RUSSIAN PRESIDENTIAL ACADEMY
OF NATIONAL ECONOMY AND PUBLIC ADMINITRATION
INSTITUTE OF EDUCATIONAL TECHNOLOGIES

Developing business thinking and skills for students with technical background through business simulations

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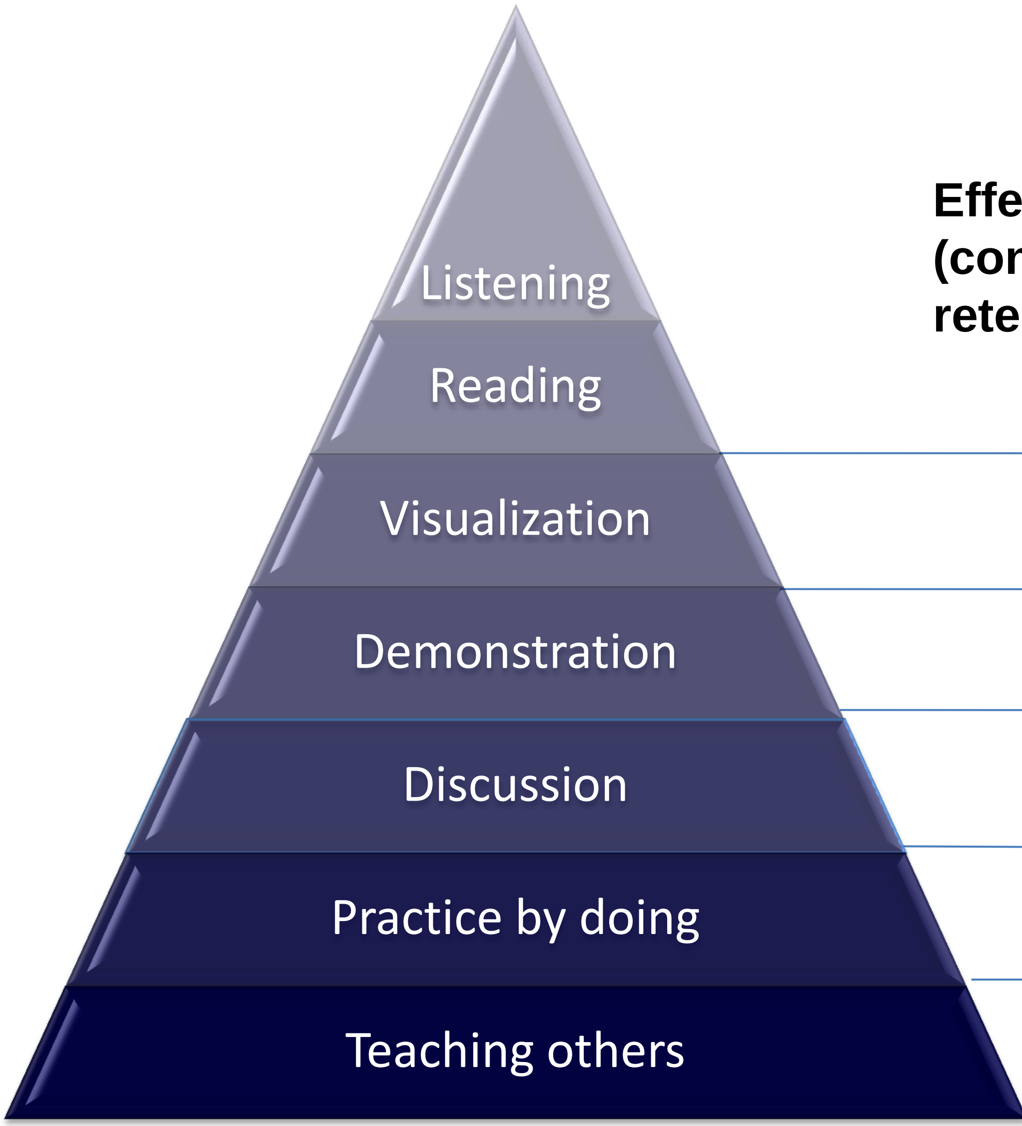
Educational technologies effectiveness (Learning Pyramid)



Effectiveness (content retention rate):	Educational technology:
10%	Lecture
20%	Presentation
30%	Demonstration
50%	Case-study
70%	Business simulation
90%	Teaching

Approach to education

«Learn by doing and analyzing experience»
John Dewey, David Kolb

Face difficulties	Realize a problem	Understand the problem	Find a solution	Implement the solution

Availability of information is no longer a limiting factor for education.

