Plan of Priority Objectives and Activities of All State Administration Bodies and Government Services for IT Sector Improvement in Serbia for 2018

Council for Innovative Entrepreneurship and Information Technology

December 2017

Intro	luction	4	
Dev	velopment of human capital	4	
Bui	lding the innovation infrastructure	4	
Competitive market			
Fin	Financial incentives		
Devel	opment of human capital	6	
Forma	l education:	6	
1)	Training for information science teachers for IT classes	6	
2)	Extension of quotas in IT departments at higher vocational schools	7	
3)	Development of dual IT profiles in vocational education	7	
4)	Introduction of electronic textbooks and digital educational materials	8	
5)	Increasing the number of computer classes in high schools	9	
6) Scie	Innovation of the curriculum in high schools for the course Computing and Information ence	9	
7) eler	Development of the curricula for the information science subjects for the 7 th and 8 th grade nentary schools	of 10	
8)	Digital innovations in teaching process at faculties	10	
9)	Implementation of IT trainings for elementary and secondary school teachers	11	
10)	Establishment of the Center for Educational Technologies	12	
Non-f	Non-formal education:		
Development of innovation infrastructure: 14			
12)	BioSense Institute	14	
13)	Science and Technology Park Novi Sad	15	
14)	Science and Technology Park Niš	17	
15)	Upgrade of the building of the Faculty of Electronic Engineering in Niš	17	
16)	Faculty of Organizational Sciences	18	
17)	Verrocchio Institute of Physics	18	
18)	New building for the education of IT engineers	19	
19)	Support to the development of the Science and Technology Park Čačak	19	
20)	Procurement of IT equipment for primary and secondary schools	21	
21) the	Project for the improvement of information and communication infrastructure in the school Republic of Serbia	ols in 21	

	22)	Implementation of the Pilot Project CTC Industry 4.0 - Center for Technological			
	Competitiveness for Cyber-Physical Production Systems at the Faculty of Mechanical Engineerin				
	the Un	iversity of Belgrade	22		
	23)	Raising the innovation-oriented capacities of the Petnica Research Station near Valjevo	23		
	24)	Support to the implementation of the innovative project Self-Sustaining Desert House	24		
	25)	Support to the establishment of the Technology Park in Bor	26		
	26) Project for the construction of a startup innovation center at the University of Priština with a temporary headquarters in Kosovska Mitrovica				
	27)	Relocation of the Computer Center in Belgrade	28		
	28)	Enabling faster upload to private users (smaller asymmetry)	28		
Legal framework for investors:					
	29)	Adoption of the Law on Alternative Investment Funds	29		
	30)	Adoption of the Law on Non-Banking Financial Institutions (to enable microfinancing)	29		
	31) Making the operation of crowdfunding platforms possible and adequate promotion of such platforms				
	32)	Incentives for investing in innovative companies			
6			21		
(ompeti	tive market	31		

Competitive market		
33)	Improvement of the conditions for global business via the Internet	31
34)	Tax exemption for the beginners in business	32
35)	Opening of Google Merchant Account and App Store in Serbia	32

Introduction

In December 2016, the Government of the Republic of Serbia established the Ministerial Council for Innovative Entrepreneurship and Information Technology (IT Council) with the aim to make Serbia move faster with the fourth industrial revolution. The Minister of the State Administration and Local Self-Government at that time, and now the Prime Minister of Serbia, Ana Brnabić, was appointed as the President of the Council. Information and communication technology sector is one of the largest sectors in Serbia, and one of the largest net exporters. Its growth, according to the data of the Business Registers Agency), was 21.7% per year in the period 2008-2016. The sector employs more than 40,000 people and has an annual income of over EUR 4 billion. According to the data of the National Bank of Serbia (NBS), the export of computer services in 2016 reached EUR 740 million and exceeded the export of wheat which amounted to EUR 656 million. Average salary per employee in the information technology (IT) sector is almost twice as high as in other industries. In establishing the IT Council, the goal was to implement by 2022 the plans that would increase the annual net exports of the IT sector from the current around EUR 400 million to EUR 1.5 billion per year. This comprehensive goal, if achieved in the right way, will contribute to the creation of new jobs for the citizens of Serbia, improve the overall innovation environment in Serbia and give a meaningful contribution to the fiscal position of the Government. During the first year, concrete parallel efforts of the Government were made in several areas. To begin with, the Government adopted the Strategy for Development of Information Technology Industry for 2017-2020, and focused on key areas and initiatives:

Development of human capital

The capacity of technical faculties was expanded through an increased number of students by 20%, additional teaching staff was employed, and additional space was provided at the leading technical faculties. Programming was introduced as a compulsory subject from the fifth grade of elementary school, and, in the partnership with the Petlja Foundation, a modern interactive learning material for programming was developed. A total of 1,750 schools were provided with secure internet, and computers and equipment were purchased for all schools. In the field of non-formal education, the Government of Serbia has launched a pilot project for retraining 100 participants for IT, and a competition for another 900 participants is in progress.

