-style-type: none"> <li>• integrated master and postgraduate programs</li> <li>• world level research</li> </ul>			
	ENGINEERING SCHOOLS			<ul style="list-style-type: none"> <li> New-generation engineers</li> <li> New technologies</li> <li> R&amp;D revenue</li> </ul>
	NON-DESTRUCTIVE TESTING & SECURITY	ADVANCED MANUFACTURING TECHNOLOGIES	COMPUTER SCIENCE & ROBOTICS	
	<ul style="list-style-type: none"> <li>• engineering master programs</li> <li>• applied postgraduate programs</li> <li>• engineering solutions</li> </ul>			
	SCHOOL OF ENGINEERING ENTREPRENEURSHIP			<ul style="list-style-type: none"> <li> Technostarters</li> <li> Income from business assets</li> <li> Income from enterprises</li> <li> Innovation environment</li> </ul>
<ul style="list-style-type: none"> <li>• master degree in entrepreneurship</li> <li>• additional minor in entrepreneurship</li> <li>• fostering entrepreneurship</li> </ul>				

## STUDY PROGRAMS



**2** bln rub. – R&D volume (2<sup>nd</sup> in Russia)

Publication activity – **2469** articles (1917 articles in WoS и Scopus journals, 552 in Q1 and Q2 journals)

**112** mln rub. – income from international contracts (1<sup>st</sup> in Russia)

## LEADER AMONG RUSSIAN UNIVERSITIES:

- in international patents
- in international contracts, programs and grants



### KEY AREAS OF EXPERTISE



NUCLEAR TECHNOLOGY



SMART ENERGY



HIGH ENERGY PHYSICS



NATURAL RESOURCES



SPACE MATERIALS SCIENCE



NON-DESTRUCTIVE TESTING AND SAFETY



PEOPLE AND TECHNOLOGY



CHEMISTRY AND BIOMEDICAL TECHNOLOGY



IT AND ROBOTICS



ADVANCED MANUFACTURING TECHNOLOGY

4

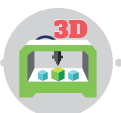
### BREAKTHROUGH R&D PROJECTS



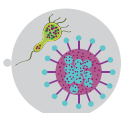
beryllium production technology – strategically valuable metal



land-shelf-atmosphere study in the Arctic



3D printing in space



antibacterial implants and materials for cell technology



nuclear technologies for customized theranostics of disseminated cancer types



commercial production of nanoceramics for high-tech sector




green chemistry – sustainable technologies and materials for chemical industry



treatment and disinfection of sewage and industrial waste waters



solid fuel conversion technology into green gas



TPU participates in experiments at the Large Hadron Collider and is the associated member of the European Organisation for Nuclear Research (CERN): NA64, RD51, LHCb, CMS, Compass

**INTERNATIONAL SCIENTIFIC COUNCIL**

TPU **International Scientific Council** was established in 2014. The Council is chaired by a Nobel Laureate in Chemistry *Dan Shechtman*

