



itMo



2024



Smart environment



Lifestyle



Talents

Well-being



Creative freedom



Science and technologies

Multilingual environment

itmo

# RESEARCH AND EDUCATIONAL CORPORATION



Beyond IT:  
photonics, quantum technologies,  
life and health sciences



Development



Innovations



International opportunities



Quality education  
that encourages proactive  
career-building

A business-minded approach  
to work processes and a distributed  
management model

A major community of industrial  
partners and a well-developed  
startup culture

Shared culture – together, we love  
science, play sports, and share our  
passions with one another

Open source philosophy: we share  
our best solutions, scale up ideas,  
and expand the talent pool

Academic freedom, comfortable environment,  
and administrative support for scientists,  
with a focus on research on the scientific frontier



## Our mission

To provide opportunities for the holistic development of individuals and to inspire them to tackle global challenges.

## Our philosophy

IT's MOre than a UNIVERSITY





# ITMO IN NUMBERS

ITMO

1,000+  
PhD students

1,300+  
faculty members

8,500+  
Bachelor's  
students

6,600+  
Master's  
students

15,000+  
students

2,700+  
international  
students



# ITMO IN RANKINGS

ITMO



79<sup>th</sup>

in the QS subject ranking  
in Computer Science  
& Information Systems

151-200  
1<sup>st</sup> in Russia

in the QS subject ranking  
in Electrical & Electronic  
Engineering

155<sup>th</sup>

in the QS broad subject  
ranking Engineering  
& Technology



29<sup>th</sup>

in the U.S. News subject  
ranking in Optics

163<sup>rd</sup>

in the U.S. News subject  
ranking in Nanoscience  
& Nanotechnology



76-100

in the ARWU subject  
ranking in Automation  
& Control



252<sup>nd</sup>

9<sup>th</sup> in Russia

in the Three  
University  
Missions ranking

TOP 400

2023



WORLD  
UNIVERSITY  
RANKINGS

359<sup>th</sup>

in QS World  
University  
Rankings

Forbes

7<sup>th</sup>

in the Forbes  
ranking of Russian  
universities



# FIELDS OF STUDY

## SCHOOL OF TRANSLATIONAL INFORMATION TECHNOLOGIES

- Software development
- Artificial intelligence
- Machine learning
- Big Data
- Bioinformatics
- Translational medicine
- Urban studies
- Internet of Things

## SCHOOL OF COMPUTER TECHNOLOGIES AND CONTROL

- Mechatronics and robotics
- Cyberphysical systems
- Digital navigation and control
- Computer graphics and design
- Unmanned aerial vehicles
- Bioengineering
- Infochemistry

## SCHOOL OF PHYSICS AND ENGINEERING

- Laser technologies
- Radiophysics
- Optics
- Nanoelectronics
- Quantum technologies
- Metamaterials
- Photonics

## SCHOOL OF LIFE SCIENCES

- Biotechnologies
- Solution chemistry of advanced materials and technologies
- Chemistry and molecular biology
- Infochemistry
- Green technologies

## FACULTY OF TECHNOLOGICAL MANAGEMENT AND INNOVATIONS

- Digital transformation
- Innovative marketing
- Quality control and industry regulation
- Intellectual property
- Venture investments
- Technological entrepreneurship

## INSTITUTE OF INTERNATIONAL DEVELOPMENT AND PARTNERSHIP

- Humanities and IT
- Art & Science
- Science communication
- Data, culture and visualization
- Public health sciences
- Product design

## HIGHER SCHOOL OF ENGINEERING AND TECHNOLOGY

- Instrumentation
- Electrical engineering and technology
- Optical technologies
- Light-guided photonics

# EDUCATIONAL MODEL

## Bachelor's programs

Individual  
educational tracks

1st year	<b>Core disciplines:</b> digital culture, soft skills, foreign languages, technological entrepreneurship, thinking, physical education, workplace safety, history	<b>Practical training,</b> including research work (up to 12% of curriculum)	Professional competencies
2nd year			
3rd year			
4th year			

## Master's programs

Individual  
educational tracks

1st semester	<b>Core disciplines:</b> thinking, scientific entrepreneurship, creative technologies, foreign languages, applied AI, soft skills	<b>Practical training,</b> including research work (up to 45% of curriculum)	Professional competencies
2nd semester			
3rd semester			
4th semester			

