

NEW APPROACH TO INNOVATION PROJECTS

Ing. Hana Krchová

School of Economic and Management in Public Administration in
Bratislava, Slovak Republic

ABSTRACT

Innovation projects are important for the long-term development of companies. New approaches join basic conditions enabling the realization of projects, using basic strategy. This strategy uses the right culture, proper cooperation and sufficient abilities optimally covered by capital investment. This article would like to focus on the importance of the psychological safety of teams, who realize innovation projects.

Keywords: Innovation, Project, Capital, Culture, Cooperation

INTRODUCTION

Being innovative is now a basic condition for the existence of businesses on the global market. An organization's ability to innovate is therefore essential for success in today's complex and dynamic environment. In recent years, researchers in Knowledge Management and Innovation have used different approaches to explain how knowledge creation can contribute to better innovation performance. The main result of this research is the conclusion that product and process innovation is the result of a continuous learning process [7], [2].

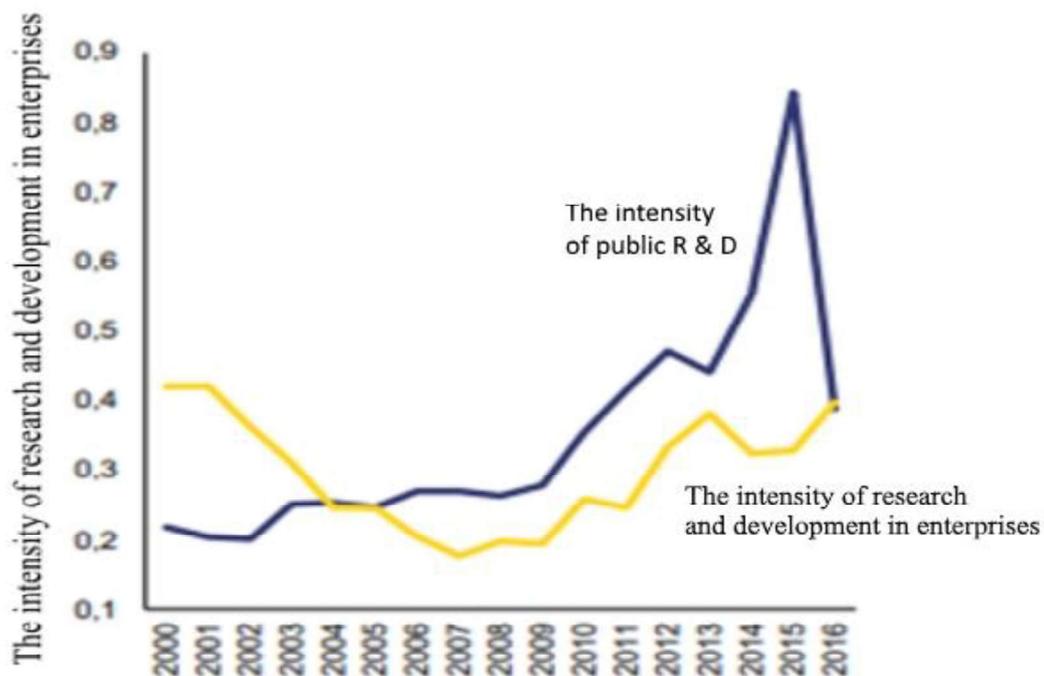
The innovation process itself is a knowledge-intensive activity that is based on two interconnected processes of creating new knowledge and using it. As some authors emphasize, the superior ability of an organization to build and manage system knowledge can support the success of innovation processes [7].

Innovation is considered a political priority at both European Union and Member State levels. Various measures and support activities are implemented there. Their diversity reflects the diversity of specific conditions, cultural preferences and political priorities in the individual Member States. These innovative policies, however, in its most important principles coincide. This is evidence that innovation policy is increasingly being realized as the real task of the whole of Europe. The disparities between the Member States, despite significant interventions, are very large.

Slovakia's ability to innovate may still be regarded as inadequate in comparison with other European countries. The country faces many challenges, including the low efficiency of the public system, development, and innovation. Furthermore, there is a strong need to support innovation in SMEs and targeted incentives for technology transfer.

According to Eurostat data, Slovakia's spending on research and development fell by one-third last year. While they accounted for 1.18 percent of GDP in 2015,

they were only 0.79 percent last year. Slovakia has joined the end of the EU when countries like Croatia or Serbia have overtaken it.



