

University Innovation Ecosystem. Case of US and Russian universities

**Conference “Development of Centers for
Entrepreneurship and Innovation in universities”**

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Innovation Hub based on the ITMO

Problem statement

Variation of terms describing university innovation activities:

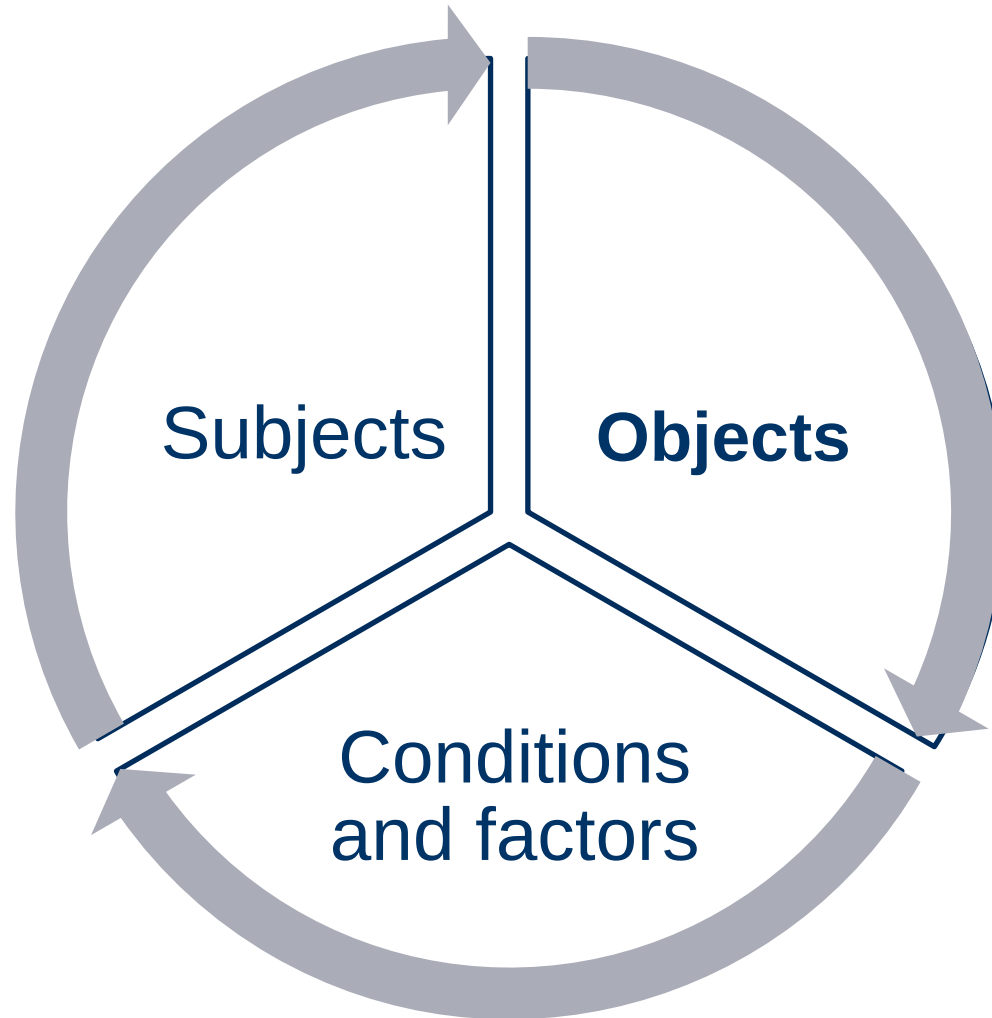
- ♦ Innovation environment (Rus.: Инновационная среда)
- ♦ Innovation ecosystem (Rus.: Инновационная экосистема)
- ♦ Innovation system (Rus.: Инновационная система)
- ♦ Knowledge based innovation hub (Rus.: Инновационный хаб)

Definitions

Innovative system - a set of **subjects** (actors) and **objects** (item) of innovation, **interacting** in the process of developing and selling innovative products governed by the State's policy on the development of innovation system *)

*) Letter of the Russian Government # 2473П-П7 dated 05.08.2010 "Principal areas of Russian Federation policy in the fields of innovation system development up to 2010"

Innovation system



Definitions

The **subjects** of the innovation system - the institutions (legal entities) and individuals involved in the development of innovations activities (including scientific, technological organizational, financial and commercial), aimed at implementation of innovative projects, as well as the creation of innovation infrastructure and its operations.

Examples: OTT, business incubators, technology parks, etc.

Definitions

All subjects that contribute to the development and implementation of innovative projects, including rendering of managerial, logistic, financial, information, personnel, organizational etc. consulting services usually referred to as **"innovation infrastructure"**

Definitions

Objects of the innovation system - all kinds of novelty (Rus. новшество) that in the process of commercialization may be transformed (converted) in the new or significantly improved product (goods, services) or process, a new method of sale or a new managerial approach in business practices, workplace organization or in external relations

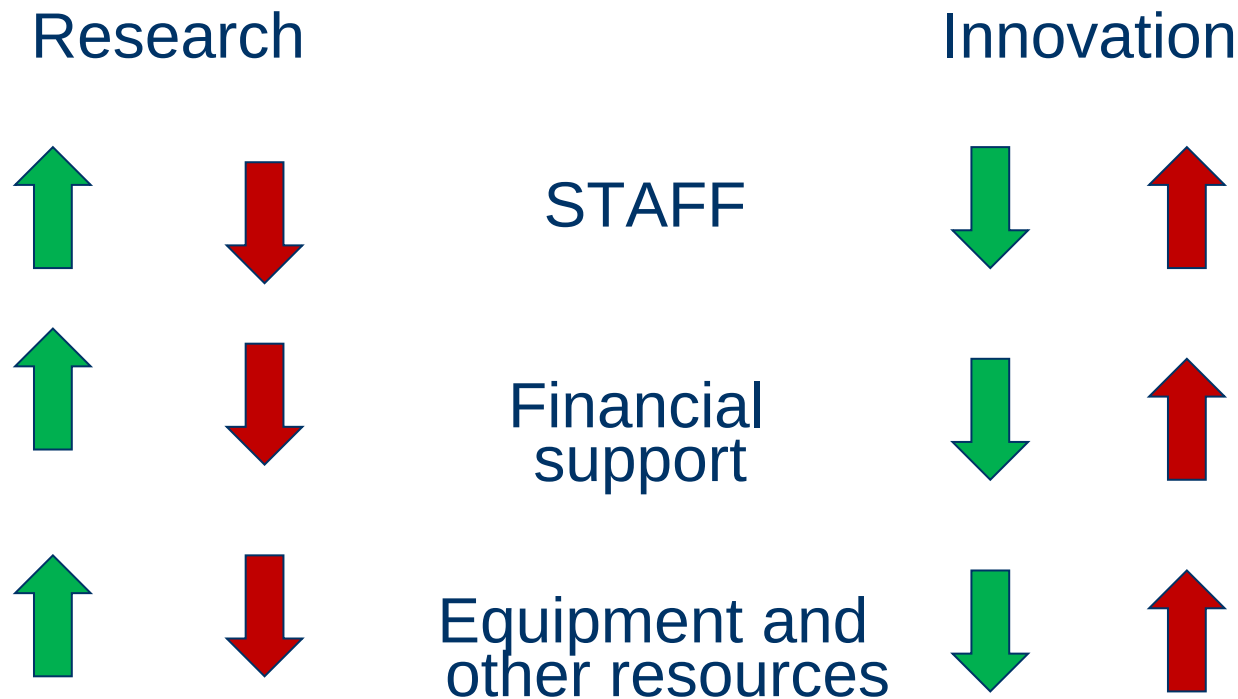
Examples: idea, projects, IP, prototype, etc.

