

Creation of Regional R&D&E Centres in Russia

INO TOMSK AS AN EXAMPLE (OR A MODEL)

Sergei V. Ketov

WHO I AM

- born in **Tomsk** 1960
- graduated from **Tomsk** State University 1982
- PhD(**Moscow**) 1986, Dr.Sc.(**Novosibirsk**) 1990
- University of Maryland, **USA**, 1990-1992
- Hannover University, **Germany**, 1992-2002
- Tokyo Metropolitan University, **Japan**, 2002~

Михаил Васильевич Ломоносов

Михаил Васильевич Ломоносов (1711 - 1765) в 1763 году:

“Российское могущество
прирастать будет Сибирью”.

Today: more than **half** of the
Russian federal budget revenues
come from **oil & gas** sector.



Собственность сайта
<http://schoolchemistry.by.ru>

Q. Where those oil and gas come from? (you are right!)

Tomsk Region

on the map of Russia

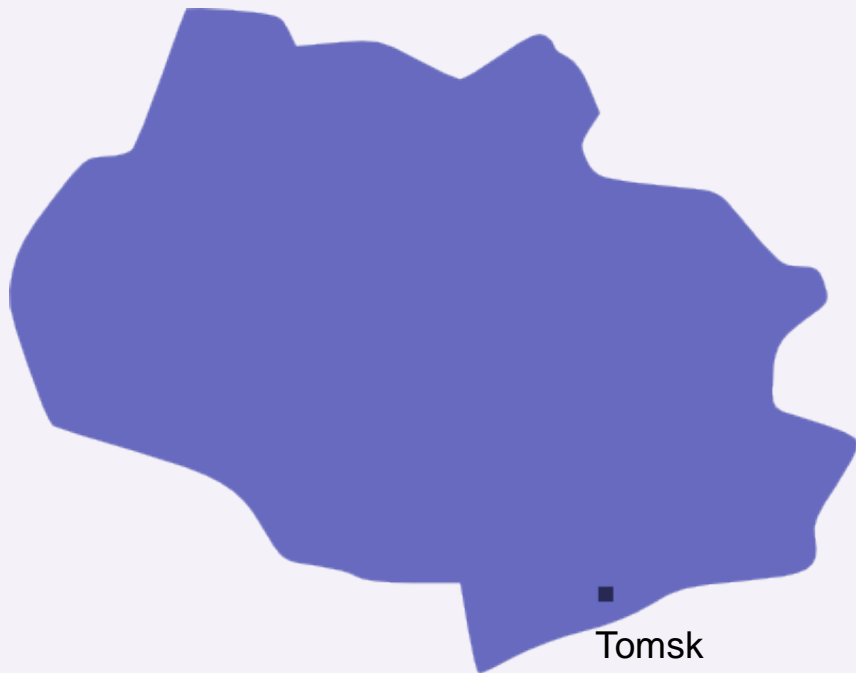


Sergei V. Ketov

**Professor of High Energy Physics
at Tokyo Metropolitan University**

born 1960 in Tomsk

Tomsk Region General Data



Area 314 000 km²

Population 1 000 000+

Time zone GMT+6(MSK+3)