## PhD programs 4 years

Academic disciplines  
+ research



# ITMO FOR STUDENTS

itmo

**Opportunities  
for self-development**

**Balance between  
the virtual  
and the physical**

**Interdisciplinarity**

**Soft skills**

**Practical learning**

**21st-century  
fundamentals**

**Professional skills**

**Social awareness**





# TALENT SEARCH SYSTEM

ITMO



Short-term schools



Exchange semesters



ITMO.START: a supplementary education platform for school students




ITMO Fellowship Program



Open contest for the establishment of international research labs

ITMO.STARS: a competition for uniquely talented students



ITMO Mega Contest and other national and international competitions



# RESEARCH IN TOP-PRIORITY SUBJECT AREAS

ITMO

**LIFE AND HEALTH  
SCIENCES**

**IT IN ECONOMICS, SOCIAL  
SCIENCES, AND ART**

**INTELLIGENT TECHNOLOGIES,  
ROBOTICS,  
AND INFORMATION SECURITY**

**SMART MATERIALS,  
NANOMATERIALS,  
AND NANOTECHNOLOGIES**

**PHOTONICS, OPTICS,  
AND QUANTUM COMMUNICATIONS**

**NATURAL SCIENCES**

# INTERNATIONALIZATION OF SCIENCE

ITMO

Russian  
and international  
researchers  
and students  
of all degree levels



Renowned  
world-class  
scientists

13

INTERNATIONAL  
RESEARCH  
CENTERS



# THE ITMO FELLOWSHIP PROGRAM

itmo

400+  
applications  
every year

50+  
winners  
every year

6 annual  
application  
review  
rounds

21  
current  
participants



Daniel  
Saponi



Andrey  
Volotka



Tetiana  
Orlova



Anton  
Barchuk

?

Our next  
hero

# INTERNATIONAL OPPORTUNITIES: INCOMING AND OUTGOING ACADEMIC MOBILITY

itMo

Internships

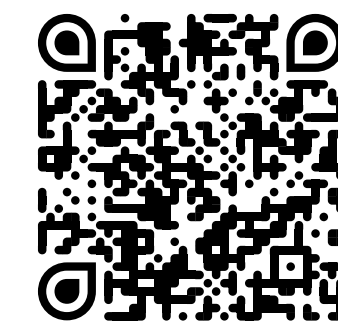
Conferences

Summer schools

Semester exchange

International  
educational  
programs

Buddy System



**45+**  
partner  
universities

**8%**

of all students  
participate in outgoing  
academic mobility  
programs

**22%**

share of international  
students in 2022



# ITMO UNIVERSITY IN NATIONAL PROJECTS

ITMO

## Advanced Engineering School

Provides training for unique specialists of a new kind (principal engineers) who possess the competencies needed to accelerate the transfer of new digital tech into the real economy.



## Technology Transfer Center

Creates and introduces effective mechanisms for the commercialization of IP and support of nation-wide technology transfer initiatives.

## Gazprom-ITMO industrial center

Implements full-cycle innovative projects that correspond to global trends and aim to achieve technological sovereignty in the oil-and-gas sector.



## priority2030<sup>^</sup> leaders are made, not born

ITMO 2030 is an open-source university.

## Startup studio

Transforms the university's student environment into a venue for the practical training of future entrepreneurs and development of new startups.



FUND FOR INFRASTRUCTURE  
AND EDUCATIONAL  
PROGRAMS  
RUSNANO Group

# ITMO UNIVERSITY IN NATIONAL PROJECTS

ITMO

## Research Center “Strong AI in Industry”

Works on full-cycle development of a range of applied systems based on strong AI elements – all for the use in conceptual engineering and industrial facility management.



## National Center for Quantum Internet

Develops and operates Quantum Communications Platform – a digital hardware-software platform solution seen in action as part of the Moscow – St. Petersburg “quantum highway”.



## National Center for Cognitive Research

Main goal: to develop a domestic ecosystem for the creation and integration of machine learning and cognitive technologies in the establishment of high-tech products and services.



