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**Harmonization of the mechanisms of  
the Ukrainian –EU innovation strategy:  
a view from Ukraine**

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



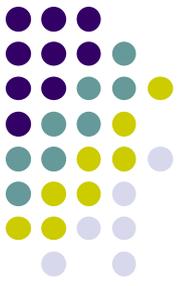
- Negative dynamics of main economic indicators: the country have reached approximately 70% of the GDP level of 1990
- Negative structural changes ( the share of machine – building sector declined from 30% of industrial output in 1990 to 11% in 2013, while the shares of ‘heavy’ industries grew substantially during the same period)
- More than 30% of the total export are products of the ferrous metallurgy sector in recent years
- Complicated political and economic situation with declining share of GERD in GDP (less than 0.8% in 2013-2014)



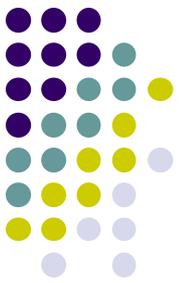
# On the other hand.....

- 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
- Agreement on association with the EU is signed

# Key features of the research system of Ukraine



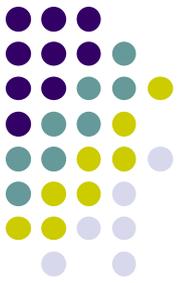
- Fragmentation of the national R&D, weak ties with the industry (growing gap due to decline of 'branch sector')
- Relative decline of industrial research, especially in national companies, main source of innovation – foreign companies
- Weak R&D in universities and concentration of research in the system of the state –sponsored academies of sciences
- Support of specialized instruments and elements of R&D and innovation infrastructure are not very effective, as the demand for R&D results and innovation within the country remains relatively low.



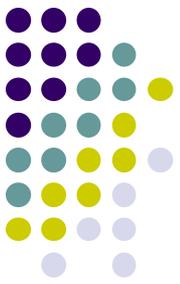
# Changes in R&D system

- Transformation of formal institutions (creation of new universities and research institutes, including key laboratories)
- Changes at the governmental level, including changes of functions of different ministries
- Aging of research and engineering communities
- Competition for talented youth from the side of other countries
- Brain drain to other sectors, especially to banking and finances, and to the foreign countries

# Brief history of co-operation with the EU



- In 2005, Ukraine and the EU have signed an Action Plan, which also contains important references on the need to develop co-operation in R&D.
- In early 1990s, during the Third Framework Programme (FP3) an agreement on partnership and collaboration in R&D was signed between Ukraine and the EU.
- New agreement on co-operation in S&T was signed in recent years
- Agreement on association - 2014



# Participation in FP-7

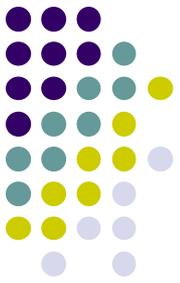
- Success ratio for applications to the FP7, measured by the number of entities retained for funding in relation to the number of evaluated ones (for Ukraine 20.2%) is similar as for other EECA country and did it not differ significantly from the average figures for the whole FP7 (22.58%) but is higher than for the new EU members (18.70%).
- Success ratio measured by the expected funding to the proposed funding for Ukraine (12.02 %) is significantly lower than the average for all participating in FP7 (20.66%) but is comparable to the rate for the new EU members (13.06%)

# Main problems on the way of R&D co-operation between Ukraine and the EU



- Legal
- Administrative
- Economic ( Financial)
- Differences at the level of 'Individuals' (Human capital qualities)

# Legal base for innovation development and co-operation with the EU



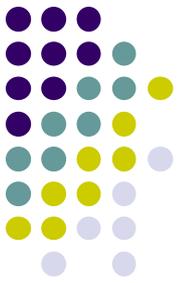
- Ukraine still needs assistance in updating its legal system to stimulate R&D and innovation. The country remains, probably, the only state in Europe, which does not use indirect instruments of support of innovation.
- Revision of different laws is under way and the legal advice from the side of the EU experts is important in this process