Natural Resources

▲ oil & gas

Ⓕ ferrous metals

Ⓜ non-ferrous metals

Science & Education

7 State Universities



3 National Research Universities 3 Innovative Universities

11 Affiliated Research Institutes

13 Research Institutes

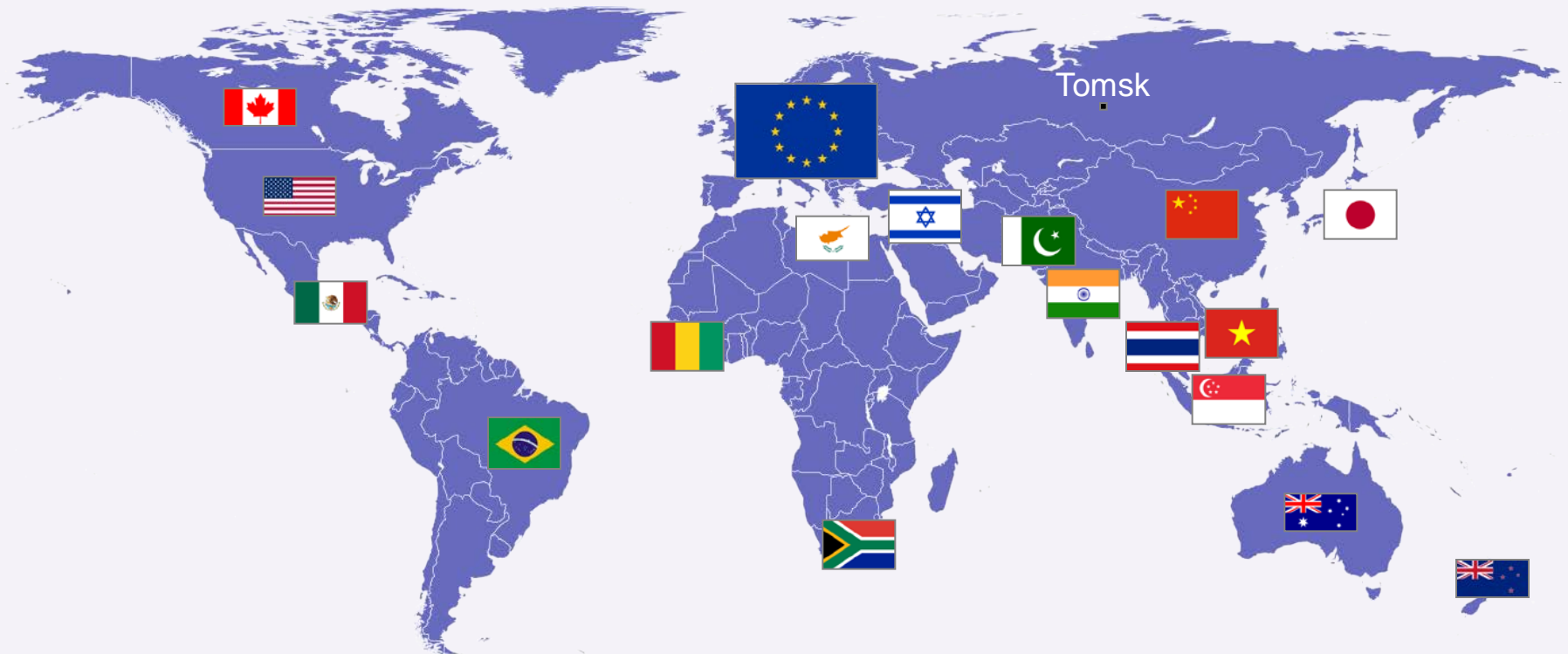


7 Institutes of Russian Academy of Science



6 Institutes of Russian Academy of Medicine

Worldwide Cooperation



Russian Government Order No. 1756-p:

INO TOMSK 2020 = R&D&E Centre Concept
has been **approved** in October 6th, 2011

Goal: put Tomsk on the world map in S&T

2012-2013 investment volume: 39,9 G RUB
(about 1 billion Euro)

past episode I: 1878-1902

under **tsar Nicolas II** of Russia

- **Reason:** developing Siberia
- **Competence:** from Moscow&St.Petersburg
- **Result:** successful



TOMSK

Tomsk State University, est. 1878



TOMSK

Tomsk Polytechnic University, est. 1896



ПЕДАГОГИЧЕСКИЙ УНИВЕРСИТЕТ

TOMSK

Tomsk Pedagogical University, est. 1902

past episode II: under **Stalin** rule (1927-1939)

- **Reason:** industrialization & collectivization
- **Competence:** exiled specialists and teachers
- **Result:** successful



TOMSK

University of Architecture & Building



**Сибирский Государственный
Медицинский Университет**
Лечебный факультет
Педиатрический факультет
Физиологический факультет
Медицинский факультет
Факультет стоматологии и ортодонтии
Факультет акушерства и гинекологии
Факультет ветеринарии и зооветеринарии

TOMSK

Siberian State Medical University, est. 1930

past episode III: under Soviet rule (1949~)

(secret) **nuclear reactors** built for plutonium production near Tomsk for military purposes

- **Reason:** Cold War
- **Competence:** Kurchatov & Obninsk
- **Result:** successful

new episode: INO Tomsk since 2012

- **Reason:** modernization & innovations
- **Competence:** unclear
- **Result:** unknown

Why Tomsk again?