Building the innovation infrastructure

During 2017, the Government renovated and fully equipped 607 square meters at the Faculty of Electronic Engineering in Niš and opened a modern Center for Innovative Youth Entrepreneurship - Startup Center, which became the center of gathering of innovative companies in southern Serbia. Funds have been allocated and the process of construction of 7 significant scientific and research facilities is in progress: Science and Technology Park in Novi Sad, Science and Technology Park in Niš, modern laboratory at the Faculty of Electronic Engineering in Niš, building for the BioSense Institute in Novi Sad, new building for the Faculty of Organizational Sciences in Belgrade, new building for the needs of the faculties of the University of Belgrade, as well as an additional building for the Institute of Physics within the project of scientific and research cooperation with prestigious European institutes.

Competitive market

A Working Group was formed to cancel the mandatory use of seals and issuance of paper invoices. Through the efforts of the NBS it has been clarified that business clients do not have to use seals in their operations with banks, and that foreign exchange inflows up to EUR 1,000 can be recorded with a standing electronic order. The Government has also issued an Explanation Regarding the Issuance and Booking of Invoices in Paper and Electronic Form without the Use of Seal and Signature, which permanently clarifies that legal entities do not have the obligation to print, sign and seal the invoices. All these initiatives will greatly facilitate the operation of IT companies (and not only them). In August, the Government adopted a longawaited Decree with Respect to More Detailed Conditions, Criteria and Elements for Flat Rate Taxation of Taxpayers on Self-Employment Income, which finally enabled entrepreneurs from the fifth group of taxpayers, including those involved in computer programming, to regularly receive notices on flat rate taxation. In cooperation with the Serbian Entrepreneurs club from the USA, a direct contact has been established with Google and Apple and a process has been initiated to enable companies and citizens from Serbia to freely sell and purchase applications through the online platforms of these companies. An agreement was signed with the European Union on the basis of which, through the BioSense Institute, Serbia would receive high-resolution satellite images that, together with other activities of this Institute, would enable development of digitization in agriculture and more efficient yields in this industry. In order to facilitate the procedure for importing certain radio and telecommunications terminal equipment, the Government adopted amendments to Annex 6 of the Decision on Determining the Goods Subject to the Issuance of Specific Documents on Export, Import, or Transit. The amendments imply deletion of certain tariff codes and headings, which will significantly reduce the list of goods that can be imported only after obtaining a document on the conformity of radio equipment and telecommunications terminal equipment.

Financial incentives

After more than two years, a competition of the Innovation Fund for Innovative Activity for Funding Innovative Solutions in the Economy was held, and for the following year, the budget of the Fund was almost doubled: from RSD 537 million in 2017 to RSD 964 million in 2018. A consensus is reached on measures to stimulate entrepreneurship through the exemption from taxes and contributions for beginners in business, and this measure will be implemented throughout next year.

During 2018, the IT Council will continue intensive work on the following key areas and initiatives:

Development of human capital

With the goal of increasing the IT potential in Serbia, we will continue to further increase the number of trained IT professionals available in the market.

Formal education:

1) Training for information science teachers for IT classes

<u>Details</u>: The success of curriculum implementation in the classes of students with special abilities in information science involves a highly competent teaching staff capable of creating a dynamic and adaptive educational environment and providing the best conditions for the formation of the knowledge in information science.

By examining the needs of the teachers employed in high schools (gymnasiums) that will form classes of students with special abilities in information science, their needs for specific high-quality professional development will be mapped. Based on such mapped needs, appropriate programs of professional training will be offered, which will be created and carried out by distinguished university teachers and representatives of the IT industry.

