CLUSTER of MEDICAL, ECOLOGICAL EQUIPMENT and BIOTECHNOLOGIES
Saint-Petersburg, Russia
2018
Cluster expansion

February 2005
12 companies
turnover 0.8 milliard rub.
450 employees
12 countries of export

September 2018
145 companies
turnover 17.5 milliard rub.
18,600 employees
98 countries of export
Participation in specialized exhibitions
**Innovative territorial clusters**

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**Правительство Российской Федерации**

Постановление от 6 марта 2013 г. № 188

Москва

Об утверждении Правил распределения и предоставления субсидий из федерального бюджета бюджетам субъектов Российской Федерации на реализацию мероприятий, предусмотренных программами развития инновационных территориальных кластеров

Правительство Российской Федерации

Председатель Правительства Российской Федерации

Д. Медведев

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<table>
<thead>
<tr>
<th>Наименование инновационного территориального кластера</th>
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<tbody>
<tr>
<td>Центральный федеральный округ</td>
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<tr>
<td>Калужская область</td>
<td>кластер лесозаготовок, деревообработки и тракторостроения (г. Орел)</td>
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<td>Московская область</td>
<td>кластер агротехнологий, биотехнологий и космической деятельности (г. Дубна)</td>
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<td>кластер биотехнологий и космической деятельности (г. Дубна)</td>
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<td>Республика Калмыкия</td>
<td>кластер аграрных и биотехнологических проектов (г. Элиста)</td>
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<td>Город Москва</td>
<td>кластер &quot;Электроника&quot;</td>
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<tr>
<td>Северо-Западный федеральный округ</td>
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<tr>
<td>Ленинградская область</td>
<td>кластер медицинской, фармацевтической промышленности, развитых технологий (г. Санкт-Петербург)</td>
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<table>
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<tr>
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<tr>
<td>Город Санкт-Петербург</td>
<td>кластер медицинской, фармацевтической промышленности, развитых технологий (г. Санкт-Петербург)</td>
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## A FUNCTIONAL MAP №1
Cluster of medical, ecological equipment and biotechnologies (horizontal type cluster)

<table>
<thead>
<tr>
<th>UNIVERSITY</th>
<th>TECHNOCFORMATIONAL STRUCTURE</th>
<th>NON-COMMERCIAL ORGANIZATION</th>
<th>FINANCIAL ORGANIZATION</th>
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<tbody>
<tr>
<td>37. IITMO University (Saint Petersburg National Research University of Information Technologies, Mechanics and Optics)</td>
<td>41. Certification and testing center, 42. Engineering Company &quot;2K&quot;</td>
<td>Certification and testing center</td>
<td>46. Fund &quot;Association écosystème&quot;</td>
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<tr>
<td>38. Novosibirsk State University</td>
<td>44. All-Russian Public Organization &quot;Russian Union of Engineers&quot;</td>
<td>Certification and testing center</td>
<td>47. Russian Investment Agency</td>
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<tr>
<td>39. Russian Institute of Influenza</td>
<td>45. Association of Medical Equipment Manufacturers</td>
<td>Certification and testing center</td>
<td>48. Fund for small and medium-size business credit assistance</td>
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<tr>
<td>40. Bremen in St. Petersburg Technical University</td>
<td>43. &quot;Cluster of medical, ecological equipment and biotechnologies&quot;</td>
<td>Certification and testing center</td>
<td></td>
</tr>
</tbody>
</table>
A FUNCTIONAL MAP Nº2
Cluster of medical, ecological equipment
and biotechnologies

Cluster is horizontal - cooperation with members working in the same industry - medical industry

1. Altus
2. ATC-
"Semiconductor Devices"
3. Milsar
4. SPE "YOLO"
5. Lumex
6. Biomedical

7. Company Neo
8. Minimax
9. MELP
10. Aksioma-Service
11. Plasmaträtt
12. Vital Development Corporation

Areas of medical instrument making as per the standard of the RF Ministry of Health
- Devices for functional and X-ray diagnostics
- Instruments and apparatus for treatment
- Equipment for anesthesiology, intensive care unit
- Instruments and equipment for endoscopy and minimally invasive surgery
- Medical products for surgery
- Medical products
- The equipment for clinical laboratory diagnosis
- Laboratory and pharmaceutical equipment
- Immobilization equipment
- Disinfection equipment
- Micro-optics and optical devices
- Medical IT systems
# A FUNCTIONAL MAP №2

