

Clusters as platforms for cooperation between science and business

The workshop organized in Poland in the framework of the project “Clusters as platforms for business-research (B2R)/research-business (R2B) relations” implemented under Visegrad Grant No. 22030333 aimed to present and discuss identified business-research cooperation models in clusters as a basis to work out project's recommendations in the form of roadmap for possible actions targeted at deepening cooperation between science and business undertaken by different actors, especially public administration, cluster coordinators, and scientific units.

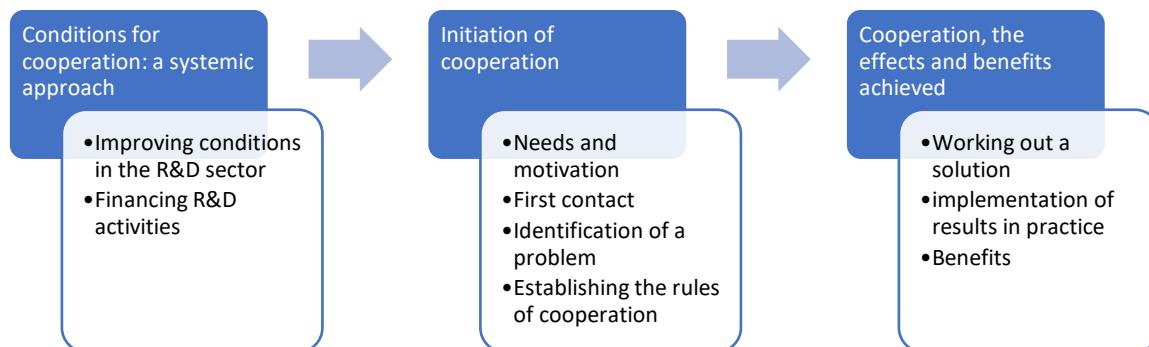
Actions that can be taken to deepen cooperation between science and business are summarized in a table divided into three parts. Each part relates to a separate stage, starting from creating the appropriate conditions for establishing cooperation, through its initiation, to its implementation.

The starting point was consideration of the appropriate environment for establishing cooperation between science and business. Creating such conditions includes providing incentives to start cooperation and limiting barriers, the overcoming of which could require too much input in relation to the expected results. One of such conditions is enabling cluster organizations to use various support programs. First of all, there must be a wider awareness of what a cluster is and what legal forms it may take. The instruments identified at this stage include, for example, assistance in applying for funding from the European Commission, grants for joint projects stimulating cooperation between enterprises and scientific institutions.

The next stage is the initiation of cooperation. Establishing partnerships between business and science is difficult due to completely different organizational structures (difficulty in reaching decision-makers in science sector institutions), as well as due to beliefs hindering cooperation on both sites (business and science). On the one hand, the scientific institutions are convinced about the small possibilities of conducting research and development works by SMEs, and on the other - enterprises believe that the costs of such cooperation are very high. Therefore, the initiation of contacts and the elimination of stereotypes is a factor that often determines the success of the partnership. The support offered at this stage may focus, for example, on the organization of science-business networking meetings. The proposed instruments are: networking meetings, as well as typical promotional activities, such as fairs, science days, innovation festivals, etc.

Further stages of cooperation include joint development of a solution, and then its implementation in practice. In order for the cooperation to be effective, it is advisable to employ a person responsible for implementation in the team and a person responsible for mediation and resolving possible conflicts. An instrument that can play an important role is the creation of special purpose vehicles in science sector institutions operating within a cluster organization. They should be managed by people with extensive business experience.

The activities presented below have been assigned to the three stages discussed and to the stakeholders involved (entities that should undertake these activities).