Definitions

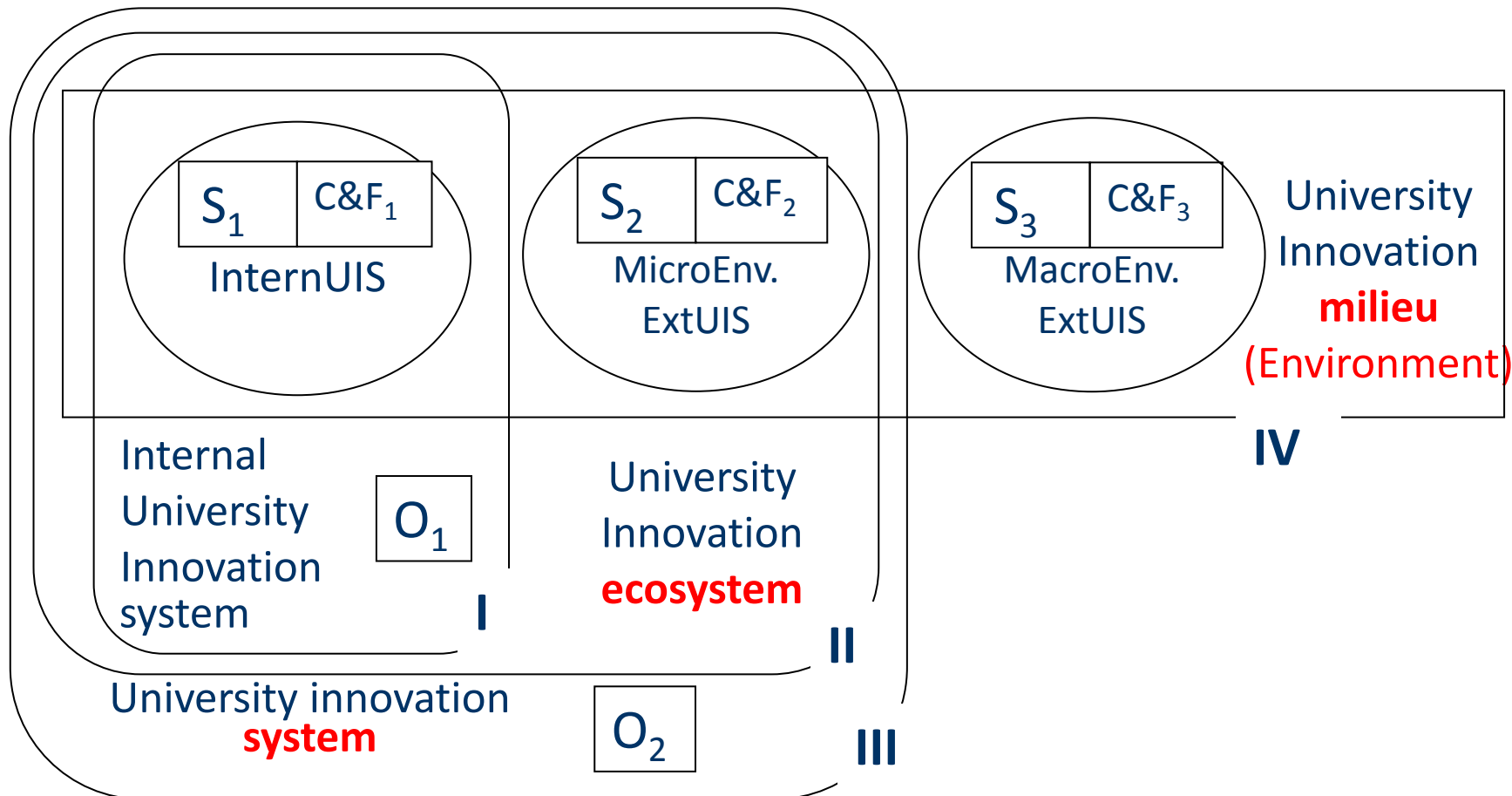
University Innovation Ecosystem - aggregation of internal University innovation system and external entities, conditions and factors that are directly involved, or provide a harmonious and effective organization of innovative activities of the University

Definitions

Why the "ecosystem"? Example - "competition" between the two activities of the university:



Definitions



Elements of University Inno-ecosystem

- I. Internal innovation system, incl.:
 - ◆ innovation infrastructure (subjects)
 - ◆ set of different types of “intellectual novelty/products” (ideas, projects, IP, prototypes, etc.)
 - ◆ set of conditions and factors that regulate and facilitate development of I&EA (both internal and external)
- II. A set of external partners, and "players" (eg, venture capital funds)
- III. A set of external conditions and factors shaping the entrepreneurial culture

Components of innovo-ecosystem of HEIs

continued:

Set of conditions and factors described the internal university innovation system:

- ◆ Support of I&E by the University top-management
- ◆ Strategy (Goals, Tasks), a program of I&E development
- ◆ Legal basis governing the development and stimulating of I&E
- ◆ Learning Environment (trainings, case studies, etc.)
- ◆ Information system, built-in University info-system
- ◆ R&D management system, incl. early detection of results with high commercial potential
- ◆ Advanced service support (lawyers, economists, etc.)
- ◆ Entrepreneurial culture and a positive image of the "innovators" in the university/research teams, etc.

Innovation ecosystem of HEIs

Lets consider the differences between innovation Ecosystems for leading US universities (members of Association of American University) and leading Russian Universities (members of Russian Association of Leading Universities)

Comparison of US and Russian HEIs

External environment

№	Conditions	US	Russia
1.	External innovation infrastructure	Advanced	Poor
2.	Diversification of VC and BA funding	Advanced	Poor
3.	Legal system to support innovation	Advanced	Poor
4.	Well educated unemployed experts	Significant Number	Poor
5.	Market demands for innovations	“Very hot”	Poor

Comparison of US and Russian HEIs

Incentives to run innovation activities:

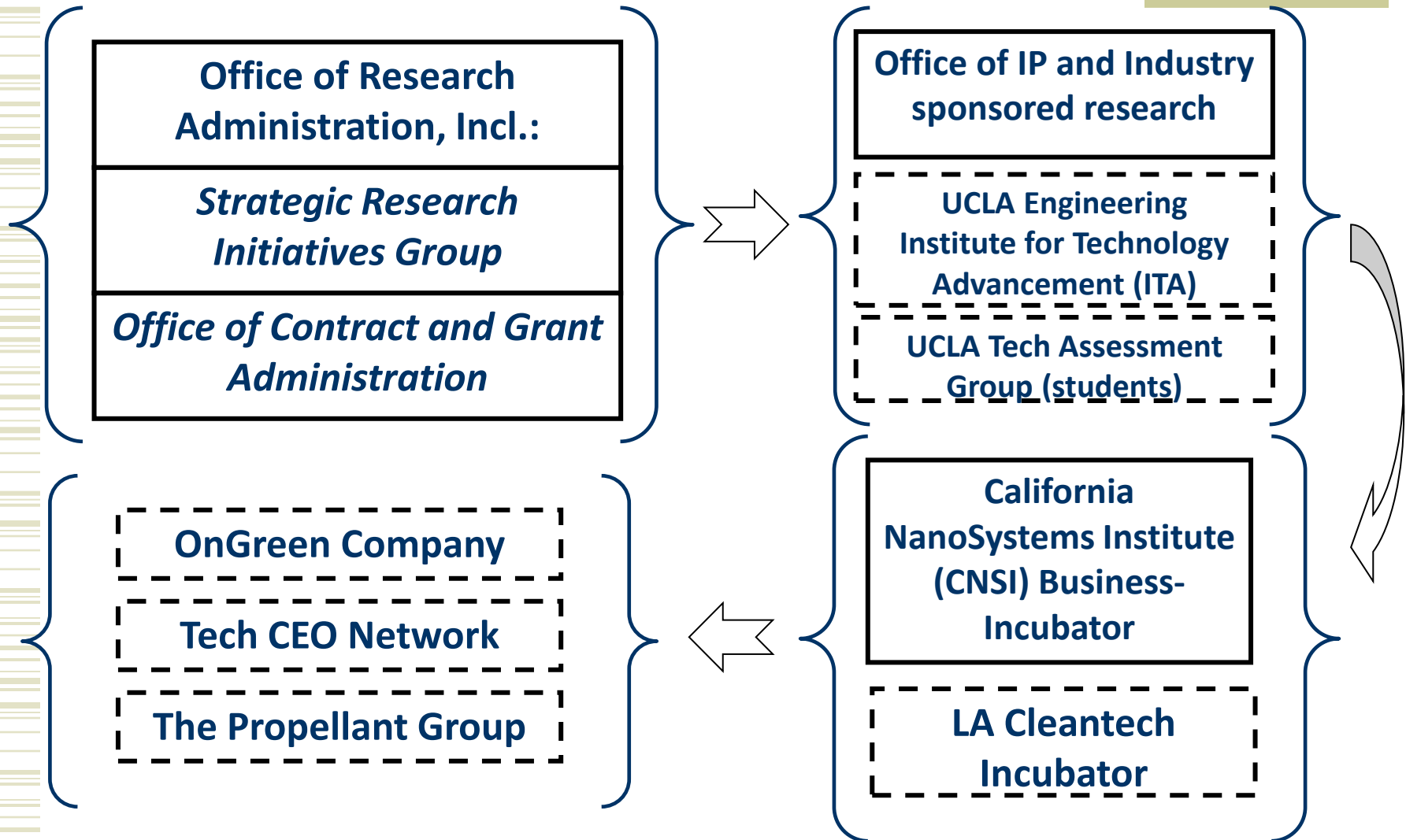
1. Russian universities:

- ◆ Reporting to Authorities
- ◆ Increasing competence to Faculty members
- ◆ Attracting active and entrepreneurial youth
- ◆ Raising funding

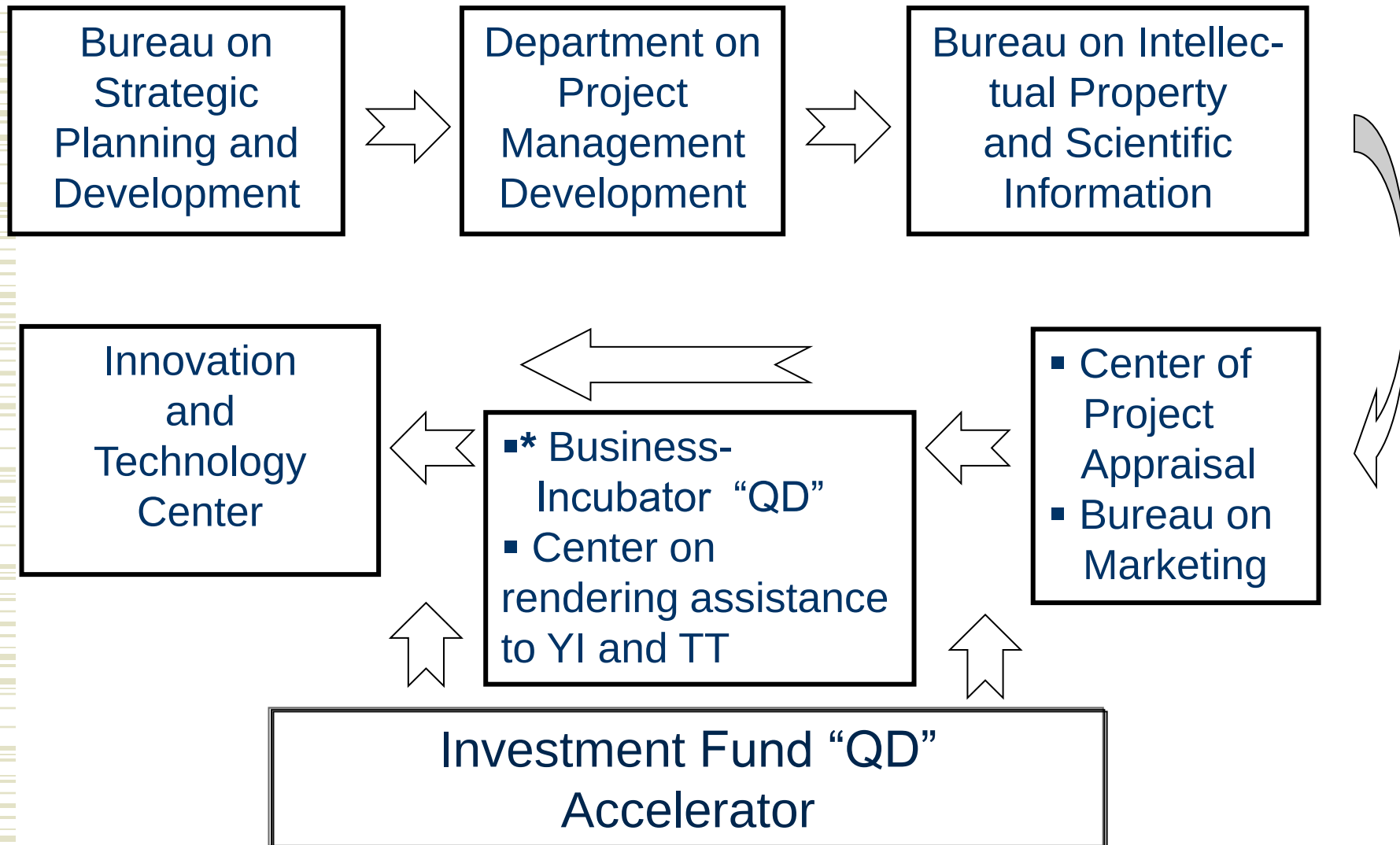
2. US Universities:

- ◆ Self-actualization of Faculty members and students
- ◆ Attracting talented youth
- ◆ Raising funding, incl. for research
- ◆ contribution to the regional development

