DEVELOPMENT OF SCIENCE, TECHNOLOGY, AND INNOVATION IN UKRAINE

Oleg Khymenko
Deputy Director of Department - Head of Division
Department of Scientific and Technical Development

Presentation for Training in Innovation in the Eastern Partnership
within the framework of the project
“Science, Technology, and Innovation Cooperation Network for Eastern Partnership Countries”
(IncoNet EaP)

Minsk, BELARUS, 26th – 28th of May, 2015
Course of the Ukraine economy development through innovation

Partnership and Cooperation Agreement with European Community
- signing: June 14, 1994
- entry into force: March 1, 1998

Strategy of Ukraine's integration into the European Union
- Decree of the President of Ukraine from June 11, 1998 № 615

The choice of such a course meant that the main source of economic growth was new (scientific) knowledge and its dissemination for commercial use in the production

Cooperation Agreement with European Community
- signing: March 21, 2014 (political part)
- June 27, 2014 (economic part)
- Ratification: in progress (19 countries from 28 - done!)
Key features of science, technology, and innovation development in Ukraine

**Background**

- decline of R&D expenditures from 3% to 0.77% of GDP in 1990-2013
- low level of demand on R&D results from the side of the economy
- outflow of leading specialists to other sectors and emigration
- decline of R&D personnel by approximately 3 times during the same period
- worsening the situation with research equipment
- aging of research personnel

**Priority directions of the science and technology sector in Ukraine (till 2020)**

- basic research on contemporary challenging topics in the science and technology sector
- information and communication technologies
- energy and energy efficiency
- rational environmental management
- life sciences, new technologies on prevention and treatment of the most common diseases
- new substances and materials
Competitiveness of the national economy as indicator of development

Today the growth of GDP of developed countries by 75 - 80% is determined by innovations

Population, 2013

5,4 mln. Singapore

5,5 mln. Finland

45,4 mln. Ukraine

GDP per capita (US$), 2013*

Singapore: 54 800

Finland: 47 100

Ukraine: 3 900

GDP per capita in Singapore or the Republic of Finland is 12 times more the GDP per capita in Ukraine. The population of Ukraine is 8 times more than in these countries.

Rating of competitive economy of the World Economic Forum*:


Challenges of science, technology and innovation spheres of Ukraine

✓ membership in the World Trade Organization (since May 16, 2008)
✓ high-tech industry is the basis for economic and technological dominance
✓ necessary funds are provided mainly from extra-budgetary sources
✓ saturation of markets and global supply
✓ transnational and regional integration
✓ development strategies formation
✓ technological integration as global economic phenomenon
✓ military threat from neighboring country
Regulatory framework of science, technology, and innovation spheres

Laws of Ukraine


approved by Government’s Decrees

- Concept of the national innovation system development
- Priority R&D thematic areas for the period till 2015
- Medium-term priorities of innovation activity of national and sectorial levels till 2016
- Concept of reforming the system of funding and management of scientific and technical activities and action plan until 2017 to implement the Concept
- Order of formation of state order for training, research, academic teaching and working staff, training and retraining
- Order of formation and placement of state orders for the supply of goods for state needs and monitor their implementation

approved Ministry’ acts

- methods, practices, rules, forms, etc.
National Innovation System (NIS) - a set of legislative, structural and functional components (institutions) which are involved in the creation and application of scientific knowledge and technologies and determines the legal, economic, organizational and social conditions for the innovation process

Purpose of NIS - improve the competitiveness of national economy

Result of NIS development - improving human welfare and ensuring sustainable economic growth

adopted by Government’s act, June 17, 2009

NIS subsystems:
- government regulation
- education
- knowledge generation
- innovation infrastructure
- production

Main lines of NIS subsystems development till 2025:
- create a competitive domestic R&D sector and ensure its expanded reproduction
- development of innovation infrastructure
- create an effective system of state support to modernize the economy through technological innovation
- improvement of the innovation culture society
The result of innovation activity

Goal of Innovation Activities is Competitiveness Goods

Main bodies

№1 - Enterprise
- Competitiveness goods
- Innovation management

№2 - State
- Legislation care
- Infrastructure development
- Training

№3 - Society
- National-spiritual level development
- General cultural level, in particular, the culture of production

Innovation-friendly environment

Competitiveness
- international standards
- certification

Quality
- value added
- IPR
- overheads

Price
Innovation infrastructure in Ukraine

Innovation infrastructure - a set of enterprises, organizations, institutions, associations of any property form that provide services to support innovation activities (financial, consulting, marketing, information and communication, legal, educational, etc.)

Law of Ukraine “On innovation”

Innovation structure* - a legal entity of any legal form established pursuant to legislation (type A), or group of entities acting on the basis of an agreement on joint activity without creating a legal entity and no union contributions to participants (hereinafter - the contract on joint activity) (type B), defined sector of activity and type of operation, focused on the creation and implementation of science-intensive competitive products

*) The Government’s act from May 22, 1996 #549 “About approval of the establishment and operation of technology parks and innovation structures of other types”

- Research and technology parks: 16
- Innovation business incubators: 28
- Innovation centers: 25
- Centers of commercialization of intellectual property: 37
- Centers of science, innovation and informatization: 10
- Enterprises of implementation of research findings: 27
- Study, research and production centers: 35
- Investment innovative venture capital fund: 1
- Centers of innovation and technology transfer: 28

© Ministry of Education and Science of Ukraine, 2015
University as a key element of innovation activity increasing

TEMPUS Project "MERCURY" - Towards Research and Entrepreneurial University models in the Russian, Ukrainian and Moldavian Higher Education (# 144855-TEMPUS-2008-DE-JPHES)

Project: terms - January 2009 - January 2012; consortium - 14 members;
one of the project’s results - the book

Book’s structure:

Entry
Part 1. Let’s get acquainted
Part 2. What do we lack?
Part 3. Find the perfect model
Part 4. Stars of novation
Part 5. Thorns of innovation
Part 6. The burden of ovations
Part 7. Towards Tomorrow
Epilogue

© Ministry of Education and Science of Ukraine, 2015
Increasing innovation culture society

Creating a positive attitude to innovation in society:
- promoting innovation
- education creative thinking
- education of Civil Servants
- improving the quality of training on innovation management

Qualification -
availability of training, professional knowledge, skills and expertise that enable the person properly to carry out certain actions; level of fitness, skill, degree of readiness to perform work on a given specialty or position that the discharge is determined, class or other attestation category

Competence -
skills, knowledge, values, attitudes and personal qualities that are manifested in the behavior of individuals. Competence - skill demonstration

Leadership -
the concept of management, including change management, for which no matter the level positions, and the degree of influence of the person and based on the ideals of creativity, strategic thinking, trust in people, etc.

Leadership – to do the right thing, instead, management – doing things right...
Thank you for your attention!

Oleg Khymenko
Deputy Director of the Department – Head of the Division of Scientific and Technical Infrastructure
Department of Scientific and Technical Development
Ministry of Education and Science of Ukraine

10, Peremogy Aven., Kyiv-135, 01135, Ukraine
Tel.: +380 44 287 82 04
mob.: +380 67 443 34 32
e-mail: oakh@ukr.net
o_khymenko@mon.gov.ua
http://www.mon.gov.ua