

and business development expertise. Third, it provides a liaison with the local entrepreneurial ecosystem as well as a due diligence process for potential investors for assessing the level of risk and the expected return of the investment.

We have selected several Key Performance Indicators (KPIs) linked to Key Success Factors (KSFs) for assessing the impact and performance of STarmac and to benchmark it to other similar initiatives. We collected both qualitative and quantitative data over the last year through interviews and surveys from a dozen of university spin-offs.

**RESULTS:** Today, STarmac hosts a dozen of projects and involves a core team of 5 people plus several adjunct and voluntary staff. In addition to the benchmarking with other initiatives, we compared the KSFs for our university spin-offs that have not followed STarmac with those that did it. The results confirm the added value to health development of business for those projects that have been supported by STarmac.

**CONCLUSIONS:** In this paper, we present the STarmac program, its components and we outline a framework with some relevant metrics for its assessment and comparison with existing similar initiatives so that we can engage into a continuous improvement methodology and provide better support to our spin-offs teams.

## A19. INNOVATION POLICY IN RUSSIA AND PACE OF UNIVERSITY-INDUSTRY LINKAGES DEVELOPMENT

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**INTRODUCTION:** The paper analyzes recent trends in Russian research and innovation policy to determine why reform efforts yield no sustainable positive results. All the major science and innovation-activity indicators for Russia remained largely unchanged over the last 10-15 years. Expenditures on R&D (research and development) stay at a low level, with 70 % of the funding provided by the federal government and business investments being stagnantly small. Sanctions have a negative impact on research and innovations in Russia but this is a fairly recent factor. During the last 5-7 years, the Russian government introduced a number of instruments to improve research performance and stimulate commercialization of technological developments. One of the measures is to stimulate closer cooperation between universities and companies. A group of "leading universities" (about 40+ in total) is pushed to be more entrepreneurial and thus to have bigger impact on country's economic development.

**METHODS:** Paper elaborates on several surveys conducted in 2016 with the purpose to define factors encouraging and hampering collaboration between universities and companies in Russia. Two major methods are: structured survey conducted by e-mail among fast growing high-tech companies (N=150) and 2) in-depth interviews conducted with 20 companies that have history of collaboration with universities.

**RESULTS:** Major problems that companies face in their attempt to partner with universities

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include 1) bureaucratic process of decision-making in Russian universities; 2) low level of mutual understanding when research projects are conducted; 3) not satisfactory level of training of graduates even in universities located in Moscow; 4) lack of capabilities from side of universities to solve concrete scientific-technical problem in short period of time. However, from side of universities the claim is that companies (especially medium-sized) often work in very narrow fields and their requests are also too specific and thus cannot always be properly addressed by university researchers.

**CONCLUSIONS:** State of cooperation between universities and companies is somewhat stable but insufficient. It is not low, especially in the area of educational activities but it is not evidently growing. Companies often prefer to conduct R&D by themselves without outsourcing tasks to universities. Entrepreneurial university is still a rare case in Russia. Despite the government's push to be more proactive in collaboration with industry, university professors are rarely consulting in companies and entrepreneurs in residence are exclusion rather than a common case. The problem of strengthening linkages may be solved if companies and universities are placed in more competitive environment, when companies would need innovations for their development and universities will not rely exclusively on federal support and will be interested to compete for industrial money for R&D.

## A20. INSTITUTIONAL CHANGE AND THE TRIPLE HELIX MODEL IN BULGARIA

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**INTRODUCTION:** The evolution of political and economic institutions is important for the economic performance of transition economies as they determine the framework for all social initiatives. In addition, institutional change has played an important role in the process of encouraging certain actions, while at the same time limiting others. Therefore, it is beneficial to analyze the interrelationship between institutional development and economic development and its contribution to the strengthening and boosting of sustainability and the sustainable development of a given society. This interrelationship is characterized by a number of endogenous and exogenous processes of institutional change, which aim to improve the joint actions of various economic agents to achieve economic growth and contribute to social progress. Also, it is important to distinguish the role of the state in strengthening such interrelationship. It performs both organizational and coordination functions in the process of interactions between the institutions and the private sector, while at the same time it regulates and provides the necessary financial resource for supporting the processes for exchange of information, knowledge and skills.

**METHODS:** The paper aims to discuss the interrelationship between the state, the institutions, (particularly educational institutions and research centers, or "the academia") and the industry by presenting and outlining a theoretical model. The model is slightly different from the standard Triple Helix model as it reflects on the impact of the processes that characterize transition economies. The empirical study is focused on the Triple Helix model and its application