Innovation Infrastructure of UCLA

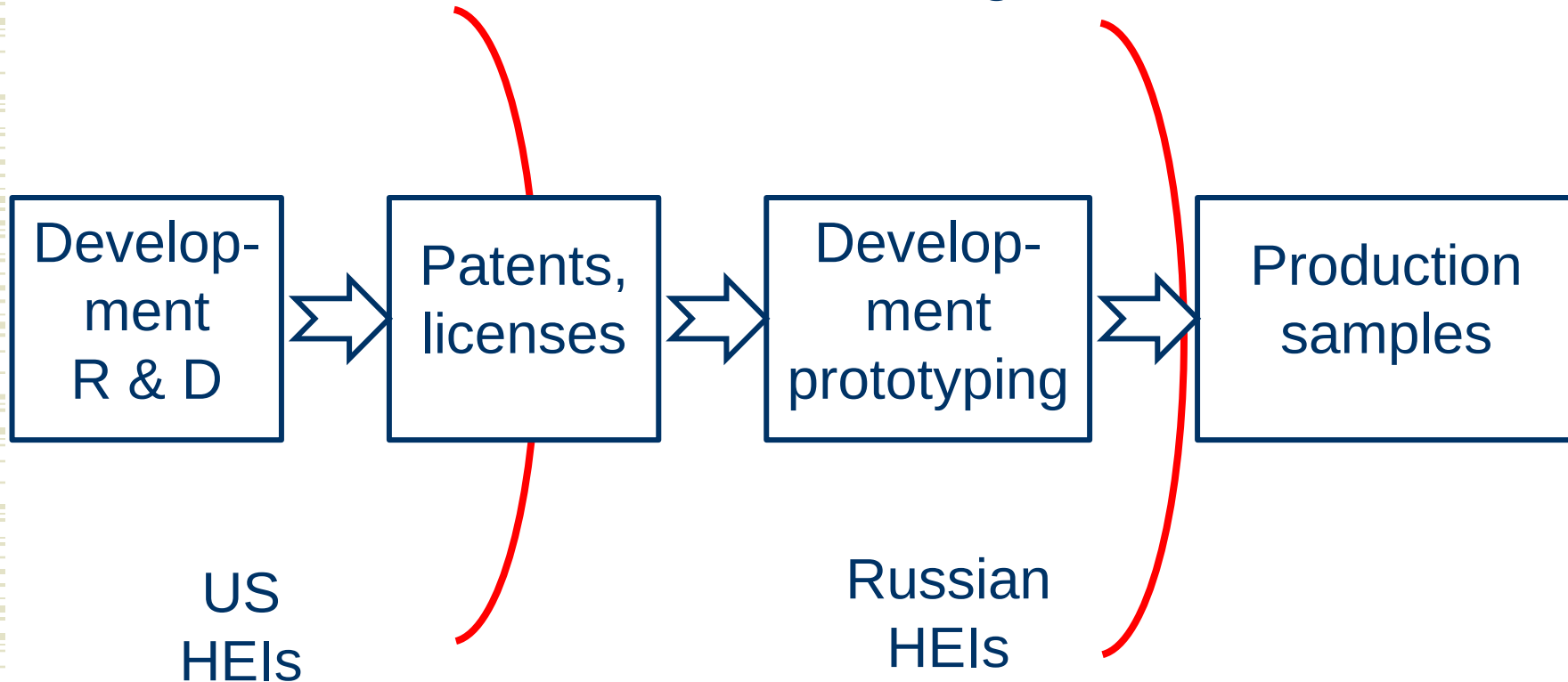


Innovation Infrastructure of ITMO

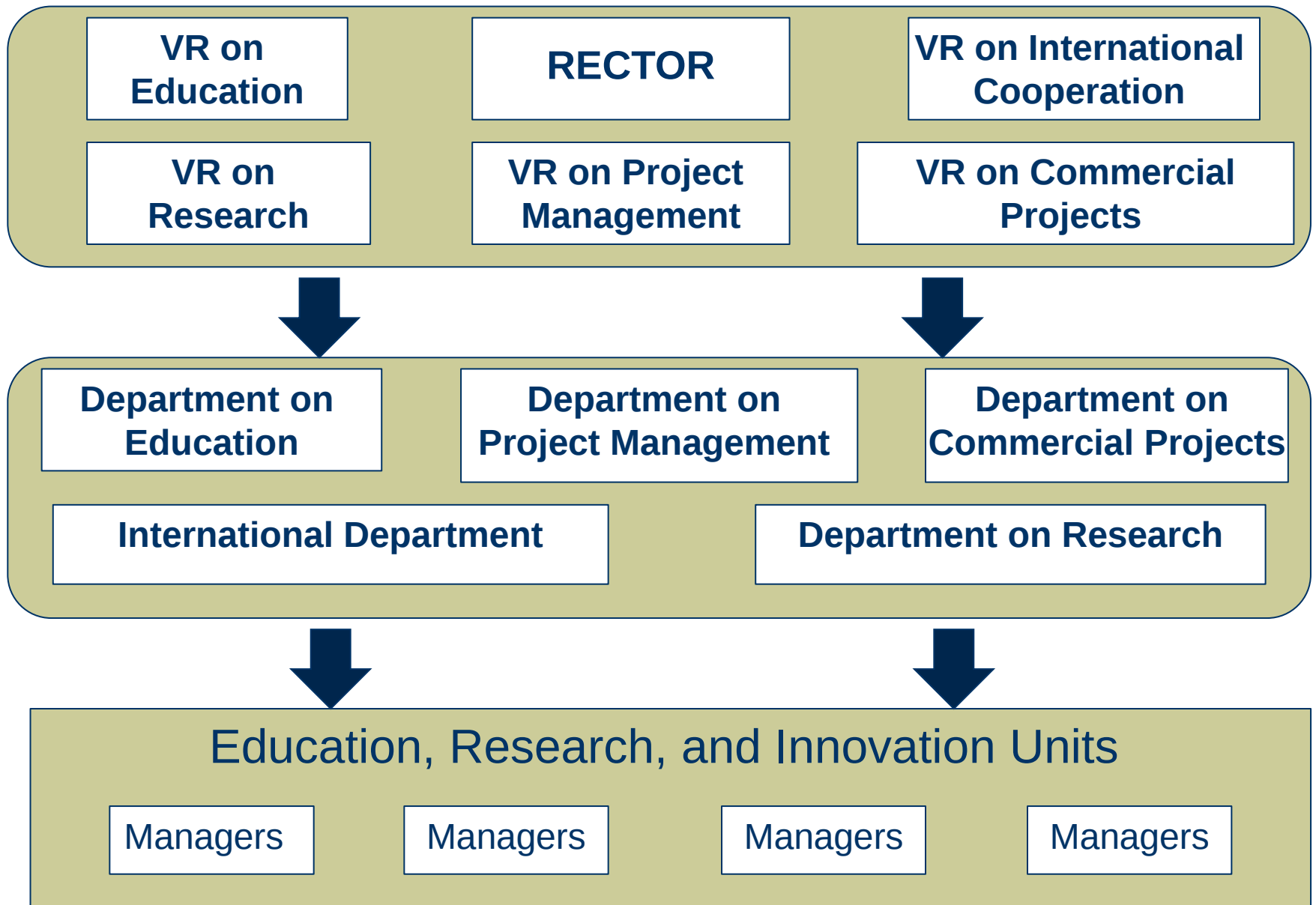


Comparison of US and Russian HEIs

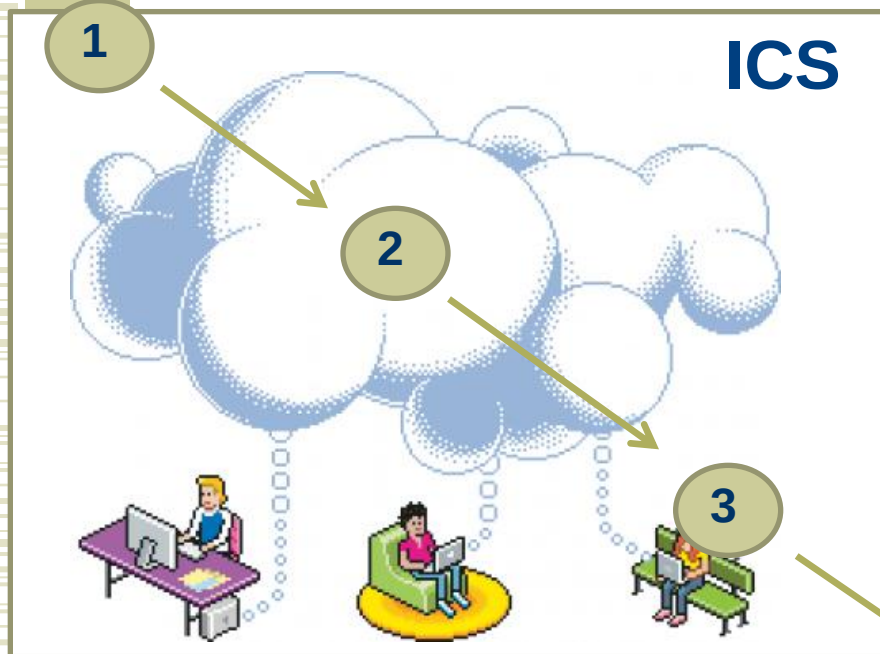
Different strategies for I&E in the
U.S. and Russian leading universities