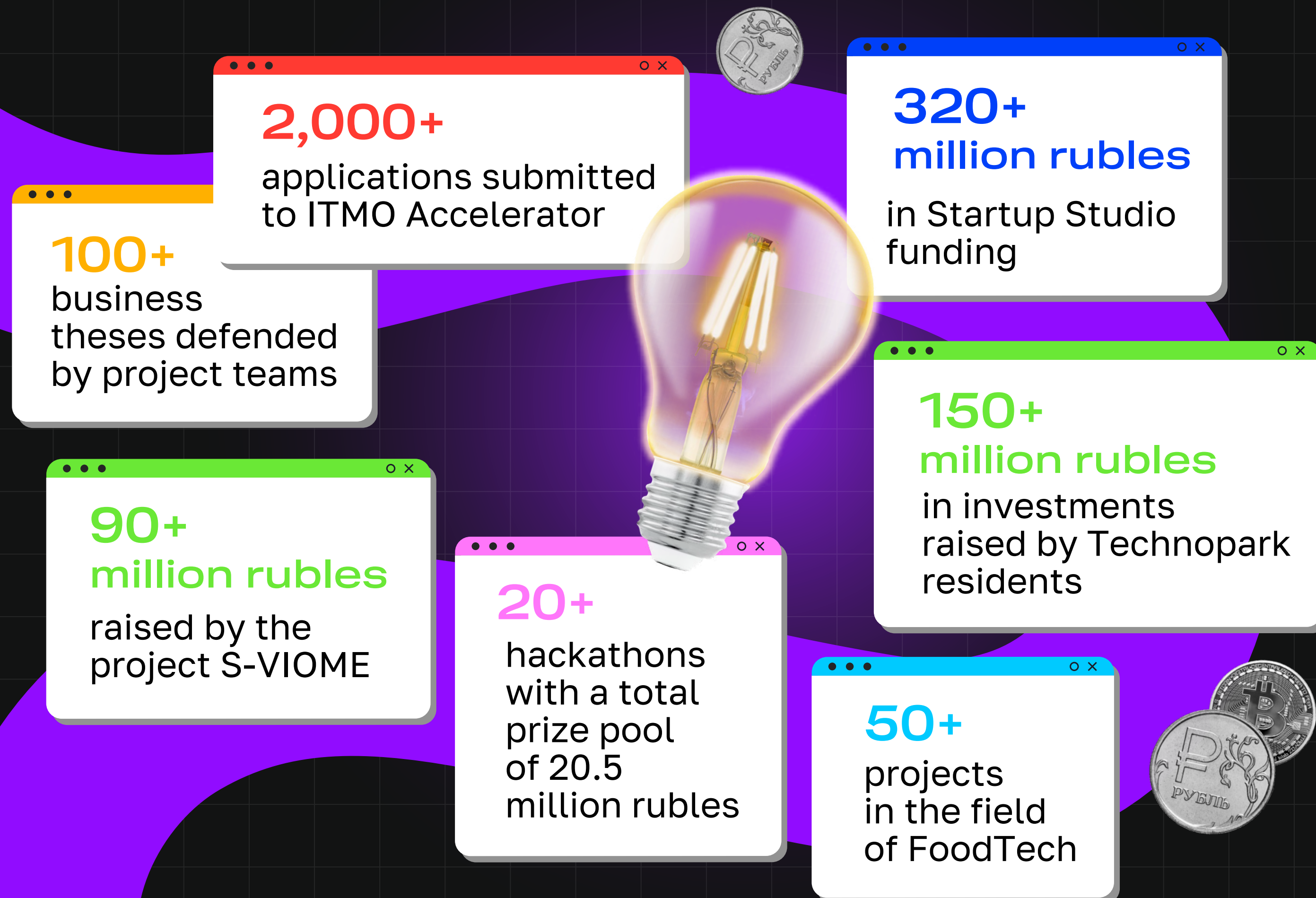
SIEMENS





# INNOVATION

ITMO University boasts one of Russia's top innovation infrastructures



- 2021: the first startup studio in Russia is launched.
- 2021: Technology Transfer Center is established.
- April 2022: the startup Merkelbot is accepted by the major international accelerator Techstarts.
- May 2022: Energy HUB, a joint contest with Gazprom Neft and one of the country's largest events for university-based startups in the energy sector, is held.
- September 2022: the launch of a joint acceleration program with Uralchem Innovation.
- Thanks to support from the Ministry of Science and Higher Education, ITMO takes part in the federal project for support of academic technological entrepreneurship and wins the tenders for:
  - o establishment of acceleration programs;
  - o organization of professional skills-focused training courses;
  - o development of startup studios.