**TECHNOLOGICAL ENTREPRENEURSHIP**

**46** small university spin-offs


**>200** work places



**>100** start-ups

turnover of innovative companies is **> 1 bln rub.** per year

**TPU MEGA-PLATFORMS**



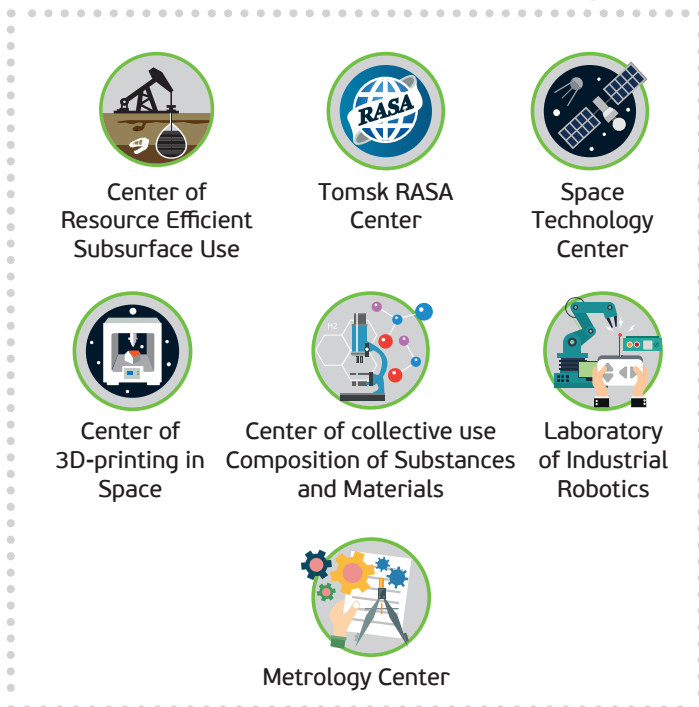
research  
**NUCLEAR REACTOR**



**Center for Geological Training in Khakassia**



**SCIENCE PARK**



- Center of Resource Efficient Subsurface Use
- Tomsk RASA Center
- Space Technology Center
- Center of 3D-printing in Space
- Center of collective use Composition of Substances and Materials
- Laboratory of Industrial Robotics
- Metrology Center

>1,000 cooperation agreements and joint projects with companies and organizations

454

158

357

18

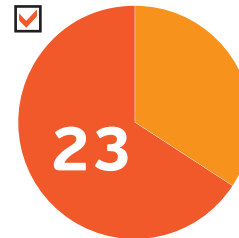
- universities and research organizations
- schools, lyceums, academic centers
- business entities
- associations and corporations

 TPU IS A BASE UNIVERSITY OF STATE CORPORATIONS



 TPU IS A PARTICIPANT OF

15 innovative development programs (IDP) of state corporations



23 out of 35 technological platforms to modernize Russia's economy and foster its sustainable development

 PARTNER COMPANIES:



 INTERNATIONAL TRAINING CENTERS



TPU is a member of 9 prestigious international organizations and consortia, including CESAER (Conference of European Schools for Advanced Engineering Education and Research) and CLUSTER (Consortium of Leading European and Asian Technical Universities)



CESAER

conference of european schools for advanced engineering education and research

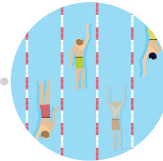
**TOTAL AREA – 329,000 m<sup>2</sup>.**



**29**  
university  
buildings



**15**  
hostels



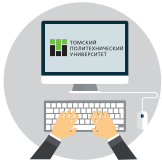
**25**-meter  
swimming pool



**8,424** m<sup>2</sup>  
of sports facilities



International  
Culture Center



**7,000**  
computers



**200**  
WiFi zones



**15**  
NGOs



TPU Library  
containing over  
**2.6** mln books



**9**  
sports clubs



**400**-meter-long  
athletic facility of the  
Olympic standard



Skiing  
lodge



Artificial football  
pitch



Rock climbing  
facility



Biathlon  
shooting range



## The Best Campus in Russia –

1<sup>st</sup> place in the contest of the RF Ministry of Education and Science

For more than 10 years, the Volunteer and Social Activities Center of TPU has been implementing public initiatives of the University. TPU volunteers took part in the Sochi 2014 Winter Olympics and Paralympics, and are currently preparing for 2017 World Festival of Youth and Students.