Projected budget: RSD 7 million

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development

Next steps:

- Survey of information science teachers on the needs for professional development in the area of expertise January 2018
- Analysis of the survey and mapping the needs of teachers January 2018
- Creation of appropriate professional development programs February-March 2018
- Implementation of trainings April-September 2018

2) Extension of quotas in IT departments at higher vocational schools

<u>Details</u>: As in the previous year, increase is planned in 2018/2019 in the number of students enrolled in IT study programs at higher education institutions, with a projection that the number of new students will be higher by 1.000.

Implementation method:

- Promotion of the Action Plan (AP) for IT at universities, faculties and higher schools, and in cooperation with them, increase in the enrollment capacity for new IT engineers.
- Accreditation of study programs and greater coverage of higher education institutions that will access the Council's AP.

<u>Projected budget</u>: Since the students' enrollment is in October, it is necessary to provide additional funding for two months to finance 1,000 students – 50,000,000. For the previously enrolled students (550 budget-financed), funds will be provided in the amount of RSD 250,000,000.

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development

Next steps:

- Promotion of the Council's AP at higher education institutions January 2018
- Collecting information on the increase in quotas at higher education institutions February 2018
- Preparation of studies and documentation for accreditation March-April 2018
- Preparation of the Competition for Enrollment and Promotion of Enrollment in higher education institutions May 2018
- Enrollment of new students and monitoring June, September 2018 Preparation of periodic reports for the Government

3) Development of dual IT profiles in vocational education

<u>Details</u>: The dual education program currently has its foundation in the new Law on Dual Education. This Law allows for a better connection between the economy and schools, and in cooperation with its partners, the Ministry will develop a dual profile for IT professionals.

In addition, the Ministry will select schools that will implement education according to the new profile and companies that will provide a place for learning at work. Students will be able to enroll in this profile starting from the school year 2018/19.

<u>Projected budget</u>: The Institute for the Improvement of Education will implement this activity within its planned budget funds.

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development

Next steps:

- Proposal to the Ministry to introduce the new profile with the company/school initiative, by the end of December 2017.
- Order of the Institute for the Improvement of Education to develop qualification standards of both curriculum and syllabus by the end of January 2018.
- Adoption of the proposal by the Council by the end of February 2018.
- Official publication of the curriculum and syllabus in the Official Gazette of RS, by the end of March 2018.
- Implementation of the process of verification of meeting the conditions of interested schools by mid-April 2018.
- Publication of the new profile for individual schools, coordination at the level of local selfgovernment unit, school administration, and finally the Ministry of Education, Science and Technological Development (part of the competition)
- Announcement of the Competition, the deadline end of April 2018

4) Introduction of electronic textbooks and digital educational materials

<u>Details</u>: In the course of 2018, digital textbooks (interactive learning materials) will be introduced in teaching so that the learning process would be more effective, more interesting to children, and in order to bring the benefits of new technologies closer to children. The pilot program will start with 2,000 digital classrooms, and then it will be gradually expanded.

Projected budget: RSD 307 million

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development

Next steps:

- Establishment of a working group to monitor the project activities (December 2017)
- Public procurement (procurement of ICT equipment) model: framework agreement (February-May 2018)
- Determining the criteria for selecting the teachers to become digital teachers (January-February 2018)
- Letter of intent to the publishers (second half of January 2018)
- Public invitation to teachers to apply (second half of January 2018)
- Selection of digital teachers (first half of February 2018)
- Public invitation to the publishers of digital textbooks (March 2018)
- Selection of textbooks (May-June 2018)
- Training of the teachers (June-July 2018)
- Installation and configuration of ICT equipment (June-August 2018)

5) Increasing the number of computer classes in high schools

<u>Details</u>: In the Republic of Serbia, general high school (gymnasium) education at the level of secondary education is available to students in 144 schools (109 high schools and 35 mixed schools). After a survey was conducted in schools for forming the classes of students with special abilities for computer and information science in the school year 2018/19, the collected data shows that 50 schools intend to form such classes. The Ministry of Education, Science and Technological Development will provide support in the implementation and will prepare an entrance examination to check students' knowledge for continuing education on this educational program.

Projected budget: RSD 100,000.00 for the preparation of entrance exam

Responsible body of the Government of Serbia: Ministry of Education, Science and Technological Development

<u>Next steps</u>: Preparation of the entrance exam by the Institute for the Improvement of Education, implementation, analysis of the results and formation of classes based on the Guide on Forming the Classes (15 students are required to form a class). In three years, when the first generation of primary school students, having information science as a compulsory subject, completes its elementary education, the entrance examination program will include, in addition to mathematics, a test that also checks the basics of programming.