Unified Project Management System

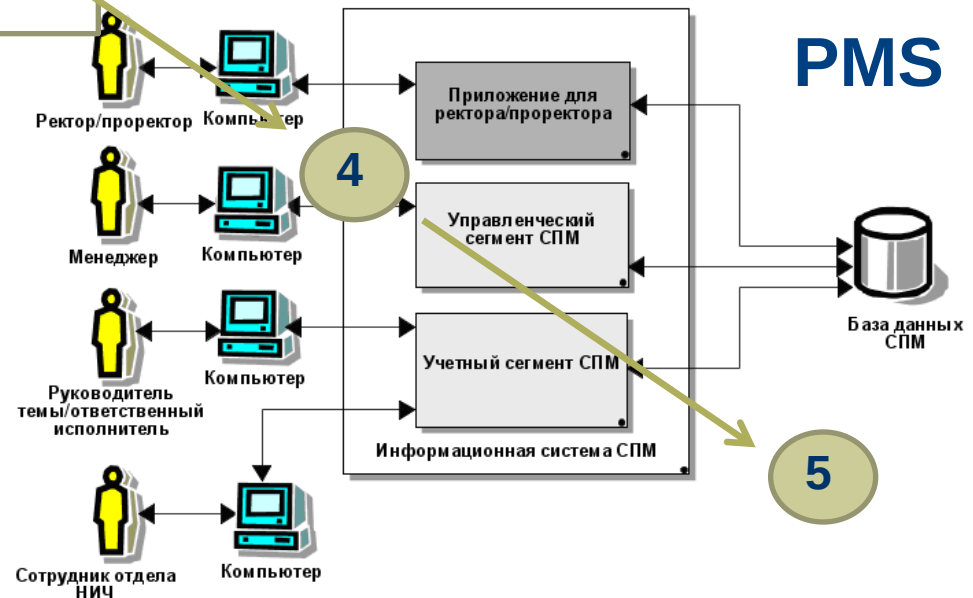


IT-support of R&D



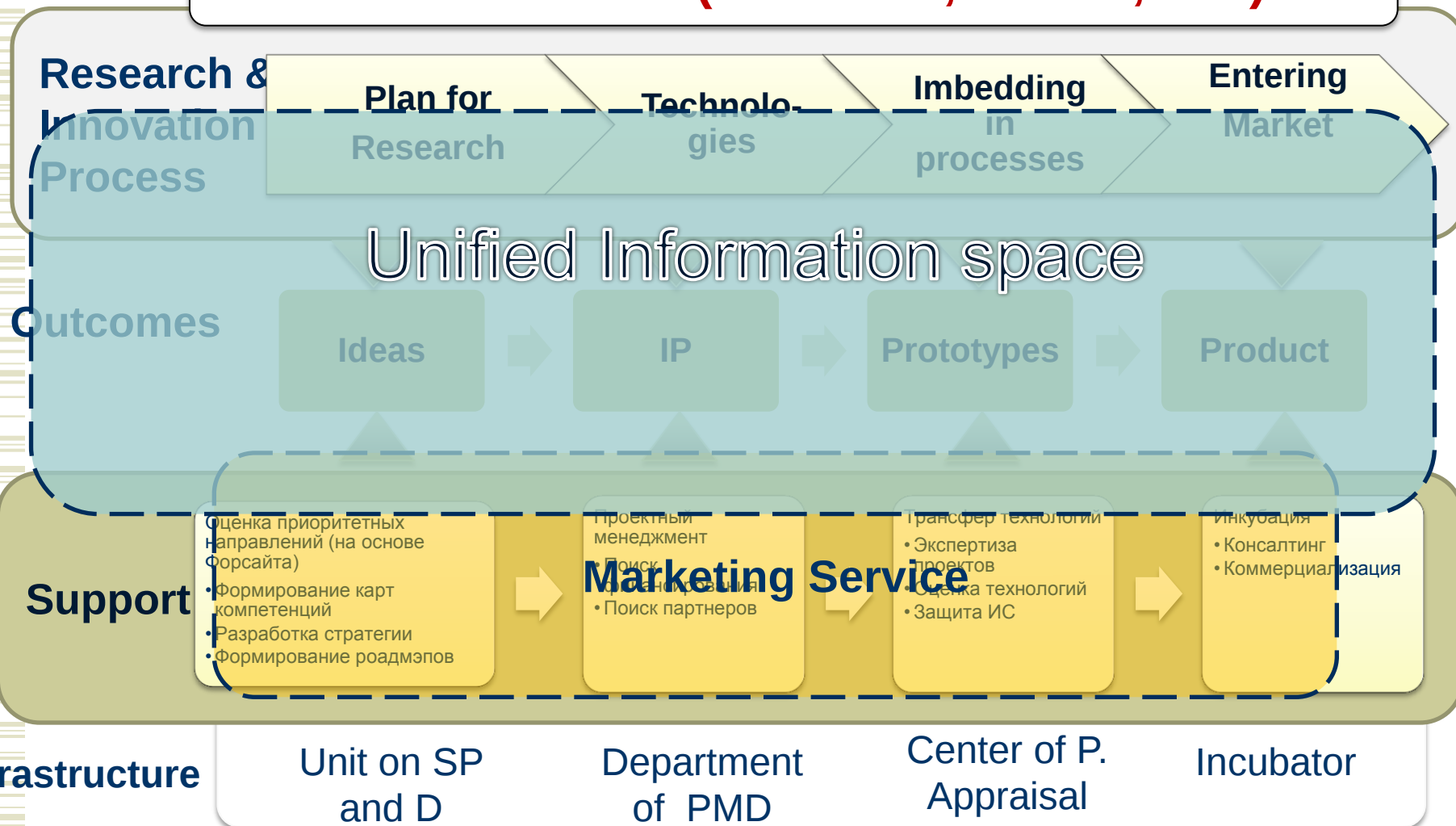
- 1** - Collection of project ideas
- 2** - Team building
- 3** - Elaboration of Application and submission

- 4** - Support and maintenance project management process
- 5** - Projects data storage



Chain of Services to Faculties and Students

Research units (Institutes, Chairs, etc.)



UCLA-ITMO Strategic Partnership

I. EURECA - Enhancing University Research and Entrepreneurial Capacity

II. 2-year pilot projects (2011-2012):

- Project 1 (EWIC): Enhancing ITMO world-wide innovative capacity
- Project 2 (CAIB): Cross-Atlantic Innovative Bridge {for Russian innovations}

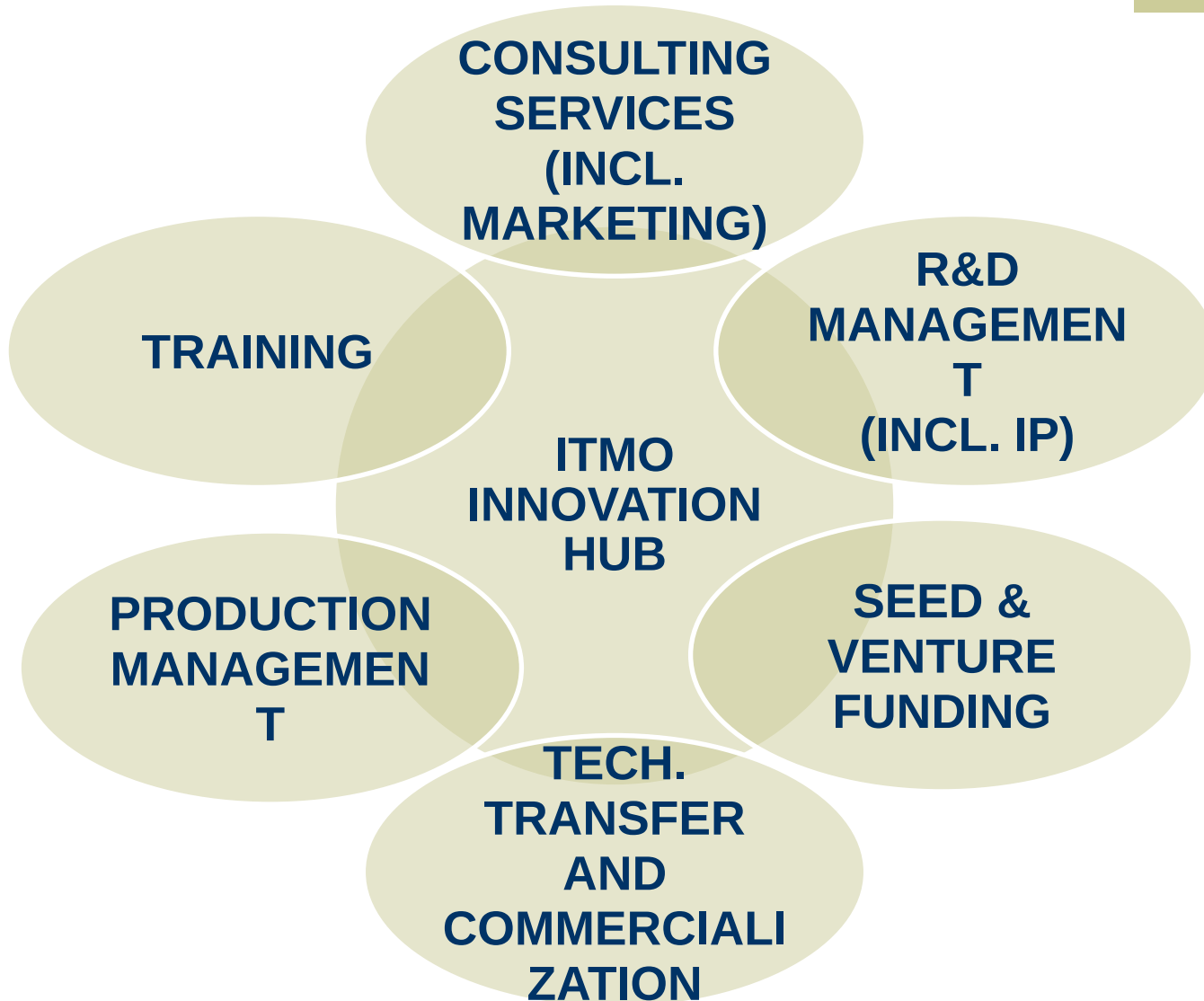
III. Universities-hubs:

- St.Petersburg National Research University of information technology, mechanics, and optics (ITMO)
- University of California, Los Angeles (UCLA)

IV. Partnership cost:

- a) USRF budget: 0,5 mln. USD , incl.:
 - * EWIC project – 0.342 mln USD
 - * CAIB project – 0.125 mln USD
- b) ITMO contribution: 1.6 mln USD

Model of University Innovation Hub



ITMO – Innovation Hub

ITMO being the Innovation Hub plays the following roles:

- ♦ **Research and education institution:** organization and implementation of R&D, running education programs etc.;
- ♦ **Consulting company:** provision of needed services to the third institutions (companies, organizations etc.) in partnership building (networking), fundraising (grants, seed, venture) and other ones within the project management activities;