# Legal problems in relations between Ukraine and the EU

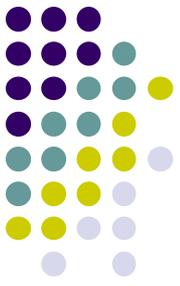


- ‘Assymetry’ in visa regime with different attitude to this problem in different EU countries (Last changes in visa regime have not included scientists as a special group)
- Mutual recognition of diploma on higher education
- IPR on new inventions, which are made jointly by the Ukrainian and the EU partners
- Programs (propositions) for Ukraine are ‘worse’ than programs (propostions) for candidate countries in 1990s-early 2000s, for instance FARE (funds access, scale and so on, especially, if compare with ‘small countries’ – Estonia and others).

# Administrative problems



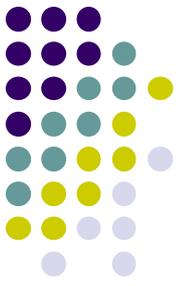
- High level of centralization in Ukrainian R&D system: administrative power of rectors and directors of the research institutes is ‘excessive’ (full control over all financial transactions, visits abroad and so on)
- System of the evaluation of research results with clear domination of ‘internal’ publications as indicators of success
- The procedures of evaluation and selection of R&D projects are not transparent and fair for potential participants.



## Administrative problems (continued)

- Specific internal regulations for doing research, when balance of interests is shifted in favor of the research organizations, not individual scientists or groups of researchers
- Problems with creation of start-ups, especially at the universities
- Different standards in banking regulation, book-keeping and audit

# Economic (financial) problems

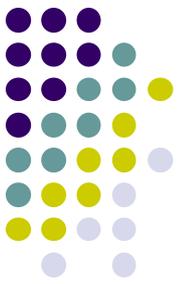


- Generally low level of financing (expenditures per researcher is more than two times lower, than in China): no new equipment, weak incentives for research work
- Low level of financing of international activities from the side of the Ukrainian state (average financing of international projects from the Ukrainian side was approximately 10 thous. per year in recent years)
- Ukraine does not pay its contribution to international organisations in many cases
- Taxation of international projects (VAT and customs duties)

# 'Individual' (human capital) qualities



- Poor knowledge of foreign languages
- Lack of international experience in many research centres and universities
- Lack of international contacts and intention to develop such contacts, especially from the side of some administrators
- Age structure of Ukrainian scientists (high level of old scientists) – no intention to mobility and extra activities in many cases



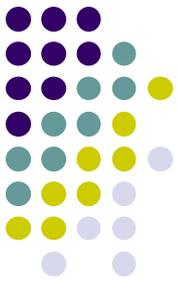
# Conclusion

- Level of co-operation between Ukraine and the EU remains relatively low, bearing in mind the size of research communities.
- In many cases, formal agreements have no proper financial support from the side of Ukrainian authorities
- Ukraine needs help in:
  - Updating its legal acts and administrative procedures, related to innovation and R&D
  - Creation effective instruments for information exchange
  - Assistance in evaluation and selection processes



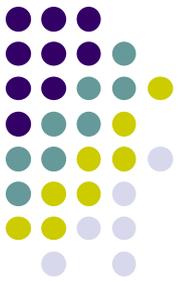
# Conclusion (continued)

- Training of specialists, who are involved in co-operation activities
- Assistance in transformation of national statistics and inclusion to the schemes, associated to comparative analysis of R&D and innovation policy ('scoreboards' and similar instruments)



## General conclusion

- Reforms of R&D sector have to be an integral part of general economic transformation. In the economic sphere, a key precondition for successful changes in R&D is the switch to an intensive growth policy and structural changes, which have to be based on innovation
- EU could contribute to the reforms in a broad sense by stimulating introduction of new standards in economic and legal spheres



**Thank you for attention !**