Source: European committee, 2018

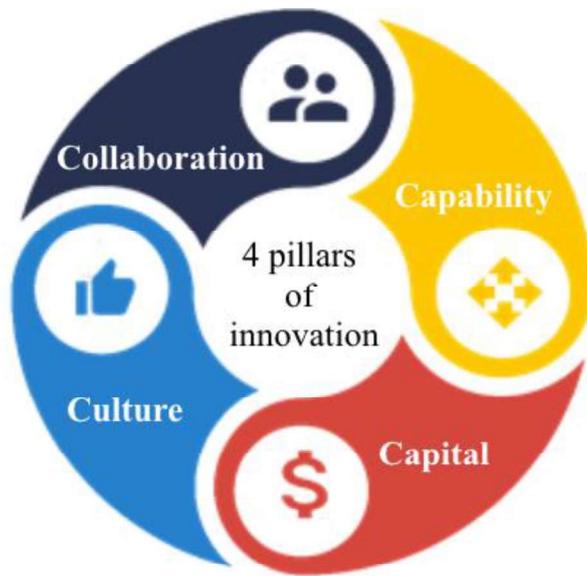
Figure 1 Investment in research, development, and innovation by sector R & D intensity (R & D expenditure as% of GDP)

One of the main reasons for this is the extremely slow take-up of EU funds for research and development. While projects funded from the old challenges have ended, new projects have not broken out. At present, companies are only pursuing development activities within their own perspective, which are limited by their own resources. As the data from Eurostat shows, corporate R & D in Slovakia grew moderately in 2016, but government spending declined.

4 pillars of innovation

There are many different theories of what they need for the proper functioning of innovative projects in the organization [2]. Some theories show the issue of innovative projects as a complex and intangible system. However, the aim is to simplify this view. Very interesting is the approach presented by Scott Thomson from Google at the DevOps Talks Conference 2017 conference hold in Melbourne, Australia. As part of his presentation showed four key pillars necessary of innovations. These basic pillars are interrelated. The first pillar can be described culture specifically pro-innovation culture. Within such a culture combines the openness of the company and receive new ideas to established processes functioning in the company. The second pillar is cooperation. The goal of adequate co-operation is to create working people capable of producing innovations. The third pillar is collaboration. Collaboration to implement these innovative projects not only on the technical (professional) but also on the organizational side. The fourth pillar is the capital. Capital and ways to obtain

enough resources to successfully implement innovation. The whole approach can be shown in the figure below.



Source: the author

Figure 2 4 pillars of innovation

First pillar - Culture

The introduction of a pro-innovation culture is key to the good functioning of innovation projects. Reaching culture is crucial for processes that are important for product and service development to be successful in a competitive business environment. Unfortunately, many senior executives continue to focus on it to achieve its performance goals instead of progress. Many companies would like to create the right culture for innovation. This is one that encourages flexibility, creativity, and risk-taking support [10], [9]. It is also because the most frequently mentioned barrier of ideas and innovation in an organization includes inappropriate corporate culture. Among the elements of a pro-innovative corporate culture are: high tolerance risks, support for new ideas, joy and sense of work, and a sufficient number of innovative challenges [11]. The pro-innovative corporate culture we consider way interaction and communication of people who support changes constantly. The right pro-innovation culture manifests itself:

- increased work engagement,
- independence,
- creativity,
- a sense of belonging to the company.

To create a sustainable culture of innovation is also cooperation with external partners, suppliers or networks needed.