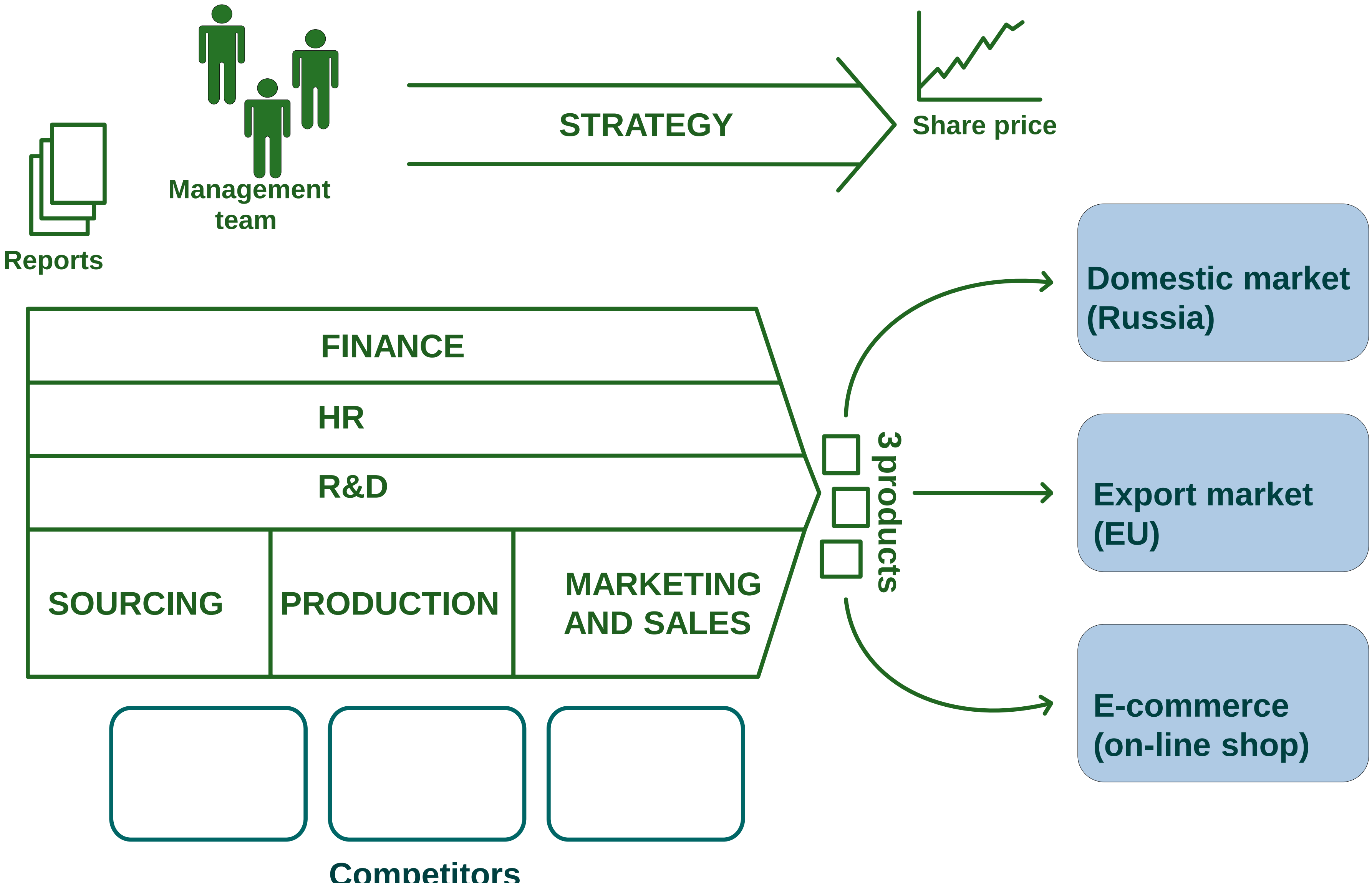
It is important to place a student in situations where he/she faces problems, in order to create the need for new knowledge or skill.