# OUR ACHIEVEMENTS

ITMO



x7

2004

2008

2009

2012

2013

2015

2017

**We are the world's only  
seven-time winners  
of ICPC!**

Google Code Jam,  
Facebook  
Hacker Cup,  
Yandex.Algorithm

ITMO scientists  
are among the  
laureates of  
Presidential  
awards and grants

Scientists of the  
Faculty of Physics are  
laureates of awards  
from the Russian  
branch of Academia  
Europaea

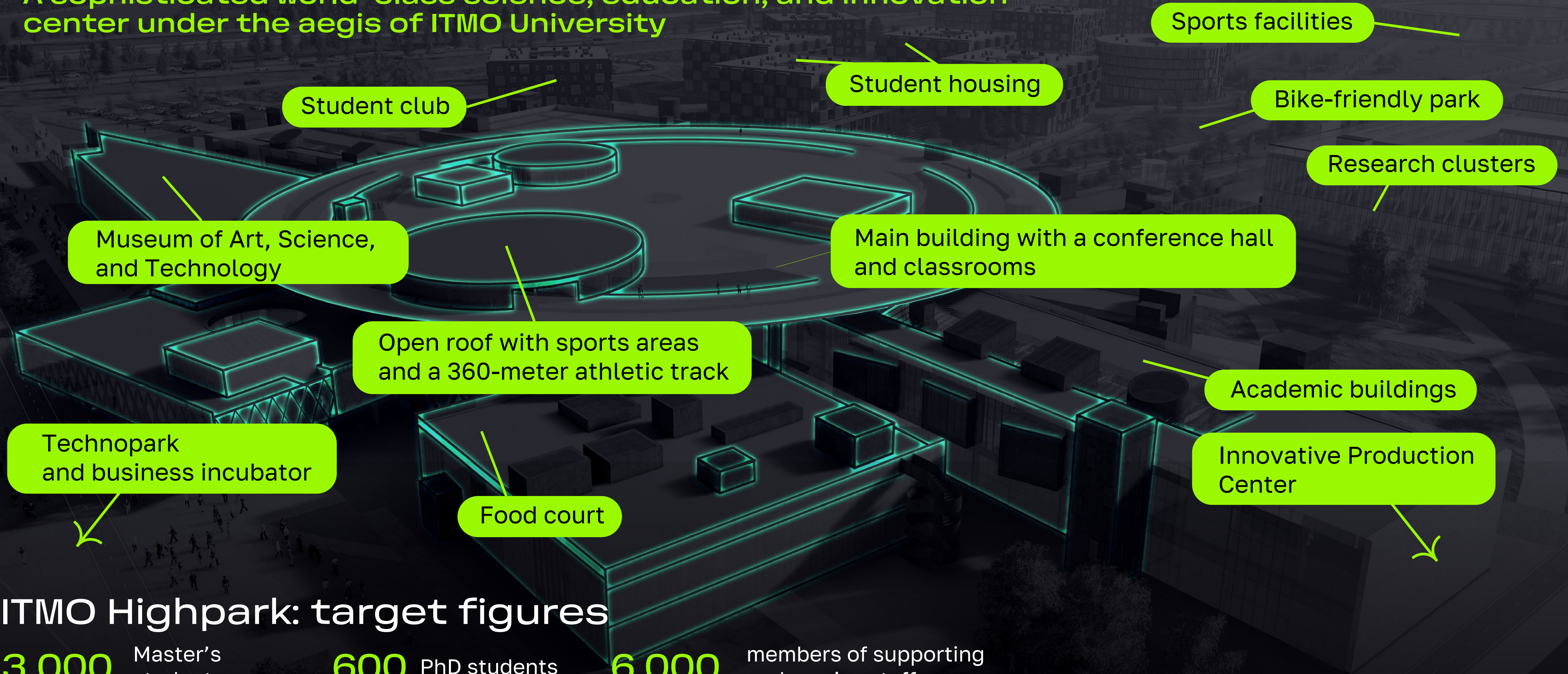
ITMO students  
are winners of  
VolgaCTF Final 2020  
and MagNet 2021



# ITMO HIGHPARK

ITMO

A sophisticated world-class science, education, and innovation center under the aegis of ITMO University