6) Innovation of the curriculum in high schools for the course Computing and Information Science

<u>Details</u>: The new curriculum for this course will be outcome-oriented and in line with new trends in modern curricula. It will also take into account the changes made in education and particularly focus on the continuity of outcome of the course Computer and Information Science, bearing in mind it has become a compulsory course in elementary education. More precisely, in the implementation method of the new curriculum and syllabus for this teaching course, guidelines are envisaged for implementing the curriculum that will be used for two generations of students who have not studied this course as an optional course in elementary school. Implementation of the new curriculum will start from the next school year.

Projected budget: No additional funds are required for the implementation of activities

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development

Next steps: The Institute prepares a training curriculum for all teachers

7) Development of the curricula for the information science subjects for the 7th and 8th grade of elementary schools

<u>Details</u>: Education curriculum was developed for the 5^{th} and 6^{th} grade; it is necessary to develop new curricula for the 7^{th} and 8^{th} grade during the autumn of 2018.

<u>Projected budget</u>: The Institute for the Improvement of Education will carry out this activity within its planned budget. The Institute, the Ministry of Education, Science and Technological Development and the IT Council will cooperate on this important initiative with the Petlja Foundation and other organizations competent in this field.

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development

Next steps: Preparation and adoption of the curriculum and syllabus for teaching and learning.

8) Digital innovations in teaching process at faculties:

<u>Details</u>: The Ministry of Education, Science and Technological Development will issue a public call to support higher education institutions in the development of new subjects and innovation of the current subjects within the study programs.

The projects should contribute to the implementation of program goals of the Ministry:

1) Development of the competencies of teachers and associates;

2) Development of new and innovation of the existing study programs that accommodate the needs of labor market;

3) Improvement of the quality of educational process by creating better conditions for the implementation of teaching and students' learning;

4) Contribution to the development of entrepreneurial education in higher education system through improved cooperation between higher education institutions and the economy;

5) Development of entrepreneurial skills and creativity of students.

In case the project refers to the introduction or innovation of one subject, the minimum value of the project is RSD 250,000.00 and in case of a group of subjects in a study program, the project value is multiplied, but the maximum value of one project is limited to RSD 1,500,000.00.

The amount of co-financing by the Ministry is 85% of the direct costs of the project implementation, and higher education institutions as project implementers provide co-financing of 15% of the direct costs of project implementation.

Projected budget: RSD 36 million and 200 thousand

Responsible body of the Government of Serbia: Ministry of Education, Science and Technological Development

Next steps:

The study programs agreed in 2017 will be evaluated by May 2018. Upon the collection of evaluation results, the Ministry will issue a new call by the end of June 2018 at the latest.

9) Implementation of IT trainings for elementary and secondary school teachers

<u>Details</u>: By adopting the Digital Competence Framework for teachers, conditions have been created for systematic training of teachers in the field of digital literacy.

The Institute for Education Quality and Evaluation, by piloting and evaluating the instruments for the self-evaluation and assessment of electronic maturity of an institution SELFI, provided the conditions for support of the needs-based planning and procurement of ICT equipment and infrastructure in schools.

After the adoption of the National Education Framework, it will be possible to begin its implementation in school curricula, with the focus on developing the interdisciplinary competence of Computer Literacy. Through the training of teachers to reach at least the basic level of digital literacy in accordance with the Digital Competence Framework for teachers and training for the application of SELFI instruments for the management, teachers and students, the process of self-evaluation of an institution will acquire a new dimension and provide for a quality development planning.

Creation and implementation of two training modules based on the adopted Digital Competence Framework for teachers and SELFI instruments. Trainings will be carried out by information science teachers, while the attendants will be teachers who teach other subjects.

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development. The Ministry and IT Council will take into account that all trainings can be carried out in the highest quality manner in the most advanced Information Access Center opened by the Ministry of State Administration and Local Self-Government in cooperation with the Republic of Korea in December 2017, which is intended for training of civil servants and citizens in the field of information and communication technologies.

Next steps:

- Creation of one training module based on the Digital Competence Framework for teachers and the other training module based on SELFI instruments February-March 2018
- Implementation of training in elementary schools April-November 2018

10) Establishment of the Center for Educational Technologies

<u>Details</u>: Informatization of education system implies the development and implementation of education policies for digital age education. Systematic approach to the building of ICT infrastructure in schools, connecting to the Internet, creating digital content, developing learning management systems, training and continuous support to teachers, are the core tasks for the Center for Educational Technologies to deal with in a sustainable and long-term manner.