Business simulations in business skills development

1. Participants work in teams of 3-5 people.
2. Every team manages a virtual production company.
3. Participants analyze situation and make management decisions.
4. Teams compete directly with each other on the virtual market.
5. Economic/market environment and consumers' behavior is simulated by computer program
6. The winner is determined by the highest stock price (cumulative success index)

"Business simulation" is a complex computer program that models a commercial company, market and economy, like flight simulators for pilots models flight conditions.

The structure of the simulated company

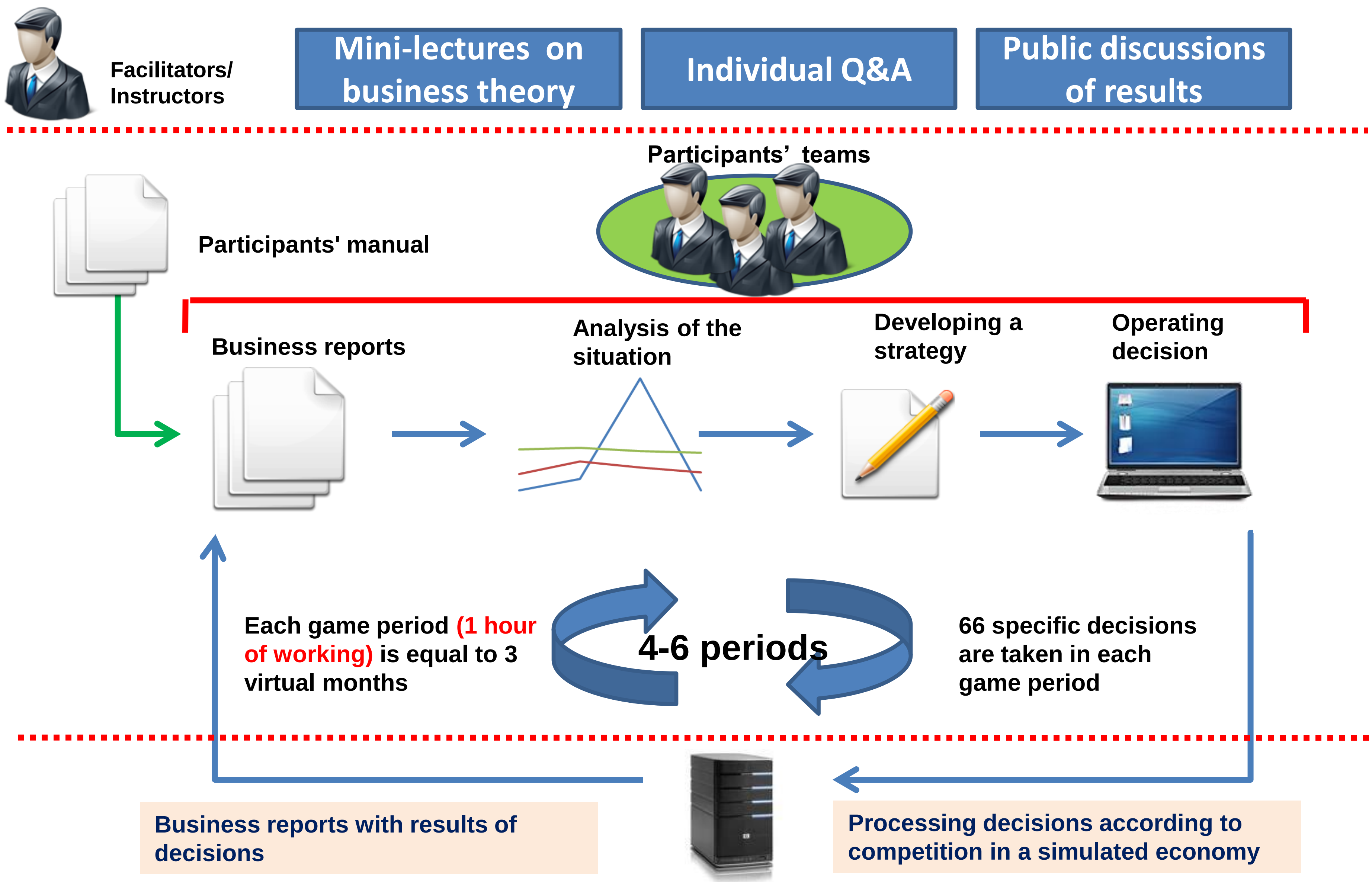


Typical decisions to be made by teams

The team's strategy is implemented through 66 decisions, including:

- Product Delivery
- Prices
- Advertising
- Assembly Times
- Product Improvements
- Research and Development
- Orders for raw materials
- Agents and Distributors
- Production: Machinery, Conservation
- Internet: Development and Ports
- Insurance Plans
- Number of Workers and Wages
- Financial Applications
- Management Budget and Dividends
- Information on Competitors and Markets

How business simulation works



Typical learning outcomes

Business simulations allow to develop the following core competencies:

1 **BUSINESS THINKING AND “BASIC BUSINESS LANGUAGE”**
(Analytical skills, decision making, general understanding of different business processes – finance, marketing, HR, production etc.))

2 **INTEGRATED and STRATEGIC BUSINESS VISION**
(Broad view on company strategy, understanding the market conditions and customer satisfaction factors)

