



SMART SPECIALIZATION STRATEGY OF SERBIA

Mirjana Kranjac

Government of Vojvodina, Provincial Secretary for Economy and Tourism, Bulevar Mihajla
Pupina 16, 21000 Novi Sad, Serbia
e-mail: mirjana.kranjac@vojvodina.gov.rs

Abstract:

The Serbian Parliament has adopted the Smart Specialization Strategy (S4) for the period from 2020 to 2027. This is a very important document that divides the research and innovation sector into special niches allocated to European countries and regions. It is a concept that creates a life cycle of knowledge and innovation in order to optimize their use and effects for Europe as a whole. Having such a document is a real value, but only if it is well promoted to all interested parties and if the implementation of the document is constantly monitored, evaluated and corrected. Is that the case in Serbia? The author focuses on the S4 life cycle after it appeared as a valid document, accessible to all. The results of the research show that this document, like many similar documents, is not used enough neither for strategic development nor as a good basis for funding through EU programs. The author gives some recommendations on how to make better use of it.

Keywords: smart specialization, innovation, research

1. Introduction

The concept of smart specialization is the vision of Dominic Foray and the expert group “Knowledge for Growth” that functioned within the European Research Area (ERA). The problem that the group noticed and analyzed was the smaller competitiveness of economies from European countries compared to the economies of USA, especially in the achievements of its research and innovation capacity, in the application of innovation and its transfer to the market. The analysis that they performed led to the conclusion that research in Europe is too fragmented, without any coordination and communication among countries. Namely, many of the countries invest in similar areas and in what is modern. A lot of money is spent without any control or results. Fields such as nano- and bio-technologies and information and communication technologies (ICT) almost dominate investments. They recommend creating modern research and innovation policies, based on the principles of good governance. This will bring development in areas that use the best potential of a region corresponding to its specificity [1, 2]. Vojvodina was the first nonEU region that developed smart specialization strategy (S3). The result of the application of EU methodology to develop S3 was that Vojvodina should focus on agriculture, food production and ICT. The strategy of Vojvodina was an excellent example of a strategic document and EC invited the experts that developed it to present it to the third countries as TAIX experts. The strategy was for the period from 2015 to 2020. Although it was accepted by the assembly of Vojvodina, only a few of the defined activities defined were realized. After 5 years of its life cycle, the strategy has not been updated. It remained without political understanding and finished its life cycle. The consequence, among others, is that many project applications from Vojvodina do not get additional points during their evaluation. We must note that the Institute for digital agriculture, Biosens, received about 30 million EUR towards its development because Vojvodina had S3 [3, 4].

2. Smart specialization strategy of Serbia life cycle

The smart specialization strategy of Serbia (S4) was adopted in the beginning of 2020. It was developed regarding the methodology suggested by the European commission. During this process, that included experts from different sectors, it had strong support from the Serbian government. Serbia went through all of the steps (Figure 1):

- The quantitative examination that identified some areas of potential.
- After a progression of meetings with significant stakeholders, a Qualitative Analysis was conducted and it indicated potential sectors with competitive advantages and has corrected mistakes that had occurred after quantitative (from statistical data) analysis.
- The entrepreneurial discovery process (EDP).
- The first version of the S4 was written.
- The public discussion, which included quite a few targeted meetings and workshops of all delegates of the Quadruple helix¹, brought about the list of priority thematic areas for research, development, and innovation.

The most important subprocess when creating S4 was the so-called Entrepreneurial Development Process (EDP). "The EDP is a comprehensive and interactive bottom-up process wherein members coming out of various environments (public policy, business, academia, NGO, etc.) are finding and delivering information about potential new activities and potential abilities that arise through the interchange of their information, while policymakers survey results and approaches to encourage the actualization of this potential" [5].

The EDP creates partnerships whose goals are to integrate entrepreneurial knowledge that is now distributed over many companies, organisations, universities, clients, and users. For the first time, it aims to include all relevant stakeholders in the process of creating sectors of interest for RSD and innovation. The process of entrepreneurial discovery is an interactive process based on targeted dialogue that brings together different actors in order to identify priority areas of smart specialization and the development of a suitable mix of policies for their implementation [6, 7].

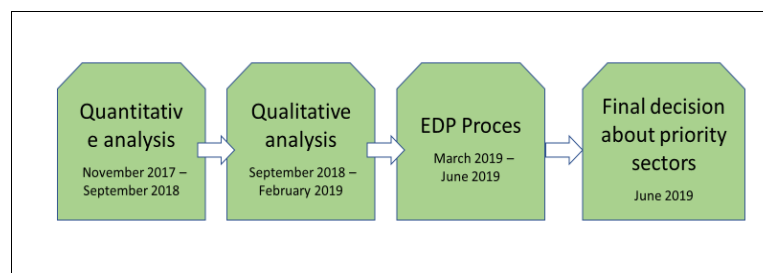


Fig. 1. The process of identifying potential priority areas [3]

At the end of the procedure, vertical priority areas were identified as the most important sectors of innovation activities in Serbia. They are presented in Figure 2 and in the following list:

1. Information and communication technologies:

- Big data and business analytics
- Cloud computing
- Internet of Things
- Software development

¹ Key local actors from government, research and scientific institutions, companies and citizens (NGO), which engage in bottom-up collaborative processes

- Embedded systems
2. Food for the future:
 - High-tech agriculture
 - Food with added value
 - Sustainable agriculture and food production
 3. Creative industries:
 - Creative Digital Audio-visual Production
 - Video game industry
 - Smart and active packaging
 4. Machines and production processes of the future
 - Machines for specific purposes
 - Information in the service of smart management-industry 4.0
 - Premium toolboxes and parts for the auto, rail and aviation enterprises
 - Eco-friendly and sustainable fuel ignition plants
 - Smart environments solutions.

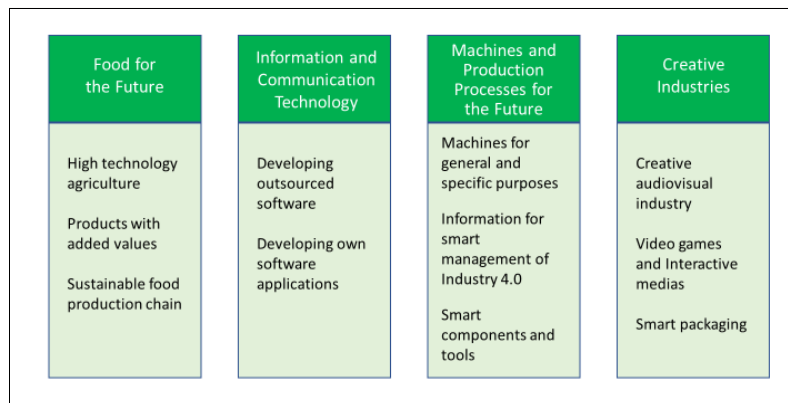


Fig. 2. Products for the future [3]

Additionally, it was discovered that there are a few horizontal areas that should be included along with others such as:

1. Energy efficient and Eco-smart solutions
 - Eco-smart energy sources.
2. Key enabling technologies (KET) and growing technologies
 - Photonics
 - Advanced materials
 - Advanced manufacturing technologies and electronics
 - Biotechnology
 - Block chain technologies
 - Autonomous driving, aeronautical systems and engineering

With all of these conclusions the life cycle of S4 began. The next phase is implementation and permanent monitoring, evaluation and correction. Does it work? Some working groups were established, but had only initial meetings. The starting energy dissipated, the stakeholders disappeared. Only a few new strategic Serbian documents mention the S4 [8].

3. Conclusions

Smart specialization is a new, important, very European concept. The European Commission has made many efforts to develop a methodology for its employment. They organized peer review workshops for many regions, set up the S3 platform website [9], wrote scientific articles and books. The EC Joint Research Center (JRC) is the main body in charge of all tasks and they have a group of experts available to provide technical assistance to anyone in need. Serbia has reached the first goal, S4 has been announced, but this is not enough. The outbreak of the Covid19 pandemic hampered the implementation of S4. In current post-pandemic period, , the world has new challenges, but Serbia must not stop activities regarding S4, as it is now. The country must implement them consistently. The strategy must be promoted, workshops must be organized, and stakeholders must be actively involved. All members who participated in the creation of the strategy must insist on its implementation. This can be done by the EC bodies, e.g. over already for S3 in charge JRC, asking for assistance, i.e. permanent workshops, peer review reports, comparisons of outcomes with other countries to see how far Serbia has come compared to other countries. The case of Vojvodina is an example of how not to do it. Vojvodina was the best, the first non-EU region to shape a Smart Specialization Strategy, but politicians did not recognize the need to update this document and extend its life cycle. This is to the detriment of Serbian citizens, and especially the development of science in Vojvodina.

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