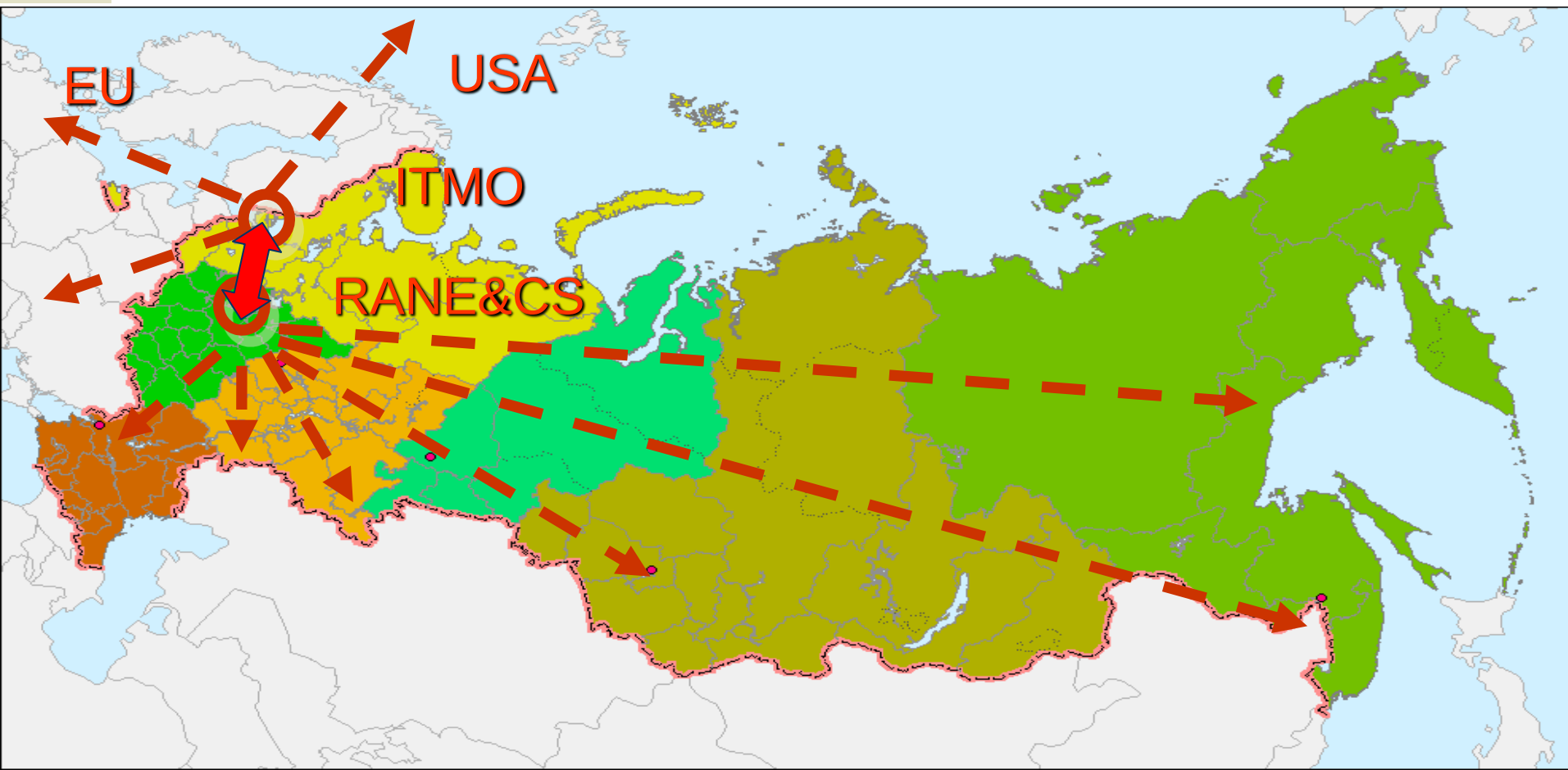
ITMO – Innovation Hub

continuing :

- ◆ **Owners/Founders of innovation infrastructure units:** provision of needed service to third institutions in technology transfer and commercialization of IP;
- ◆ **Manufacturing company:** organization and manufacturing of prototypes and products/services in cooperation (within the contracts) with third institutions