3 **COOPERATION and COMMUNICATION**
(Personal and team work skills)

How typically business schools use simulations for their management students

an **part of course** - *demonstration/illustration* or *training*

separate workshop that *integrates knowledge* from different disciplines and functional areas

the **core of complex program** on strategy and management

Options for embedding simulations as part of curriculum

Problematization

SIMULATION | MODULE 1 | MODULE 2 | MODULE 3

Knowledge integration

MODULE 1 | MODULE 2 | MODULE 3 | SIMULATION

The basis of the program

MODULE 1 | MODULE 2 | MODULE 3 | MODULE 4

SIMULATION

CASES of using simulations in Russia for people with technical background

Rusnano-MIPT masters program

20 partic. / 3 days

Goal: Introduction to business realities, general business understanding followed by specialized courses of masters program on Tech business.

Participants of BIT contest

120 partic. / 5 weeks

Goal: General business understanding for further business plan development and implementation of their projects

Students of various Tech universities

200 partic. / 5 weeks

Goal: General business understanding

Typical structure of simulation-based workshop

Day 1

09.00

- Introduction and briefing – simulated market etc

10.30

- Company history analysis (together)
- **Decision Making** Quarter 1

13.30

- Lunch break

14.30

- **Decision making** Quarter 2

16.15

- Additional task on analytical skills

17.00

- **Decision making** Quarter 3

18.30

- Discussion on teamwork issues

19.00

Day 2

- **Decision making** Quarter 4
- Preparation of presentations (in teams) coached by instructors