Cluster of medical, ecological equipment and biotechnologies

Cluster is horizontal - cooperation with members working in the same industry - medical industry

## PART 2

<table>
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<tr>
<th>No.</th>
<th>Company Name</th>
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<tr>
<td>17.</td>
<td>TES center</td>
<td><img src="image5.png" alt="Image" /></td>
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<td>AKC</td>
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<td>21.</td>
<td>Union – Group</td>
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<td>EKOHIM</td>
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<td>Special and medical technology</td>
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<tr>
<td>24.</td>
<td>Meditek Zernaya Tsetla</td>
<td><img src="image12.png" alt="Image" /></td>
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</tbody>
</table>

### Areas of medical instrument making as per the standard of the RF Ministry of Health

- Ultrasound and functional and X-ray diagnostics
- Instruments and apparatus for treatment
- Equipment for anesthesia, intensive care, ultrasonic ultrasound
- Laboratory and pharmacy equipment
- Equipment for clinical laboratory and diagnostics
- Medical products for surgery
- Medical products
- Micro-optic and optical devices
- Medical IT systems
- Immobilization equipment
- Disinfection equipment
- Robotic equipment
- Rehabilitation equipment
A FUNCTIONAL MAP №2
Cluster of medical, ecological equipment and biotechnologies

Cluster is horizontal - cooperation with members working in the same industry - medical industry
A FUNCTIONAL MAP №3
Cluster of medical, ecological equipment and biotechnologies

Direct import substitution program

1. Contribution to the Direct Import Substitution Program implemented in St. Petersburg in 2010-2020

2. Dealing with the RF Regions for promotion the Cluster's products under the cooperation agreements between St. Petersburg and Russian regions
   (Joint participation in exhibitions and round tables; master classes by St. Petersburg’s leading specialists using innovative equipment made by cluster member manufacturers, and distribution of presentation materials (catalog of cluster members’ products; consolidated request)

3. Use of leasing in supplies to Russian regions

4. Acceptance testing and certification (Company “Certification and testing center”)

5. Inter-cluster interaction – collaboration with AsMedica, Moscow Association of medical equipment manufacturers

6. Localization of a Lithuanian ultrasonic diagnostic equipment manufacturer from Lithuania to Russia (Saint-Petersburg)

7. Industrial tech park of the cluster’s import substitution and innovations

8. Implementation of the new medical technology for pharmaceutical product quality control based on X-ray analysis
A FUNCTIONAL MAP №4
Cluster of medical, ecological equipment and biotechnologies

Interaction with research and education institutions

1. Clinical trials of medical-purpose products
   2. Joint R&D efforts

1. LabTech project under the Programs of the Permanent Committee of the Union State of Russia and Belarus

1. Development of education programs
   2. Pre-graduation internship with subsequent employment assistance
   3. Joint R&D efforts

1. Joint R&D efforts

1. International cooperation in R&D

1. Setting up a joint St. Petersburg-Shanghai R&D center for laser technologies

MEMBER OF THE CLUSTER

- Pavlov First Saint Petersburg State Medical University
- Research Institute of Infection
- Republican Research & Practical Center for Epidemiology & Microbiology, Minsk
- ITMO University
- FinnMedi Oy
- Jozef Stefan Institute, Ljubljana, Slovenia
- Guangyong-Electra
  Yantai, Shandong Province, China

- St. Petersburg’s medical and preventive treatment institutions
- Health Care Committee of St. Petersburg
- Committee for Economic Development, Industrial Policy and Trade of St. Petersburg
- Cluster of Medical, Ecological Equipment and Biotechnologies
Tendencies in development of the Cluster’s products supply to St. Petersburg’s healthcare institutions

Diversification of supplies (increase by 85%)