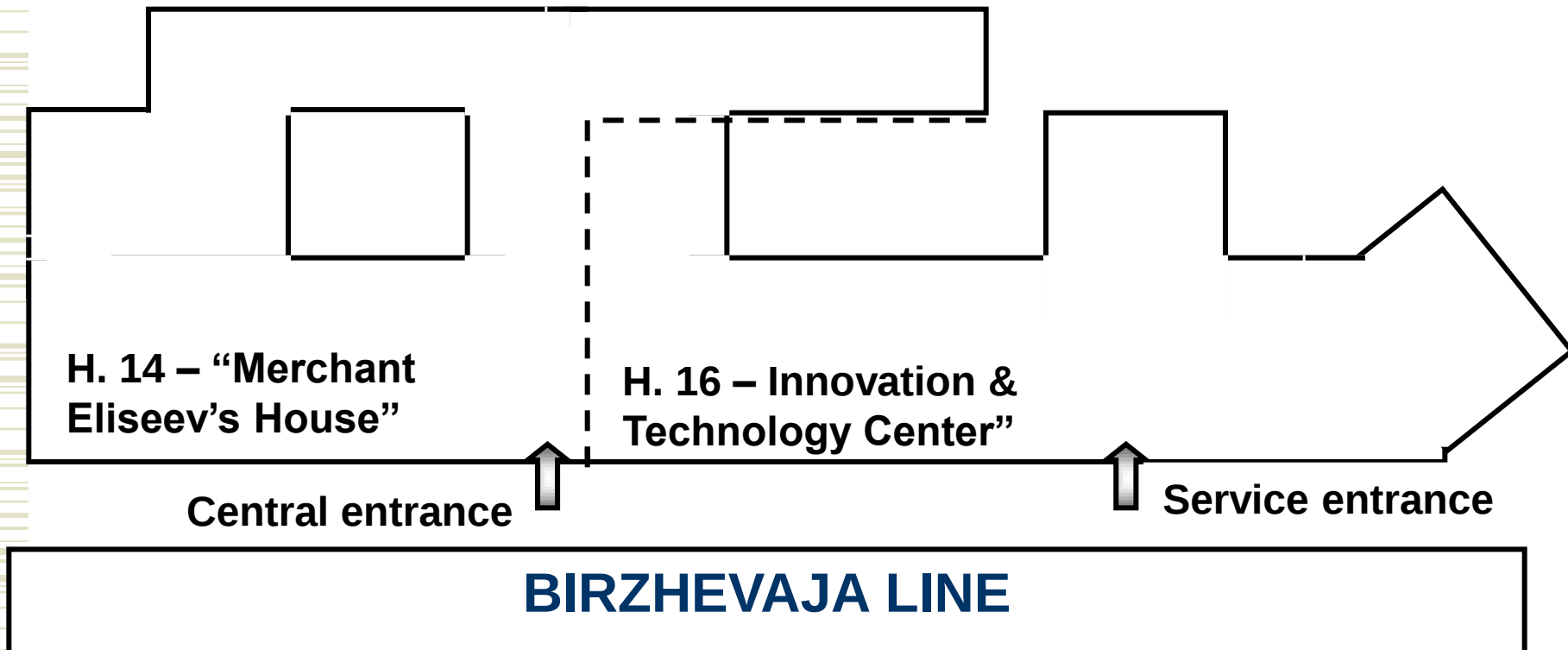
Networking and Partnership Development

Network of Innovation Hubs



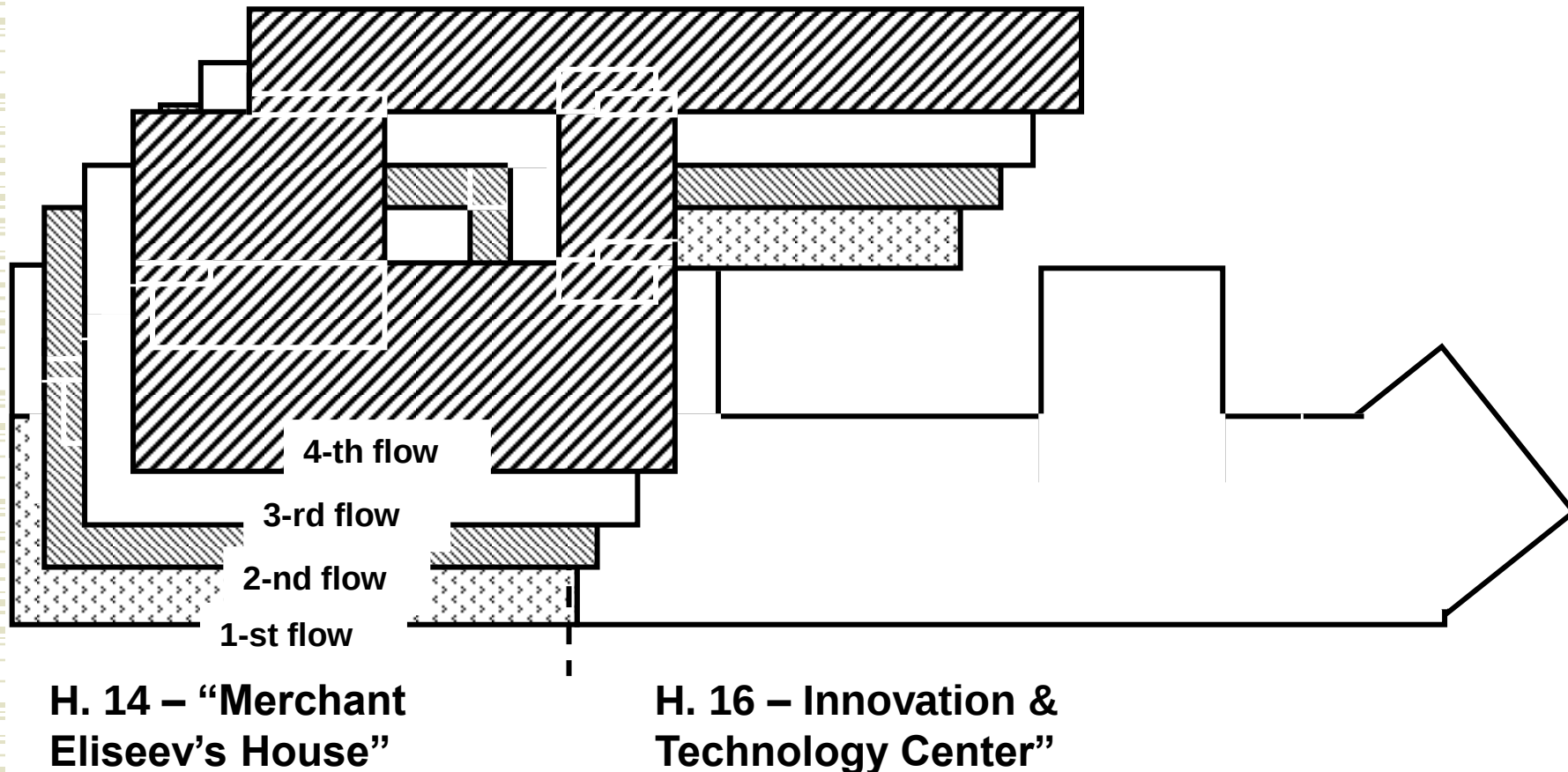
Innovation Infrastructure of SPbSU ITMO

Chart of the «Complex on Birzhevaja»



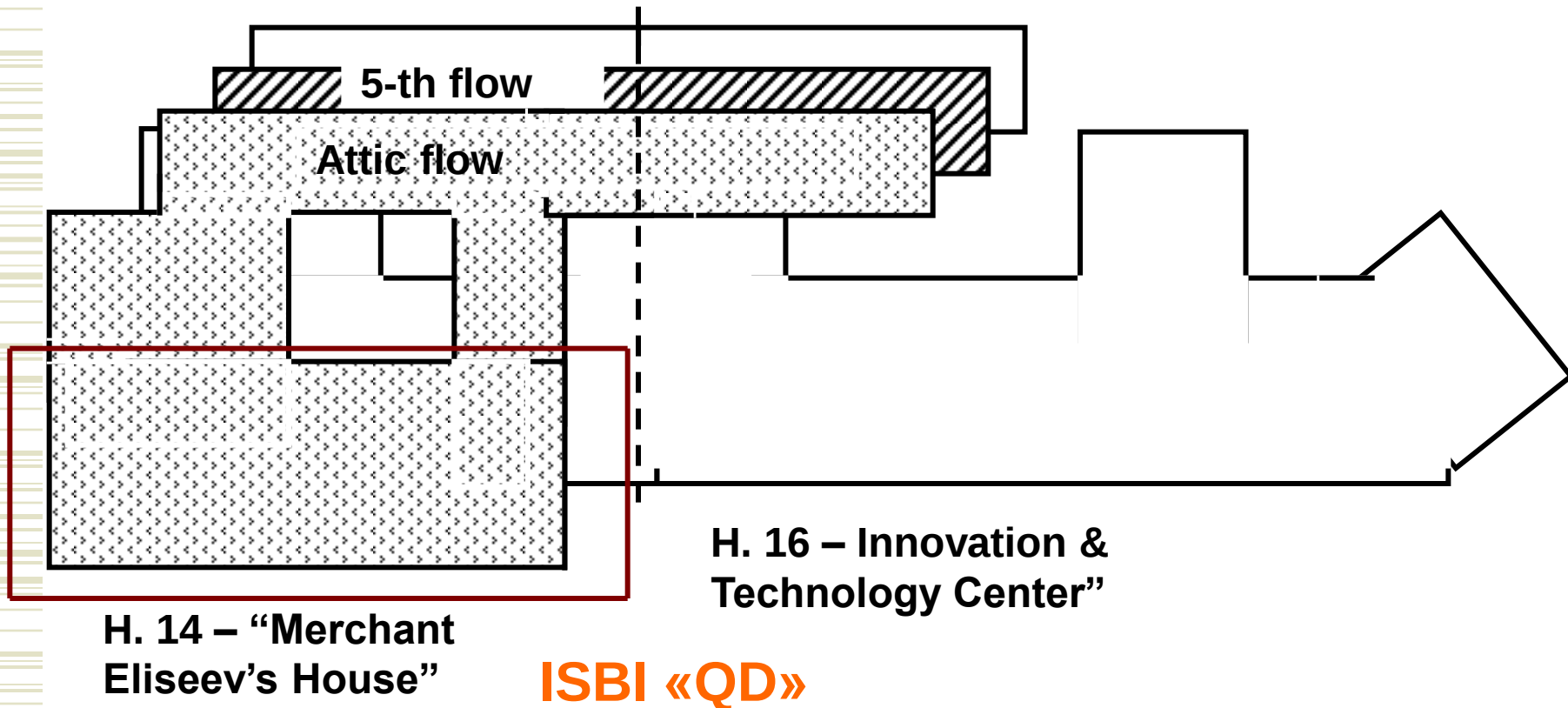
Innovation Infrastructure of SPbSU ITMO

Location of Education-and-Research Institutions in the «Complex on Birzhevaja»



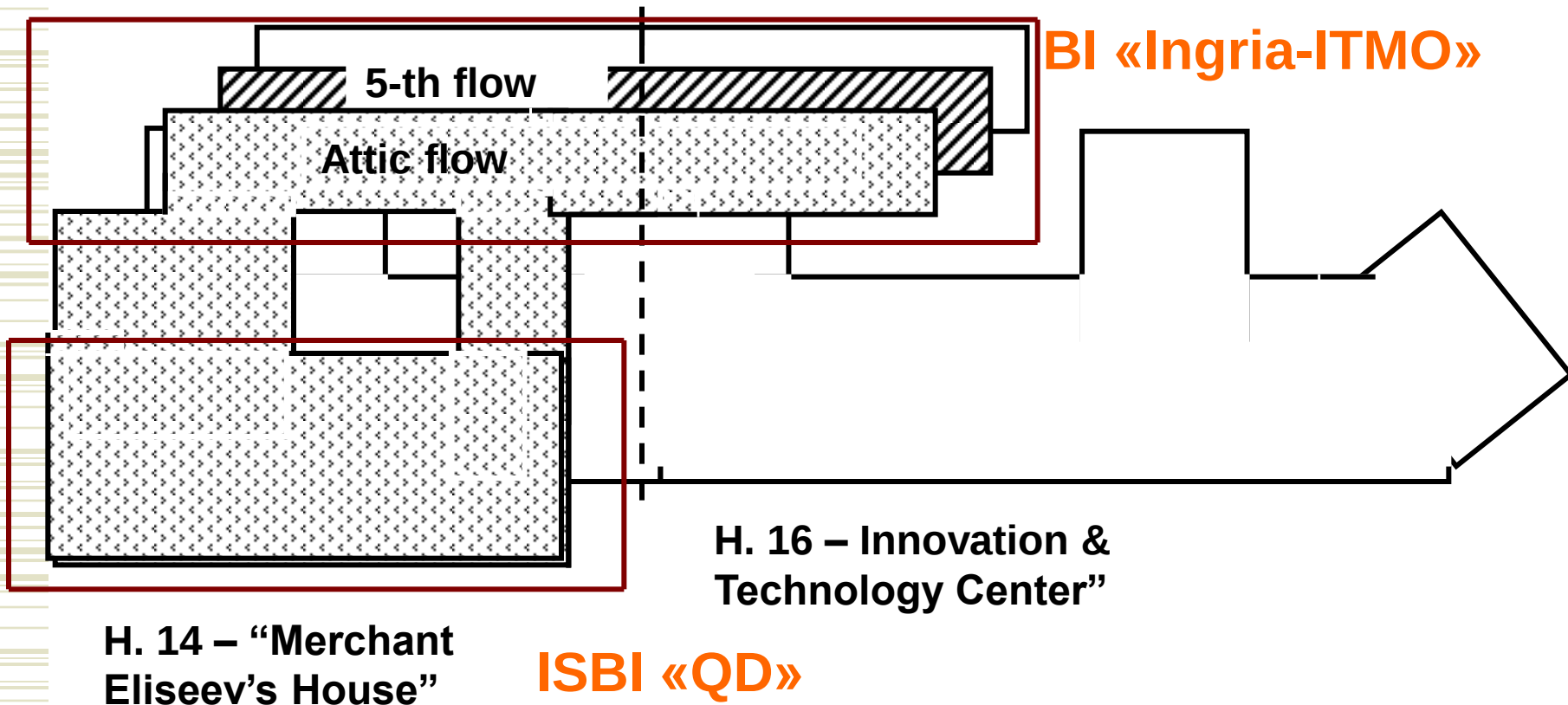
Innovation Infrastructure of SPbSU ITMO

Location of Business Incubators in the «Complex on Birzhevaja»