14.00

- Обед

14.45

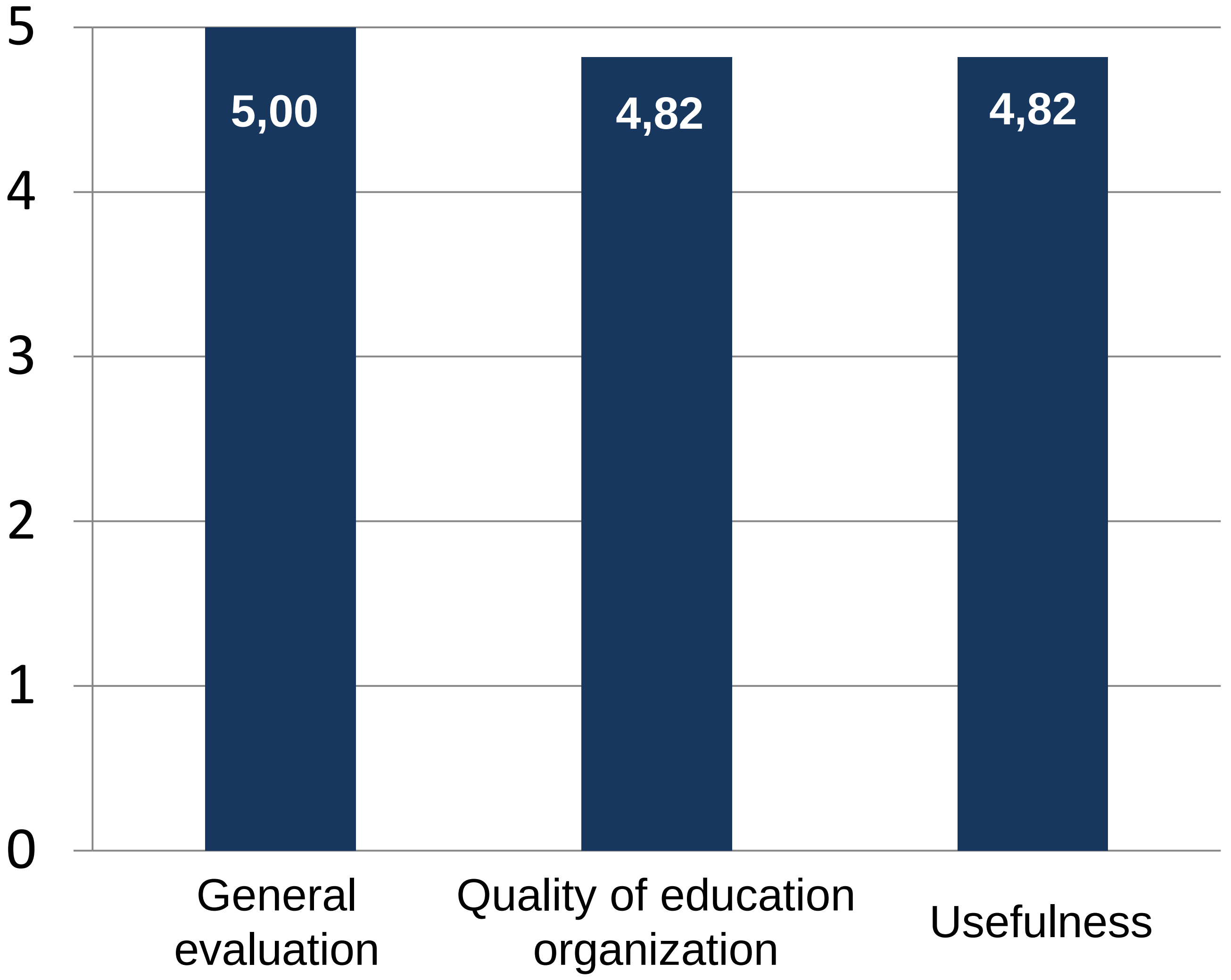
- **Team presentations** on strategy and results (annual report to Board)

17.45

- Final discussion and announcement of results

18.00

Feedback of workshop participants



Based on results of workshop in the Department of RUSNANO, MIPT, September 2011

Global Management Challenge
(on-line simulation-based competition example)

The largest Strategy and Management Competition in the world.

Founded in 1980 with more than 40 000 company managers participating in this event throughout the world annually. Over 5,000 participants from Russia. www.worldgmc.com

Innovation in training of management teams

The unique "simulator" that prepares managers and project teams to work in competitive environment and international standards of management. Accredited by the European Foundation for Management Development (EFMD) as a high-tech educational tool for managers.

Media and networking event

Visible event, that attracts attention to the problems of management and promotes participants and partners as innovative companies, investing in their HR.