## ITMO Highpark: target figures

3,000

Master's students

600

PhD students

6,000

members of supporting and service staff

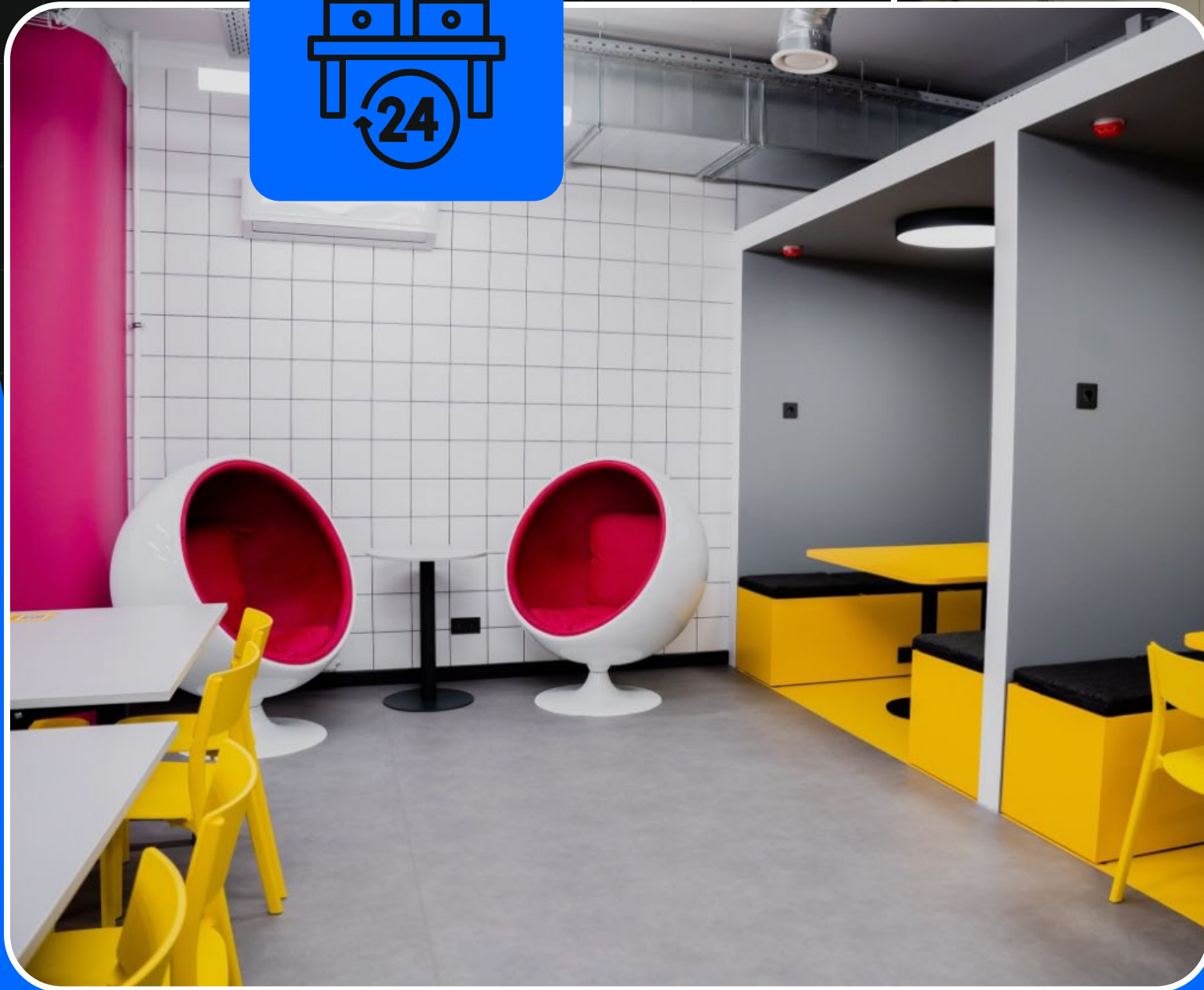
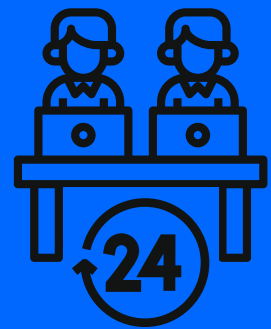
6,000

jobs for highly-qualified staff, including student employees



# ITMO FAMILY: AN ENVIRONMENT FOR GROWTH

itmo



Coworking areas

24/7

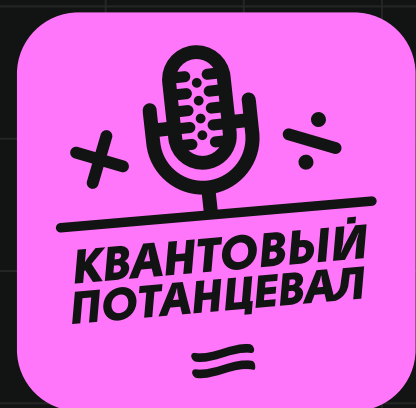


Digital library



# ITMO FAMILY: AN ENVIRONMENT FOR GROWTH

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Quantum Potential  
science stand-up show