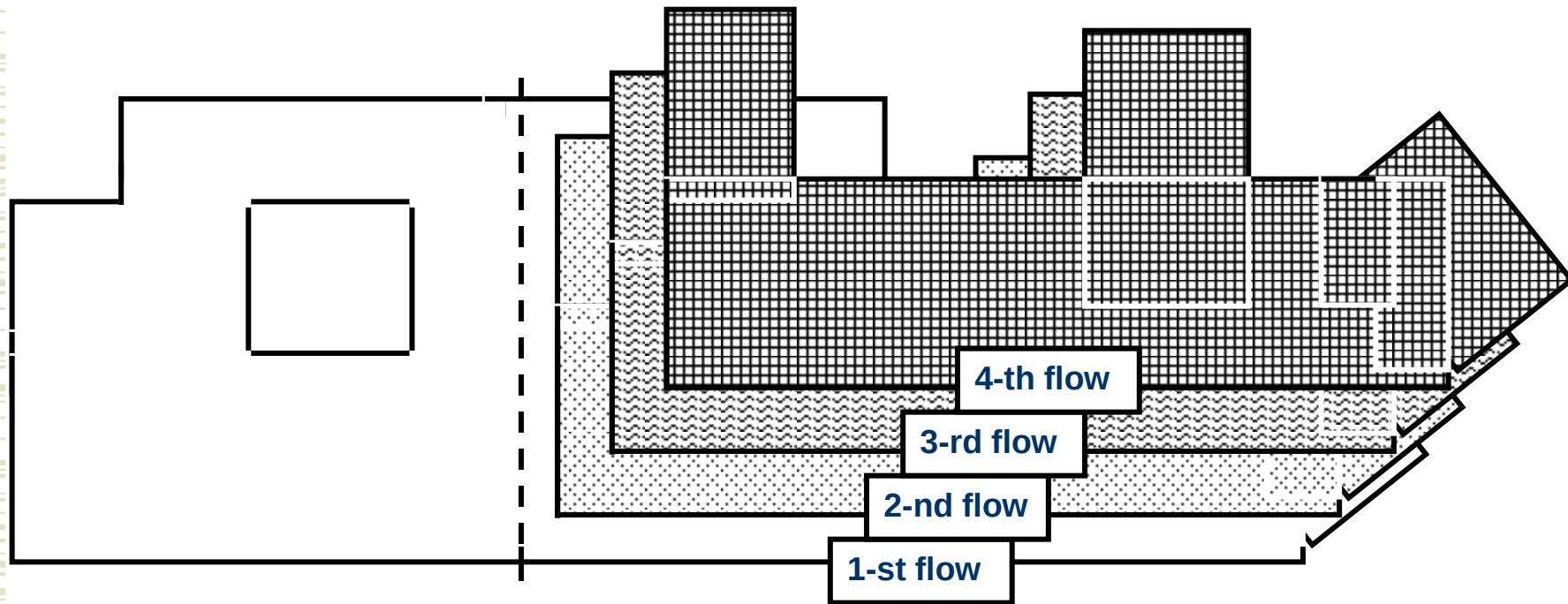
Innovation Infrastructure of SPbSU ITMO

Location of Business Incubators in the «Complex on Birzhevaja»



Innovation Infrastructure of SPbSU ITMO

Location of start-ups in the «Complex on Birzhevaja»



H. 14 – “Merchant
Eliseev’s House”

H. 16 – Innovation &
Technology Center”



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- Список партнеров и партнеров по развитию
- Информация о программах поддержки бизнеса

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Информационный стенд

Содержит различные объявления, включая:

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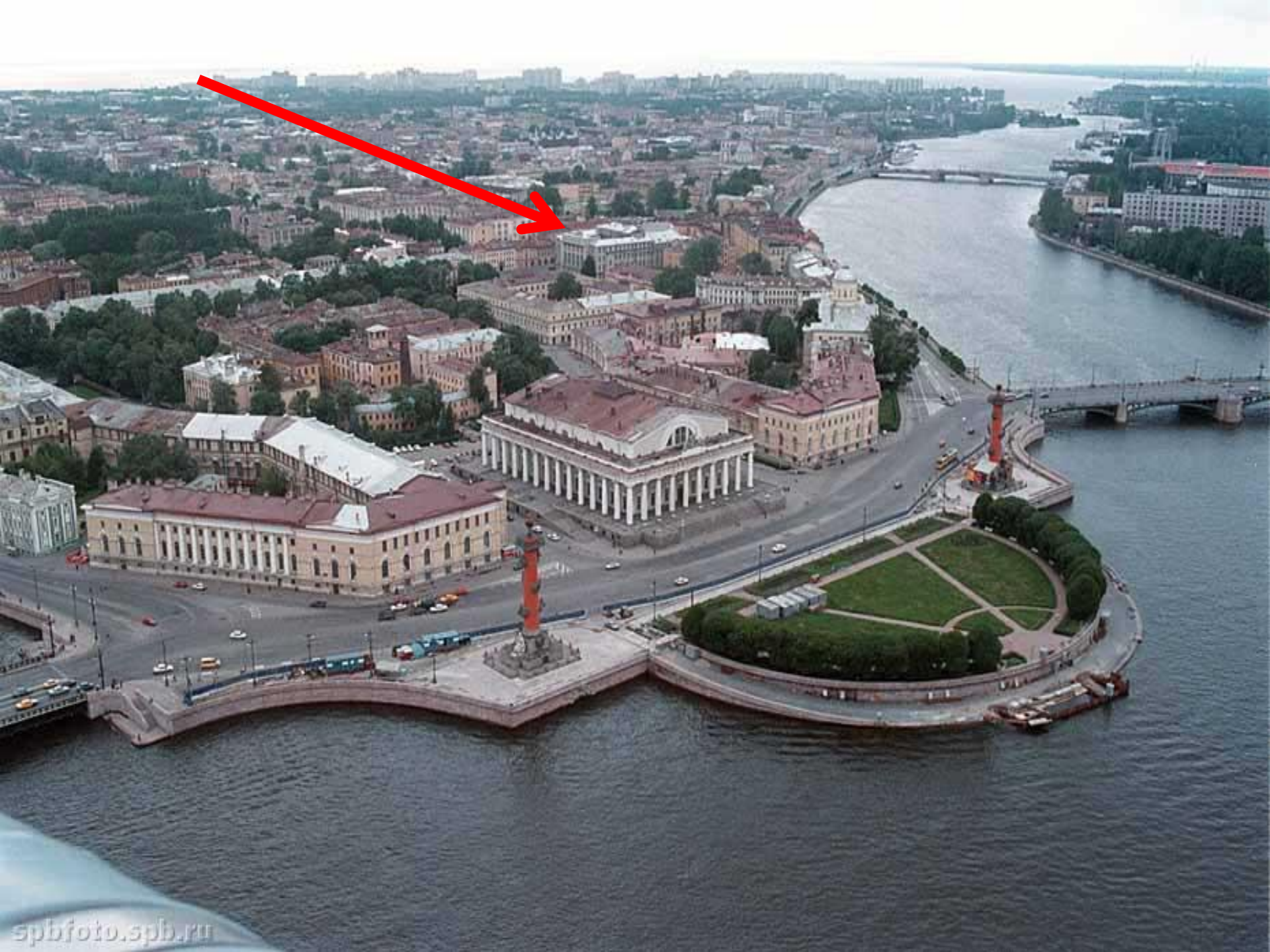












Thank you for your attention

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