



Ministry of Education and Science of Ukraine

# **DEVELOPMENT OF SCIENCE, TECHNOLOGY, AND INNOVATION IN UKRAINE**

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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, 26<sup>th</sup> – 28<sup>th</sup> of May, 2015



# Course of the Ukraine economy development through innovation

*(declared)*

**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



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\*:

Ukraine:	2014-2015 - <b>76</b> place, 2013-2014 - <b>84</b> place
Finland:	2014-2015 - <b>4</b> place, 2013-2014 - <b>3</b> place
Singapore:	2014-2015 - <b>2</b> place, 2013-2014 - <b>2</b> place

\*) World Economic Forum. The Global Competitiveness Report 2014–2015. [http://www3.weforum.org/docs/WEF\\_GlobalCompetitivenessReport\\_2014-15.pdf](http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf)



# 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

since 1991

## Laws of Ukraine

“On scientific and technical activity”, “On scientific and technical information”, “On scientific and technical expertise”, “On the priority directions of science and technology”, “On National Security of Ukraine”, “On Scientific Parks”, “On Scientific park “Kyiv Polytechnic”, “On special regime for innovation activity in technological parks”, “On innovation”, “On innovation activity priorities in 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 – a tool of Ukraine competitiveness

**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

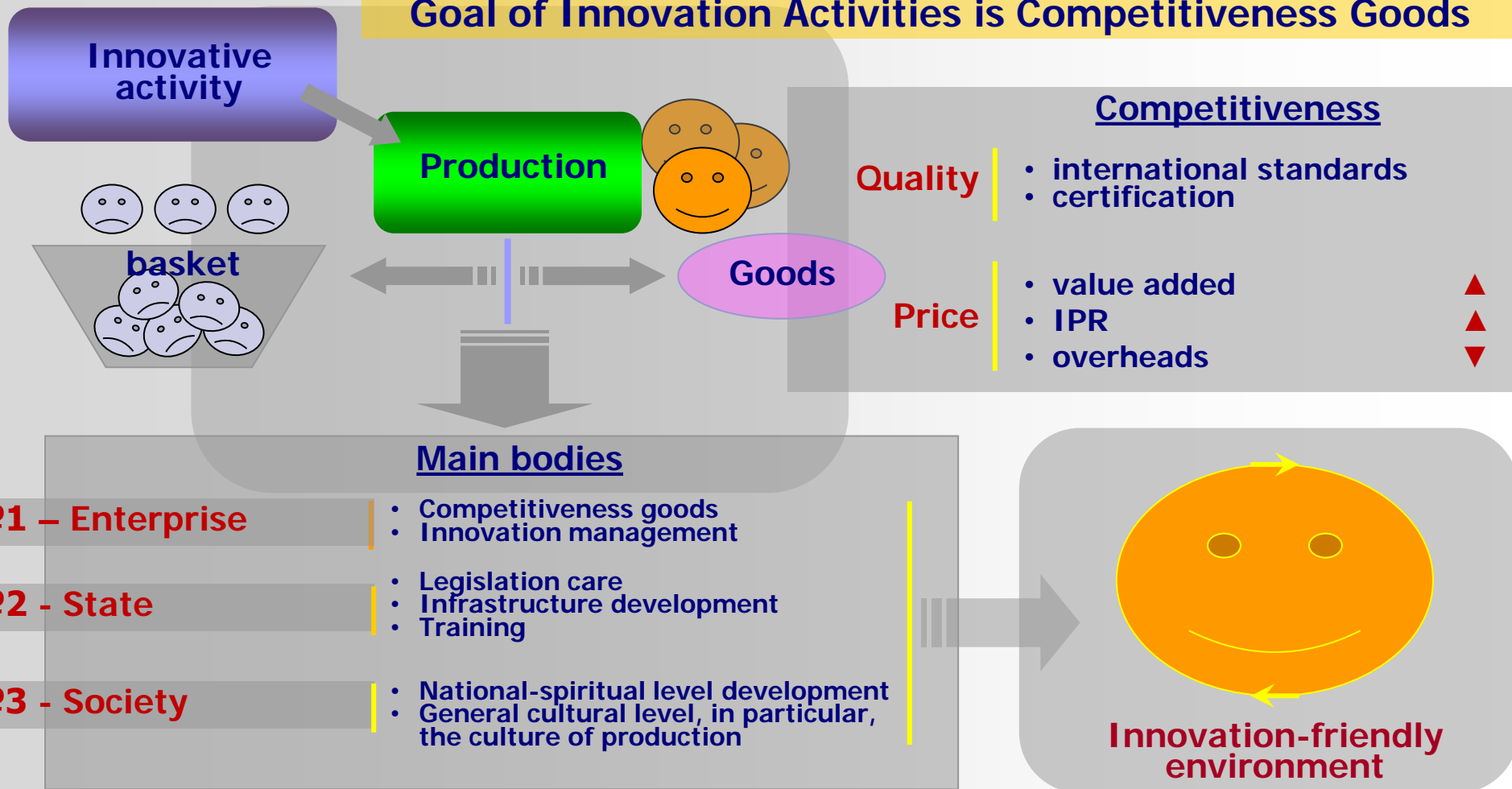
## Main lines of NIS subsystems development till 2025:

- 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









# 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*

<input type="checkbox"/> <b>Research and technology parks</b>	<b>16</b>
<input type="checkbox"/> <b>Innovation business incubators</b>	<b>28</b>
<input type="checkbox"/> <b>Innovation centers</b>	<b>25</b>
<input type="checkbox"/> <b>Centers of commercialization of intellectual property</b>	<b>37</b>
<input type="checkbox"/> <b>Centers of science, innovation and informatization</b>	<b>10</b>
<input type="checkbox"/> <b>Enterprises of implementation of research findings</b>	<b>27</b>
<input type="checkbox"/> <b>Study, research and production centers</b>	<b>35</b>
<input type="checkbox"/> <b>Investment innovative venture capital fund</b>	<b>1</b>
<input type="checkbox"/> <b>Centers of innovation and technology transfer</b>	<b>28</b>

\*) 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"



# 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:

synopsis

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





# 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!

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