

# R&I POLICY FRAMEWORK IN UKRAINE WITH REGARD TO S3

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## Context of innovation development in Ukraine during the independence years

- Negative dynamics of main economic indicators: the country have reached less than 70% of the GDP level of 1990.
- Negative structural changes ( the share of machine – building sector declined from 30% of industrial output in 1990 to 5.8% in 2015, while the shares of ‘heavy’ industries grew substantially during the same period)
- More than 30% of the total export are products of the ferrous metallurgy sector in recent years, only in 2014-2016 agricultural export surpassed export of ferrous metallurgy sector

# Strategy 2020

- President Petro Poroshenko announced his plan of reforms 'Strategy-2020' in 2014. It includes a number of different goals.
- The plan assumes that the GDP per capita will grow to 16,000 USD (in PPP),
- Ukraine will enter 20 top countries according to the 'Doing Business' Index and 40 top states according to the Index of Competitiveness and so on

## Key features of innovation in Ukraine in 1990s-2010s

- Decline of R&D expenditures from 3% to less than 0.7% of GDP in 1990-2015, including (0.66% in 2014)
- Worsening situation with bank's loans provision (more than 85% of innovation expenditures are made from own resources of companies)
- No specialized VCs
- Outflow of leading specialists to other sectors and to foreign countries
- Since mid-2000s, the share of graduates in natural sciences declined by one third, in technical sciences - by more than one fifth, while in humanities and arts grew by 5% and in social sciences, business and law growth reached 45%.

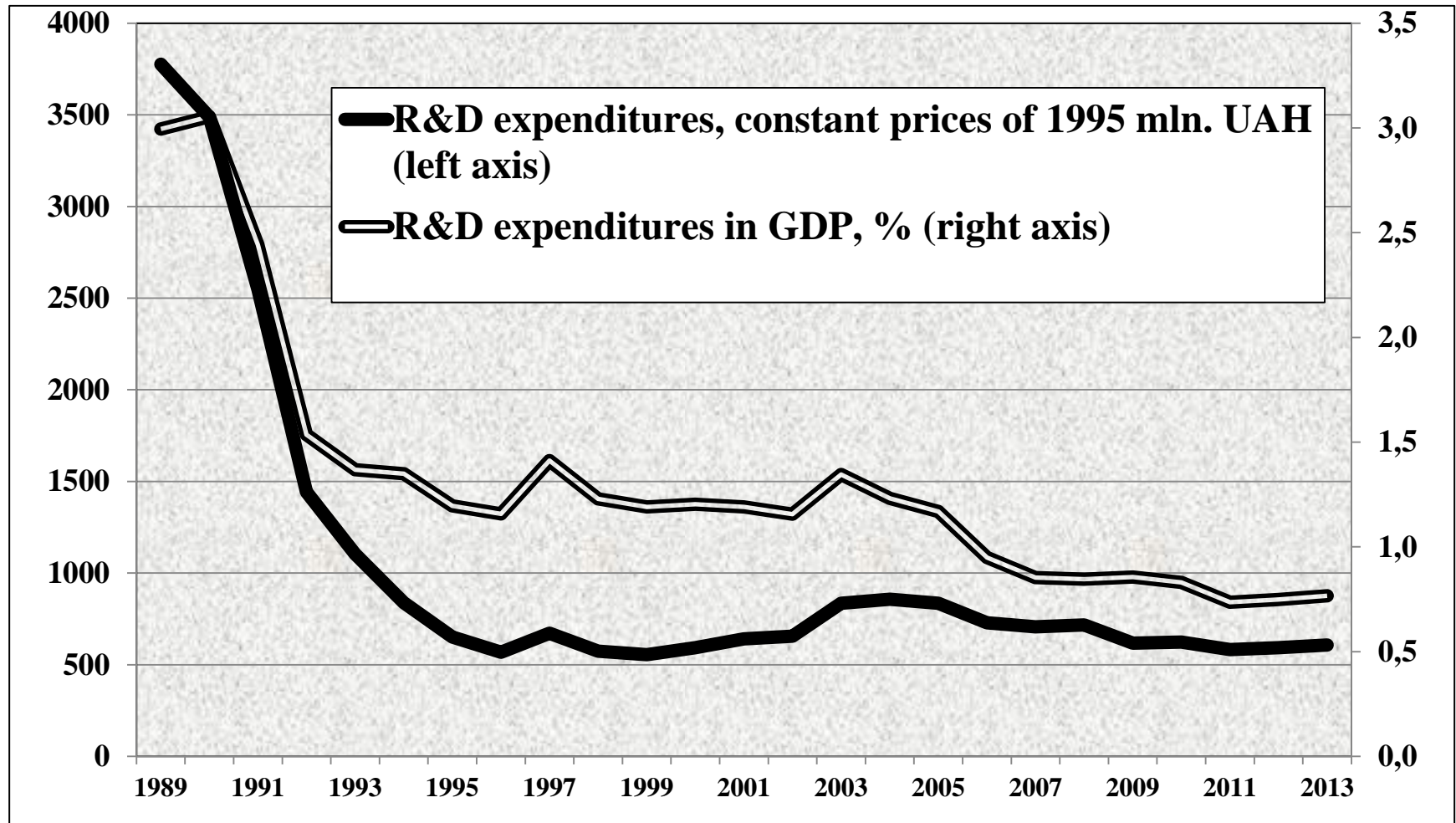
Financing of innovation from the state and local budgets 2000-2014, %of the total financing of innovation in industrial sector