Second pillar - Collaboration

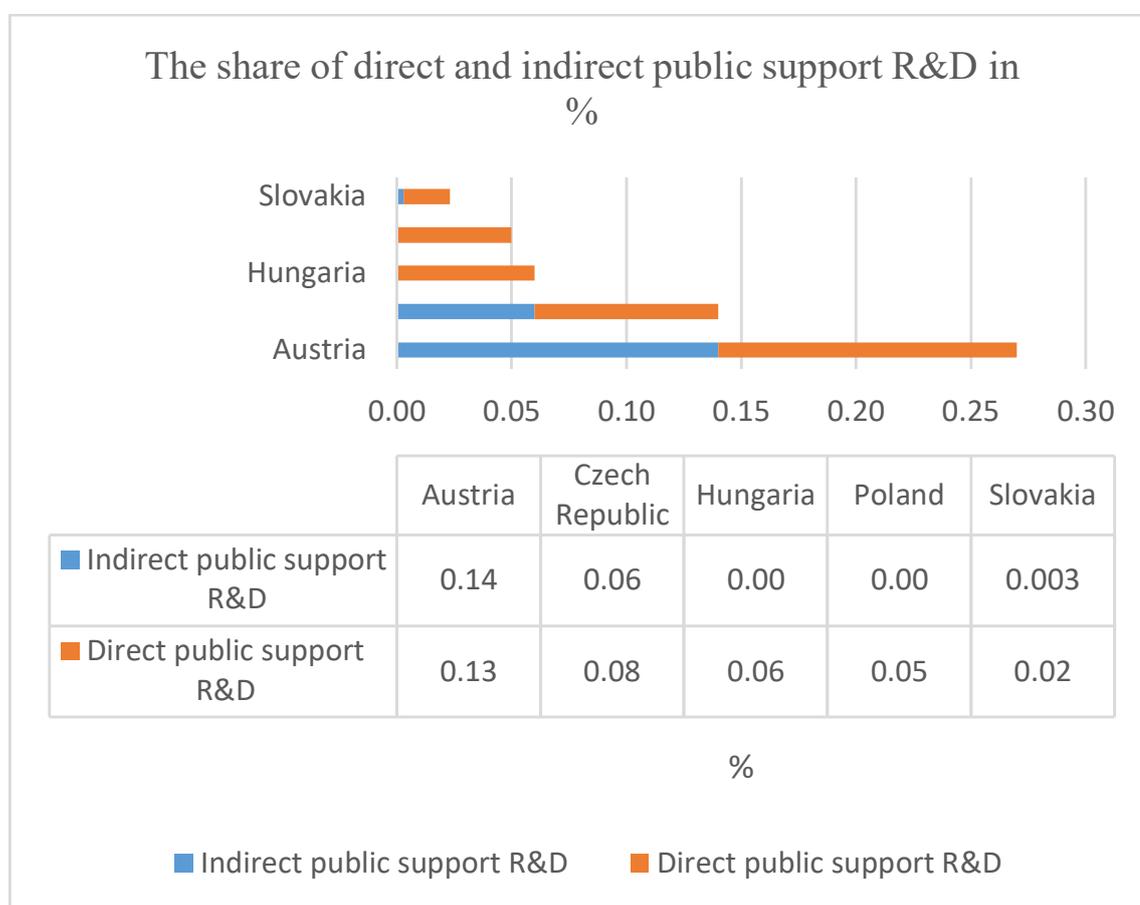
For proper cooperation, it is necessary to set the conditions for the compilation of individual project teams, but also to ensure their adaptation to the functionality. For proper cooperation, it is necessary to set the conditions so that the innovation project teams can work together perfectly. In the context of the Google Aristotle project, which began in 2012 and lasted five years, Google is trying to figure out how to create the perfect team and understand the effectiveness of a properly functioning team. In this project, they were collected and reviewed data on 180 Google teams. It is interesting that there was no correlation to why one team was successful and the other not. And Google is inexorable in its conclusions. Conclusions build on hard data and thorough research work. They came from Google's internal data, but also from 50 years of psychological research in this area. The original goal was to find the ideal combination of personality types, people with different abilities and personal history, or the ideal combination of age, gender, and possibly sexual and racial diversity [6]. However, they have found that the only thing that demonstrates the effectiveness of the team is - the atmosphere and the mood in the team - psychological safety. Psychological security serves to make individual innovation projects truly effective. If we manage the company properly implement psychological safety achieved significant successes. When working with individual teams, we will greatly improve the probability that innovative projects will be successful. Also, we increase the number of team members who start to learn from mistakes and achieve significantly increased employee involvement.

Third Pillar - Capability

It is not just about skills in the sense of technical skills, but above all the organizational skills in terms of implementing innovative projects. Necessity is the proper use of project management tools. Typical innovation projects are a specific group of projects. These are projects that can be very difficult to implemented entirely using traditional project management. In the case of innovative projects, it is starting to use agile project management. Agile project management is used mainly in IT until 2016 and now beginning to appear in other innovation areas. It is important to realize that to be able to adequately implement agile innovation projects, for example, using Agile-Stage-Gate [5], must be implemented the agile culture in the organization. It is not possible to perform agile projects without a consistently established agile culture. Bernard Marr [8], as part of their inquiry, dealt with the failure of projects. He found that 25 percent of innovative projects failed completely. 20 to 25 percent do not show the return on investment, and up to 50 percent need the massive redesign. He dealt with the question of why so many innovative projects failed and found that in fact 54% of project failures could be attributed to poor management - while only 3% were due to technological problems. Now thoroughly examined the benefits of agile development methods in the software world. These are primarily flexibility, productivity, and speed. These properties of agile methods have been thoroughly studied and documented [1], [4], [3].

The fourth pillar - Capital

The last pillar is capital. Capital is considered as a source for financing innovative projects. Innovative projects are very costly. Very often, companies do not have enough own funds to finance them. Slovakia uses several tools to support innovations. On the one hand, it is purposeful support aimed at supporting specific projects and grants. Businesses can also obtain from the state so-called indirect support when it is not a financial contribution, but a tax on income tax on own innovation projects. For comparison, the average share of R & D expenditure was 2,03% of GDP in the EU in 2016. Above the EU average, eight countries were located: Belgium, Denmark, Finland, France, Germany, Austria, Slovenia, and Sweden. The share of research and development spending was higher than 3% of GDP in Denmark, Austria, and Sweden. In Slovakia, the share of R & D spending in Slovakia was only 1.18% of GDP. The following figure shows the share of direct and indirect public support for Slovakia and neighboring countries.



Source: OECD, 2018

Figure 3 the share of direct and indirect public support for Slovakia and neighboring countries

One of the other possibilities of supporting the financing of corporate research and development was the introduction in 2015 of a so-called "super discount" at the height of 25%. It should be one of the main tools to motivate businesses to invest in research and development. After two years, for which data are available concerning the use of "super discount", however, it shows that the interest of

companies is unexpectedly low. Real use lags behind the government's expectations by more than half. According to the CRIF - Slovak Credit Bureau's analysis in 2015, the supercomputing amount reached only 9.2 million euros and in 2016 only 16.4 million euros. The government counted up to 24 million euros. The amendment from 2018 brings several changes to the supercomputer system. The most significant is a fourfold increase in the supercomputer: from the current 25% to 100% of the tax-deductible expenses.

CONCLUSION

The issue of implementing innovative business projects can be considered complicated. It is mainly because innovation projects are determined by a high degree of uncertainty. It is always a step into the "unknown". For this reason, it is not advisable to manage them as standard "waterfall" projects.

Practice shows that the implementation of elements of agile projects into innovative projects is the right way. It is, however, important to note that agile projects can be implemented without an agile culture. For successful implementation of innovation projects is also to be considered a pillar called cooperation. Innovation projects are always realized in innovation teams which are professionally specialized. Efficiency good teamwork goes without saying. What it is necessary to recall the need for psychological security of these teams.

The question is whether our Slovak companies are prepared and able to create such a psychologically safe environment for their innovation teams. The last part of the four innovation pillars as a closed framework for innovation is capital. Without obtaining sufficient capital innovations cannot be efficiently developed. How we presented the results of innovation support from the Slovak Republic is not good. It is a question of whether the current situation will improve the new "super-discount" for R&D companies that is in place since 2018.

ACKNOWLEDGEMENTS

This article is an outcome of the scientific project "Evaluation of the competencies of project managers in small and medium enterprises", IGP 3/2016 - project share 100 %.

REFERENCES

- [1] Begel, A., and Nagappan, N. (2007). Usage and perceptions of agile software development in an industrial context: An exploratory study. In ESEM '07: First International Symposium on Empirical Software Engineering and Measurement, 255–264. Washington, DC: IEEE.
- [2] Brunswicker. S., Chesbrough, H. (2018) The Adoption of Open Innovation in Large Firms, *Research-Technology Management*, 61:1, 35-45,
- [3] Caputa, W. (2015) Social relations and environmental influence as a determinant of customer capital , *Oeconomia Copernicana* 2015, Volume 6, Issue 2 , S. 109 – 128 P-ISSN 2083-1277, E-ISSN 2353-1827

[4] Cooper, R. G. (2013). New products: What separates the winners from the losers and what drives success. In *The PDMA Handbook of New Product Development*, 3rd Edition, ed. K. B. Kahn 3–34. Hoboken, NJ: John Wiley & Sons.

[5] Cooper, R. G. (2016). Agile–Stage-Gate Hybrids: The Next Stage for Product Development Blending Agile and Stage-Gate methods can provide flexibility, speed, and improved communication in new-product development. *Research-Technology Management*, 59(1), 21-29.

[6] Duhigg, C. (2016). What Google learned from its quest to build the perfect team. *The New York Times Magazine*, 26, 2016.

[7] Duřová Spiřáková, E., Mura, L., Gontkovičová, B., Hajduová, Z. (2017). R&D in the context of Europe 2020 in selected countries. *Economic Computation and Economic Cybernetics Studies and Research*, Issue , Vol. 51, No. 4., pp. 243 – 261. ISSN 0424–267 X

[8] Marr, B. (2017). *Data Strategy: How to Profit from a World of Big Data, Analytics and the Internet of Things*. Kogan Page Publishers.

[9] Supeková, S., Janáková, H. (2014). *Interkultúrne aspekty medzinárodného marketingu*. Monografia. Bratislava: Wolters Kluwer. S 168. ISBN 978-80-7478-711-9

[10] Trends, G. H. C. (2017). Deloitte University Press. online [cit. 17-5-2018] <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/HumanCapital/hc-2017-global-human-capital-trends-gx.pdf>

[11] Olson, M. V. (2008). When Growth Stalls. . *Harvard Business Review*, 86 (3), 50. online [cit. 18-5-2018] <https://hbr.org/2008/03/when-growth-stalls>