# TPU 2020 – TRIANGLE OF INNOVATIONS

TOMSK  
POLYTECHNIC  
UNIVERSITY

IS A LEADING  
INCENTER

ENGINEERING  
INTELLECTUAL  
INNOVATIVE

CENTER

IN RUSSIA-ASIA-EURASIA

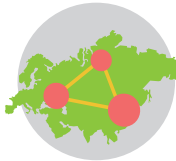
2015 2020 2025



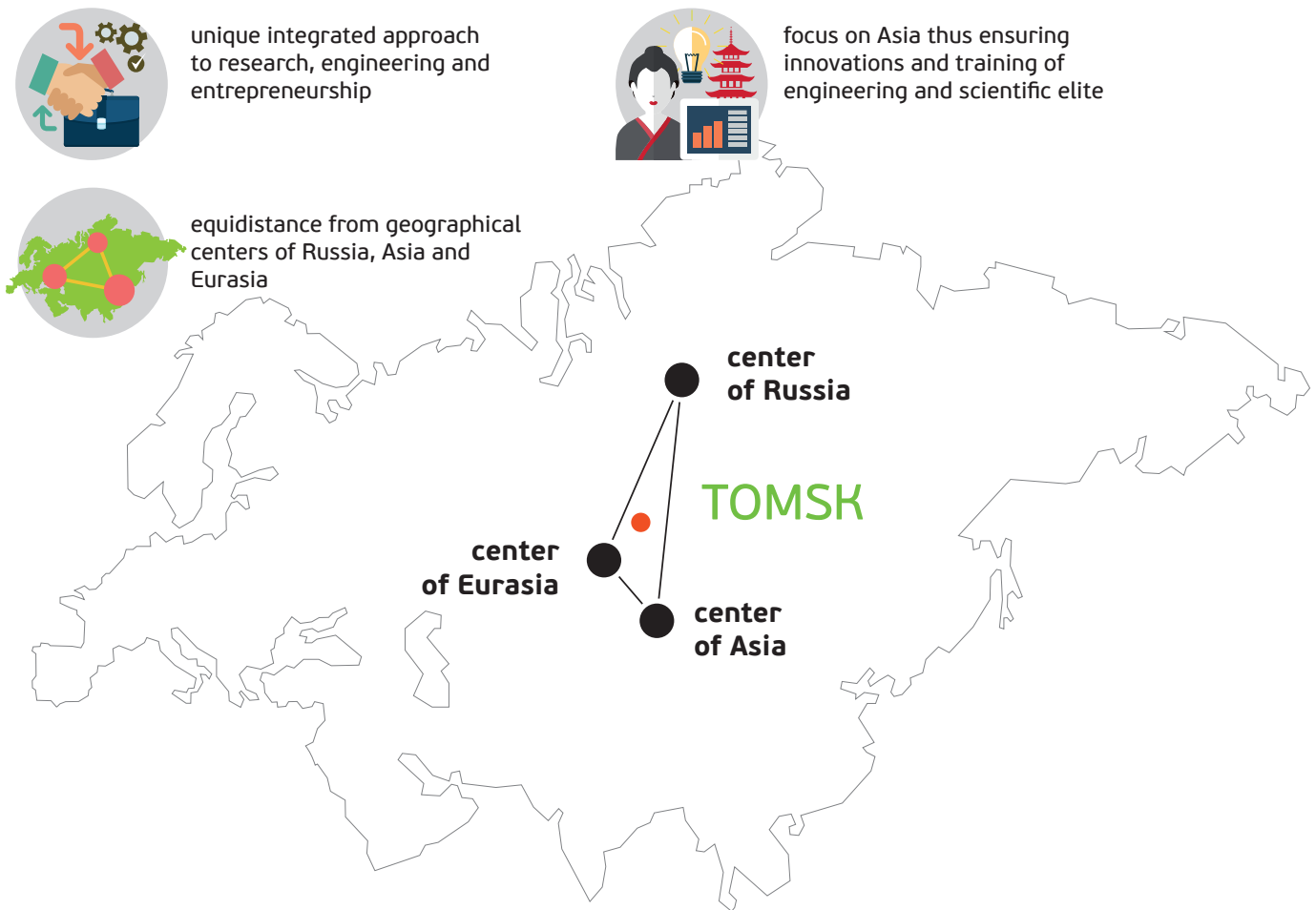
unique integrated approach to research, engineering and entrepreneurship



focus on Asia thus ensuring innovations and training of engineering and scientific elite



equidistance from geographical centers of Russia, Asia and Eurasia



TOMSK

center  
of Russia

center  
of Eurasia

center  
of Asia