<b>year</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2014</b>
<b>%</b>	2.4	0.8	1.2	5.0

Financing of innovation from the foreign sources  
in 2000-2014, %of the total financing of  
innovation in industrial sector

<b>year</b>	<b>2000</b>	<b>2010</b>	<b>2013</b>	<b>2014</b>
<b>%</b>	12.4	30.0	13.2	1.8

# Key parameters of R&D financing (the longest period of observation), 1989-2013, calculated by Dr. Igor Bulkin



# Results of CIS-type surveys in Ukraine

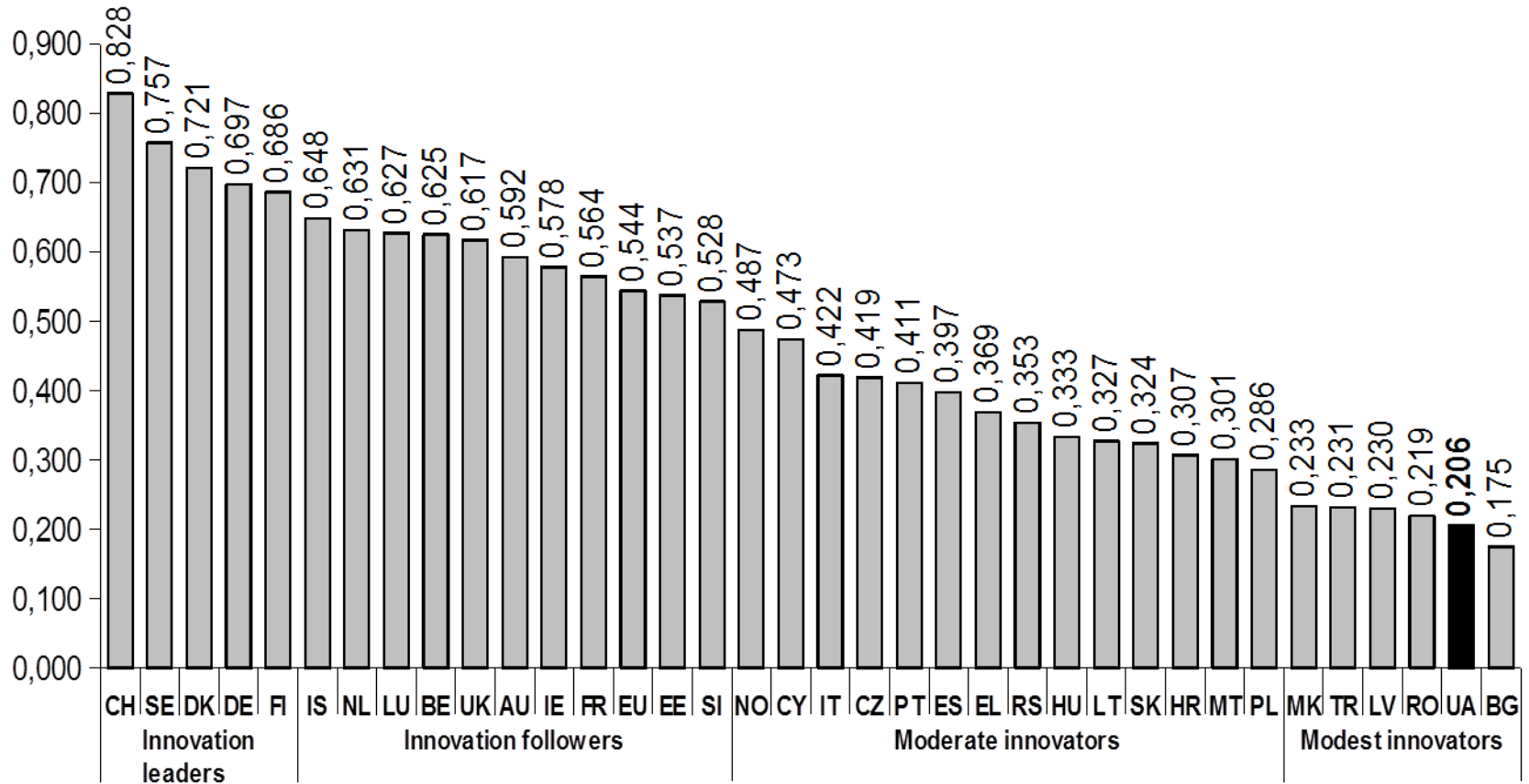
- 3 surveys were made in 2008-2014 (results of two of them are published)
- In 1990-2010s, the share of innovative enterprises in Ukrainian economy was between 6% and 20%, while in neighbouring Poland it was at least two times higher
- These figures correlate with all major indexes of competitiveness for national economies, which are used for international comparisons.
- **However, the level of innovativeness itself could not be an indicator of commercial success.**