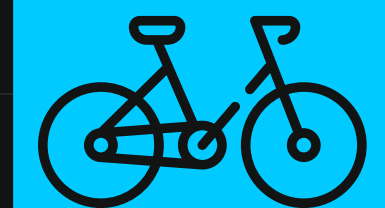
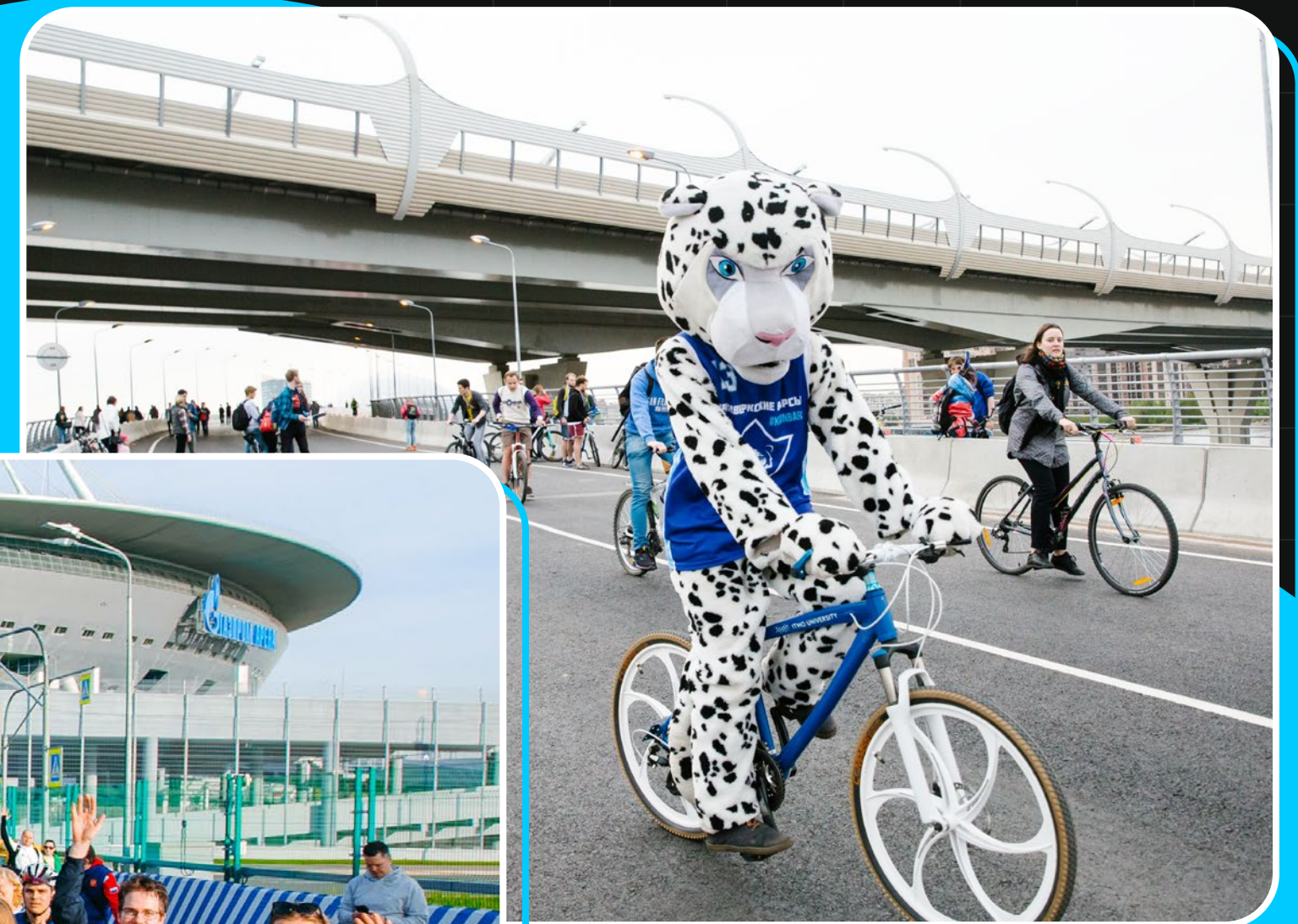
Graduation in the heart  
of St. Petersburg





# ITMO FAMILY: AN ENVIRONMENT FOR GROWTH

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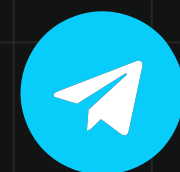


The bi-annual bike ride with the Rector



it's **MO**re than a  
**UNIVERSITY**

Join us!



itmo\_uni



spbifmo