Number of medical and preventive treatment institutions participating in the program

Cluster products’ cost benchmarking (savings of 70% in comparison with foreign analogues)

Cluster products’ expendable materials and technical maintenance cost benchmarking (savings of 45% per year in comparison with foreign analogues)
Market share 2017

- Import (General Electric, Atom Medical Corporation, Siemens, Healthcare, Medtronic, Johnson & Johnson and etc.)
- Russian equipment

Market share by 2020 according to the Federal Target Program for the development of the medical and pharmaceutical industry of Industry and Trade Ministry Russian Federation

- Import (General Electric, Atom Medical Corporation, Siemens, Healthcare, Medtronic, Johnson & Johnson and ect.)
- Russian equipment
Clusters cooperation

St. Petersburg

Ekaterinburg

Moscow

N.Novgorod

ets.
Technology platform «Medicine of the future»

The Cluster is a co-founder of and is included in the Steering committee of the Technology platform «Medicine of the future».

- Quality improvement of medical services though introduction of innovative machine and program diagnostic complexes
- Systems based on combined vectors for therapy
- Ceramic and biodegradable medical materials
- Biosensors for home and laboratory diagnostics
- Molecular control methods of cell functions
- Virtual systems for pathogenesis dynamics forecasting given assigned factors
- Biomedical foundations of 4D visualization and dynamic noninvasive monitoring of person's health
- Theme-based directions of Technology platform «Medicine of the future»

Quality improvement of medical services though introduction of innovative machine and program diagnostic complexes
Russian clusters at PRIT 13 December 2010

Several Russian clusters and innovation areas are present in PRIT 2010.

**SaintPetersburg’s cluster of medical, ecological equipment and biotechnologies**

The largest cluster in Saint-Petersburg, it gathers 74 companies in various areas of medical equipment and bio technologies: functional diagnostic, surgery instruments, endoscopy, laboratory equipment, physiotherapy, artificial vessels... The cluster is part of the “Technological platform” initiated by the Russian government to promote cooperation between clusters and technology institutes.
SLOVENIA, 2011
International experience for movement innovations
1. Companies with extended markets for exporters
2. Medical market entering companies with high level of Readiness
3. R&D projects with long-term experience in clinical use
Cooperation in the framework of the International engineering cluster park technology transfer in the field of medical industry

Technology Transfer

Cluster Technology Transfer Network in Russia

- Years of experience in implementing
- Academic base
- Clinical bases
Cooperation in the framework of the International engineering cluster park technology transfer in the field of medical industry

- Law on localization
- CE certification center in Russia
- R&D
Medical tourism

The Cluster of Medical, Ecological Equipment and Biotechnologies (hereinafter the Cluster) proposes starting cooperation to expand the opportunities of Russia – Europe international medical tourism.

The basic partners for the future project are the Cluster (St. Petersburg, Russia) and the Tourism Chamber of Slovenia (Ljubljana, Slovenia).

The Cluster has an extensive experience in the implementation of international projects with the participation of the Administration of St. Petersburg and federal executive authorities.

The Cluster currently includes 145 organisations in the medical industry, and it has been successfully cooperating with leading Russian scientific and clinical medical centres for many years.

At the initial stage of organisation of the project office for the development of the Russia – Europe international medical tourism with the Cluster (St. Petersburg, Russia) and the Tourism Chamber of Slovenia (Ljubljana, Slovenia) as the basic partners, we propose the following identification of the parties concerned:

<table>
<thead>
<tr>
<th>Russia</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Unique nature reserves – health resorts, VIP Spa</td>
<td>Travel firms</td>
</tr>
<tr>
<td>II. Travel firms, Private VIP clinics</td>
<td>Spa hotels and rehabilitation areas</td>
</tr>
<tr>
<td>III. Spa hotels and rehabilitation areas</td>
<td>Rehabilitation equipment manufacturers</td>
</tr>
<tr>
<td>IV. Rehabilitation equipment manufacturers</td>
<td>Spa hotels and rehabilitation areas</td>
</tr>
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</table>
Thank you for your attention