# International co-operation

- Ukraine has bi-lateral agreements on co-operation in S&T with more than 50 countries.
- Ukraine signed an agreement on association with the EU Horizon-2020 program in March, 2015.
- But the country is not integrated strongly enough into production chains of the European companies, probably, excluding agricultural sector.

# Summary innovation index for EU, Ukraine and possible 'competitors', 2015



## Key problems of the modern Ukrainian S&T and innovation -1

- The key contradiction is that the government and business do not utilize existing S&T potential (which is shrinking every year), and does not create adequate conditions for transformation of research system to adjust it to new realities.
- Ukrainian legal system in R&D and innovation area is not harmonized, as some lobbying groups with the help of the Law on Budget could stop implementation of the most important clauses of the laws, which are aimed at support of innovations.

## Key problems of the modern Ukrainian S&T and Innovation -2

- R&D and innovation-related programs are numerous, and in the past it was difficult to find money for their realization. It is much better to have less programs that will receive better financing.
- Ukraine has very few American or EU patents, if compare with other countries of the region, even with countries of smaller size. Partially, it could be explained by relatively high costs of patenting in these countries but the state has no special program of support patenting abroad, despite the fact, that discussion about such program is still continuing in Ukraine.

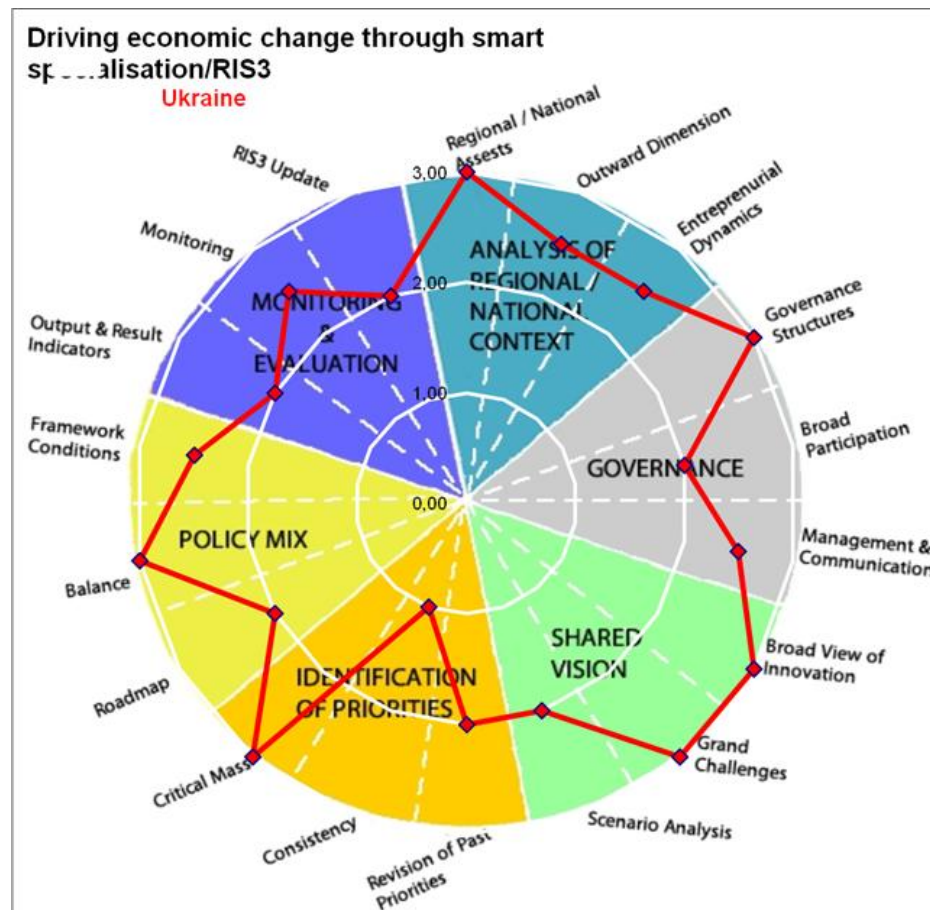
## Key problems of the modern Ukrainian S&T and Innovation -3