1st place in Russia by concentration of PhD&D.Sc.

every 5th inhabitant is student (86000)

existing infrastructure for innovations

Special Economic Zone

local government support



Innovation Infrastructure

13

Commercialization
Offices

7

Business
Incubators

4

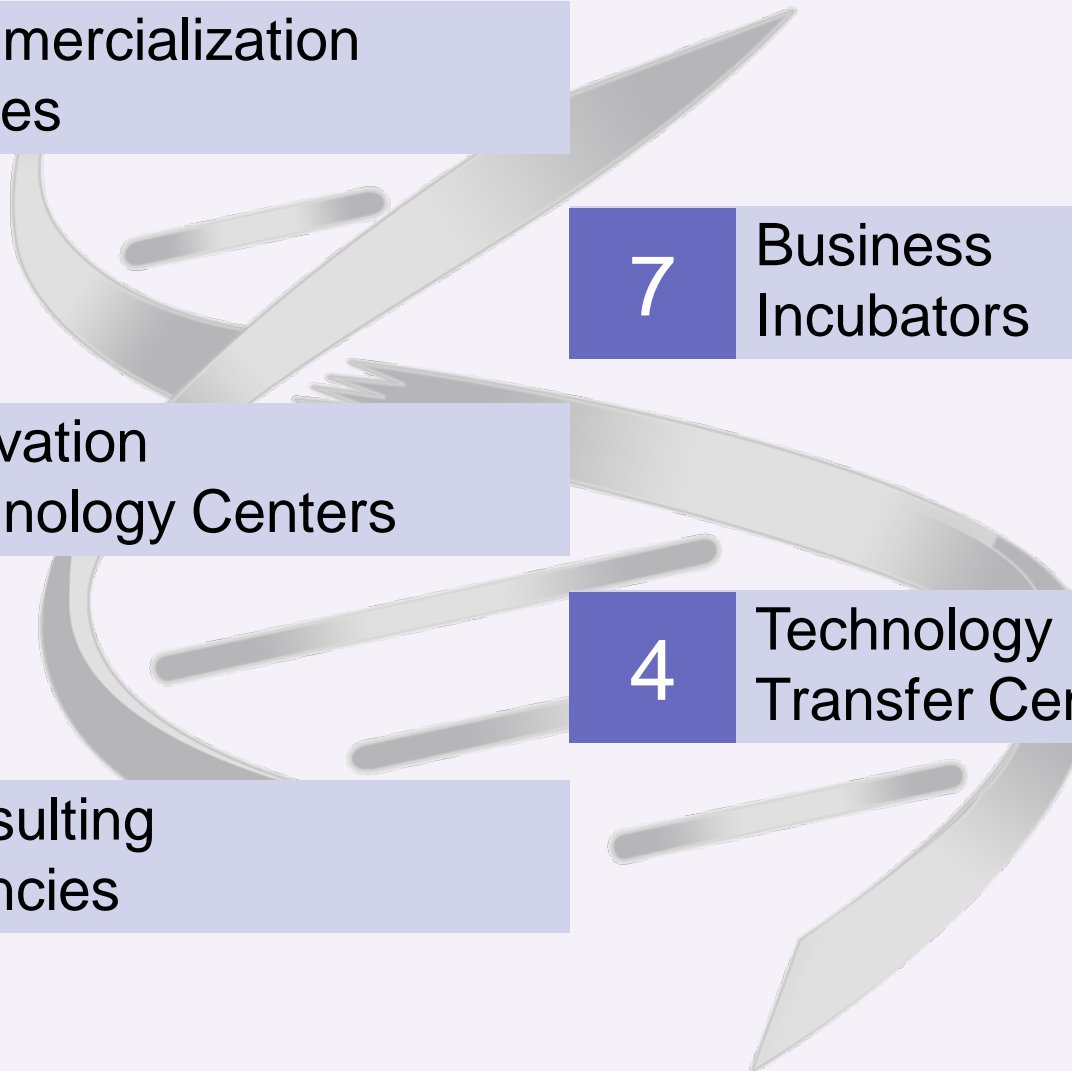
Innovation
Technology Centers

4

Technology
Transfer Centers

7

Consulting
Agencies



Special Economic Zone

0%

Property Tax
10 years

0%

Transport Tax
10 years

0%

Land Tax
5 years

0%

**Import
Customs Duties**

14%

Social Tax
instead of 34%

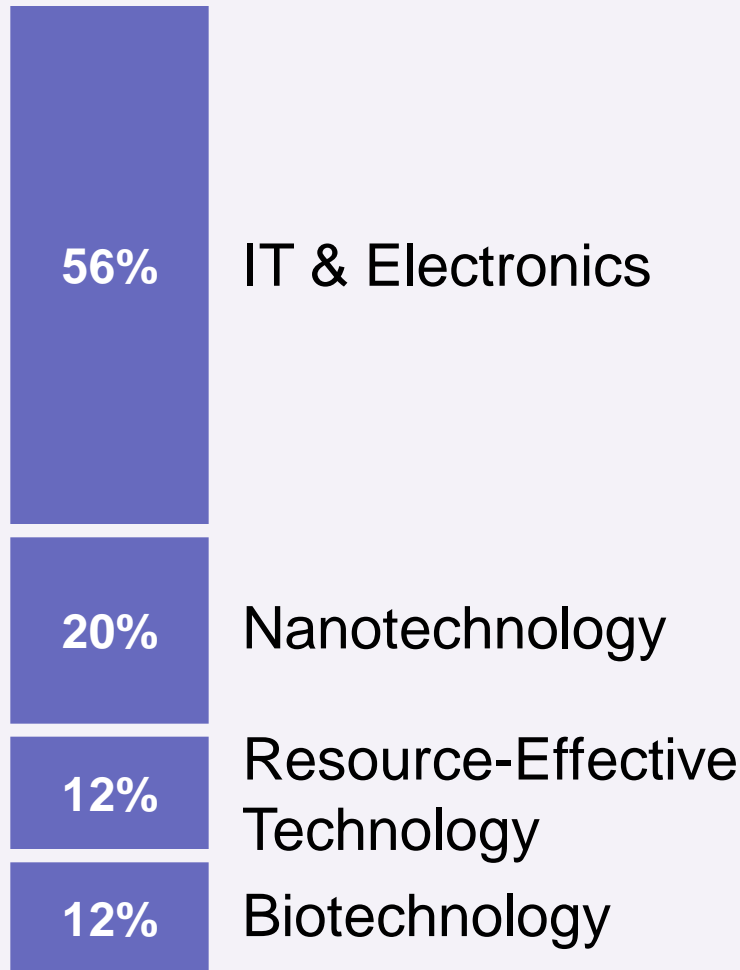
15%

Income Tax
instead of 20%

One

Stop Shop Principle
Administrative Regime

Economic Zone Residents



**The Biggest Resident
of SEZ in Russia**

8

**Foreign Residents
in Tomsk SEZ**

Foreign Investors



SEZ Joint Companies



Ze Poly Tomsk Ltd.

Polycrystalline Silicon



Solagift Ltd.

New Biological Substances
on the Basis of Botanicals



MainConcept DivX Ltd.

Video Encoding
& Wireless Digital TV



Monsoon Multimedia Ltd.

Video Encoding
& Wireless Digital TV



Emission Ltd.

Devices for the Earth
Crust Monitoring



VRKom Ltd.

3D Technology



MOJE Keramik-Implantate Ltd.

Ceramic Implants



TomskLabs Ltd.

Video Analytics Technology

TOMSK

Promising & Ambitious City



Nuclear
Technology

Energy
Efficiency

Energy Saving
Technology

INO
Tomsk

Aerospace
Technology

Sustainable
nature
management

Information
Technology

China



Timber Project

Educational Cooperation



India



Educational Cooperation

Oil & Gas Project

ओएनजीसी विदेश



ONGC VIDESH

ONGC Videsh Ltd.

Germany



Top Level Summit in Tomsk

Hannover Messe, Germany



France



Signing the Agreement
with Lorraine, France