Cooperation with the Republic of Korea and the status of a mentored country provide the opportunity to observe the recommendations made during the 18-year experience of the Korean KERIS Institute and use them in our country.

The Center will be responsible for professional support when defining education policies in the field of educational technologies, cooperation with relevant institutions, planning and managing the investments, programs and projects, research and evaluation of the application of ICT on all levels of education policy and within individual subjects in primary and secondary schools, and will develop and coordinate professional development and training programs for teachers in the field of educational technology and instructional design.

Projected budget: RSD 7 million

RSD 1 million for the development of the Education Informatization Plan

RSD 5 million for salaries in 2018 and further budgeting as a regular part of the system

RSD 1 million for 5 computers, server and other necessary equipment.

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development and the Ministry of Trade, Tourism and Telecommunications

Next steps:

- Defining the Education Informatization Plan and key areas of the operation of the Center for Educational Technologies (education policy, online learning system, standardization and certification of digital educational content, teachers training ...) March-April 2018
- Adoption of appropriate legislation (if necessary) in May 2018
- Establishment of the Center for Educational Technologies with 5 employees June 2018
- Defining and implementing an AP for each of the key areas of the operation of the Center for Educational Technologies June-December 2018

Non-formal education:

Continuation of the work on the development of ecosystem that efficiently produces over 1,000 beginner developers every year requires the creative and efficient use of government resources in close cooperation with the economy.

According to the survey of the needs of IT sector in Serbia, conducted by Infostud in February 2017, there is a great need for the employment of IT juniors. Almost all IT companies have difficulties finding quality employees and are willing to help educational institutions in IT training programs and retraining practices.

According to the results of the surveys in the past three years, there has been a significant increase in the employment of junior programmers, and in 2017, on a sample of 118 surveyed companies, employment of almost a thousand new staff is planned. Almost all surveyed companies (95%) said they had difficulties finding quality employees, while for 4% of the companies it was almost impossible to find such employees.

11) Retraining for the IT sector

<u>Details</u>: Following the success of the pilot trainings for 100 participants and the current retraining for up to 900 candidates, training for additional 1,500 people is planned in 2018. The program will be implemented by the National Employment Service.

The main objectives of the trainings are to:

Provide knowledge and skills in IT in order to increase the number of employees in the IT sector in Serbia

Provide mentoring to candidates and encourage them to start a career in IT

In order to encourage as diverse programs as possible, individual instructors can train a maximum 100 participants in one cycle. Second stage training starts in early 2018.

In order to ensure the diversity of programs and geographic distribution, we will determine some limits:

- 1) Geographical: determine the maximum number of participants per city according to the needs
- 2) According to the courses: determine according to the needs. It will be suggested to the candidates for conducting the trainings to offer several different programs in order to increase the chances of winning the competition, since they can not have more than 100 participants and the above mentioned limits will be strictly observed.

Candidate selection:

In the first round of the selection process, online testing will be performed by the company chosen through a tender. At least 2,000 best candidates will be chosen based on competency tests and English language tests

Projected budget: RSD 300 million

Responsible body of the Government of Serbia: Ministry of Labour, Employment, Veteran and Social Affairs, the Office for Information Technology and Electronic Administration

Next steps:

- June 2018 Completion of training for up to 900 candidates
- July 2018 Evaluation of the second phase and preparation of a call for a new retraining cycle
- October 2018 Beginning of a new retraining cycle

Development of innovation infrastructure:

According to Government Conclusion No. 030-8923/2017-1 of 22 September 2017 the IT Council supports the projects of:

- Construction and development of Science and Technology Parks, which connect the academic community and the economy, and represent one of the key factors for the development according to the above mentioned strategies.
- Extension of the capacities of the faculties that implement study programs in the IT field, in order to compensate for the lack of engineers on the market and to ensure stable growth of IT industry in Serbia.
- Strengthening the capacities of scientific and research institutes for the development of high technologies and cooperation with the economy.