- State agencies that have to support R&D and innovation have overlapping functions, which are not clearly defined.
- The procedures of evaluation and selection of R&D and innovation projects are not transparent and fair for potential participants, some of them could receive substantial advantages thanks to their direct influence on the results of the competition.
- Support of specialized instruments and elements of R&D and innovation infrastructure are not very effective
- Low level of co-operation with foreign countries in R&D and innovation sphere

# On the other hand....

- Large European country (the second largest on territory after Russia) with population of more than 40 million people
- Relatively highly educated population (higher figures, than average for the EU countries), substantial part of knowledge – in a ‘tacit form’, not in ‘codified’ form
- Declaration of innovation development as a key priority at the national level
- The country has both scientific and industrial potentials in some areas (example of ‘Resource’ program proposition) for defining 3S Strategy

# 3S Wheel for Ukraine



# National context - Main developments and barriers:

- Legislation on innovation and S&T policy is not harmonized enough.
- General economic situation is complicated.
- Labour market is not sufficiently flexible. It is still strictly regulated and mobility of workforce remains low.
- Regional innovation and industrial policies are underdeveloped.



# Governance - Main developments and barriers:

- Lack of cooperation between different actors of innovation system remains a serious problem.
- Ukrainian state is not very active in promotion of cooperation between key internal and external actors, including EU partners.
- Low involvement of Ukrainian companies into joint scientific and innovation projects.
- R&D 'assets' are viewed largely as a liability. This is partly the result of structural and organisational mismatches, and partly because of their low immediate relevance to the realities of market economy.

# Shared vision - Main developments and barriers:

- There are still differences between main actors on the mechanisms of promotion of innovation and R&D.
- Part of the government, notably, Ministry of Finances, is not ready to introduce supportive measures for innovation.
- Two other ministries – the Ministry of Economy and the Ministry of Education and Science - could not agree some positions in the new version of the Law on Innovation and some other legal acts.
- Business sector is not actively involved in discussions on the innovation issues.

# Identification of priorities - Main developments and barriers:

- In fact, in recent years these laws were not implemented in a proper way.
- Other problems are related to very broad definitions of priorities and lack of financial resources for implementation of corresponding government programs. It is important to focus on specific areas, which have high potential for development.
- Co-ordination between innovation and industrial policies in priority settings at the state and, especially, regional levels remains poor.

# Policy mix - Main developments and barriers:

- Financial barriers on the way of innovation remain the most important obstacle on the way of innovation.
- Different measures do not articulate the need to attract both national and foreign financial resources. These measures have to include initiation of the special state programs, creation of venture funds, strong guarantees for intellectual property rights protection.
- Situation with business climate remains complicated. It is very important to improve it, and to create conditions, where entrepreneurs will be willing to sell significant part of their shares to outsiders and also they will be willing either to be acquired or to participate in public offerings.

# Monitoring and evaluation - Main developments and barriers:

- Comprehensive system of monitoring and evaluation in S&T and innovation in Ukraine has not been created, despite there is a special state law on evaluation in S&T in Ukraine.
- Key problem of evaluation at the middle level are non-transparent procedures and use of 'administrative resources' for obtaining required results.
- Evaluation is not focused on output indicators, while resource indicators are playing key role in decision-making processes.

# Conclusion

- It is evident that the implementation of 3S concept in Ukraine will face a number of barriers but the country has to find its place in a quickly changing world. The right selection of future specialization, based on existing potential and the vision of the future of the country, is critically important for its development.
- There is a decision of the Vice-Prime Minister of Ukraine V. Kubyv to arrange a special meeting of representatives of business, science, higher education sector and government officials in September, 2016 to discuss the possibility of development of 3S Strategy for the country.

**Thank you for your attention**