Stage I - Conditions of cooperation

Stakeholders responsible for action	Action / measure
Public administration	Employing field experts who could supervise large sectoral projects as a "substantive project supervisor"
Public administration	Delegating to cluster organizations experts who have experience in developing applications for co-financing for R&D&I projects in programs financed directly by the European Commission (e.g. Horizon Europe)
Public administration	Developing a system of tax reliefs for R&D activities conducted in consortia of research units and enterprises
Public administration	Building international consortia
Public administration	Implementing instruments enabling the identification of the needs of the three sectors
Public administration	Adapting rules for granting state aid to the functioning of consortia of entities from the science sector and enterprises in R&D&I projects
Public administration	Reducing the risk related to taxes in jointly implemented projects (VAT)
Public administration	Launching programs dedicated to science-business cooperation (the POMOST program) consisting of three components: 1) Promotion of good practices, 2) Promotion of cooperation leaders, 3) Financed science-business cooperation (e.g. following the model or using the FENG program - European Funds for the Modern Economy).
Public administration & science sector	Creating systemic regulation for implementing contracts with scientists at universities, encouraging scientists to implement cluster projects within universities
Public administration & science sector	Adopting rules on intellectual property rights at universities, providing greater opportunities to protect intellectual property for scientists implementing R&D projects with clusters
Public administration & science sector & cluster manager	Using the sharing economy concept to stimulate science-business cooperation
Public administration	Conducting an information campaign aimed at making a wide range of

& cluster manager	stakeholders aware of what a cluster / cluster organization is
Cluster manager	Preparing a database of domain experts who could evaluate applications for co-financing according to thematic areas

Stage II - Initiation of cooperation

Stakeholders responsible for action	Action / measure
Cluster manager & Public administration	Organizing science - business networking meetings (in the formula of substantive meetings related to networking); e.g. brokerage events, innovation days
Cluster manager & Public administration	Promoting and explaining the benefits of cooperation between units from the science sector and enterprises
Cluster manager	Initiating cooperation by directing inquiries about the willingness to solve a specific research / technological problem to all cluster members and forming task groups around topics. After selecting the interested parties - signing the NDA and closing the group of associates.
Cluster manager	Building awareness of the sharing economy in a cluster organization - inviting people to take advantage of joint investments
Science sector	Adjusting the indicators of periodic appraisal of employees of science sector institutions to introduce greater motivation to cooperate with business
Science sector	Decentralizing decisions made in science sector institutions, e.g. through special purpose vehicles dedicated to cooperation
Science sector	Reducing overheads on fixed / administrative costs in projects commissioned by cluster enterprises
Science sector	Promoting greater interdisciplinarity in science and cross-industry cooperation
Public administration & science sector	Animating contacts with the external environment
Public administration & science sector & cluster manager	Promoting good cooperation practices (science, local government, business)

Stage III - Cooperation and its results

Stakeholders responsible for action	Action / measure
Public administration	Providing a person responsible for mediation, resolving possible conflicts
Public administration & science sector & cluster manager	Ensuring parameterization of strategic goals (at the level of each type of entity participating in the cluster cooperation)
Cluster manager	Creating agreements that clearly defines the principles of cooperation, tasks and benefits for each party
Cluster manager	Promoting the achievements of cluster companies outside the cluster - building credibility of their activities
Science sector	Establishing self-financing special purpose vehicles managed by people with extensive business experience at universities / research institutes. The

	purpose of the activities of these companies would be to identify research works with commercialization potential and help in the commercialization of research results, e.g. through spin-off companies.
Science sector	Organizing working meetings, thanks to which there is an increase in trust between cooperating parties
Science sector	Employing a person responsible for the implementation in the team
Science sector	Undertaking interdisciplinary approach on the part of the university
Science sector & enterprises (cluster members)	Creating conditions for greater emphasis on the implementation of university R&D results and applications to the industry
Science sector & enterprises (cluster members)	Creating conditions for commercialization as a key path to success in science-business cooperation
Science sector & enterprises (cluster members) & cluster manager	The aim of the science-business cooperation within clusters should be putting Polish products / technologies at the top of global competition. It should be the most important indicator of the effectiveness of science-business cooperation within clusters.