The IT Council will regularly monitor the progress of implementation of the projects:

12) BioSense Institute

<u>Details</u>: BioSense is one of the leading European research institutes dedicated to modern applied and market-oriented research in the field of agriculture and food. For the Antares project, the BioSense Institute won the first place in Europe within the call Horizon 2020 – Timing, intended to develop the European Center of Excellence in scientific research. The budget of the Antares project is EUR 28 million, of which EUR 14 million are EU grants, while EUR 14 million are provided from the project Research and Development in the Public Sector funded by the European Investment Bank and the Council of Europe Development Bank.

<u>Projected budget</u>: EUR 28 million (EUR 14 million from the Horizon 2020 program, EUR 14 million from the European Investment Bank loan)

Funds in the amount of EUR 14,019,900 will be paid by the Ministry of Education, Science and Technological Development successively, according to the issued interim payment certificates, according to the following schedule:

- no later than 31 August 2017, the amount of EUR 4 million;
- no later than 30 April 2018, the amount of EUR 2,400,000;
- no later than 30 July 2018, the amount of EUR 3.350.000, and
- no later than 31 October 2018, the amount of EUR 4,269,900.

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development, Cabinet of the Minister without Portfolio in charge of innovations and technological development, Public Investment Management Office

Next steps:

Acquisition of location-related conditions is in progress, as well as the public procurement procedure conducted by the Public Investment Management Office for the procurement of services of the development of project design for building permit application, detailed project design, professional supervision, preparation of validation documents for clean rooms, as well as project management for the construction of the BioSense Institute building in Novi Sad.

Key activities planned in the following period:

- development of a project design for building permit application and main and detailed design;
- public procurement procedure for the execution of works;
- foundation stone and commencement of works planned for June 2018;
- completion of works planned in the coming period planned for June 2019;

13) Science and Technology Park Novi Sad

<u>Details</u>: Phase II of the Science, Technology and Innovation Park Novi Sad, which represents continuation of the construction of a building with an area of 29,134.50 m², of which 9,000 m² are intended for the Faculty of Technical Sciences of the University of Novi Sad. This project has already started with funds from the project Research and Development in the Public Sector financed by the European Investment Bank in the amount of EUR 12 million. In the initial project, construction of 19,000 m² to the rough construction work stage was planned; additional funds from the Budget of the Republic of Serbia in the amount of RSD 200 million in 2018 and RSD 640 million in 2019 were provided for the completion of works on the entire building. It is necessary to fully change the concept having in mind that the total planned net area of the Science, Technology and Innovation Park Novi Sad of 29,134.50m² will consist of a 6-level complex, including entrance hall, connecting parts and footbridges, and will be organized as follows:

- 4,000 m² for startup and smaller companies whose activity is related to innovation, development and research activities
- 3,500 m² for R&D sectors of the developed companies;
- 9,000 m² for educational and research work of the Faculty of Technical Sciences Novi Sad, of which up to 2,000 m² will be intended for amphitheaters, conference halls, multimedia and video halls, and exhibition spaces that would be used by Faculty of Technical Sciences,

University of Novi Sad and the Science, Technology and Innovation Park Novi Sad

- 4,000 m² for scientific and research institutions of special importance for the development of the Autonomous Province of Vojvodina, i.e. institutes and companies that have already been developed and are important for Novi Sad and Vojvodina, that conduct an activity based on research and development, and their research can be used to develop new products and services within the Science, Technology and Innovation Park (for example, for the institutes in the field of information technologies, food technologies, development of new materials and products, etc.)
- 4,971.50 m² for the Co-Working Space including halls, socializing area, banks, companies providing ancillary services, etc. with a restaurant that will operate on 24/7 basis, gym and office space for the Core Innovation Accelerator Team, which will provide support and ensure smooth functioning of the Park, where the most important positions providing the greatest benefits to start-ups and companies are: financial manager, legal advisor, business development director, marketing director, technology manager and accounting manager
- 3,663 m² for garages and basement.

In accordance with the concept, it is necessary to prepare a specification and provide adequate equipment for future users of the Phase II of the Science, Technology and Innovation Park Novi Sad.

Projected budget: RSD 200 million for 2018 and RSD 640 million for 2019

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development, Cabinet of the Minister without Portfolio in charge of innovations and technological development, Public Investment Management Office

Next steps:

- Signing the consolidated text of the Annex I to the Agreement on Financing Terms and Implementation Method for the Project of the Construction of Science, Technology and Innovation Park Novi Sad by the Ministry of Education, Science and Technological Development, Provincial Secretariat for Higher Education and Scientific Research, University of Novi Sad, