

Pursuant to Article 38, Paragraph 1 of the Law on the Planning System of the Republic of Serbia (“Official Gazette of the RS”, No. 30/18),

the Government adopts

STARTUP ECOSYSTEM DEVELOPMENT STRATEGY OF THE REPUBLIC OF SERBIA FOR THE PERIOD 2021- 2025

1. INTRODUCTION

The startup ecosystem development strategy of the of the Republic of Serbia for the period from 2021 to 2025 (hereinafter: Strategy) establishes the goals and measures for the development of the startup ecosystem, the implementation of which should result in the accelerated development of the startup ecosystem, encouraging innovation in the economy of the Republic of Serbia, as well as economic growth based on the knowledge economy.

Startups are newly founded, innovative business entities that have the potential for rapid and large growth. By creating innovations that contribute to the transformation of the economy and the creation of new jobs, startups increase the export of products with high added value and contribute to economic growth. Establishing a public policy for the development of startups affects the number and quality of startups, but also the entire ecosystem that is created around them.

In order to economically strengthen the Republic of Serbia, encouraging the startup ecosystem has been recognised as one of the Government’s priorities in the period from 2021 to 2025.

The general objective of this strategy is the accelerated development of the startup ecosystem to the stage of between 800 and 1,200 startups, and which, due to its attractiveness, will attract a large number of talents, i.e. experienced founders, investors and mentors from the region and the world who will support the development of startup ideas in the Republic Serbia.

The specific objectives of the Strategy are:

1. Raising startup entrepreneurial capacity through educational programmes;
2. Improvement of infrastructure and programme support for startups;
3. Improvement of the startup financing mechanism;
4. Improvement of conditions for startup business;
5. Promotion of startup culture and global recognition of the ecosystem.

The proposer of the strategy is the Ministry of Education, Science and Technological Development (hereinafter: MESTD). The draft strategy was created as a result of several months of active work by members of the Working Group established by the Government, among which there were representatives of the Cabinet of the Prime Minister, relevant ministries, key institutions, representatives of support organisations, the economy, financial institutions, as well as other stakeholders important for the ecosystem.

The legal basis for drafting the Strategy is Article 38, Paragraph 1 of the Law on the Planning System of the Republic of Serbia (“Official Gazette of RS”, No. 30/18) which prescribes that the Government adopts a public policy document at the republic level, as well as Art. 10 and 13 of the same law, which determine the type and content of the public policy document, i.e. Strategy.

Startups have a multiple positive impact on the economy and society in which they are founded and developed, and are slowly becoming creators of new business models of the 21st century. Their development brings numerous advantages to the economy and society of a country, at the national, regional and global level.

Startups represent a special type of innovative micro, small and medium-sized enterprises and operate in high-risk conditions. By creating new markets or disrupting existing ones, startups, when they achieve market success, whose value is measured in tens and hundreds of millions of euros, represent new drivers of development.

The increase in the number of startups stimulates economic growth, increases exports and gross domestic product (GDP). If one takes into account the assumption that competition leads to economic growth and the fact that startups are most often innovative entities with products developed for large global markets, one can see how powerful they can be in the economic development of a country.¹ Expanding the spectrum of pioneering products, services and business models, startups contribute to technological development, influencing the creation of a modern economy and innovative products available to a society, opening the way for the development of new activities based on modern technologies and innovative ideas.

By creating new markets, startups generate new jobs, especially for enterprising, young and educated people, and investing in startups creates human capital with competencies and skills needed for a modern economy based on knowledge and innovation.

With their innovation, startups contribute to the promotion of the country and the region. With the goal of creating products for global markets, they promote local talent in a wide variety of industries around the world. Their development is a catalyst for the creation of a favourable national ecosystem, which then becomes a magnet for both domestic and foreign investors and talents.

Startups generally use high-tech innovations to create products and services that are new on a global scale, including nanotechnology, biotechnology, computing or telecommunications, and thus contribute to the connection between science and business. Over time, new opportunities for using innovations created by startups open up, bearing in mind that the revolution of information technologies (hereinafter: IT) reaches beyond the digital sector and has the capacity to transform traditional industries as well, such as manufacturing, healthcare, retail and transportation. Startups thereby contribute to the creation of new industries and new jobs that will replace those that have been shaken by globalisation and technologies².

By creating innovations that can strongly contribute to the transformation of an economy and the creation of jobs needed for the development of a knowledge-based economy,

¹ Acs J, Zoltan. Armington, Cathrine. *Endogenous Growth and Entrepreneurial Activity in Cities*. Center for Economic Studies. 2003.

² Mandel, Michael. *How the Startup Economy is Spreading Across the Country — and How It Can Be Accelerated*, Progressive Policy Institute. 2017.

startups increase the export of products with high added value and contribute to economic growth, which leads to the conclusion that startups are an indisputable lever of state development and that the state should create public policies that can strongly influence the number and quality of startups, but also the entire ecosystem surrounding them.

When it comes to the startup ecosystem of the Republic of Serbia, according to the 2020 data from Startup Genome³, the value of the startup ecosystem in Belgrade and Novi Sad is estimated at 434 million euros. However, this value is calculated based on publicly available data that does not take into account self-funded startups, as well as investments and exits that are not publicly disclosed. According to their observation, the estimated value could be up to three times higher than stated. Although the development of the Belgrade and Novi Sad startup ecosystem is in the activation phase⁴, significant growth was recorded in the period from 2018 to 2020, and according to research, our ecosystem ranks in the top five startup ecosystems in the activation phase according to growth rate. The majority of startups in the Republic of Serbia are concentrated in Belgrade (71%), followed by Novi Sad (15%) and Niš (4%). With 200–400 startups, Belgrade and Novi Sad are on par with the average number of startups in ecosystems like Berlin and Tel Aviv. However, it is evident that there is a lot of room for improving the promotion and support for the development of the startup ecosystem in other regions of the Republic of Serbia in order to fulfil the full development potential.

In order to economically strengthen the Republic of Serbia, stimulating the startup ecosystem has been recognised as one of the Government's priorities in the period from 2021 to 2025⁵. In order to achieve the set goal regarding the non-linear accelerated transition of the startup ecosystem from the activation phase to the next phase of the life cycle, the globalisation phase, the Government, by adopting the Strategy, focuses on two key objectives: (1) increasing the number of startups and (2) increasing the quality of startups. By creating more startups of higher quality, i.e. greater potential, a sufficient number of opportunities will be created for private investors, whose active participation in the ecosystem would ensure further sustainability of the ecosystem, which would be supported by Government measures, but also by the activities of the private sector.

This strategy is adopted in order to coordinate the different individual initiatives within the ecosystem and to ensure a strategic and systemic approach to the action of public institutions in order to support the creation of an environment that will help startups in different stages of development by sharing risks, sharing knowledge and access to information and financing to facilitate business and create new opportunities.

During the drafting of the Strategy, other options were considered that could recognise and support the importance of the startup ecosystem. Due to the multiple positive impact on the economy and society in which startups are founded and developed, the need for a special strategic document that governs this area and according to which other acts will be harmonised is recognised. So, one of the measures of this strategy is the adoption of the new Law on innovative activity, in which the startup will also be recognised as an innovative entity.

³ Startup Genome, Global Startup Ecosystem Report

⁴ See pp. 15–17.

⁵ Government programme – candidate for Prime Minister, Ana Brnabić, National Assembly, 28 October 2020

On 5 February 2021, the Government passed a Decision⁶ to establish a Working Group for the preparation of the Draft Startup Ecosystem Development Strategy of the Republic of Serbia from 2021 to 2025. The proposer of the strategy is the Ministry of Education, Science and Technological Development.

The working group is composed of representatives of: Cabinet of the Prime Minister, relevant ministries, the National Bank of Serbia, key institutions (Republican Secretariat for Public Policies, Fund for Innovation Activities, Office for Information Technologies and Electronic Administration, Agency for Financing and Insurance of Exports of the Republic of Serbia, Science and Technology Park Belgrade, Scientific-technology park Čačak, Science and Technology Park Novi Sad, Science and Technology Park Niš, representatives of support organisations (Vojvodina ICT Cluster, Niš cluster of advanced technologies, Zrenjanin ICT cluster, Subotica IT cluster, ICT cluster of Central Serbia, ICT Network Serbian Venture Network, Srpska blockchain initiative, Serbian Entrepreneurs, National Alliance for Local Economic Development, Initiative “Digital Serbia”, Chamber of Commerce of Serbia, ICT Hub, Impact Hub), economy, financial institutions (World Bank), as well as other stakeholders important for the ecosystem (Netokracija, South Central Ventures).

2. TERMS RELATED TO STARTUPS AND STARTUP ECOSYSTEM USED IN THIS STRATEGY

A startup team is a group of individuals who develop an innovative product that demonstrates the potential for large and rapid business growth on the global market. The startup team is not registered as a business entity in the appropriate register. Startup teams that register as business entities become startups in the full sense of that term.

A startup is a newly founded, innovative business entity⁷ that performs innovative activities and has the potential for rapid and large growth.

In the context of the Strategy, the newly founded criterion is determined so that a newly founded entity is one since whose establishment it has not been more than ten years. This criterion was created with the aim of supporting startups that have been developing their product or service for a relatively long time⁸.

The criterion of innovation and the potential for rapid and large growth is observed in three alternative ways where a startup would be considered a newly founded business entity:

– which, through the confirmation of an independent expert, demonstrates the potential to develop a product, service or process that is new or significantly improved in the foreseeable future

⁶ Decision to establish a Working Group for the preparation of the Draft Startup Ecosystem Development Strategy of the Republic of Serbia from 2021 to 2025, 05 Number: 02-1087/2021 (“Official Gazette of RS”, No. 9 dated 5 February 2021)

⁷ Business entity or entrepreneur.

⁸ Startups engaged in research and development in fields such as biology, chemistry, electronics, medicine, and agriculture, often due to the nature of their product require a period of several years to prove the concept they are working on, and in the first few years they cannot generate revenues.

compared to the best currently available solution in its industry, and which carries with it the risk of technological or market failure,

– where research and development costs make up at least 10% of total expenditures,
or

– which is the holder of some intellectual property right or another intellectual property, or the licensee of intellectual property rights or other intellectual property, which is directly related to the innovation activity it performs.

The mentioned criteria of newly founded entity, innovation, growth potential and risk of failure are the key characteristics that distinguish a startup from other micro, small and medium enterprises.

Unicorn is an internationally recognised term for a startup with an estimated value of more than one billion euros.

A **startup ecosystem** is an environment in which startups develop, which consists of individuals, teams, startups in different stages of development and different types of organisations and institutions that work together as a system to create and accelerate the development of new startups.

Factors of the ecosystem are also: universities, scientific research organisations, financial institutions and organisations, support organisations, representatives of the economy and state organisations that create policies and programmes.

STAGES OF THE STARTUP ECOSYSTEM LIFE CYCLE

(according to the Startup Genome methodology)

The **activation phase** refers to an ecosystem with limited startup experience (including the know-how of founders, investors and mentors, decision-makers, as well as the wider community that supports the development of startups) in which a relatively small number of startups develop and which faces challenges such as talent and resource drain to ecosystems that are in the later stages of the ecosystem's life cycle.

The **globalisation phase** follows the activation phase, where enough collective knowledge and experience are generated that results in a larger number of startups (depending on the population, the number varies between 800 and 1,200, but is not strictly defined). In this phase, there are several key "triggers" that serve as catalysts for ecosystem development, and they include: a series of exits from investments of more than 100 million euros and attracting more resources (talents, investors, mentors, etc.) from other ecosystems. However, in the phase of globalisation, there is still a drain of domestic talents to ecosystems at a higher level of development.

The **expansion phase** occurs when the startup ecosystem counts more than 2,000 local startups (depending on the population size), with a number of globally impressive unicorns and exits above one billion euros (larger in leading countries) that lead to the attraction of global resources.

The **integration phase** is the final phase of startup ecosystem development in which the number of startups exceeds 3,000, and the global attraction of resources leads to a high and self-sustaining global connection and flow of knowledge in the ecosystem.

The **incubator programme** is a concept that includes a wide range of support for startup teams and startups in the form of activities designed to support the beginning and growth of startups through learning about business processes and opportunities. In the process of

incubation, startups shape their ideas and processes, develop a team and to a certain extent reduce the risk of failure of their entrepreneurial venture for later investors. The primary role and goal of incubator programmes is to encourage the creation of successful startups through a set of services, to make them financially liquid and self-sustaining upon leaving the incubator.

The **acceleration programme** is a short intensive programme whose concept was created for startups that have passed the earliest stage of development, in most cases they have already created a *minimum viable product* that has been evaluated in some way and that provides support during market testing, business model development, preparation for investors and the like. Accelerator programmes generally have stricter selection criteria than incubator programmes, a precise deadline, and they focus on the growth of startups whose success they themselves can earn by acquiring shares in startups through their programmes or by charging a percentage of successful investments in startups. Accelerators are crucial for the development of the ecosystem because they prepare startups for growth and presentation to investors, thus making it for them to enter new markets and raise investment.

A **spin-off** is a startup founded by an existing legal entity with the aim of commercial exploitation of innovations. A scientific research organisation spinoff is a startup founded with the aim of commercial exploitation of innovations resulting from scientific research.

The **science and technology park** is a business entity whose goal is to encourage economic development through the promotion and development of innovative activities by stimulating and managing the flow of knowledge and technologies between universities, scientific research organisations, business entities and the market, as well as by facilitating the creation and growth of innovative business entities through incubation programmes and support for the formation of spinoffs. The science and technology park also provides other services with the aim of encouraging innovative activity.

Business angels are investors in innovative activities, who invest funds in startups. They are individual investors who decide to direct part of their assets towards startup companies, as a type of their own investment. In addition to providing funds in the earliest stages of development, business angels can additionally contribute to startups through active participation in their development.

In the context of this strategy, a business angel is a natural person who invests funds in the amount of more than 5,000 euros in the startup equity, and who, in addition to financial resources, can also invest their own knowledge, experience and network of contacts in order to support the development of the startup, but is not employed in the startup or engaged on a full-time basis.

A **venture capital fund** is an alternative investment fund with a private offer whose assets are mainly invested in business entities that are newly founded or in the initial stages of business, and show the potential for growth and business expansion. Venture capital funds invest in shares of highly innovative companies with high growth potential.

Venture capital funds are professional, institutional investors in startups. The allure of investing in venture capital funds lies in the potential for a very large return on investment in case of a sale of the startup in the later stages.

Exit⁹ is the name for the procedure of selling or monetising capital in a startup by the founder, that is, the investor (individual or venture capital fund). An exit can happen in several ways, some of which are:

- merger or acquisition,
- sale of company shares (*share deal*),
- sale of individual or all property rights of a company, e.g. sale of intellectual property rights (*asset deal*),
- initial public offering (going public).

The emergence of exits is extremely important for the development of the startup ecosystem, as it enables investment funds and individual investors the return on investment and thus creates space for re-investments in new companies.

GovTech represents the application of new technologies and business models led by partnerships with startups and innovative technology companies to adopt new technological solutions and provide services in the government sector.

3. CONNECTION WITH EXISTING PLANNING DOCUMENTS AND LEGAL FRAMEWORK

The strategy is cross-sectoral, and during its development, it was harmonised with other planning documents, as well as with the valid legislative framework.

In the previous period, the Republic of Serbia undertook a number of legislative activities to improve the general framework for startup business. Of those that are particularly important for the development of the startup ecosystem, there are tax incentives, the adoption of a special law regulating the establishment and operation of venture capital funds as institutional investors in startups, flexible solutions that enable innovation testing, amendments to the Law on Companies related to the introduction of a special financial instrument related to the right to acquire one's own share in the company, amendments to the law in the field of intellectual property, as well as the adoption of the Law on Digital Assets.

3.1. Legal framework

3.1.1. Law on Innovation Activity

The Law on Innovation Activity ("Official Gazette of RS", Nos. 110/05, 18/10 and 55/13) regulates the basic principles, goals and organisation of the application of scientific knowledge, technical and technological knowledge, inventiveness and discoveries, with the aim of creating and realisation, in relation to the existing technical-technological basis, of new and improved products, processes and services, as well as ways of financing innovative activities. This law established the Innovation Fund, which supports innovative entrepreneurship in the early stages of development, and represents one of the mechanisms of state support for the development of the startup ecosystem in the Republic of Serbia.

3.1.2. Law on Companies

Law on Companies ("Official Gazette of RS", Nos. 36/11, 99/11, 83/14 - other law, 5/15, 44/18, 95/18, 91/19 and 109/21) as the system law regulates the legal position

⁹Selling all or a significant part of the startup.

of companies and other forms of organisations, especially their establishment, management, status changes, changes in legal form, the right to acquire one's own share, termination and other issues of importance for their position, as well as the legal position of entrepreneurs. Thus, this law establishes the legal framework for the establishment and operation of startups.

3.1.3. Law on Digital Assets

Law on Digital Assets ("Official Gazette of RS", No. 153/20) created the possibility of raising funds for the development of innovative projects and financing startups through the issuance of digital tokens, as a special way of group financing using blockchain technology. In this way, the legal basis for an alternative source of financing was established, as well as additional opportunities for startups that deal with the development of financial products and services based on blockchain technology.

3.1.4. Law on Alternative Investment Funds

With the adoption of the Law on Alternative Investment Funds ("Official Gazette of RS", No. 73/19), conditions were created for the development of *venture capital funds* and private equity funds, which represent an efficient way of financing startups. The establishment of such funds opens hitherto unavailable alternative ways of financing, which will contribute to the development of the startup ecosystem in the Republic of Serbia.

3.1.5. Law on State Aid Control

Law on State Aid Control ("Official Gazette of RS", No. 73/19) establishes a comprehensive set of rules for granting state aid, including that granted to startups. Regulation on Rules for State Aid Granting ("Official Gazette of RS", Nos. 13/10, 100/11, 91/12, 37/13, 97/13, 119/14, 23/21 - other regulation, 23/21 - other regulation, 62/21 - other regulation, 62/21 - other regulation, 62/21 - other regulation, 99/21 - other regulation and 99/21 - other regulation) regulates, among other things, the method of granting state aid for research, development and innovation, as well as state aid that is granted in order to eliminate market defects on the venture capital market. Also, the conditions under which state aid can be granted to newly established innovative business entities are prescribed.

3.1.6. Law on the Fundamentals of Education System

Among the goals of the Law on the Fundamentals of Education System ("Official Gazette of RS", Nos. 88/17, 27/18 - other law, 27/18 - other law, 10/19 and 6/20), among others, there is also the development of key competences for lifelong learning, cross-curricular competences and professional competences in accordance with the demands of occupations, the needs of the labour market and the development of modern science and technology. Among the key competences for lifelong learning is the competence that implies the confident and critical use of information and communication technologies for work, leisure and communication, as well as a sense of initiative and entrepreneurship and the ability to turn ideas into action through creativity, innovation and risk-taking, as well as the ability to plan and manage projects. In the case of general cross-curricular competencies for the end of primary and secondary education, in addition to digital competence, work with data and information and entrepreneurship and entrepreneurial competence are also recognised.

The aforementioned competences are also recognised in the Law on Primary Education (“Official Gazette of RS”, Nos. 55/13, 101/17, 27/18 - other law and 10/19) and the Law on Secondary Education (“Official Gazette of RS”, Nos. 55/13, 101/17, 27/18 - other law, 6/20 and 52/21).

3.1.7. Law on Higher Education

The Law on Higher Education (“Official Gazette of RS”, Nos. 88/17, 27/18 - other law, 73/18, 67/19, 6/20 - other law, 6/20 - other law, 11/21 – authentic interpretation, 67/21 - other law and 67/21) within the scientific research work of higher education institutions, stipulates that in order to commercialise the results of scientific research or artistic work, a university or other higher education institution can be the founder of scientific institutes, innovation centres, centres of exceptional value, centres for technology transfer, business-technology incubator, science and technology park and other organisations for carrying out innovative activities and providing infrastructure support for the development of innovations and commercialisation of research results.

3.1.8. Law on the Dual Model of Studies in Higher Education

The Law on the Dual Model of Studies in Higher Education (“Official Gazette of RS”, No. 66/19) recognises the development of entrepreneurship, innovation and creativity of each individual for their professional and career development as one of the goals of the dual model in higher education.

3.1.9. Law on Science and Research

The Law on Science and Research (“Official Gazette of RS”, No. 49/19), among the objectives of the implementation of scientific and research activities, foresees the support to the creation of innovations for the economy, the transfer of technologies and the strengthening of engineering capacities, with the aim of creating comparative advantages on the global market as well as the promotion of entrepreneurship.

3.1.10. Law on Corporate Income Tax

According to the Law on Corporate Income Tax (“Official Gazette of RS”, Nos. 25/01, 80/02 - other law, 80/02, 43/03, 84/04, 18/10, 101/11, 119/12, 47/13, 108/13, 68/14 - other law, 142/14, 91/15 - authentic interpretation, 112/15, 113/17, 95/18, 86/19, 153/20 and 118/21) prescribes tax incentives for economic entities that perform innovative activities. Costs directly related to research and development can be recognised as an expense in the tax balance in a doubled amount.

In addition, it is possible to exempt qualified income from the corporate income tax base for the income of legal entities from intellectual property created in the Republic of Serbia - Rulebook on the Conditions and Method of Exempting Qualified Income from the Corporate Income Tax Base (“Official Gazette of RS”, No. 50/19). Specifically, it is a tax incentive for startups, which is provided for in Article 25b of the Law on Corporate Income Tax, and according to which qualified income, which is earned by the taxpayer, holder of copyright or related rights, based on the fee for the use of a deposited copyright or related subject rights, except for the copyright or related right transfer fee as a whole, may, if the taxpayer so chooses, be exempted from the tax base in the amount of 80% of the thus realised income. This regime covers all types of income from key forms of intellectual property (e.g. patents, software). It is

this tax treatment of legal entities that develop innovative solutions that the Report recognises as one of the key advantages of the Serbian startup ecosystem.

When it comes to tax incentives for investing in startups, the Law on Corporate Income Tax stipulates that legal entities that invest in the capital of a newly founded business that performs innovative activities are entitled to a tax credit of 30% of the total amount.

3.1.11. Law on Personal Income Tax and Law on Contributions for Compulsory Social Insurance

The Law on Personal Income Tax (“Official Gazette of RS”, Nos. 24/01, 80/02, 80/02 - other law, 135/04, 62/06, 65/06 - correction, 31/09, 44 /09, 18/10, 50/11, 91/11 - CC, 93/12, 114/12 - CC, 47/13, 48/13 - correction, 108/13, 57/14, 68/14 - other law, 112/15, 113/17, 95/18, 86/19, 153/20 and 44/21) and the Law on Contributions for Compulsory Social Insurance (“Official Gazette of RS”, Nos. 84/04, 61/05, 62/06, 5/09, 52/11, 101/11, 47/13, 108/13, 57/14, 68/14 - other law, 112/15, 113/17, 95/18, 86 /19, 153/20 and 44/21) prescribe exemption from paying taxes and contributions for employers, i.e. newly established companies that carry out innovation activities. The Law on Amendments to the Law on Personal Income Tax and the Law on Amendments to the Law on Contributions for Compulsory Social Security (“Official Gazette of RS”, No. 86/19), effective of 1 March 2020, made it possible for newly established companies that carry out innovative activities to use exemption from taxes and contributions based on the earnings of the founders employed in that company, for monthly earnings up to 150,000 dinars, paid in a period of 36 months from the day of establishment of the company.

Since startups often do not have the opportunity to find people with the appropriate competencies and skills on the domestic labour market, the existence of an incentive framework for attracting talent from foreign markets is extremely important. The Law on Personal Income Tax and the Law on Contributions for Compulsory Social Insurance provides for a relief for the employment of newly settled persons, i.e. returnees and foreigners who have special vocational education and who are difficult to find on the domestic labour market, which is realised as a reduction of 70% of the tax base and contributions based on their earnings, for a period of five years.

When it comes to investment in startups through investments in venture capital funds, the Law on Personal Income Tax stipulates that a taxpayer who invests in an alternative investment fund, i.e. in the purchase of an investment unit of an alternative investment fund, is granted the right to a tax credit on account of the annual tax on personal income up to 50% of the investment made in the calendar year for which the annual tax on personal income is determined. This incentive can be used by the so-called business angels if they invest in venture capital funds established in the Republic of Serbia.

3.1.12. Law on Foreign Currency Transactions

The Law on Foreign Currency Operations (“Official Gazette of RS”, Nos. 62/06, 31/11, 119/12, 139/14 and 30/18) regulates payment transactions with foreign countries, and startups are dominantly oriented towards foreign markets in their operations and often cooperate with non-residents.

3.1.13. Laws in the field of intellectual property

As startups, as a rule, work to develop highly innovative products and services, the way in which the legal framework related to patents and intellectual property in general is regulated is extremely important. There have been improvements in the previous period, so in 2019, amendments to the following laws in the field of intellectual property were adopted: Law on Copyright and Related Rights (“Official Gazette of RS”, Nos. 104/09, 99/11, 119/12, 29/16 - CC and 66/19), Law on Patents (“Official Gazette of RS”, Nos. 99/11, 113/17 - other law, 95/18 and 66/19) and the Law on Protection of Topography of Semiconductor Products (“Official Gazette of RS”, Nos. 55/13 and 66/19). The changes relate to harmonisation with world practices and increase the level of protection of computer programme authors, database manufacturers and contractors.

3.1.14. Legal framework for employment of foreigners

Startups, as companies developing products for foreign markets with which they often have no direct experience, sometimes cannot find the skills and knowledge they need on the local labour market, but are forced to attract talent and employ foreigners with highly specific knowledge and competencies.

Therefore, it is extremely important that the regulatory framework for the employment of foreigners be flexible and favourable. To that end, the Government adopted the Decree on criteria for determining categories of foreigners and categories of foreigners who can be granted temporary residence in the Republic of Serbia regardless of the grounds for granting temporary residence (“Official Gazette of the RS”, No. 13/20), which defines the grounds for residence of foreigners (often called “startup, talent and investor visas”), and determines the categories of foreigners who can be granted temporary residence in the Republic of Serbia regardless of the grounds for granting temporary residence.

3.1.15. Law on Electronic Commerce

The Law on Electronic Commerce (“Official Gazette of RS”, Nos. 41/09, 95/13 and 52/19) regulates the conditions and manner of providing information society services, obligations to inform users of services, commercial messages, rules regarding the conclusion of contracts in electronic form, responsibility of information society service providers, supervision and violations. Also, the Law on Trade (“Official Gazette of RS”, No. 52/19) recognised and regulated in detail electronic trade, its models, as well as the obligations of traders who operate in this way in the modern digital age.

3.1.16. Law on Public Procurement

The Law on Public Procurement (“Official Gazette of RS”, No. 91/19) created a legal basis for the development of innovative goods, services and works and their subsequent procurement through the application of the “innovation partnership” procedure. The client can implement the innovation partnership procedure, through the foreseen negotiation stages, if it has a need for innovative goods, services or works, which it cannot satisfy by purchasing goods, services or works that are available on the market. In the innovation partnership, the criterion for awarding the contract is solely the best price-quality ratio.

3.2. Planning documents

3.2.1. Strategy of Scientific and Technological Development of the Republic of Serbia for the period 2021–2025 “The Power of Knowledge”

Strategy of Scientific and Technological Development of the Republic of Serbia for the period 2021–2025 “The Power of Knowledge” (“Official Gazette of RS”, No. 10/21) identifies steps and adopts measures that should strengthen the scientific research and innovation system of the Republic of Serbia, but also other stakeholders who produce, disseminate and apply knowledge in the sectors of education, economy and media. While the “Power of Knowledge” Strategy recognises the importance and lays the foundation for the further development of the scientific and technological development of the Republic of Serbia, this Strategy recognises and directs the development of an ecosystem whose purpose is the commercialisation of innovations aimed at economic development of the Republic of Serbia.

3.2.2. Smart Specialisation Strategy of the Republic of Serbia for the period 2020–2027

Smart Specialisation Strategy of the Republic of Serbia for the period 2020–2027 (“Official Gazette of RS”, No. 21/20) relies on high-tech solutions that are often developed through the creation and growth of startup companies. In this way, the formation of an environment favouring the development of smart specialisation and the realisation of the goals of that strategy is encouraged, such as the implementation of smart solutions in the sector of information and communication technologies, food production and creative industry. In the field of ICT, in the process of entrepreneurial discovery, it highlights the need to equip capacities for training personnel in this field with the most modern technologies, as well as the establishment of additional innovation-research-business parks for companies and startups in the field of ICT. Its specific objective 2. “Strengthening the economy through research and development and cooperation among the participants of the quadruple helix”, within measures 2.4. and 2.12. foresees an accelerator and a subprogramme intended for startups in the 4S areas, as well as the opening of the Creative Embassy in London, which, among other things, should present Serbian startups on the UK market and attract foreign investors in startups.

3.2.3. Strategy for the Development of Artificial Intelligence in the Republic of Serbia for the period 2020–2025

Strategy for the Development of Artificial Intelligence in the Republic of Serbia for the period 2020–2025 (“Official Gazette of RS”, No. 96/19) lists the development of education aimed at the needs of modern society and the economy, as well as the development of the economy based on artificial intelligence as its specific objectives. Bearing in mind that basing a business model on artificial intelligence technology is a common case in the startup ecosystem, this strategy supports the implementation of the measures outlined in the Artificial Intelligence Development Strategy, such as support for startup companies and small and medium-sized enterprises in the field of artificial intelligence and the establishment of shared infrastructure resources for the development of artificial intelligence.

3.2.4. Industrial Policy Strategy of the Republic of Serbia from 2021 to 2030

In addition to formulating a new industrial policy, the Industrial Policy Strategy of the Republic of Serbia from 2021 to 2030 (“Official Gazette of RS”, No. 35/20) has an important role to play in concluding Chapter 20 – Enterprise and Industrial

Policy in the pre-accession process of the Republic of Serbia to the European Union. This strategy identifies innovation, digital transformation and investment growth as strategic areas of intervention. By encouraging the development of high-tech innovative solutions and creating a favourable legal and financial environment for startup companies, it contributes to the achievement of goals and implementation of the Industrial Policy Strategy.

3.2.5. Strategy for the Development of New Generation Networks until 2023

In the Strategy for the Development of New Generation Networks until 2023 of Serbia (“Official Gazette of RS”, No. 33/18) among the six areas that need to be developed in order to fulfil the priorities of the Republic of Serbia, innovations and the development of smart networks are singled out. Within these areas, innovations will be encouraged, as well as the creation of better connections between science, technology and entrepreneurship, the development and application of sustainable development in the education system, the growth of capacities for research and development, including new information and communication technologies. The implementation of measures in these areas is correlated with the goals of the Startup Ecosystem Development Strategy in the Republic of Serbia.

3.2.6. Education Development Strategy in the Republic of Serbia until 2030

The Education Development Strategy of the Republic of Serbia until 2030 (“Official Gazette of RS”, No. 63/21) envisages the establishment of a Fund for Encouraging High-Tech Entrepreneurship, which will include financing the establishment of incubators, spinoff companies, technology transfer centres, and intellectual property centres, whose work will be continuously monitored and evaluated. At higher education institutions, the plan is to establish organisational units that will deal with innovation and technology transfer, such as creative centres and centres for technology transfer. The centres will implement the aforementioned tasks through the organisation of training programmes for the development of creative thinking and the acquisition of entrepreneurial skills, the organisation and promotion of volunteer programmes, the organisation of open innovation campaigns in cooperation with companies, the organisation of competitions for the best student ideas, through support for centre users in the development of ideas and their validation, by helping students and pupils in the use of equipment and software in the centre prototype workshop, i.e. creating and developing the idea of starting their own business through the establishment of a startup, i.e. helping researchers in the establishment of spinoff companies for the commercialisation of research results. The plan is also to increase the participation of content related to entrepreneurship in study programmes.

3.2.7. Economic Reform Programme (ERP) 2021–2023

According to the Economic Reform Programme (ERP) 2021–2023, Item 3.2. “Current economic developments and prospects for the year 2020”, the part that refers to the financial sector, it is planned that, in the coming period, NBS completes the activities it started on the drafting of the law regulating *crowdfunding* and alternative financing, as additional support would be provided to the development of small and medium-sized enterprises and startups. Within the Structural Reform 15. Improvement of institutional support for the development of smart specialisations and innovations, greater support for startups in the field of creative industries is planned, as well as the digital transformation of companies, while through the activities of the national platform

“Serbia creates”, to enable adequate communication between the Serbian creative industry and the world.

3.3. Regulatory sandbox

The *regulatory sandbox* is a “safe space” where startups can test innovative products, services and business models, without immediately bearing all the usual regulatory consequences of engaging in that activity.

Establishing such a regulatory framework allows startups to test their products in a controlled environment under the supervision of regulators. This type of improvement of the business environment is an ideal way of harmonising the existing environment with the needs of startups without disturbing the rules and procedures that apply to a wide range of companies.

With the passing of the Law on Payment Services (“Official Gazette of RS”, Nos 139/14 and 44/18), within the limited network exclusion, interested startups and entrepreneurs get the opportunity to, in the initial phase of development (when the applicability and profitability of the model is not yet fully possible evaluable), perform tests without conducting the entire and comprehensive procedure of submission and assessment of requests for granting permission for the provision of payment services. In order to use this possibility, it is mandatory to obtain the opinion and allow the National Bank of Serbia to inspect the testing.

Also, a *MedTech sandbox* was created, where unregistered medical devices can be imported within 24 hours for the purposes of research and development of innovative products, if the startup is a member of the science and technology park, or is a beneficiary of funds for encouraging innovation through the Innovation Fund in accordance with the law governing innovation activity.

Such solutions greatly reduce costs for startups and enable them much-needed speed and flexibility in their work, but the approach of creating regulatory sandboxes, i.e. easier testing and implementation of innovative solutions, needs to be extended to other areas as well.

4. ANALYSIS OF THE EXISTING SITUATION

In recent years, the Serbian startup ecosystem has attracted increasing attention from the domestic and international business, innovation and scientific community. The previous years were marked by successful entrepreneurial stories of domestic innovators who created business solutions that achieved notable results at the global level. However, the successes were sporadic and most often the result of individual commitment of the founders, and not a community as a whole. In order to provide future startups with a better environment for the development and global expansion of innovative ideas, MESTD, at the initiative of the Cabinet of the Prime Minister, and in direct cooperation with the competent authorities, institutions and the startup ecosystem community, started drafting the Strategy.

Although very dynamic and growing, the domestic startup ecosystem is young and there is no systematic approach to its development, including information about its current state. Bearing in mind that the Serbian startup ecosystem has been the subject of research in a small number of publications, including: “*Global Startup Ecosystem Report*”, by Startup

Genome (hereinafter: Report)¹⁰ and Startup Scanner of the “Digital Serbia” Initiative (hereinafter: Scanner), there is a very limited amount of information available for deeper ecosystem analysis. In the process of drafting the Strategy, the information was based on the two aforementioned studies and the insights of the participants of the Working Group, public consultations and conversations with representatives of various ecosystem stakeholders. Specific parts of the description of the current state find source in additional publications whose primary topic is not narrowly focused on the startup ecosystem, but can be related to it.

Global Innovation Index (hereinafter: GII) includes a set of indicators (including the degree of development and application of science, higher education, the number of graduated scientific and engineering specialists in the field of high technology, the degree of development, application and efficiency of technologies and the knowledge economy, the state of institutions, political stability, the rule of law, the state of infrastructure, environmental sustainability, and others) and is calculated as the mean of two groups of indicators of innovative ability and innovative results. In the list of 132 countries ranked, measured by the 2021 GII, the Republic of Serbia is positioned in 54th place and belongs to moderate innovators.

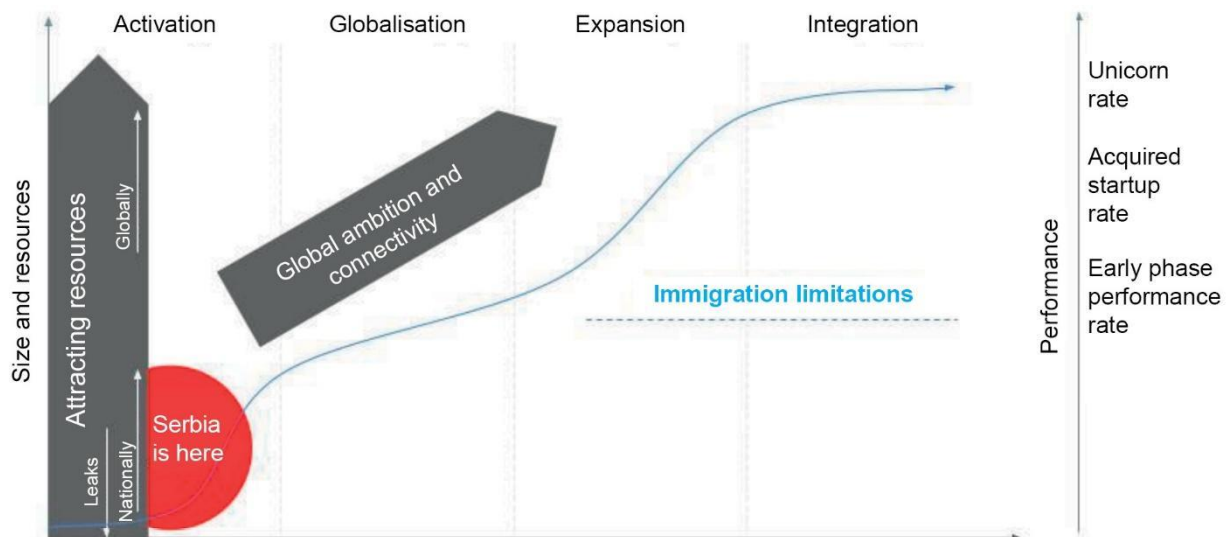


Figure No. 1 Lifecycle phase of the startup ecosystem Belgrade – Novi Sad (source: Report)

In 2019, the Republic of Serbia became part of one of the most relevant studies on the startup ecosystem in the world within the Report. In the 2020 Report, which covered over 300 ecosystems, the Republic of Serbia is the only country in the region that is part of this research and was rated as one of the top 5 countries in the talent accessibility category. Belgrade and Novi Sad (which were the only subject of this research and viewed as a unique startup ecosystem) were singled out with five other cities in the region of Europe and the Middle East as the most promising. The Republic of Serbia is classified as one of the fastest growing startup ecosystems in the activation phase, according to the criteria of growth in the volume of financing, sales of startups and the number of startups (Figure No. 1). The mentioned activation phase is characterised by the limited experience of the startup community in terms of

¹⁰ Startup Genome is a leading company from San Francisco that bases its expertise on more than a decade of data research in more than 250 cities and over one and a half million companies.

know-how of founders, investors and mentors that originate from a small number of startups, especially those that have achieved great growth on the world market and had significant exits. Insufficient knowledge of the community and insufficient number of opportunities for startups result in the emigration of startups from ecosystems at a lower level of development to those that are more developed. For the above reasons, the rapid development of the ecosystem is of great importance in order to fully utilise the local potential and prevent the departure of founders and entire companies from the domestic economy.

It is encouraging that the growth rate of the Serbian startup ecosystem (Belgrade and Novi Sad) is above the average of countries whose startup ecosystems are at the same level of development, and which are part of the research (Berlin, Jerusalem, Frankfurt, Tel Aviv and others), which indicates a large potential for further ecosystem development (Figure No. 2).

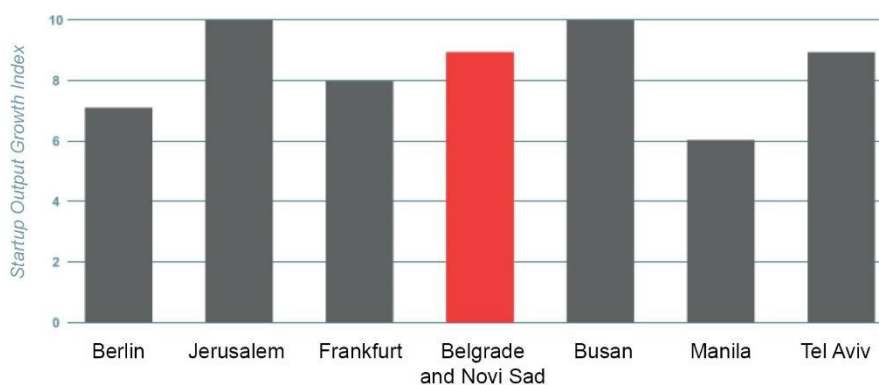
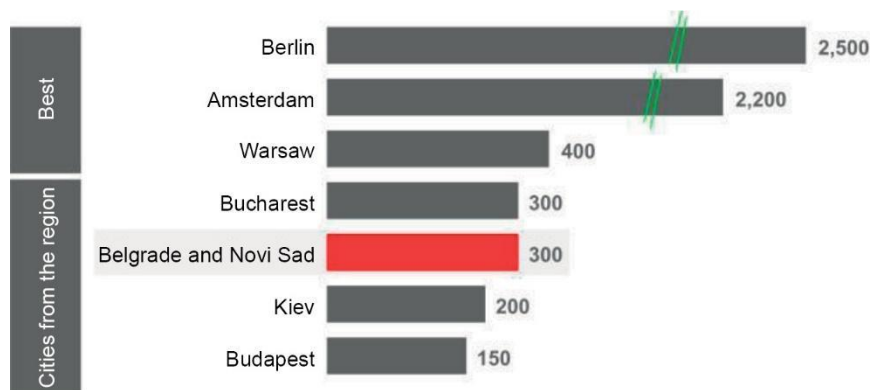


Figure No. 2 Growth rate of the number of startups in Belgrade and Novi Sad compared to ecosystems in the activation phase (source: Report)

Compared to other countries whose startup ecosystem is at the same level of development, the size of the ecosystem is smaller, more precisely, the number of startups is not high. According to the Report, the number of startups in the Republic of Serbia ranges between 200–400 and, compared to regional ecosystems at the same stage of development, it is at a medium level, such as Warsaw and Bucharest, while it is twice as large as Budapest (Figure No. 3). Despite the fact that the Republic of Serbia has a lower GDP and a smaller number of IT professionals per 1000 inhabitants, it manages to keep pace with other ecosystems in the activation phase. This shows that the Serbian ecosystem is already investing a lot of energy in its growth and that it is operating beyond its capacity. However, in order to ensure further growth and development at the same or higher level, it is necessary to identify sectors where additional improvements are possible.

Although it was not part of the Report, the region of the city of Niš is also making progress in terms of the development of the local startup ecosystem and shows great potential for further growth. According to the research on the ecosystems of South and East Serbia, which was carried out by the Science and Technology Park Niš and Niš Cluster of Advanced Technologies for the purposes of the Strategy, over 300 technology companies have been identified in that region, of which 25 are startups, all of which are working on over 150 innovative technology projects with market potential.



Source: Nexten.io - Software developers in Europe & the World: averaged

Figure No. 3 Number of startups in the Belgrade and Novi Sad ecosystem compared to other European cities (Source: Report)

The great potential of the region lies in the historical heritage of the city of Niš, as the industrial and technological centre of the region, and the renowned University of Niš, with a strong scientific and research base, whose alumni are famous founders of domestic companies. In recent years, the city of Niš has recognised the development of a knowledge-based economy as a key strategic goal, despite the significant influx of technological foreign direct investments, through support for the development of the Niš cluster of advanced technologies and a platform for the gathering of all interested parties for the development of the innovation and startup ecosystem – the Forum of Advanced Technologies, opening the Niš Startup Centre and the Niš Science and Technology Park, as an umbrella organisation for the development of the innovation ecosystem, actively supporting the promotion of startup culture and the development of the startup ecosystem. Additionally, in the local ecosystem there has already been media coverage of the acquisitions of local companies, as a trigger for the development of the ecosystem.

Also, there is a lack of collective experience and knowledge of the community about startups and the startup ecosystem, as well as a low level of attraction of resources for this stage. In order to move to a higher stage of the life cycle of the startup ecosystem, the relevant indicators (number of startups, level of funding, number of exits, etc.) must have constant growth.¹¹

In the system of scientific and research activity in the Republic of Serbia, and in accordance with the laws regulating scientific research activity, i.e. science and research, the National Council for Scientific and Technological Development was established to improve scientific and technological development, the quality of scientific and research work and the development of scientific and research work, as the highest professional and advisory body of the Government, which appoints members from the ranks of academics, scientists, university professors and businessmen, for a period of five years. The Law on Science and Research precisely defines the responsibilities of the National Council, and some of them are to monitor the state and development of scientific and research activity in the Republic of Serbia, give an opinion on the text of the Draft Strategy for Scientific and Technological Development of the Republic of Serbia, propose to the Minister scientific fields, branches and disciplines for which to form parent scientific committees, submit an annual report on the state of science for the previous year, pass an act on the evaluation of scientific and research work and the accreditation procedure of institutes, integrated universities,

¹¹ Report on the work of the Cabinet of the Minister without portfolio in charge of innovation and technological development – Government, January 2020, pp. 316–317

faculties and centres of exceptional value, achieve international professional cooperation, as well as cooperation with the appropriate body in the field of higher education, and other bodies and organisations as well as other jurisdictions determined by law.

Based on the extract from the State of Science Report for 2019, it can be pointed out that thanks to the great engagement of the research community, the science of the Republic of Serbia is highly positioned in international rankings, which unequivocally speaks of the country's potential in this field and its international competitiveness. Based on the ranking of more than 230 countries by *SCImago Journal & Country Rank*, the Republic of Serbia in 2019 ranked 55th in the world. On the other hand, research and innovation in the Republic of Serbia are integral elements of the majority of strategic documents that have been adopted in the past few years, and are therefore related to the activities of a large number of bodies and organisations. The innovation system is organised according to the Law on Innovation Activity. Innovation organisations are involved in the implementation of scientific research programmes of general interest, and scientific research organisations are not recognised as an integral part of the innovation system. Based on the above, it can be concluded that it is necessary to further improve the conditions for turning scientific results into innovations and their placement on the market in order to properly translate the scientific potential into a more competitive economy.

As this chapter proceeds, five key areas in the startup ecosystem of the Republic of Serbia are analysed: availability of education and talent, infrastructural and programme support for startups, access to financing, business environment and, finally, entrepreneurial culture, all with the aim of identifying gaps and challenges in the ecosystem that need to be solved by implementing the Strategy.

4.1. Availability of education and talent

Talent

Although there is a talented and affordable workforce, they do not have enough work experience within startups, which makes further development of the ecosystem difficult. Every startup, especially in the initial phase, requires diverse experiences and competencies within the team, while on the other hand, there is a lower interest in working in young startups due to the risks they carry with them. According to the Report, the number of experienced engineers as well as professional staff in this sector is below the average for the Activation phase (Figure No. 4). This situation is noticeable not only in terms of professional IT staff, but also in other areas for which startups require experience and which are necessary for their rapid growth and development (e.g. experienced founders, consultants, sales, marketing and business development managers). The Serbian ecosystem has a small number of startups that passed the A series and later stage, while only about ten startups went through the acquisition process. This is important because individuals with such experience are the ones who can support the growth and development of new teams and ensure that mistakes are not repeated¹², or present opportunities for growth and development that are not visible to less experienced founders.

The lack of experience is not surprising considering the volume of the Serbian ecosystem and the stage it is in, but it creates the need to accelerate development in order to create faster the collective experience of the ecosystem that is necessary for its development. Collective experience is increased by creating more multidisciplinary teams, as well as

by sharing knowledge and experiences with professionals from more developed ecosystems.

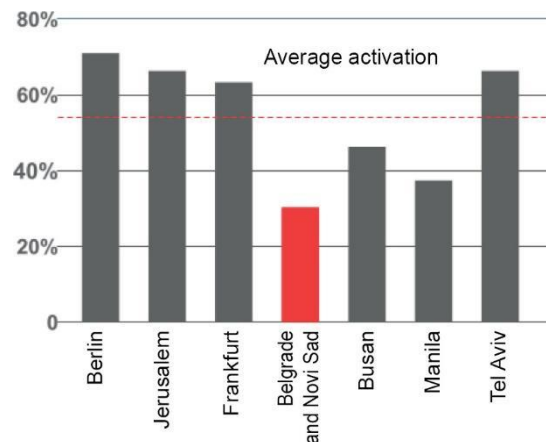


Figure No. 4 Percentage of engineers with previous experience working in a startup (source: Report)

The Report notes that ecosystems that can attract greater resources and include employees with experience undoubtedly reach a higher level of development and exit from an investment of greater value, which in the period of ecosystem development can be solved by attracting experienced startup founders and other experts from abroad. Specifically, bearing in mind that in the Republic of Serbia the market for startup products and services is neither sufficiently developed nor large enough, the challenge of local founders is greater because they have to understand different consumer cultures, needs and habits in order to offer their products or services in a way that suits target markets. Startups have a problem with creating a suitable *product-market fit*, because they make products for distant markets that they have not had the opportunity to get to know in detail. That is why it is often desirable for startups to work in partnership with foreign founders, advisors, mentors, as well as to employ foreign experts with specific knowledge and experience for their further development, marketing and sale of products/services.

Education

Increasing the collective knowledge of the community can be achieved through education and through greater connectivity within the ecosystem as well as with stakeholders outside the ecosystem.

4.1.1. Formal education

To ensure the long-term stable growth of the ecosystem, the education of future generations is extremely important, as they can be development catalysts, if they develop sufficient multidisciplinary competences, a tendency to creative problem solving and an entrepreneurial spirit during education.

Reforms of the education system, such as outcome-oriented programmes (instead of content-oriented programmes) which, among other things, aim to develop key competences for lifelong learning (especially mathematical, scientific, technological and digital competences, as well as leadership and entrepreneurship competences) and general cross-curricular competencies (entrepreneurship and orientation towards entrepreneurship,

problem solving, cooperation) provide a good basis for acquiring the competencies needed for the development of the startup ecosystem.

In primary education, the contents of entrepreneurship are studied within the reformed and improved subject of technical education. The subject of entrepreneurship was first introduced into professional education in sample educational profiles with the initiation of the reform of these profiles, which began in 2005. Now this subject is studied within the curriculum of teaching and learning for educational profiles in most areas of work in secondary vocational schools. More than 75% of all vocational school students attend entrepreneurship courses, and a total of 95 programmes (profiles) include entrepreneurship. Over 80% of secondary schools have experience with the implementation of extracurricular activities in the field of entrepreneurial education. In the high school, entrepreneurship is covered through the elective programme Economy and Business, which contains a topic related to startups. However, as part of the research carried out by MESTD and the Institute for the Evaluation of the Quality of Education and Training with teachers, one of the conclusions is that the vast majority of high school teachers believe that their entrepreneurship and digital competences are the lowest. This fact puts a special focus on the implementation of all activities that are related to the improvement of these key competences of teachers so that they could develop them in students during schooling.

In addition to teaching and learning, the entrepreneurial spirit of students is also developed through student cooperatives in primary and secondary schools. As an example of good practice, the competition of student teams organised by the non-governmental organisation “Junior Achievement” stands out, which in a practical way, through a mentoring programme, develops projects with students from their idea to a final product ready for the market. Greater inclusion of students from high schools in the Republic of Serbia, especially from IT departments, in this competition would contribute to a better understanding of the possibility of developing ideas into startups by students, and therefore to the future expansion of startup culture in the Republic of Serbia.

Bearing in mind the specifics of the startup ecosystem as an environment in which the entrepreneurial skills of an individual come to the fore, it is necessary to constantly modernise existing programmes by following the best practices, especially in terms of concepts and roles of participants in the startup ecosystem as well as examples of good practice in the country and in the world.

Entrepreneurship topics are also present in higher education, primarily within study programmes whose outcomes are oriented in this direction. In order to encourage faculties from various scientific and artistic fields, but above all those which do not include it as their main area, to include digital competences and entrepreneurship in their curricula, since 2016, MESTD has been implementing a competition on the basis of which it allocates funds to higher education institutions for the introduction of content related to digital competences and entrepreneurship.

In addition, MESTD, together with the “Digital Serbia” Initiative, has so far implemented two “Master 4.0” contests, which aimed to create multidisciplinary study programmes in the fields of ICT and business and ICT and art, with significant participation of the economy through an increased scope of practice and participation of business lecturers (unemployed lecturers).

In accordance with the Law on the Dual Model of Higher Education Studies and after the adoption of standards for the accreditation of study programmes according to the dual model together with a significant share of learning through work in a real working environment in relation to classes of active teaching,

students are expected to significantly raise the level of competencies they acquire at a higher education institution, especially in terms of practical application of what they have learned. Although it is not the primary goal of the dual study model, it can be expected that the encounter with the world of work and the practical application of what has been learned from an early stage of study will contribute to the creation of an entrepreneurial spirit in students and that many, at an earlier stage of their lives, will be encouraged to start their own business, for which they acquired relevant work experience in parallel with their studies.

As an example of good practice in the field of improving the knowledge and skills of students in the field of the startup ecosystem through practical teaching activities, the “Startup team project” stands out, which was conducted as an optional subject on the Master 4.0 programme in 2021, and included lecturers and evaluators from the economy with experience in the startup ecosystem. During the course’s eight modules, students simultaneously attended lectures and developed their own startup ideas, which they presented to potential investors at the end of the programme.

In 2018, the project “Innovative entrepreneurship – a combination of science and business”¹³ was implemented, within which seven public opinion surveys were carried out, the results of which highlight that the majority of respondents believe that the programmes at the faculties are not sufficiently focused on encouraging innovative entrepreneurship and that business initiation, project writing and managerial skills for running a business are the most important topics to be covered through formal education. As with entrepreneurship programmes in undergraduate education, similar programmes and topics in higher education need to be in line with the specifics related to startups.

4.1.2. Informal education

Informal education is especially important in the startup ecosystem segment because changes in the industry happen faster than formal education needs to adapt its programmes. In this sense, non-formal education should be seen as an upgrade and supplement, not as a substitute for content in the field of entrepreneurship in formal education.

In the offer of non-formal education, there are more programmes and training for certain professions and professional development in a certain field. Within the training for starting one’s own business organised for the unemployed by the National Employment Agency, topics important for entrepreneurship are covered, but not particularly in terms of startups. However, these programmes are available to young people and other citizens after completing formal education, while a wide range of state non-formal education programmes are not available to pupils and students.

As an example of informal education for students, the programme of the Belgrade Science and Technology Park stands out, which implements an entrepreneurial education programme for students of the University of Belgrade twice a year, through which students creatively and practically simulate the development of startups and learn how to develop innovative business ideas and evaluate them on the market. More than 100 students go through the intensive programme annually.

¹³ The project was implemented under the auspices of the Cabinet of the Minister without portfolio in charge of innovation and technological development.

Commercialisation of innovation, that is, implementing the process of technology transfer and thus the creation of spinoffs, represents a great development opportunity for the startup ecosystem of the Republic of Serbia. In order to fulfil the full potential of the economy, high school students, students and innovators, MESTD has been organising a state project since 2005, the National competition for the best technological innovation in the Republic of Serbia. So far, 2,800 teams with over 9,000 participants have participated in the project, and thanks to this competition, over 85 new companies were founded, and 1,425 business plans and business models were prepared. 8,469 researchers in high-tech companies, student and high school teams and innovators passed the training.

The main goal is to point out to a larger number of potential techno-entrepreneurs, individuals or legal entities, all the possibilities but also the obstacles, as well as the work that must be done, in order to make a seemingly attractive idea ripe on the market. Those necessary previous activities include the organisation of work teams, education, market research, preparation of business plans, work with modern IT tools and others.

Definition of the framework for the development of the startup ecosystem in accordance with this strategy is expected to harmonise the existing programmes and create new ones that can respond to the specific needs of education about the startup ecosystem and startup entrepreneurship.

4.2. Infrastructure, support and ecosystem connectivity

The startup ecosystem includes a large number of stakeholders, who are involved in the activities of the ecosystem with different experiences and needs. One of the main levers that significantly affects the growth and development of startups is connectivity, communication and cooperation with relevant participants in the ecosystem and outside it. The relationships that represent particularly important levers for ecosystem development are those between founders, founders and domain experts, founders and investors, and finally between representatives of two different ecosystems.

The need to connect within the ecosystem has led to the emergence of a large number of startup business support organisations that have different models of business and support, but which greatly contribute to the promotion and strengthening of startup culture and knowledge in the country. Additionally, bearing in mind that formal education can only partially prepare founders for the path of startup development, support organisations largely compensate for this gap in knowledge by organising various educational and mentoring programmes. In recent years, various forms of assistance to startups have appeared in the form of financial, infrastructural, educational and technical support through support organisations such as science and technology parks, incubators, hubs and accelerators.

Law on Innovation Activity, among other things, recognises the following as the most relevant organisations for providing infrastructure and professional support to innovation activity in the startup ecosystem (hereinafter: support organisations): business-technology incubator and science-technology park.

Support organisations for startup teams and startups independently create their own support programmes for startups that can differ according to the level of idea development in the startups they are intended for as incubator or accelerator programmes.

4.2.1. Science and technology parks

Science and Technology Park (hereinafter: STP), is defined in the Law on Innovation Activities as a company that provides infrastructure and professional services within a defined area to higher education institutions, scientific research and innovation organisations, as well as high-tech and medium-tech companies in a certain scientific, research-development or production group with the aim connecting them and applying new technologies as quickly as possible, creating and placing new products and services on the market, which indicates that the state has already recognised the importance of building this type of support for startups. STPs were created in response to the need for strong institutions, with superior scientific and research infrastructure and recognition at the regional, European and world level in order to increase the level of commercialisation of scientific research through spinoffs and startups. In addition to the establishment of STP Belgrade, which is already achieving significant results, the Republic of Serbia is expanding the network of science and technology parks in various regions (Novi Sad, Niš, Čačak, Kruševac). The aim of these parks is to bring to the regional and global market technologies based on innovations, which generate high added value, thus directly stimulating exports. In the previous period, an initiative was launched to establish another Science and Technology Park in Kragujevac¹⁴.

STP Belgrade was founded in 2015 in a partnership between the Government, the City of Belgrade and the University of Belgrade, while the establishment and development of STP Belgrade was supported by the Government of the Swiss Confederation. The financing of STP Belgrade comes from the budget and its own funds, so that during the development of STP Belgrade, the share of its own funds increases, while the share of budget funds decreases, which is now at the level of about 25%. As far as projects are concerned, STP Belgrade is implementing the project with the support of the Swiss Government “Technopark Serbia 2 – Boosting exports through techno parks”, based on previously good results in the process of establishing and developing STP Belgrade. In the first five years of operation, support was provided for more than 100 companies in development and commercialisation of innovative products and services. Member companies export to more than 40 countries around the world and employ more than 1,200 highly educated people. Seven support programmes were developed, more than 500 young potential entrepreneurs were trained, while over 3,500 students were animated for technological entrepreneurship, and more than 15,000 people participated in numerous events realised in STP Belgrade. Special programmes for startups that were developed and implemented in cooperation with domestic and international partners are: An integrated incubation model of NTP Belgrade and the Business and Technology Incubator of Technical Faculties Belgrade (BITF), which annually supports 50 startup teams and companies through the incubation programme.

STP Niš was founded in 2020 in partnership with the Government, the City of Niš and the University of Niš. The financing and operation of NTP Niš is regulated by the Management and Development Programme of STP Niš until 2025, which also regulates the co-financing of operations, in proportion to the share in ownership by the Government and the City of Niš. 66 companies responded to the public call for membership in STP Niš in the first year. At the STP Niš first anniversary, it has 46 members, of which 16 technologically developed, 23

¹⁴ Strategy of Scientific and Technological Development of the Republic of Serbia for the period 2021–2025, under the motto

startup companies and seven virtual members. About 500 people currently work in STP Niš member companies, and by the end of 2023, it is planned to employ over 1,000 mostly young, highly educated people. In the first year, about 35 events were organised and attended by about 2,000 people. Support programmes for members through training and mentoring have been created and implemented, and an education programme in the field of innovative technological entrepreneurship has been designed – the Niš Startup School, which is held four times a year and is primarily intended for final year students and high school students with the aim of promotion and familiarisation with the basics of technological innovation entrepreneurship. In order to make its activities regional, a regional network of STP Niš for the development of innovative economy and technological entrepreneurship was formed, which brings together all startup centres, business incubators, shared workspaces, regional development agencies, chambers of commerce and business associations through which STP Niš realises its activities in the entire region. STP Niš plans to, as an umbrella organisation in the region in this area, in cooperation with local and regional partners and the support of competent republican institutions and partners, make a full contribution to rebuilding the economy and changing the image of the region, as well as development based on the knowledge-based economy.

STP Čačak was founded in 2020. Like STP Niš, STP Čačak participates in the implementation of the project “Technopark Serbia 2 – Boosting exports through techno parks”, through which the Government of the Swiss Confederation supports further development, innovation and the creation of a network of science and technology parks in the Republic of Serbia for four years in a row. In addition, STP Čačak provides services for the use of production space with shared rooms, office space, conference hall, STP laboratory, as well as business incubation and startup centre services. Also, the “*SMEs Digital*” project focuses on the goal of developing small and medium-sized enterprises and IT startup companies at the local level, i.e. in Moravica, Raška and Zlatibor administrative districts, through the digital transformation programme.

STP Novi Sad was founded with the aim of bringing together companies engaged in innovative activities, for the purpose of connecting them, creating and placing new products and services on the market, promoting research and scientific results, developing a climate for the development of entrepreneurship, opening new jobs, as well as for creating conditions for the development of innovative startup companies. Final works on the completion of the Science and Technology Park facility are underway and the planned completion date is October 2021. Public calls for membership in STP Novi Sad were announced in September 2021 for startups, startup teams and technology-development companies. In relation to the planned dynamics of activities during the month of November, contracts with potential members would be concluded.

4.2.2. Business technology incubators

The founders of startup companies are often innovators who turn their specific knowledge into a product or service that did not exist on the market until then, but the problem is that they lack the basic resources to start a business. One of the possible forms of support in such situations are incubators. Specifically, since startups in the initial stages of business lack resources, experience and relevant contacts, incubators provide services that help them overcome the initial obstacles in starting a business. These obstacles include space, financing, legal, accounting

and other services that are a prerequisite for business and development. The process of business incubation itself represents support for young startups to pass the initial development phase as successfully as possible, as well as to acquire the necessary skills for further growth and development.

The primary role and goal of business technology incubators is to encourage the creation of successful startups through a set of services, to make them financially liquid and self-sustaining upon leaving the incubator. At the local and regional level, business-technology incubators are an instrument for stimulating the growth of employment, technology transfer and innovation.

The first initiatives for business incubation in the Republic of Serbia appeared around 2004–2005 and were supported by donors, namely the Government of Norway, the Organisation for Security and Cooperation in Europe (OSCE), the Austrian Development Agency (ADA), the Government of the Federal Republic of Germany and the US Agency for International Development (USAID). At the beginning of 2006, there were only five incubators in the Republic of Serbia, while the analysis of the state of business incubators in the Republic of Serbia of 2020¹⁵ identified forty in six regions. In the first years, based on the Law on Innovation Activities, the first technological incubators were established, namely: Business Technology Incubator of Technical Faculties of Belgrade, Business Incubator Zrenjanin, Business Incubator Novi Sad. According to their own statement, almost half of the identified incubators support the development of startup companies, while the rest are focused on providing support to entrepreneurs from all fields. However, the capacity of domestic incubators to support the development of startups beyond the capacity of providing work space is very limited, so they generally do not gather the most promising startups locally who decide to develop their business independently or with the support of individual mentors and investors. For example, one incubator, such as the Business Technology Incubator of Technical Faculties, supported the creation of a large number of startups and companies that today employ over a thousand engineers in the ecosystem.

In the Serbian ecosystem, hubs are recognised as extremely important for the national ecosystem, which also represent business and technology incubators in the sense of the Law on Innovation Activities, started as private or civil initiatives, and which bring together a large number of stakeholders in the ecosystem and, in addition to infrastructure, provide educational and mentoring support on the basis of the programmes they implement. Such hubs are mostly started with the support of donors, and are mostly financed through project activities, and less through commercial services.

In recent years, both private companies participating in the digital economy and globally recognised startups have also established hubs through which they support the development of innovative solutions in industries close to them.

As a rule, incubators are a great support for young startups at the very beginning of their business and one of the most important support instruments for the formation of new and sustainable startups because they provide immediate support to startups in the period when they are most sensitive and prone to failure. However, the need for their existence and development has not led to the opening of even more incubators due to the difficulty of finding a business model that enables their financial (self)sustainability, which is further emphasised by the fact that very limited budget funds are available to business-technology incubators. The lack of subsidies for the operation of the incubator, which mostly arises after investment in the physical infrastructure, indicates the need for raising

the capacity of incubator managers to create a sustainable financing model. Consequently, the lack of market competition in this sector leads to stagnation in the process of developing programmes and supporting startups.

4.2.3. Startup centres

Analysing the state of innovation potential in the Republic of Serbia before 2020, it was determined that the capacity for innovation development exists in local communities and that this fact should be used as a starting point for the development of a network of regional innovation startup centres. Through the development of such centres, the conditions are equalised for all individuals and institutions operating in the field of innovative activity, which contributes to a more even economic development of the country. The cabinet of the minister without portfolio in charge of innovation and technological development launched the implementation of the Support Programme for the opening of regional innovation startup centres in 2018 and 2019¹⁶. The general goal of this type of programme is the systemic improvement of the innovation ecosystem throughout the territory of the Republic of Serbia through support for the opening of regional innovation startup centres. The ultimate goal of the Programme is to provide the necessary conditions and equal chances for the realisation and development of innovative entrepreneurial ideas in all parts of the Republic of Serbia¹⁷.

Based on that programme, a total of eight projects were implemented (“Startup Centre of Science and Technology Park Čačak”, “Regional Innovation Startup Centre Gornji Milanovac”, “Regional Centre for Sustainable Development Srem – Phase I: Establishment of Stara Pazova Innovation Startup Centre”, “Regional Innovation Startup Centre of Rasina District”, “Regional Innovation Startup Centre of Subotica”, project “Establishment of a Startup Centre in Pirot”, “Serbian Innovation Network – Startit Centre Zrenjanin”, “Regional Innovation Startup Centre Valjevo”) in the total amount of 250,000,000 dinars¹⁸.

From the budget of the Republic of Serbia, 220,000,000 dinars have been provided for the implementation of the Support Programme for the opening of regional innovation startup centres for 2019. Based on this project, startup centres were opened in Užice, Priboj and Kragujevac.

4.2.4. Local connectivity

Better local connectivity (especially relationships with other founders in the ecosystem) is highly interdependent with better startup performance. This also means that poor local connectivity is associated with lower startup performance. For the development of the startup ecosystem, it is important to have professional relationships, cooperation, a culture of knowledge sharing among startups and other stakeholders of the startup ecosystem. Local connectivity includes a sense of community that is reflected in the mutual assistance of founders and assistance from investors and experts. It also includes local connections between founders, investors and experts (Figure No. 5).¹⁹

The results of the Report clearly show that Belgrade and Novi Sad lag behind the global average when it comes to local connectivity. The analysis reveals that relationships and connectivity in the community – the way founders and investors help each other (sense of community) and the number of quality relationships between founders, investors and

¹⁶ Government Decree (“Official Gazette of RS”, No. 15/19)

¹⁷ Cabinet Report, p. 39

¹⁸ Cabinet Report, pp. 41–46

experts – is below the global level.

The Report emphasises that although local startups perform primarily on the global market, their interaction with local investors and experts will help them achieve greater success.

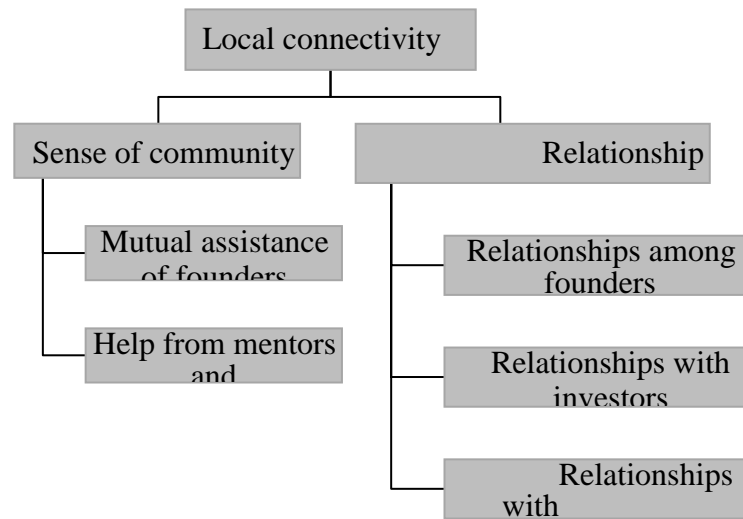


Figure No. 5 Presentation of missing local connectivity components (source: Report)

International connectivity

Data from the Report shows that startup founders from Belgrade and Novi Sad have a strong connection with representatives of the most developed startup ecosystems in the world and that their orientation towards the global market is higher than the average among startup founders who are at the same stage of development. International connectivity shows the number of business connections of startup founders with the best-ranked ecosystems that represent a source of experience and knowledge for creating business models and startups that have the potential to become global leaders (Figure No. 6). Connection with global experience and knowledge can influence the development of the Serbian ecosystem and give it the value necessary for participation in other markets. However, such a good result in the field of global connectivity is primarily the result of individual initiatives of the founders, and less of a systemic approach to creating the exchange of knowledge and experiences with foreign countries. Additionally, there is room for improvement regarding the integration of foreign founders into our ecosystem, which would greatly contribute to the development of the community's collective knowledge.

It is also indisputable that the diaspora provides increasing support to domestic startups – both through mentoring work and through connecting with investors and clients in their market. In the last few years, this support has received a more concrete structure in the form of the existence of the *Serbian Entrepreneurs* organisation, which was founded in Silicon Valley in 2016 by successful entrepreneurs from this area. Their significant contribution to the Serbian startup ecosystem is reflected in providing access to skills, resources, connections and mentorship, which they implement through their representative offices in

San Francisco, New York, Los Angeles, Miami, Toronto, London and Berlin.²⁰

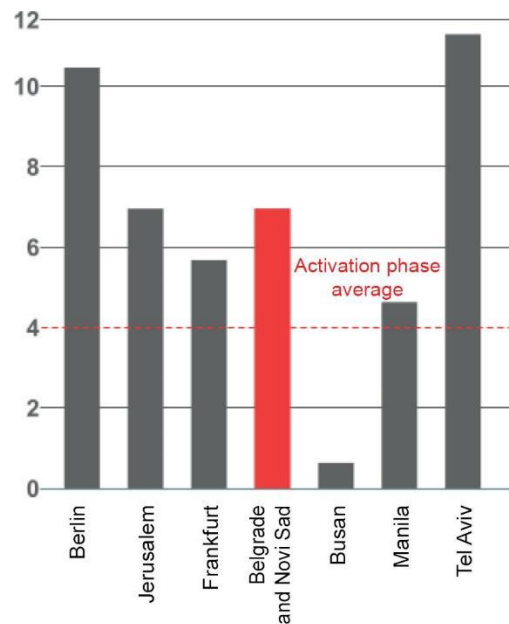


Figure No. 6 International connection with startup ecosystems in the world (source: Report)

The reach of connection with the global market can further grow depending on the existence of the founders' global ambitions (based on their desire to develop a product for the global market, the motivation to change the world and develop a leading product in the global market) and global strategy (finding global markets by the founder).

According to the Report, founders of Serbian startups show a higher than average tendency when it comes to global strategy. Specifically, only 22% of startups are oriented towards the markets of the Republic of Serbia (11%) and the former Yugoslavia (11%). The largest number is focused on the USA (37%) and Europe (26%), while 6% of startups define their market as

“global”. Of the remaining, 5% of startups are focused on the UK market, while the United Arab Emirates, Canada and Asia are the focus of 1% of startups.

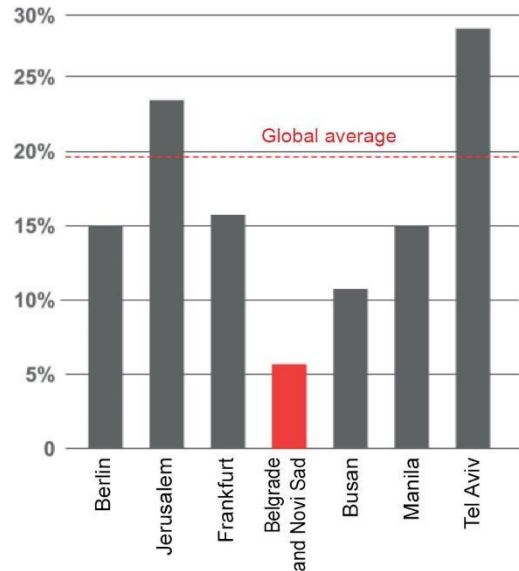


Figure No. 7 Presentation of the global ambition of the startup founder (source: Report)

What emerges as a negative side of Serbian startups is the lack of global ambitions of the founders. The proportion of founders in Belgrade and Novi Sad with high ambitions is below the global average of 19%, and amounts to only 6% (Figure No. 7). Lack of targeting a market worth over 30 billion dollars is particularly noticeable, where only 15% of founders have such an ambition, compared to 30% of startup founders in other ecosystems (Figure No. 8). The share of immigrant founders in the Serbian startup ecosystem is also low, which affects global connectivity, and this component is further reflected in the reduction of reach on the global market (Figure No. 9).

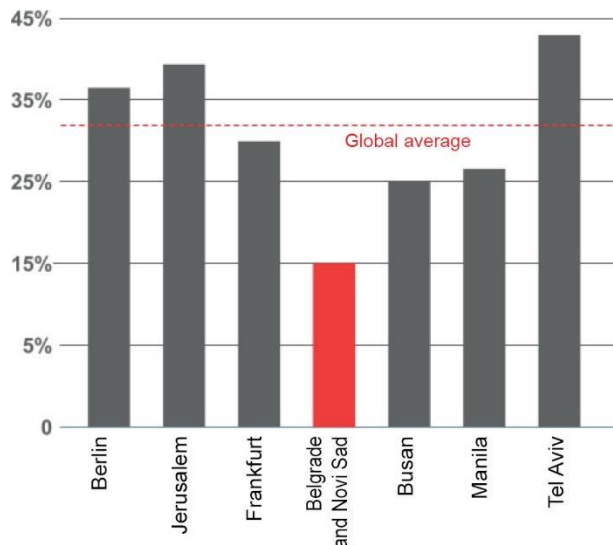


Figure No. 8 Percentage of startups developing/marketing products in markets worth 30 billion euros or more (global strategy) (source: Report)

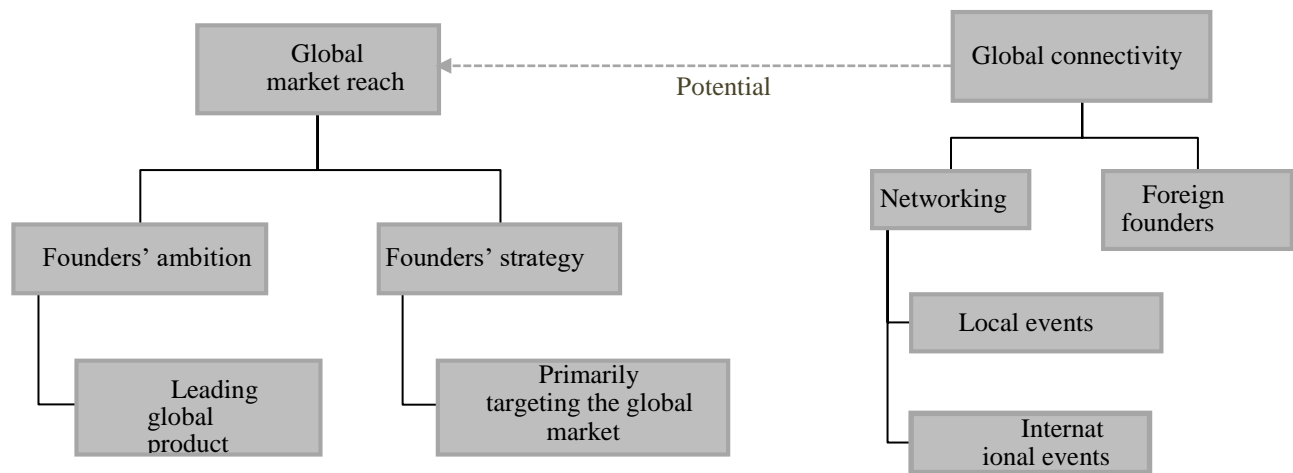


Figure No. 9 Presentation of missing global connectivity components (source: Report)

4.3. Financing of the startup ecosystem of the Republic of Serbia

The report unequivocally indicates that the main challenges of the ecosystem are related to funding in the early stage of startup development. At this stage, they receive almost nine times less funds than the global average for ecosystems at the same stage of the life cycle, because the average value of investments in Serbian startups is 17,000 euros, while the average of other ecosystems is 155,000 euros.

The 2019 report shows that domestic startups collected more than 143 million euros in investments in ten years, with more than 80% of the funds (about 122 million euros) invested in just two companies. The challenge of obtaining investments for startups becomes even more visible if we know that more than 50% of domestic startups have not attracted any investments and are fully financed from their own resources²¹.

Financing startups at an early stage, when they are in the riskiest and least attractive stage of development, is a challenge for founders who find it difficult to find investors who are ready to support them under favourable and fair conditions. To some extent, this problem is also present in more developed ecosystems, and its solution lies in the provision of grants by the state or international development funds, or through the activation of a group of business angels. The current funding opportunities in the ecosystem will be presented below. The above statistics indicate the existence of a *funding gap* during the early stage of development, which puts Serbian startups in an unenviable position year after year. In the current stage of ecosystem development, it is crucial to provide financing for as many startups as possible in the early stage, but also to develop the entire chain of financing as the startups move to further stages of development.

Serbian startup companies are mostly financed from the founders' own sources, their own savings or with loans from relatives and friends. Less than half of the startups in the Republic of Serbia manage to attract external investment or financing, but the majority are still financed from their own resources. In addition to

²¹ Scanner, p. 9

the mentioned sources of financing, startups were able to apply for funds from state programmes and alternative investment funds in the previous period.

In order to encourage the activation of private capital for investments in startups and to simultaneously create an investment culture, it is important to systematically support and encourage this type of investment. The mechanism of co-financing investments in startups and alternative investment funds proved to be one of the most effective practices in the world. For example, in the case of co-financing, the state follows the investments of private investors in an equal or smaller amount by investing additional funds in a startup or venture capital fund selected by professional private investors through grant funding or investment.

4.3.1. Ministry of Education, Science and Technological Development

According to the Law on Innovation Activity, MESTD announced eight public calls for innovation project proposals of legal and natural persons by registered innovation entities in the period 2006–2017 by programmes:

- Funding programme for innovation projects that result in a commercially verified product, including software, process, technology or service;
- Programme for the development of registered organisations for carrying out innovative activities and providing infrastructure support for innovative activities;
- Project financing programme for natural persons – registered innovators.

In that period, 448 projects of legal entities, registered innovation organisations with a total sum of 10.8 million euros and 148 projects of natural persons – registered innovators with a total budget sum of 0.8 million euros were financed with budget funds.

4.3.2. Innovation Fund

Innovation Fund (hereinafter: Fund) is a state organisation specialised in providing support to innovation activity and managing financial resources to encourage innovation, which was given that mandate by the Law on Innovation Activity in 2006. The Fund's mission is to support the development of innovations through appropriate instruments of financial, technical and advisory support. One of the Fund's specific objectives is to support innovative entrepreneurship, especially in the early stages of development. Realisation of the Innovation Fund programme is supported by the Government, MESTD, as well as the European Union and the World Bank.

In accordance with the mandate to perform tasks related to the preparation, implementation and development of programmes, projects and other activities in the field of implementing innovation policy, the Fund implements programmes through which it finances the creation of new products, services and technologies with market potential. Of importance in the context of this strategy are the programmes intended for small and medium-sized enterprises, namely those in the early stage of development (the Early Development Programme, launched in 2011 and the Smart Start Programme, planned for 2021), in the growth phase (Co-financing Innovation Programme, launched in 2012 and the Acceleration Programme, planned for 2021), as well as for cooperation with scientific research organisations in the form of a consortium (Science and Business Cooperation Programme, launched in 2016).

The above-mentioned programmes from 2011 to 2020 supported 227 projects. The total amount of financing through the use of grants amounts to over 21.1 million euros.

4.3.3. Support programmes for startups

In order to encourage innovation and entrepreneurship, government bodies, agencies and funds implement support programmes to which startup companies can also apply. Such support programmes are implemented by MESTD, the Innovation Fund, the Cabinet of the Minister without portfolio in charge of innovation and technological development, the Development Fund of the Republic of Serbia, the National Employment Agency, the Development Agency of Serbia, etc. Through these programmes, startups can receive certain financial support through direct grants, favourable loans, employment support programmes, internationalisation support programmes, etc. According to NALED²² data, in 2019 and 2020, 19 programmes to support innovation and entrepreneurship financed by state bodies, agencies and funds were implemented.

The startup development project of the Belgrade Science and Technology Park, which is implemented through the programme “*Raising Starts*”, supported by the Government of the Swiss Confederation, provides professional and non-refundable financial support to startups in the early stages of development in order to validate the idea on the market and develop the first prototype. Through this programme, up to 100 startup companies will be supported by 2024 through the realisation of the programme in science and technology parks in Belgrade, Niš and Čačak, which further contributes to the decentralisation of opportunities in the ecosystem.

Like programmes financed from the budget of the Republic of Serbia, startups could also apply for programmes of international donors such as the European Union, the United Nations Development Programme, the American Agency for International Development, the World Bank, the German Organisation for International Cooperation and the Swiss Agency for Development and Cooperation. According to NALED data, during 2019 and 2020, these donors implemented ten programmes for financing innovation, entrepreneurship development and science support. In addition to international donors and state institutions, support programmes are also organised by non-governmental organisations and corporations, often with the support of international partners.

However, like similar programmes implemented by state bodies, agencies and funds, they are often not originally and specifically intended for startup companies, but entrepreneurs, micro, small, medium and large enterprises that do not have the unique characteristics of a startup could also apply for funds and other support. This shows that it is necessary to envisage targeted support programmes that would distinguish startups as a special type of company and adapt them to the specific needs that startups have (high research and development costs, lack of income in the initial stages of business, teams that are not yet incorporated or not established in Republic of Serbia). Specifically, due to all their specifics, startups require a customised approach compared to standard models of support for small and medium-sized enterprises, although at the same time they share most of the daily business challenges with them.

²² Startech – Mapping of innovation support programmes in the Republic of Serbia – Analysis and recommendations for improvement

4.3.4. Business angels

The importance of business angels for ecosystems in the initial stages of development like ours is extremely high, due to their willingness to support startups in the earliest stages of development, when the risks of startup companies failing are relatively high and when most investors are not ready to support them. The importance of business angels in the ecosystem is far greater than their ability to finance the development of startups, they are especially important in the context of knowledge transfer, sharing contacts and connecting the community and finally, their activities contribute to the promotion of startup culture and the culture of investing in startups.

In the Republic of Serbia, business angels are almost non-existent, and their activities are not specifically regulated or encouraged.

4.3.5. Alternative investment funds

Investing in startups presents a special type of challenge and special knowledge is needed to make informed decisions about investing in such business ventures, due to the overall risk that startups carry with them. That is why the existence of professional, institutional investors is especially important for the development of the venture capital market. With the adoption of the 2019 Law on Alternative Investment Funds (“Official Gazette of RS”, No. 73/19), the legal basis was created for the development of *venture capital funds* that represent an efficient way of financing startups. The establishment of such funds opens new ways of financing, which will contribute to the development of the startup ecosystem in the Republic of Serbia.

The creation of venture capital funds represents a source of financing for startups, but also a reduction of risk for investors. Venture capital funds can be state-owned, private or combined. They aim to collect funds to invest in startups based on a defined investment policy.

4.3.6. Crowdfunding

Due to the existing gap in the level of investments in domestic startups, it is necessary to enable different types of alternative financing. Crowdfunding is a way of financing projects or business ventures by collecting a small amount of money from a large number of people, usually through online platforms. In the Republic of Serbia, several regulatory obstacles currently hinder the creation of local platforms for crowdfunding and the collection of funds on them from foreign sources, as a result of which it is necessary to create a special legal framework that could enable different types of crowdfunding, e.g. *donation-based, reward-based, crowdfunding and crowdlending*, which will enable domestic startups to raise funds from domestic and foreign investors in a safe and efficient manner.

The Law on Digital Assets (“Official Gazette of RS”, No. 153/20) created a mechanism and a secure legal framework for crowdfunding through initial coin offering in the Republic of Serbia.

4.4. Business environment

Startups, as companies whose main characteristic is that they are newly founded innovative entities with the potential for rapid and large growth but also the risk of failure, are largely dependent on the ability to use their resources efficiently. Creators of public policies and regulations should recognise the specifics of startups and create a business and legal framework that encourages their establishment and development. Given that startups are young business entities that often have to work intensively for long periods of time to develop their products and services, invest in research and development, and without generating business income, the level of understanding of their business model when creating a legal business framework would be very high. Facilitating their establishment, operation and closing so that the founders can start new business ventures as soon as possible is one of the main goals that state policies must achieve in this area.

The existing regulatory framework, although significantly improved in the previous period, primarily when it comes to tax incentives and digitalisation of business, is still to a certain extent not sufficiently flexible and adapted to the way startups do business. In order to ensure that the legal framework, administrative procedures and other obligations during business are sufficiently efficient and stimulating, so that they enable the optimal use of the startup's limited resources (which should primarily focus the startup on research and development), it is necessary to continuously improve the administrative legal business framework.

In order to improve the framework for startup business, it is necessary to continuously identify the need to change administrative procedures and regulations that hinder or slow down the development of startups, and then implement the best solutions. Through the process of public consultations, a number of administrative procedures and regulations were identified that represent a challenge for startup business, and which need to be changed in accordance with the capacities and work plan of public institutions, and some of the most frequently mentioned needs concern:

- Registration of new products and services,
- The needs for the development of alternative financial instruments,
- Customs procedures for the import and export of prototyping components,
- Facilitation of global business (primarily in terms of payments and collections abroad),
- Regulatory sandbox,
- Easier creation of special entities for investment,
- Encouraging business angel investments,
- Facilitating the procedure of hiring foreigners,
- Facilitating and speeding up the procedure of closure and bankruptcy of startups.

4.5. Promotion and popularisation of the startup ecosystem and entrepreneurial culture

Startup entrepreneurship²³ as such is a relatively new phenomenon in domestic culture

²³ Entrepreneurship in the context of this strategy is used in its broader meaning, in accordance with the following definition: "Entrepreneurship is usually associated with the creation of new business ventures or with

and the economy, and that brings with it a certain level of misunderstanding and lack of information among the domestic public about the concept and importance of startups as drivers of an innovative and globally oriented economy. In order to encourage the establishment of a larger number of startups, but also the use and promotion of products and services offered by domestic startups, it is necessary to systematically approach its popularisation.

The development of a startup directly depends on the social environment in which it is located, because it has a great influence on the development of entrepreneurial culture. Startup ecosystems are developing in numerous countries and in the most diverse social contexts. The social environment is important for building an entrepreneurial culture that encourages the development of entrepreneurship in accordance with the needs and behaviour of the market.

In the period from 2016 to 2020, there was a Council for Innovative Entrepreneurship and Information Technologies with the main goal of encouraging the creation of legal conditions for the systemic development and improvement of the IT sector and the development of innovative entrepreneurship in the Republic of Serbia. After four years of this body's work, the Government decided in 2021 to continue the development of this economic branch, as well as expanding the scope of work, and established the Council for encouraging the development of the digital economy, innovation, high-tech entrepreneurship and digitisation in business operations of economic entities (the decision on the formation of the Council for encouraging the development of the digital economy, innovation, high-tech entrepreneurship and digitisation in business operations of economic entities was published in the "Official Gazette of RS", No. 38/21). The task of the Council is to consider issues and make proposals necessary for a significant and systematic increase in the volume of exports in the field of digital economy, high-tech products and services and innovative entrepreneurship, increasing GDP in these areas, increasing the volume of professional staff, improving infrastructure for business, improving the application of high technologies and increasing total employment through the development of innovative entrepreneurship, including retraining and other measures. The Council will, among other things, monitor the position and make proposals for improving the position of the Republic of Serbia on the ranking lists of international institutions that monitor the development of the digital economy, innovation, high-tech entrepreneurship and digitisation in business operations of economic entities, such as the global innovation indices of the World Intellectual Property Organisation and *Bloomberg*, the World Digital Competitiveness Ranking of the Institute for Management Development, the list of Technological Cities of the Future, etc. It is important to emphasise that the Council will also make proposals for systemic development and training of professional staff in relevant areas (digital economy, innovative entrepreneurship, technological entrepreneurship and digitisation in business operations of business entities), which is of great importance for the further development of the Serbian ecosystem.

The cabinet of the minister without portfolio in charge of innovation and technological development, in addition to direct incentives aimed at supporting the development of innovation, initiated the implementation of the Programme for the Promotion of Innovation and Innovative Entrepreneurship. 36 projects were financed through previously announced public calls, thus creating

self-employment. These activities, it is true, are a reflection of entrepreneurial behaviour; however, entrepreneurship is a much broader phenomenon. Whether starting a new business, solving a problem, or deciding which way to get home, people with an entrepreneurial mindset will always be open to the possibility of improving their lives, even if it's a small thing. That's why we say that entrepreneurship is a way of human behaviour that consists of identifying a new framework of ideas and goals in life." (M. Minniti and R. Koppl, "Market Processes and Entrepreneurial Studies", in Handbook of Entrepreneurship Research, eds. Z. Acs and D.

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and marketing numerous promotional materials and carrying out domestic and international events, which aimed in promoting startup entrepreneurship, but also the domestic startup ecosystem.

In 2018, the same Cabinet launched the implementation of a series of programmes to support the development and promotion of women's innovative entrepreneurship, the goal of which is the systematic improvement, promotion and affirmation of innovative entrepreneurship among women, for which projects a total of 400,000,000 dinars were allocated.

4.6. Women's entrepreneurship

In the business sector, management positions and the role of owners and founders of small and medium-sized enterprises are still mostly held by men (77.9%), while women are most often the owners of shops (34.3%) and medium-sized companies (22.1%).²⁴

It should be emphasised that only 12% of startup founders in Belgrade and Novi Sad are women, which is similar to the global average (Figure No. 10). Through its grant programme, the Innovation Fund finances 141 projects, of which 14% of the funds go to teams led by women, and only 6% to teams made up only of women. The percentage of "women's only" teams in the ecosystem is equal to the global average and is at the level of 2%.²⁵ Regardless of that, the research conducted by Craft shows that only 1 individual out of 175 CTOs in European technology companies that raised Series A or Series B in the last year was a woman. Therefore, the fact that the women's share among the founders of startups in Belgrade and Novi Sad is close to the global average does not diminish the need that the startup world should be more inclusive when it comes to women and that everyone should support activities that will contribute to that.²⁶

Despite the fact that there are numerous programmes that finance promotional activities aimed at entrepreneurship, startup entrepreneurship, the participation of women and youth in entrepreneurship, there is still a gap in certain categories, such as addressing the target group that includes professionals with decades of experience and encouraging them to establish startups. This group represents a great potential for the startup ecosystem due to its knowledge of business challenges and ways of functioning, as well as its established network and reputation.

²⁴Data from the National Strategy for Gender Equality for the period from 2016 to 2020 with the action plan for the period from 2016 to 2018 ("Official Gazette of RS", No. 4/16)

²⁵Scanner, p. 10

²⁶*Ibid.* 34-35

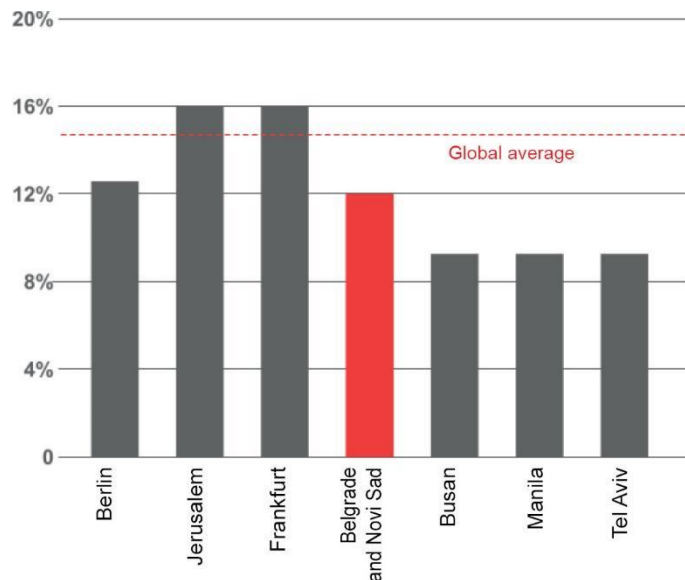


Figure No. 10 Percentage of female startup founders (source: Report)

Conclusion

The previous description of the current situation leads to the conclusion that certain efforts are being made in the domestic ecosystem in order to accelerate its development, but that it is necessary to further improve and strengthen the efforts of the Republic of Serbia in the field of startup ecosystem development. The growth recorded by the ecosystem is far from fully fulfilling the potential of the domestic startup ecosystem. During the analysis of the opportunities for improvement, the emerging areas of special importance in the context of this strategy are:

- Education and availability of talent,
- Infrastructure support and connectivity in the startup ecosystem,
- Funding opportunities for startups,
- Business environment,
- Entrepreneurial culture and promotion within the ecosystem and recognition of the ecosystem as a whole.

In terms of education and the availability of talent whose knowledge and skills are considered relevant, if not necessary for the development of startups and the startup ecosystem, there is a noticeable lack of entrepreneurial knowledge and skills. In this sense, management, sales, marketing and international business development skills are especially important. Taking into account that the startup ecosystem, and the business world in general, are changing at a high speed, it is important to provide a basis for the constant increase of the collective knowledge of the community, which is increased by creating a larger number of multidisciplinary teams, as well as by sharing knowledge and experiences with professionals from more developed ecosystems. All levels of education and upbringing have a role in creating collective knowledge, and the key roles depend on educators and participants in the economy who must be ready to transfer knowledge to younger generations.

With the support of the Government and the competent ministry, conditions were created for the creation of a network of support organisations that would provide infrastructural and professional support to the development of startups. However, the lack of acceleration programmes

is evident, whose role is to create startups ready to raise larger rounds of investment and conquer world markets from startups that have overcome initial obstacles and validated their idea on the market. The lack of programmes that would support all stages of startup development, from establishment to exit, largely contribute to the emigration or failure of domestic startups. In addition, the low level of connectivity in the community, together with the lack of collective knowledge in the field of startups, leads to little collective experience of the community, which is extremely important for the development of the ecosystem.

Financing of startups in the Republic of Serbia can be divided into three levels:

- personal savings and support from the close environment,
- grants provided from the budget of the Republic of Serbia or donor funds,
- private investments.

The above highlights the very low level of private investments in startups that are necessary for the healthy and sustainable development of the startup ecosystem, as well as the full utilisation of the potential that startups can have in the economic development of a country. The lack of knowledge and experience in the field of investing in startups, as a high-risk investment, discourages potential investors from taking such a step, which leads to the conclusion that initially it is necessary to promote and, to a certain extent, reduce the risk of investing in startups.

Despite the previously mentioned specifics of startups, they still represent economic entities that are established and operate within the business and regulatory framework of the state, and that framework significantly affects their work. In order to increase the chances of a startup's success, it is necessary to constantly improve it to reduce costs, accelerate administrative procedures and encourage investments. As a prerequisite for the creation of targeted policies and support measures, startups must first of all be recognised in the legal system, then increase the capacity of the relevant state authorities to understand the challenges and specifics of startups in order to support them as efficiently as possible, and then promote and make the measures as accessible as possible.

Startup entrepreneurship promotion programmes are mostly aimed at the general population, with a special focus on young people and students, while the entire group of experienced professionals and entrepreneurs remains neglected. Experienced individuals are particularly important for the development of the startup ecosystem due to their work experience, which brings with them a deep understanding of business opportunities and practices in a certain segment of the economy, as well as the credibility these individuals have acquired during their careers. Startup teams that include professionals in their fields with many years of experience have a higher chance of startup success, so it is necessary to create programmes that would relate to this group. It is also necessary to ensure greater visibility of successful stories from the ecosystem and to share them at the international level so that the domestic startup ecosystem can achieve greater recognition.

5. VISION AND DESIRED CHANGES

The vision the Strategy contributes to is a society that enables and supports every individual, team and organisation to use their full potential and need to create innovative products, services and processes, which will produce added value and support the goals of a prosperous economy and social

welfare.

6. GENERAL AND SPECIFIC OBJECTIVES OF THE STRATEGY

The general objective of this strategy is the accelerated development of the startup ecosystem to the level of globalisation.²⁷ In the phase of globalisation, the Serbian startup ecosystem should have between 800 and 1200 startups and attract a large number of talents, that is, experienced founders, investors and mentors from the region and the world who develop their startup ideas or support their development in the Republic of Serbia.

The increase in the number and quality of startups will also lead to an increase in the number of exits of more than 100 million euros, which will, like a trigger, influence on the one hand the motivation of other entrepreneurs to launch startups, and on the other, attract investors. By increasing the offer of startups looking for investments, which meet the investors' criteria, there is a greater number of investments, as well as returns on them, so private investors are engaged and remain in the ecosystem, thus creating a self-sustaining ecosystem.

This strategy should affect all stakeholders in the startup ecosystem, startup teams, startups, public and private support organisations, investors as legal and natural persons, institutional investors in the form of alternative investment funds, as well as public administration bodies in raising the capacity to provide institutional support for faster development of the startup ecosystem.

The accelerated growth of the startup ecosystem requires an increase in the number of startups by 20% per year, the creation of additional financing mechanisms for startups in order to close the existing financial gap and the improvement of the quality of startups originating from the Republic of Serbia.

The **performance indicator** is the annual growth of the number of startups by more than 20%.

- Initial value: 0
- Target value: 700

Source of verification: Startup register, Report

²⁷ See page 6, item 2.

The specific objectives of the Strategy are:

1. Raising startup entrepreneurial capacity through educational programmes

Measure 1.1.: Introduction of startup entrepreneurship content in secondary education

Measure 1.2.: Introduction of startup entrepreneurship content in higher education

2. Improvement of infrastructure and programme support for startups

Measure 2.1.: Improving the quality of support for startups in the early stage of development

Measure 2.2.: Improving connectivity and cooperation in the ecosystem

3. Improvement of the startup financing mechanism

Measure 3.1.: Raising the level of grants to finance early-stage startups

Measure 3.2.: Encouraging the development of the venture capital market

Measure 3.3.: Creation of mechanism and basis for crowdfunding

4. Improvement of conditions for business startups

Measure 4.1.: Establishing a mechanism for recognising different startup ecosystem stakeholders

Measure 4.2.: Improvement of tax framework for business startups

Measure 4.3.: Raising the competencies of employees in the public administration for the creation and implementation of measures in the area of the startup ecosystem

Measure 4.4.: Facilitating access to information in the area of startup business

Measure 4.5.: Establishment and implementation of the *GovTech* programme of the state as the first user of innovative solutions

5. Promotion of startup culture and global recognition of the ecosystem

Measure 5.1.: Popularisation of startup culture and development of entrepreneurial spirit

Measure 5.2.: Improving the international recognition of the Serbian startup ecosystem

7. MEASURES IDENTIFIED TO ACHIEVE OBJECTIVES

7.1. Specific objective 1: Raising startup entrepreneurial capacity through educational programmes

The role of the education system in the creation, development and success of startups is multiple. In order to establish a large number of startups, it is necessary to have a high degree of entrepreneurial culture in society. School, as an educational institution, is the primary place where young people can adopt entrepreneurial values such as multidisciplinary, fostering teamwork and respect for diversity.

For the development of entrepreneurial culture, it is important to include relevant content at all levels of education. Entrepreneurial spirit, focus on multidisciplinary and a creative approach to solving problems are already developed in primary school, and accordingly it is necessary to systematically work to develop both the aforementioned and digital skills in children. Secondary school is a space for a more advanced and direct approach to the development of knowledge and skills among students, and for young people interested in high technologies and entrepreneurship, there must be enough opportunities to try and learn new skills.

Through higher education, an individual acquires the most advanced knowledge and skills in a narrower academic or professional field, which, among other things, enable them to independently solve the most complex problems in an innovative way. The introduction of multidisciplinary content on startup entrepreneurship in higher education is of great importance for future high-tech startups because the highly educated population carries the greatest potential for establishing new startups.

The **performance indicator** is the number of newly founded startups whose founders acquired competencies relevant to startup entrepreneurship through higher education.

- Initial value: 0
- Target value: 15

Source of verification: MESTD report

7.1.1. Measure 1.1.: Introduction of startup entrepreneurship content in secondary education

Modern education is focused on the development of students' competencies in order to respond as quickly as possible to rapid changes in society and the economy and prepare them for the challenges they will face in the future labour market.

A sense of initiative and entrepreneurship is one of the key competencies for lifelong learning that every individual needs for personal fulfilment and development, inclusion in social life and employment. Secondary education should enable the acquisition of competencies that will prepare students for work in emerging industries, including the startup ecosystem.

The development of these competencies can be ensured through the introduction of content about startup entrepreneurship in existing teaching and learning programmes, the improvement of teachers' competencies for the realisation of these contents, the development of new and the improvement of existing open educational resources about startup entrepreneurship and by introducing students to industries for the development of startups.

In high schools, the startup ecosystem is studied through the Economy and Business elective programme, and due to the volume of IT subjects, specialised IT departments do not have the option of choosing this programme, so it is necessary to improve the curriculum of specialised IT departments in high schools, which would enable these students to get knowledge about startup ecosystem through existing subjects.

Taking into account that teachers are a key link in the transfer of knowledge, as well as career guidance for young people, and that, on the other hand, they themselves do not have enough knowledge about new and dynamic areas of development of the IT sector and the startup ecosystem itself, a special focus should be on the development of teachers' competencies about startup entrepreneurship. In addition to the development of materials that would provide support to teachers in working with students, it is necessary to organise training through the system of professional development that would provide teachers with the necessary knowledge for the areas of startup entrepreneurship. The beginning of the reform of the high school programme was marked by a questionnaire for high school teachers where, among other things, teachers' views on having key competencies for lifelong learning were examined. MESTD and the Institute for Evaluation of the Quality of Education and Training conducted this research and one of the conclusions is that the vast majority of high school teachers believe that their entrepreneurship and digital competencies are lower. This fact puts a special focus on the implementation of all activities that are related to the improvement of these key competences of teachers so that they could develop them in students during schooling.

In addition to knowing the basics of startup entrepreneurship itself, students should develop a wide range of skills that will enable them to use the knowledge needed to solve real problems. Therefore, it is important to establish a broad base of open educational resources, especially in the domain of algorithmic literacy. In order for the knowledge base to always be in line with the development of technologies and the economy, it is crucial to ensure the continuous development of new and improvement of existing open educational resources and technical maintenance. Such a knowledge base will provide adequate support to teachers and students in this area. In addition, open educational resources in the field of algorithmic literacy could be used by teachers and students in specialised IT departments in high schools.

In order to ensure that students already during high school education become familiar with relevant industries and potential career choices, it is important to include regular cooperation with the economy, whose representatives, in cooperation with teachers, would share knowledge and experiences with students.

7.1.1.1. Description of the mechanism for implementing the measure

The mechanism for the implementation of this measure includes supplementing the high school curriculum for students with special IT abilities at higher grades with content on startup entrepreneurship, development and accreditation of the programme of continuous professional development of teachers for the implementation of content about startup entrepreneurship.

The development of open educational resources will be carried out through the cooperation of the public and private sectors for the further development and improvement of existing open educational resources, as well as the preparation of new teaching materials for informatics and computing subjects in undergraduate education, including IT specialised departments in high schools. Familiarising students who do not attend specialised high school departments for computing and informatics with relevant industries for startup entrepreneurship will be carried out as part of extracurricular activities in the form of trial classes, through cooperation

of schools and industries and the exchange of knowledge and experiences that should help students with their career choices.

7.1.1.2. Institutions responsible for implementation, monitoring and control of implementation

MESTD

7.1.1.3. Measure performance indicators

Changed teaching and learning programme for higher grades in high school specialised IT departments:

- Initial value: No
- Target value: Yes

Source of verification: Rulebook

The number of teachers who attended training for professional development and education of employees in the field of the startup ecosystem:

- Initial value: 0
- Target value: 200

Source of verification: Lists of training participants, training reports

Number of published open educational resources in the field of algorithmic literacy intended for high school education for students and/or teachers:

- Initial value: 20
- Target value: 50

Source of verification: Database of open educational resources

Number of published open educational resources in the field of digital entrepreneurship intended for high school education for students and/or teachers:

- Initial value: 0
- Target value: 10

Source of verification: Database of open educational resources

Number of schools where presentations of relevant industries were held as part of extracurricular activities covering the area of startup entrepreneurship:

- Initial value: 30
- Target value: 100

Source of verification: MESTD report

7.1.2. Measure 1.2. Introduction of startup entrepreneurship content in higher education

Building entrepreneurial capacities through higher education is achieved in different ways, but in the context of this strategy, the focus is on the development of multidisciplinary through new master programmes with a high-tech component and the inclusion of optional subjects in accredited undergraduate and master study programmes, which deal with topics in the field of startup entrepreneurship. In order to additionally support potential startup teams at higher education institutions, it is necessary to raise the capacities of the teaching staff to recognise these teams and support them in the development of ideas.

Multidisciplinary master programmes with a high-tech component boost the relevance of higher education according to projections of the needs of the economy and long-term economic development, including the development of the startup ecosystem in the Republic of Serbia. These programmes will be characterised by an increased number of hours that students spend in companies within internship programmes, if they are implemented through a classic study model, or they will be implemented through a dual study model, in which, through learning through work, the student spends at least 450 hours a year with the employer.

In order to ensure a long-term increase in the number of students attending master programmes in these areas, which have been identified as priorities for the future development of the startup ecosystem, it is necessary to ensure the continuous improvement of the quality and relevance of existing master programmes, as well as the introduction of new multidisciplinary master programmes.

Topics in the field of startup entrepreneurship are dealt with within study programmes at certain higher education institutions, so the introduction of new electives relevant to the field of the startup ecosystem will enable a wider understanding of the startup culture and opportunities to work in this framework among students. New elective courses should be created in cooperation with the economy, as well as focused on the practical application of knowledge and skills through team projects. In the first period, it is crucial to introduce these optional subjects to study programmes in the field of so-called STEM science (*science, technology, engineering, maths*), as well as in the field of economic and organisational sciences.

The student population has great entrepreneurial and innovative potential. At most higher education institutions, there is no awareness of the importance of entrepreneurial knowledge and culture for the development of innovation, and even where this awareness exists, entrepreneurship is not sufficiently encouraged. Through daily contact and work with students, the teaching staff has a great influence on the future development of students and the choices the students will bring. Cooperation between teachers and students, especially through practical teaching, has a great impact on students' motivation to research and expand their interests, as well as acquiring additional knowledge and mastering new skills. In order to be able to provide adequate support and mentoring to students in the field of startup entrepreneurship, it is necessary to strengthen the teaching staff of higher education institutions in this field. Implementing a coordinated mentoring programme is a great opportunity, as teaching staff have undoubted domain expertise, but need to strengthen mentoring skills for business startups and innovation development.

7.1.2.1. Description of the mechanism for implementing the measure

Bearing in mind the autonomy of higher education institutions in terms of determining study programmes, this measure will be implemented by MESTD within the Development of Higher Education programme activity, through public calls for the creation of new multidisciplinary master programmes as well as a public call for the innovation of study programmes.

Programme activity “Development of Higher Education” should support higher education institutions in the development of new and innovating existing subjects within study programmes, thus leading to the achievement of MESTD programme objectives:

- improving the teaching competences of teachers and associates;
- innovating existing study programmes that follow the needs of the labour market;
- improving the quality of the educational process through the creation of better conditions for teaching and student learning;
- developing the entrepreneurial skills of students and improving the cooperation of higher education institutions with the economy and other stakeholders in local self-government;
- increasing the use of information technologies in teaching and learning processes.

When selecting project proposals to be financed by MESTD, the following are especially valued:

- contribution of projects to the implementation of the Action Plan for the implementation of the Smart Specialisation Strategy in the Republic of Serbia for the period from 2021 to 2022, i.e. Specific objective 3: Education oriented towards innovation and entrepreneurship, and
- contribution of projects to the realisation of the Government’s action plan for the improvement of the IT sector.

At the very beginning of the implementation of the programme activity “Development of Higher Education”, the emphasis was placed on the contribution of the projects themselves to the implementation of the Government’s action plan for the development of the IT sector, which was adopted in December 2016, involving 17 faculties in the Republic of Serbia in its implementation. The growth of applications continued in this spirit and the total financial resources that MESTD allocates for this programme activity increased, thus unequivocally improving the quality of applications and the efficiency of realised projects, especially when it comes to their implementation in the teaching process. The very fact that the total budget of the project was increased from the initial 16 million dinars to 35 million dinars for the 2021/2022 academic year speaks volumes for how much this programme activity contributed to the development of the teaching process at higher education institutions founded by the Republic of Serbia.

Activities related to teacher training will be implemented within the project “Venture an idea” implemented by the “Digital Serbia” Initiative, which is supported by the US Agency for International Development (USAID). As part of this project, a training programme will be piloted at the Faculty of Organisational Sciences, which will organise the training of teaching staff for mentoring innovative student teams, as well as the implementation of a coordinated mentoring programme at the faculty.

7.1.2.2. Institution responsible for implementation, monitoring and control of implementation

MESTD

7.1.2. Measure performance indicators

Number of students enrolled in master studies with a high-tech component

- Initial value: 105
- Target value: 450

Source of verification: SORS database and the Unified Information System of Education (UISE)

Number of accredited multidisciplinary master programmes with a high-tech component

- Initial value: 10
- Target value: 15

Source of verification: National accreditation body and reports of higher education institutions

Number of innovative study programmes on topics that deal with startup entrepreneurship

- Initial value: 0
- Target value: 5

Source of verification: MESTD report

The number of teachers of higher education institutions who have received training to support innovative student ideas:

- Initial value: 0
- Target value: 120

Source of verification: Reports of higher education institutions

7.2. Specific objective 2: Improvement of infrastructure and programme support for startups

In addition to financial and infrastructural support, early-stage startups are highly dependent on available knowledge and contacts in the ecosystem. In recent years, the Serbian startup ecosystem has brought very successful companies, whose knowledge and experience can contribute to the growth of the collective knowledge of the community if it is shared and multiplied through different channels. During their development, startups go through several key stages in which they need a variety of support. In order to provide constant support to teams and startups, regardless of the stage of development they are in, and to prevent the outflow of startups to other ecosystems where support is more accessible, it is necessary to focus on the long-term development of the support chain.

Support during the development of startups can come from experienced founders from the country and abroad, contact with mentors, investors and representatives of relevant industries in which startups can develop and market their solutions. However, startups often do not have enough experience or contacts to provide relevant and much-needed support on their own. Therefore, it is necessary to strengthen the organisations that

can provide that kind of support and encourage them to create high-quality incubator and accelerator programmes that will make the collective knowledge of domestic and foreign ecosystems available to domestic teams.

It is especially important to enable simultaneous development in all local ecosystems within the Republic of Serbia, in order to decentralise knowledge, opportunities and contacts and create optimal conditions for the success of domestic startups, regardless of the region they come from. The created support provided by STPs through high-quality programmes at the national level represents a good infrastructural base for further connection within the ecosystem.

The lack of collective knowledge of the communities is also reflected in the support organisations, which see a special challenge in the selection and training of suitable personnel for the creation and implementation of startup support programmes. In order to enable the further growth of the ecosystem, it is necessary to provide support to organisations in this segment in the form of resources for the continuous improvement of support organisations staff. Also, it is necessary to encourage the specialisation and cooperation of support organisations in the creation of programmes and obtain quality programmes that provide support to startups in all stages of development.

The **performance indicator** for this specific objective is the number of startups from the Republic of Serbia that participated in the startup development support programme on an annual basis:

- Initial value: 70
- Target value: 120

Source of verification: MESTD report, DAS report

7.2.1. Measure 2.1. Improving the quality of support for startups in the early stage of development

Support programmes must accompany the growth of available financing in the ecosystem so that invested public and private funds can have the desired effect of creating more successful startups. In order to create a chain of support for startups, it is important to systematically focus on the creation and implementation of support programmes that should be created in accordance with the stage of development of the ecosystem as a whole, but also of the startups themselves. In accordance with the above, it is especially important to create support programmes intended for startups in the conceptual phase, those that have developed products ready for market entry, and startups that are preparing to break into new markets and grow big. The development of the support chain implies improvement at several levels: diversification of support programmes, increasing the quality and sustainability of support programmes, which entails increasing the capacity and sustainability of the support organisations themselves, and finally changing the institutional funding of support organisations.

In order to improve the capacity of support organisations to organise work and provide services to startups in accordance with the best world practices, it is necessary to provide financial, technical and advisory support to organisations that create and implement support programmes for startups.

It is of particular importance to fill the existing gap in acceleration programmes, that is, in working with startups that have proven the potential of their idea and created the first product, but need support in further growth and development in new markets, for which there is currently the greatest need and ecosystem gap. Acceleration programmes

need to provide startup teams and startups with individually tailored educational and mentoring sessions, encourage intensive teamwork in the development of startups, ensure access to mentors with relevant expertise, especially in the field of business development, sales and marketing in global markets, as well as absolute support in raising investments in the country and abroad.

In order to ensure the financing of support organisations in accordance with the market performance and needs, it is necessary to improve the model of institutional financing of registered support organisations

7.2.1.2. Description of the mechanism for implementing the measure

Creation of programmes to strengthen the capacity of support organisations

Managers and other employees in support organisations (such as STPs, business incubators, startup centres, and hubs) will be provided with access to coaches and mentors in the field of support programme organisation, providing support to startups, creating sustainable business models, strengthening the financial self-sustainability of organisations and similarly. Support will come through the mechanism of co-financing or full financing of educational sessions, training and certifications for startup mentors and trainers in the field of startup development, investing or collecting investments, project management and all other relevant areas.

Encouraging the creation and implementation of incubator and accelerator programmes

In order to create high-quality support programmes efficiently and quickly enough in accordance with the needs of the ecosystem, financial and logistical support will be provided for the creation and implementation of support programmes. The funds will be earmarked for the implementation of newly created programmes or the financing of licences for the establishment of world-renowned programmes.

Participation in the support programme for the creation and implementation of support programmes for startups should be conditioned by raising the capacity of support organisations, ensuring geographic and gender equality, cooperation between stakeholders within the ecosystem and a self-sustainability model that would ensure the implementation of the programme for a certain number of years without financial support from public funds. Programmes created in partnership, co-financed or otherwise supported by complementary partners can be supported with public funds.

Adoption of the act on institutional financing of support organisations

Taking into account the need to further increase the stability, competitiveness and efficiency of the ecosystem, it is necessary to introduce a continuous and results-based evaluation of the work of organisations that use budget funds. The incentive for the strengthening of institutional capacities will come from a regulatory measure that directly links the results at the level of support organisations with the amount of their institutional/programme/project financing from various budget sources.

That is, when distributing public funds, it is important to use the success criteria of implementing the organisation's programme, based on the achieved results that are in direct connection

with the success of startups that were beneficiaries of the financed programme (evaluation of startups of programme participants that during or immediately after the programme moved to the next investment cycle, entered a new market, launched a new product, etc.).

7.2.1.3. Institution responsible for monitoring and control of implementation

Development Agency of Serbia (DAS)

7.2.1.4. Performance indicator

Number of support organisations as beneficiaries of the programme for strengthening the capacity of support organisations

- Initial value: 0
- Target value: 10

Number of support programmes created and implemented in cooperation with several partners

- Initial value: 0
- Target value: 4

Number of support programmes outside the ecosystem of Belgrade and Novi Sad

- Initial value: 0
- Target value: 2

Number of startups that went through the programmes and achieved a minimum of 10% annual growth, raised the first subsequent round of investment or entered a new market one year after the end of the programme.

- Initial value: to be determined²⁸
- Target value: to be determined

Measure verification source: DAS report, MESTD report

7.2.2. Measure 2.2. Improving connectivity and cooperation in the ecosystem

Research shows that startups that are members of ecosystems that are well internally connected experience faster growth than those from less connected ecosystems. Connection implies joint activities, cooperation and exchange of knowledge, experiences and contacts between startups, academia, business, state institutions, support organisations, mentors, investors, etc.

In the Republic of Serbia, it is important to improve two aspects of local connectivity:

- connection between members of different ecosystem helixes (e.g. economy, i.e. industry, academia, investors, mentors, support organisations, etc.);
- connection between ecosystem stakeholders from different regions, that is, cities.

²⁸ The initial and target value of performance indicators will be determined in accordance with the activities of the Action Plan for 2021–22

By encouraging these two ways of cooperation in the ecosystem, the goal is to create fertile ground for the exchange of knowledge and experiences between the stakeholders in the ecosystem in order to increase the collective knowledge and experience of the community.

7.2.2.1. Description of the mechanism for implementing the measure

In order to increase the level of local connectivity and use it as a lever for faster development of the ecosystem, it is necessary to create programmes and encourage activities that are carried out in cooperation between different stakeholders in the ecosystem, such as conferences, training, joint projects, support programmes and similarly.

The mechanism for implementing this measure implies that when financing projects and organisations with public funds, as well as creating incentive measures aimed at support organisations, cooperation is especially recognised and valued between:

- members of different ecosystem helixes (e.g. economy, i.e. industry, academia, investors, mentors, support organisations, etc.);
- ecosystem stakeholders from different regions, that is, cities.

Networking of science and technology parks is recognised as one of the important factors for the development of the innovation ecosystem in the Republic of Serbia. By strengthening the capacities of science and technology parks, mutual cooperation and the exchange of professional knowledge and experience, cooperation between parks and its members is encouraged, with a special emphasis on startups. In this way, the networking of science and technology parks has a positive effect on the development of the startup ecosystem.

7.2.2.2. Institutions responsible for monitoring and control of implementation

MESTD

Partners: STP Belgrade, STP Čačak, STP Niš, STP Novi Sad, Innovation Fund

7.2.2.3. Performance indicator

Number of projects implemented in cooperation with two or more stakeholders in the startup ecosystem, and financed with public funds:

- Initial value: to be determined
- Target value: to be determined²⁹

Source of verification: MESTD report, STP Belgrade report

7.3. Specific objective 3: Improvement of the startup financing mechanism

Startups, considering that by their very nature they represent high-risk innovative ventures with the potential for rapid and large growth, require a special type of financing for their activities. In their earliest stages they cannot ensure

²⁹ Given that until the writing of the Strategy, no records were kept on the type of cooperation, the values will be determined in accordance with the activities of the Action Plan for 2021–2022

access to traditional forms of financing, and personal savings are often not sufficient for rapid development and growth. Therefore, startups opt for alternative forms of funding in the form of grants in the earliest stages, and later in the form of investments, primarily from business angels or alternative investment funds.

As startups in the earliest stages often cannot attract the attention or desire of private investors to invest the first capital, states and international institutions fill the financial gap by allocating grants in the amounts necessary for startups to sufficiently develop or test their idea so that they can be presented to private investors. After using the initial funds, it is important for startups to secure the next round of investments so that at each stage of development they have access to the capital necessary for further steps. Therefore, it is necessary to systematically approach the construction of a financing chain that includes grants, business angels and, finally, alternative types of financing such as venture capital funds and crowdfunding.

There are grant funding mechanisms in the Republic of Serbia, but they are insufficiently developed to support the achievement of the Strategy's goal, i.e. increasing the number of startups. For this reason, it is necessary to expand grant programmes. At the same time, it is important to develop mechanisms, as well as incentives, to create mechanisms for further rounds of investment that will be able to further support the growth of startups.

The **performance indicator** at the level of this specific objective is the total amount of financing and investments from private sources in domestic startups, and the source of verification will be the annual report of Startup Genome.

The total amount of financing and investments from private sources in domestic startups:

- Initial value: 23,000,000 euros
- Target value: 80,000,000 euros

Source of verification: MESTD report, Register of Startups, Report of the Innovation Fund, Report of the STP Belgrade, Report of the National Council for Scientific and Technological Development, Report of the Council for Encouraging the Development of the Digital Economy, Innovation, High-Tech Entrepreneurship and Digitisation in the Business of Business Entities, Report of Startup Genome

7.3.1. Measure 3.1. Raising the level of grants to finance early-stage startups

Bearing in mind the statistics that even 90% of startups face failure in the first five years of operation, it can be concluded that a larger number of successful startups can only be expected if there is a very large number of attempts.

It is especially challenging for startups to find financial support in the earliest stages of development, when they are still working on developing an idea, establishing a team, creating prototypes, and the like. In that period, they are too risky, but also insufficiently developed, to be attractive to private investors. Therefore, it is extremely important for good startups that have ideas with the potential to receive non-equity grant funding. This type of financing is provided by the state through its own budget or in partnership with numerous international donors.

When providing funds to support startups, the principles of gender equality and geographical distribution of the programme should be respected so that

support is not concentrated in certain economic centres.

7.3.1.1. Description of the mechanism for implementing the measure

In the period from 2021 to 2025, through two programmes – “Smart Start” and “Early Development Programme” – the Innovation Fund will offer startups mentoring and financial support in the amount of up to 35,000 and 80,000 euros per project.

Science and Technology Park Belgrade, with the support of the State Secretariat for Economic Affairs of the Government of the Swiss Confederation (SECO), is implementing the project

“Technopark Serbia 2” within which the “*Raising Starts*” programme is implemented. The goal of the programme is to support up to 100 *pre-seed* startup companies, through the provision of initial financial support of up to 15,000 CHF, education and mentoring, in the next three years. The programme is being replicated at the science and technology parks in Niš and Čačak, thereby contributing to the increase in the number of innovative startups in the Republic of Serbia and the decentralisation of support and knowledge in the ecosystem.

In order to ensure that the startups that enter the programmes are really the ones with the greatest market potential, it is crucial to ensure that the selection of teams and startups, which will be allocated funds, is carried out by experts with experience in working with startups.

Private companies and non-governmental organisations will additionally participate in the implementation of this measure, with financial and institutional support from international donors and socially responsible companies.

7.3.1.2. Institutions responsible for monitoring and control of implementation

MESTD

Partners: Innovation Fund, STP Belgrade

7.3.1.3. Performance indicator

The number of startups financed through certain programmes of the Innovation Fund

- Initial value: 42
- Target value: 110

Source of verification: Innovation Fund report

The number of startups that will be financed through the Belgrade Science and Technology Park programme

“*Raising Stars*”

- Initial value for STP Belgrade: 0
- Target value for STP Belgrade: 54
- Initial value for STP Čačak: 0
- Target value for STP Čačak: 12
- Initial value for STP Niš: 0
- Target value for STP Niš: 22

Source of verification: Report of STP Belgrade, Report of STP Niš, Report of STP Čačak

Number of startups that will be financed through private and civil sector programmes:

- Initial value: 0
- Target value: 60

Source of verification: Report of the National Council for Scientific and Technological Development, Report of the Council for Encouraging the Development of the Digital Economy, Innovation, High-Tech Entrepreneurship and Digitisation in the Business of Business Entities.

7.3.2. Measure 3.2.: Encouraging the development of the venture capital market

For the development of the startup ecosystem, the mobilisation of private capital of individuals and legal entities, as well as institutional investors, who will financially support the development of domestic startups in the early stages, is of crucial importance. In the Republic of Serbia, there is not enough awareness or desire of potential investors to direct their savings towards high-risk startups, despite the possibility of a large investment return.

Activating private capital means increasing the activity of private investors in the startup ecosystem through:

- Encouraging business angel investments, primarily through groups of business angels;
- Encouraging the formation and investment of venture capital funds.

As the Serbian startup ecosystem is in the activation phase and at the time of writing the Strategy there is one domestic fund of venture capital, while an active group of business angels does not exist, it is necessary to create incentives for the creation of such initiatives, but also generally larger private investments in startups.

7.3.2.1. Description of the mechanism for implementing the measure

In order to encourage direct investments in startups, a co-financing mechanism of the state will be created with business angels and venture capital funds through:

- The Fund's programme, which includes the co-financing of startups that have gone through a predetermined accelerator programme and secured a qualified investment from a private investor, in a total amount of up to 300,000 euros,
- Creation and implementation of the Fund's programme, which envisages co-investment with venture capital funds,
- Creation and implementation of the Fund's programme, which envisages co-investment with business angels.

7.3.2.2. Institution responsible for monitoring and control of implementation

MESTD

Partners: Innovation Fund

7.3.2.3. Performance indicator

The total amount of external investments provided by startups that passed through the predetermined acceleration programme of the Innovation Fund

- Initial value: 0
- Target value: 7,000,000 euros

Source of verification: Innovation Fund report

Number of startups using the Innovation Fund programme for co-investing with business angels

- Initial value: 0
- Target value: 68

Source of verification: Innovation Fund report

Number of established venture capital funds

- Initial value: 1
- Target value: 4

Source of verification: Registry of the Securities Commission

7.3.3. Measure 3.3. Creation of mechanism and basis for crowdfunding

As the financial market in the Republic of Serbia is focused on the banking system, and startups are companies in the early stages of development that develop innovative products and services characterised by a high degree of uncertainty, the access of startups to traditional sources of financing and the capital market is very challenging.

Due to the above, and as it has been established that there is a large gap in available financing between startups in the Republic of Serbia compared to startups in other countries whose ecosystem is at a similar level of development, this strategy aims to encourage and enable the creation of different alternative sources of financing, in a way that will facilitate the access of Serbian startups to those sources, both domestic and foreign.

One of the mechanisms that will enable startups to collect funds for their ideas and projects from domestic and foreign so-called alternative sources of financing, in a way that is safe, efficient and legal, is also the adoption of a special law on crowdfunding, which would enable different types of group financing in a flexible way (such as, for example, so-called *investment-based*, *lending-based*, *donation-based*), with consideration of the possible risks of a certain type of crowdfunding and alignment with the regulations adopted to protect against those risks.

Specifically, crowdfunding aims to facilitate project financing by collecting capital from a large number of persons who contribute relatively small amounts of investment through a publicly available information system. Crowdfunding opportunities are potentially open to an unlimited pool of investors who, through licensed platforms, practically accept startup investment proposals and participate in fundraising. Investors in this type of financing are mostly natural persons, including those who are not the so-called business angels.

7.3.3.1. Description of the mechanism for implementing the measure

The passing of the law will regulate crowdfunding in the Republic of Serbia, that is, the conditions and method of providing crowdfunding services in the Republic of Serbia, the conditions for the establishment and operation of providers of these services, the supervision of the operations of these service providers, as well as the protection of users of these services. Bearing in mind the process of harmonisation of the regulations of the Republic of Serbia with the regulations of the European Union, it is necessary to look at the possibilities for adapting certain solutions from the Regulation on European crowdfunding service providers that was adopted in the European Union on 20 October 2020 (*Regulation (EU) 2020/1503 of the European Parliament and of the Council of 7 October 2020 on European crowdfunding service providers for business and amending Regulation (EU) 2017 /1129 and Directive (EU) 2019/1937*) to economic, institutional and legal framework of the Republic of Serbia. The implementation of the aforementioned regulation will begin on 1 November 2021.

7.3.3.2. Institutions responsible for monitoring and control of implementation

National Bank of Serbia (NBS)

7.3.3.3. Performance indicator³⁰

- Number of (successful) crowdfunding projects
- Initial value: 0
 - Target value: to be determined
- The number of users of crowdfunding services
 - Initial value: 0
 - Target value: to be determined
- The number of providers of crowdfunding services
 - Initial value: 0
 - Target value: to be determined

Source of verification: NBS annual report

7.4. Specific objective 4: Improvement of conditions for business startups

More and more countries recognise startups as an important integral part of their economies, and strive to create the most favourable legal, regulatory and administrative framework for their business, as well as various support programmes for their creation and development. This type of support is mainly implemented by the state through a network of institutions whose task is to provide assistance and support to startups in all stages of their development.

As startups are by their nature fragile and young business entities, it is necessary to create and implement targeted measures to improve the conditions for their business. Practically, it is necessary to facilitate their establishment and functioning, create a favourable tax environment, provide access to alternative sources of financing and facilitate global business, that is, business cooperation with foreign countries. Appropriate laws,

³⁰ All performance indicators will be determined after the adoption of the Law on Crowdfunding.

policies and regulations will help create a business environment in which startups will develop and commercialise their products and services.

The **performance indicator** at the level of this specific objective is the number of startups that decide to register and operate in the Republic of Serbia, and the source of verification will be the Startup Registry that will be established in accordance with this strategy.

Number of startups in the registry

- Initial value: 0
- Target value: 700

Source of verification: Startup register

7.4.1. Measure 4.1. Establishing a mechanism for recognising different startup ecosystem stakeholders

Startups, as newly established highly innovative business entities that create new products and services intended for global markets with high growth potential, are currently not recognised in the laws of the Republic of Serbia. The Law on Innovation Activity recognises technopreneurship as an activity that includes knowledge, skills and abilities aimed at starting, organising, developing and innovating technological processes, with the main goal of creating a new market and making a profit, and foresees the existence of a corresponding register of technological companies that apply or develop technology as an important component of their business activities, and are engaged in research and development, their own or commissioned from other companies, organisations, institutions or individuals.

However, although technopreneurship and startups have a lot in common, they are not the same, since startups have different needs and potentials than technology firms that have existed for many years, and there is no definition or registry that would recognise, identify and target startups. Therefore, the creation and implementation of policies and measures that would directly target startups is difficult, both for state authorities and for startups themselves as beneficiaries of those measures.

In this sense, this measure implies, first of all, the recognition of the relevant startup ecosystem stakeholders in the regulations (startups, business angels and support organisations), and then the creation of a unique database that can be used by various authorities in order to facilitate the creation and implementation of measures and programmes, the implementation of statistical research, reducing the administrative burden of startups when applying for various support measures, etc.

Registration of startups in the unified database would be voluntary, except in the case of the intention to use the facilitated access to state incentive measures and budget funds for development. When creating and implementing measures, all state authorities should use the register as a relevant source of data when determining the fulfilment of the criteria for the use of incentives and support programmes.

7.4.1.1. Description of the mechanism for implementing the measure

The first step in the implementation of this measure would be to amend the Law on Innovation Activities to recognise and define startups and other relevant stakeholders, and create a legal basis for the creation of a unique base. It would then be necessary to establish a single electronic register in which registered organisations for the provision of infrastructural support to innovation activity in the sense of the Law on Innovation Activity would enter data on startups available to them within the scope of their activity and where startups would apply on a voluntary basis in order to facilitate their access to support measures. The register will be networked with all relevant state institutions and their databases, so that they can use data from it and thus reduce their administrative capacities needed for the implementation of their measures, but also the burden on startups when applying for support measures and incentives.

7.4.1.2. Institution responsible for monitoring and control of implementation

MESTD

Partners: Innovation Fund, Office for information technology and electronic administration, authorised registered organisations for providing infrastructure support for innovation activity

7.4.1.3. Performance indicator

Startup register created

- Initial value: No
- Target value: Yes

Source of verification: Startup register, Innovation Fund report

7.4.2. Measure 4.2. Improvement of tax framework for startup business

One of the components when creating globally competitive conditions for startup business is the creation of a tax environment that encourages the development of innovations and reduces the high costs of research, development and creation of new products. The potential of extremely fast non-linear growth of startups can contribute to the growth and modernisation of the economy, and the aim of the measure improving the tax framework for their business is to encourage and stimulate their establishment, as well as to reduce the part of their costs in the initial, most uncertain stages of their business.

A tax incentive regarding the salary level of employees who are engaged in research and development projects would make it easier for startups to start developing their own products. Specifically, the high costs of research and development, which have an uncertain outcome, often represent too much of a challenge for these young economic entities. The goal of the measure is that an increasing number of people with innovative ideas and the necessary knowledge/skills start releasing those ideas through research and development activities, which would increase the number of startups, improve the level of innovation of startups and release additional funds for their work.

Also, it is important to extend the existing incentive for innovative startups, i.e. newly established companies that perform innovative activities, based on the earnings of the founders who are employed in that company, which enables exemption from paying income tax and contributions for mandatory social insurance up to a maximum of 150,000 dinars of gross earnings. The mentioned incentive can be used by employers, i.e. newly established companies, which were founded by 31 December 2021, who can obtain benefits in the form of exemption from paying taxes and contributions for mandatory social security for the founder's salaries paid in a period of 36 months from the day when a company was founded.

In addition to the above measures, it is necessary to constantly look for the opportunity to introduce new incentives for business angels to invest in startups, as well as companies in venture capital funds, in order to activate domestic capital aimed at innovation, in accordance with budgetary possibilities.

7.4.2.1. Description of the mechanism for implementing the measure

Support for research and development projects should be provided in the area of personal income tax, so that salaries paid to employees who are directly engaged in research projects or in the development of new or innovative products or services intended for the market are exempt from income tax and mandatory social security contributions in the amount of 70%. This kind of exemption is applied immediately, that is, 70% of calculated taxes and contributions are not paid into the account of public revenues. In other words, the startup has the right to keep the calculated amount (instead of waiting for the return of these funds). An additional measure is reflected in the partial exemption of salaries paid in this way from the annual personal income tax.

When extending the tax exemption from payment of calculated and withheld tax and contributions for mandatory social security based on the earnings of the founder of a newly established business company engaged in innovation activity in the amount of up to 150,000 dinars if they are employed in that business company, it is necessary to appropriately amend the Law on Personal Income Tax and the Law on Contributions for Compulsory Social Insurance.

7.4.2.2. Institution responsible for monitoring and control of implementation

Ministry of Finance

Partner: Tax Administration

7.4.2.3. Measure performance indicator:

Number of startup founders using the measure

- Initial value: 0
- Target value: 90

Source of verification: Tax Administration

The number of employees in research and development positions at the user of the measure

- Initial value: 0
- Target value: to be determined³¹

Source of verification: Tax Administration

7.4.3. Measure 4.3.: Raising the competencies of employees in the public administration for the creation and implementation of measures in the area of the startup ecosystem

Along with recognising and defining the stakeholders of the startup ecosystem in Serbian legislation, it will be necessary to improve the capacities of employees in the public administration, and therefore of all relevant institutions. Only this way will new concepts, measures and incentives be created and applied in accordance with the goal for which these stakeholders were recognised.

Specifically, startups, as young, innovative and fast-growing companies often have specific business models and administrative needs that can be effectively solved if there is a sufficient level of understanding of the special characteristics of startups. In this sense, it is necessary to raise the awareness and knowledge of all stakeholders in the support chain, among which the bodies and organisations in public administration that are creators and implementers of the measures determined by the Strategy occupy a special place.

The aim of this measure is to ensure through continuous professional development that employees in the public administration can respond to the needs of stakeholders in the field of the startup ecosystem by proper, efficient and economical application of regulations. By improving the knowledge, skills and abilities of public administration employees in this area, quality communication and cooperation between startups and institutions would be ensured. By strengthening the capacity of public administration, a number of benefits will be created for startup founders, which are reflected in the availability of information regarding the business of startups, recognition of business opportunities that may arise between the state and startups, as well as informing decision makers or implementers of measures about the real needs and challenges of startups.

7.4.3.1. Description of the mechanism for implementing the measure

The National Academy for Public Administration, in accordance with its scope in the field of professional development, will implement a series of activities aimed at improving the knowledge and skills, that is, the abilities of employees in public administration in the field of the startup ecosystem for the correct, efficient and economical application of regulations. The activities implied by this are:

- determination of the need for professional training, on the basis of which the priority thematic units of the area and the target groups of employees in the public administration for whom the training is intended are precisely identified,
- preparation and development of the startup ecosystem within the general training programme, in accordance with the identified needs,
- implementation of training programmes,
- evaluation and verification of training programmes.

³¹ The target value will be determined in accordance with the activities of the Action Plan for 2021–22

Public administration employees who attend this training programme at the National Academy for Public Administration, and thus acquire the necessary knowledge, skills and abilities to work with startups, will be recognised as such in their competent institutions and will increase the state's capacity to systematically recognise and support innovations.

7.4.3.2. Institution responsible for monitoring and control of implementation

Ministry of State Administration and Local Self-Government

Institution responsible for implementation: National Academy for Public Administration

7.4.3.3. Measure performance indicator:

- Professional development programme in the field of startup ecosystem for the respective year implemented Initial value: 0
- Target value: to be determined

Source of verification: Central record of professional development programmes in public administration and report of the National Academy of Public Administration

- Number of training participants in the startup ecosystem field (in the year in which the training programme is implemented) Initial value: 0
- Target value: to be determined

Source of verification: Central record of professional development programmes in public administration and report of the National Academy of Public Administration

7.4.4. Measure 4.4. Facilitating access to information in the area of startup business

The implementation of the measures provided for in this strategy will open numerous additional opportunities for domestic startups in the area of support programmes, as well as numerous incentives and other measures. As one of the risks foreseen within the proposed measures, startups are insufficiently informed about the available programmes and measures. The challenge is that in the Republic of Serbia there is currently no single place to inform startups about events and opportunities in the ecosystem.

In order to better inform startups, but also to better promote the efforts invested in the development of the startup ecosystem, it is necessary to expand the existing "Entrepreneurship Portal" with contents created specifically for the needs of startup enthusiasts, teams, founders and employees. A website of this type primarily serves to inform startups, but also to promote the Serbian startup ecosystem and the opportunities that exist. Therefore, the website should be available in Serbian and English in order to encourage the immigration of foreign co-founders or entire companies into the ecosystem.

7.4.4.1. Description of the mechanism for implementing the measure

Ministry of Economy, as the institution responsible for maintaining the Entrepreneurship Portal, together with domestic and international partners (such as GIZ, UNDP,

NALED, DSI) and through cooperation with the stakeholders of the startup ecosystem will create a separate part of the website dedicated to information about the startup ecosystem. In order to create a comprehensive information page, it is necessary to collect, process and translate data on:

- Available measures and incentives in the field of startup business;
- Available support programmes and opportunities for obtaining investments;
- Events with topics relevant to the startup ecosystem;
- Support organisations and their services and/or activities.

7.4.4.2. Institutions responsible for monitoring and control of implementation

Ministry of Economy

Measure performance indicator:

Number of page visitors

- Initial value: 0
- Target value: 1000

Source of verification: Ministry of Economy report

7.4.5. Measure 4.5 Establishment and implementation of the *GovTech* programme of the state as the first user of innovative solutions

Governments and officials around the world today are striving to change the way the public sector and state administration adopt new technological solutions. Concerns are often expressed through the analysis of the current approach to the procurement of innovative solutions, because established public procurement procedures lead to the application of existing, widespread technical solutions that in many cases do not fully meet the needs of the client and do not contribute enough to the quality of work and service provided to the end user. Startups, as young and innovative companies, often encounter obstacles during the public procurement process, which are the result of a lack of understanding of their specifics and a lack of opportunities to test innovative solutions.

In order to overcome the aforementioned challenge, one of the solutions is the implementation of the *GovTech* programme, which recognises the state as the largest employer and largest service provider. The global *GovTech* market is currently estimated to be worth over 400 billion euros, and given a high growth rate of 15%, it is expected to reach 1 trillion euros by 2025.

The application of the concept of open innovation, where solutions are the result of cooperation between public institutions/companies and innovative companies, startups, faculties and research centres, puts the state and state institutions in the first line of users, which enables the testing of innovative solutions in controlled conditions. In this way, the state becomes an extremely important reference when placing products on the foreign market.

This measure primarily involves the analysis of various models of the *GovTech* programme, which is currently being implemented, and the result of which will be the mapping of existing solutions and forms of cooperation, as well as the set of activities that need to be undertaken in order to successfully implement the appropriate format through state institutions.

A significant tool, which

contributes to efficiency in the procurement of innovative solutions, is also the Law on Public Procurement, which entered into force in July 2020, and Article 59 of which foresees the existence of a new public procurement procedure, called Partnership for Innovation.

The goals of establishing the *GovTech* programme in the Republic of Serbia are primarily reflected in the promotion and improvement of cooperation between the state and innovative companies and startups in order to open the possibility of cooperation with the first significant clients for this type of companies, which can later facilitate their expansion on a global level. This measure greatly contributes to raising the quality of the implementation of the concept of open innovation for the further development of technological solutions based on artificial intelligence, blockchain, etc., in the public sector. Public administration, the health system, agriculture, local self-government units in the introduction of “smart cities”, etc., stand out as areas for cooperation.

7.4.5.1. Description of the mechanism for implementing the measure

The first step in the implementation of this measure is the analysis of the current state of procurement and application of innovative solutions by state institutions, after which a team will be formed to implement the activities foreseen by the *GovTech* programme and the framework for its functioning will be set, which will manage the process, with the support of the Office for Information Technologies and eGovernment and others.

It will be necessary at the beginning to map the solutions that are already used in the public sector, as well as the solutions of innovative companies and startups that, with certain adaptation, could be applied in the public sector. This will be followed by the training of employees in the public administration, who should recognise the importance of innovative solutions and the contribution to the quality of work that is obtained through their application.

Through a series of different activities by the team, continuous support and encouragement will be provided to institutions regarding the practical application of the Partnership for Innovation procedure in order to apply the concept of open innovation to the greatest extent possible.

7.4.5.2. Institution responsible for monitoring and control of implementation

MESTD

Partners: Innovation Fund, Office of the Prime Minister, Office for Information Technologies and eGovernment, Office for Public Procurement

7.4.5.3. Performance indicator

The number of implemented partnership for innovation procedures

- Initial value: 0
- Target value: 5

The number of initiated partnership for innovation procedures

- Initial value: 0
- Target value: 20

Source of verification: Public Procurement Portal (Office for Public Procurement)

7.5. Specific objective 5: Promotion of startup culture and global recognition of the ecosystem

Bearing in mind the broad social and economic impact that startups can have on our economy, it is necessary to inform the public about the opportunities provided by startup companies, both for the founders themselves and their employees, as well as for potential investors, the economy in general, and even the entire population. For the comprehensive promotion of startup entrepreneurship, startups and the entire ecosystem, the activities within this specific objective were created with the aim of creating a basis for:

- motivation and education of potential founders and potential employees in startups who are not familiar with the opportunities and possibilities that creating a startup or working in a startup brings;
- motivation and education of those who are informed about the possibilities, but, for various reasons, do not use them to their full capacity;
- raising the awareness of the general public about the importance and possibilities of developing the startup ecosystem, demystifying the career path directly related to startups, destigmatising and ensuring the support of society for those who choose such a career path;
- improving the general image of the domestic startup ecosystem abroad in order to create new opportunities, especially in more developed startup ecosystems.

Startup companies and companies dealing with high technologies are still unknown to a large part of the population in the Republic of Serbia. The entrepreneurial spirit is mainly developed based on experience from the immediate environment, and therefore those who did not grow up or work in such an environment often do not have a realistic picture of entrepreneurship. Building a culture of startup entrepreneurship is even more limited, bearing in mind that there is a small number of successful startups in the Republic of Serbia. Therefore, it can be concluded that in order to increase the number of startups, it is necessary to promote startup entrepreneurship as a favourable career path.

Research conducted by numerous organisations shows that entrepreneurs believe that there is not enough promotion of successful entrepreneurial stories in the public. This can also be applied to the promotion of startups that are visible to an even narrower target group. The topic of startups is reserved for a small circle of people who are members of the bubble of the startup ecosystem, while it is challenging for those outside the bubble to be informed about all the potential of startup entrepreneurship. Therefore, it is necessary to increase the visibility of domestic startups, first of all in the Republic of Serbia, and then abroad. Foreign countries represent a very important channel of communication when promoting domestic startups and ecosystems, because the majority of potential investors and users of services and products created by startups are located outside the borders.

The **performance indicator** for this specific objective is the number of registered startups per million inhabitants:

- Initial value: 57/1.000.000
- Target value: 85/1.000.000

Source of verification: Startup Register, Statistical Office of the Republic of Serbia, Startup Genome Report

7.5.1. Measure 5.1. Popularisation of startup culture and development of entrepreneurial spirit

The report identified an underdeveloped entrepreneurial culture as one of the key obstacles on the way to the further development of the startup ecosystem. A pronounced positive social climate towards starting one's own business, which carries great risks, but also the possibility of enormous success, would help a far greater number of individuals decide to take such a step. Various research on the role models of young people in the Republic of Serbia most often identify actors, musicians and athletes as those that this population looks up to, while the success of startup founders (domestic or foreign) is almost never recognised.

Experiences from more developed countries, as well as the Republic of Serbia, show that creating content in the domain of popular culture is one of the most successful ways to promote a certain value system, change the social climate related to a defined topic, and educate a wide population. It is because of this that this measure envisages financing the production of a series intended for a wide population that would demystify the lifestyle of startup founders, directly show its advantages compared to a traditional career and promote values and attitudes such as self-confidence, willingness to take risks, acceptance of failure as regular occurrence in business, and diversity, cooperation and teamwork. The series will focus on promoting the digital economy as a desirable environment for the development of companies with the potential for rapid growth. A one-year financing of such an undertaking would ensure the beginning of a project that has the potential to be further developed according to market principles. In this way, long-term sustainability will be ensured.

In addition, this measure includes the organisation of events that contribute to the promotion and popularisation of innovations and innovative entrepreneurship at the national and local level, as well as the preparation and implementation of research on the state, problems and perspectives of the innovation ecosystem in the Republic of Serbia.

Also, the measure envisages the production of printed and multimedia publications that contribute to the promotion and popularisation of innovations and innovative entrepreneurship in the wider population.

7.5.1.1. Description of the mechanism for implementing the measure

Organisation of events, as well as the creation of research and publications that contribute to the promotion and popularisation of startup culture will be financed through the programmes of the Cabinet of the Minister without portfolio in charge of innovation and technological development, the Centre for the Promotion of Science, the Fund and science and technology parks.

The Ministry of Culture and Information, in accordance with its competences and capabilities, and through cultural institutions whose activity is related to the recording of video content (Filmske novosti), will support the creation of content in the field of popularisation of the development of the startup ecosystem.

7.5.1.2. Institution responsible for monitoring and control of implementation

MESTD

Partners: Ministry of Culture and Information, Cabinet of the Minister without portfolio in charge of innovation and technological development, Centre for the Promotion of Science (CPS)

7.5.1.3. Performance indicator

Viewership of the feature serial programme per aired episode

- Initial value: 0
- Target value: 200,000 viewers

Source of verification: Ministry of Culture and Information report

Number of financed projects in the field of popularisation of startup culture and entrepreneurship:

- Initial value: 30
- Target value: 50

Source of verification: MESTD report

7.5.2. Measure 5.2. Improving the international recognition of the Serbian startup ecosystem

International connectivity is one of the identified advantages of the domestic startup ecosystem, which, according to the “Startup Scanner” research of the “Digital Serbia” Initiative, is mainly based on strong connections with the diaspora. Also, the data shows that a relatively small number of domestic startups make an investment, and growth is ensured primarily through their own funds. In order to further successfully position domestic startups on the global market and achieve the visibility of our ecosystem among relevant members of the global startup community (experienced entrepreneurs, investors, mentors), it is necessary to make an additional effort and increase the presence in relevant places such as global events, international media and ranking-lists in the field of technological entrepreneurship, innovation and competitiveness.

By providing funds to startups to finance participation in relevant world conferences, fairs and events of another type that gather founders, investors and other professionals operating within the ecosystem, it is possible to create new connections on a global level, but also to raise the visibility of success from the Republic of Serbia.

This measure foresees a focus on the positioning of the Republic of Serbia on relevant lists that rank startup ecosystems and startups themselves by success (such as Startup Genome, *FT 1000*, *StartupBlink*, *Dealroom*, *Crunchbase*) because this can help efforts to achieve greater global visibility that is necessary for further development.

In addition, the measure foresees the provision of funds for which the organisers of domestic events dedicated to the startup ecosystem can apply to finance efforts to ensure the presence of representatives of the international media or otherwise present themselves on the international stage.

7.5.2.1. Description of the mechanism for implementing the measure

To implement this measure, it is necessary to ensure that the ecosystem continues to be recognised on relevant lists, as well as creating programmes that would support the presentation of startups, but also the ecosystem as a whole, at relevant global fairs and conferences.

7.5.2.2. Institution responsible for monitoring and control of implementation

MESTD

Partners: Development Agency of Serbia, Cabinet of the Minister without portfolio in charge of innovation and technological development, Innovation Fund, STP Belgrade, STP Čačak, STP Novi Sad, STP Niš

7.5.2.3. Performance indicator

Number of domestic startups present at relevant world conferences

- Initial value: to be determined
- Target value: to be determined³²

Number of relevant international lists that include the domestic ecosystem and startups

- Initial value: 2
- Target value: 4

Source of verification: MESTD report

The number of publications in the international media that treat the Serbian startup ecosystem or its representatives in a positive context

- Initial value: to be determined
- Target value: to be determined³³

8. ANALYSIS OF THE

EFFECTS OF MEASURES Effects of measures within Specific

objective 1

Within this objective, introducing content about startup entrepreneurship in secondary and higher education contributes to society by creating an in-depth understanding of the startup ecosystem. The advantages that this type of entrepreneurship offers in the formative years in pupils and students leads to an increase in the number of future startups. In addition, this type of education enables the young generations entering the labour market to better prepare for work in future jobs, in the context of developing key competencies in the field of entrepreneurship, encouraging decision-making based on facts, as well as understanding the value of teamwork and constructive problem

³² The initial and target value will be determined during the creation of programmes that meet the objectives of this measure.

³³ The initial and target value will be determined during the creation of programmes that meet the objectives of this measure.

solutions. With this approach, a continuous increase in the number of student and student startups, as well as innovative teams created at the university or formed by recent graduates, is expected. With the increase in the competence of the workforce, the productivity and competitiveness of the entire economy increases, which leads to higher value, exports and GDP. For the implementation of the measures, it is necessary to provide appropriate administrative and professional capacities that would prepare changes in the curriculum, timely create materials and training for teaching staff. Empowering university professors for additional work with students, and especially for support and mentoring in the field of entrepreneurship, will directly affect the increase in the number of innovative student teams and startups. Also, this measure has a direct impact on better alignment of the educational system with the needs of the economy and encourages the cooperation of institutions with the economy. For the implementation of the mentioned measure, it is necessary to provide appropriate administrative and professional capacities, as well as financial resources in order to implement these programmes.

One of the risks for the implementation of these measures is the insufficient response of teachers who would attend the seminars, insufficient encouragement of teachers to approach proactively when holding classes, as well as the insufficient response of higher education institutions to competitions for new master programmes and electives.

Effects of measures within Specific objective 2

Measures within this objective would provide startups in the later stages of development with adequate support, in order to remain in the ecosystem. This would make them available to future founders for sharing knowledge and experiences, which would increase the collective knowledge of the community. For the implementation of this measure, management capacities that would monitor and professionally evaluate the work of support organisations must be provided, as well as human and financial capacities that would create, implement and monitor support programmes. It is necessary to include representatives of the economy and experts from the startup ecosystem in all the mentioned processes. The cooperation of the participants of different helixes of the ecosystem achieves a constant transfer of knowledge and business practices between sectors, which further leads to better networking and deepening of multidisciplinary. On the other hand, connecting stakeholders from different cities and regions leads to the decentralisation of opportunities in the ecosystem, as well as the potential development of regions with a low level of economic participation. For the implementation of this measure, it is necessary to provide additional financial and human resources that would follow the implementation of the programme. The main risk during the implementation of this measure is the lack of experience and knowledge of the organisations and institutions in charge, which would ensure the possibility of developing a startup company through an adequate number of both mentoring programmes and support programmes.

Effects of measures within Specific objective 3

The measures under this objective represent various possible mechanisms for funding startups. Through their implementation, the innovative, highly educated and entrepreneurial population will be encouraged to try their hand at entrepreneurial ventures, which leads to the generation of new ideas and the creation of new jobs. By raising the level of grants for financing startups in the early phase, the number of new companies will increase, which will contribute to the growth of the competitiveness of the Serbian economy. To implement this

measure, it will be necessary to ensure sufficient capacity in the competent institutions to implement programmes in accordance with the best world practices, and in this sense, the risk is the provision of professional capacities for the selection of startups as well as ensuring the quality of mentors. By encouraging the development of the venture capital market, numerous benefits for society are achieved, which are reflected in: different opportunities for capital investment, education of potential investors and users about alternative types of investment, as well as the creation of new opportunities for financing innovative ideas with market potential. To implement this measure, it will be necessary to expand the capacities of the Innovation Fund and provide specific expertise for the successful management of co-investment programmes. The creation of the venture capital market creates the possibility of activating domestic and foreign private capital for the purpose of investing in the creation and development of innovations and startups. The risk in the successful implementation of the measure is the capacity of competent institutions, in terms of human and financial resources, as well as expertise to successfully manage venture capital funds and other types of alternative financing. The development of the crowdfunding market would simultaneously open up new investment opportunities for legal and natural persons, as well as opportunities for startups to raise funds for the realisation of their projects in an innovative and flexible way.

When creating the legal framework, it is necessary to harmonise it with the existing legal framework of the Republic of Serbia, ensure a high level of legal and financial protection of users, and at the same time leave enough freedom for startups to offer domestic and foreign investors a model that suits their business needs. In doing so, one should take into account the possible risks of a certain model of crowdfunding and related transactions, as well as regulations that eliminate or significantly reduce these risks. The development of the crowdfunding market would simultaneously open up new investment opportunities for legal and natural persons, as well as opportunities for startups to raise funds for the realisation of their projects in an innovative and flexible way. The main risk for the implementation of these measures is the creation of a legal framework that is not used in practice.

Effects of measures within Specific objective 4

Measures within this objective contribute to increasing knowledge about the state of the startup ecosystem, which increases the capacity of decision-makers to support the development of the startup ecosystem, and thus their potential nonlinear contribution to the growth of the domestic economy. In this way, it contributes to understanding the importance of improving the process of providing services, through the application of innovative solutions, which improves the capacities, efficiency and quality of services provided to the citizens of the Republic of Serbia.

For the implementation of the measures, it is necessary to provide appropriate administrative, professional and technical capacities in the following state administration bodies: MESTD, Tax Administration, National Academy for Public Administration and Ministry of Economy. By providing the mentioned capacities, it will be possible to manage the Startup Register, to hire accredited programme implementers and trained staff for the process of public procurement in institutions and public companies. The realisation of this goal will contribute to a better creation of public policies that will raise the competitiveness of this segment of our economy, as well as easier access to support measures, which reduces the administrative costs of the users of the measures. The training of public servants ensures efficient and economical

implementation of measures and incentives in the area of the startup ecosystem. By promoting existing measures and incentives, a higher level of interaction between startup founders and supporting institutions and organisations is encouraged, which leads to the exchange of information and a greater number of beneficiaries of state measures and programmes. By reducing research and development costs, an increasing number of companies are enabled to engage in the development of their own products and activities that bring higher income. In this way, profits are increased, GDP grows, exports are affected, and as a final result there is an increase in tax revenues. The biggest risk in the implementation of the measures is the capacity of the authority that manages the register to efficiently, professionally, impartially and transparently process submitted requests for registration, as well as monitoring startups that are already in the register. On the other hand, the risk in implementation is the level of information of potential users about the existence of the measure, as well as the readiness to go through the administrative procedure required to use the measure.

Effects of measures within Specific objective 5

By promoting international recognition of the startup ecosystem of the Republic of Serbia in the public, a positive image and a more affirmative attitude towards startups and this kind of career path of people from the immediate environment is created. For the implementation of the measures, it is necessary to provide appropriate financial and professional capacities that would implement the described activities. This measure contributes to increasing the global visibility and recognition of the local startup ecosystem and its stakeholders. The possibility of international investments, attracting professional staff, strengthening connections with other ecosystems and building trust among potential clients of domestic startups in foreign markets directly affect the growth of the ecosystem and the entire economy. The risk in the realisation of these measures is the development of quality programmes that will be relevant to the target groups and ensure their popularity on the one hand, and on the other, raise and change awareness in the desired direction. An additional risk is the lack of interest of domestic startups to share data about their business with international organisations that rank ecosystems and startups, so that the Republic of Serbia is adequately represented on the relevant lists.

9. AMENDMENT OF APPLICABLE REGULATIONS

In order to implement the public policy measures envisaged by this strategy, it will be necessary to amend/enact the following regulations:

1. The Law on Innovation Activity and corresponding by-laws, in order to recognise the stakeholders of the startup ecosystem, and provide for the formation of the register, the manner of its management and organisation, as well as the criteria for registration and deletion from the register;

2. Law on Personal Income Tax;

3. Law on Contributions for Compulsory Social Insurance;

4. Law

on

Crowdfunding.

10. CONSULTATIONS CONDUCTED

During the preparation of this strategy, extensive consultations were carried out in accordance with the Law on the Planning System of the Republic of Serbia (“Official Gazette of RS”, No. 30/18) and the Decree on the methodology of public policy management, analysis of the effects of public policies and regulations and the content of individual public policy documents (“Official Gazette of RS”, No. 8/19). The consultative process began on 21 April 2021, when a notice was published on the website of the “Digital Serbia” Initiative about the start of the public consultation process together with the draft version of the proposed measures prepared by the working group.

The consultations lasted from 21 April 2021 to 24 May 2021 and were carried out by submitting written comments and through focus groups. A total of six focus groups were held according to the following topics:

- Establishment and operation of startups (3 groups)
- Capacity building to support startup initiatives through an educational programme (1 group)
- Financing and investments in startups and alternative investment funds (1 group)
- Strengthening the capacity of support organisations and improving startup support programmes (1 group).

The participants in the public consultation process were, depending on the focus group, representatives of all interested parties:

- Students,
- Professors and researchers,
- Other representatives of faculties and universities,
- Representatives of investment funds,
- Founders and employees of startup companies,
- Representatives of successful companies.

Beside formal public consultations, the Working Group conducted a broad informal consultative process with representatives of the academic community and the economy during the process of writing the draft text of this Strategy.

11. THE METHOD OF MONITORING THE STRATEGY IMPLEMENTATION

MESTD will report semi-annually to the Council for encouraging the development of the digital economy, innovation, high-tech entrepreneurship and digitisation in business operations of economic entities on the realisation of the goals and measures provided for in this Strategy, and the Council for encouraging the development of the digital economy, innovation, high-tech entrepreneurship and digitalisation in business operations of business entities (hereinafter:

“Council”) will report to the Government once a year on the status of implementation, as well as on potential opportunities or risks for implementation.

Through the Information System for planning, monitoring of implementation, coordination of public policies and reporting, MESTD and the Council will cooperate with competent ministries, competent bodies and organisations, the economy and faculties at the national and local level.

12. ACTION PLAN

Action plans for the implementation of the Strategy are drawn up by MESTD in cooperation with competent authorities and organisations, the economy, universities and other interested entities. The action plan of the Startup Ecosystem Development Strategy of the Republic of Serbia for the period from 2021 to 2022 will be adopted within 90 days from the adoption of the Strategy. The action plan for the next period will be adopted in accordance with Article 18 of the Law on the Planning System of the Republic of Serbia (“Official Gazette of RS”, No. 30/18).

13. ASSESSMENT OF THE FUNDS NEEDED FOR STRATEGY IMPLEMENTATION

For the implementation of the act in question, funds are provided by the Law on the Budget of the Republic of Serbia for the year 2021 (“Official Gazette of RS”, Nos 149/20, 40/21 and 100/21) and the Law on the Budget of the Republic of Serbia for the year 2022 (“Official Gazette of RS”, No. 110/21), and for implementation during the following years of the Strategy validity period, starting in 2023, funds will be provided within the limits established by the Ministry of Finance for the distribution of authorities and organisations that are the holders and partners in the implementation of the measures, that is, activities, in accordance with budgetary possibilities.

Also, funds will be provided through other sources such as donations, project loans and international aid. In addition to the funds approved from the budget, funds are also planned to come from the Agreement (Project for Acceleration of Innovations and Encouraging Growth of Entrepreneurship in the Republic of Serbia) signed between the Republic of Serbia and the International Bank for Reconstruction and Development (No. IBRD 90290YF), in accordance with the Law on Confirmation of the Loan Agreement (“Official Gazette of RS - International Agreements”, No. 3/20), and other sources.

14. FINAL PROVISIONS

This strategy is to be published on the website of the Government, the website of the Ministry of Education, Science and Technological Development and the e-Government portal within seven working days from the day of adoption.

This strategy is to be published in the “Official Gazette of the Republic of Serbia”.

05 Number: 023-11452/2021-1

In Belgrade, 9 December 2021

G O V E R N M E N T

PRIME MINISTER

Ana Brnabić, duly signed

LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|--------------|--|
| AP | Action plan |
| GDP | <i>Gross domestic product</i> |
| GII | <i>Global innovation index</i> |
| DSI | Digital Serbia Initiative |
| ERP | Economic Reform Programme |
| ICT | Information and communication technologies |
| IT | Information technologies |
| IPA | <i>Instrument for Pre-Accession Assistance</i> |
| ME | Ministry of Economy |
| MESTD | Ministry of Education, Science and Technological Development |
| MF | Ministry of Finance |
| NALED | National Alliance for Local Economic Development |
| NBS | National Bank of Serbia |
| STP | Science and technology park |
| CCS | Chamber of Commerce of Serbia |
| DAS | Development Agency of Serbia |
| SORS | Statistical Office of the Republic of Serbia |
| RS | Republic of Serbia |
| RSD | The national currency of the Republic of Serbia, the Serbian dinar |
| CPS | Centre for the Promotion of Science |
| 4S | Smart Specialisation Strategy of the Republic of Serbia for the period 2020–2027 |