Waterworks Modernization
Project



Tomsk Region
Administration

high-tech&fundamental science in Tomsk

- **4G mobile base stations** (LTE technology), Tomsk Univ. of Radioelectronics, MIKLAN, jointly with **Nokia Siemens Networks** (75%)
- **videotechnologies for cloud programming**, IT joint project with **Singapore** and **USA**
- **supersymmetric quantum field theory**, with **Novosibirsk, Dubna, Hannover, Tokyo, Brazil**

INO Tomsk & Skolkovo

- INO Tomsk is more **diverse** project
- Skolkovo should **not** be alone in Russia
- Memorandum about partnership **exist**
- fears of **brain-drain** from Tomsk to Skolkovo
- doing S&T and R&D&E in Tomsk may be **better** than in Moscow!

Problems&Challenges

- **enforcing** modern principles of R&D&E organization and management
- creating local incentives & environment for **highly** qualified professionals
- transparent and independent **expertise**

triple-**K** strategy as the **necessary** conditions:

- **КАДРЫ**: truly qualified professionals
- **КРЫША**: cooperation with authority
- **КОНКУРЕНТНОСПОСОБНОСТЬ**:
beyond world-average level

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The Forum is held under the auspices of Russian Presidential Executive Office, Ministry for Economic Development of the Russian Federation, Administration of the Tomsk Region, Russian Presidential Academy of National Economy and Public Administration.

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Getting Closer to Tomsk



Tomsk – Moscow

3 morning flights / day
3 evening flights / week

Airbus A319, Boeing 737



Plenty of nice hotels
and good restaurants



Picturesque
Natural
Sites

Average temperature



winter -19 ° C

summer +22 ° C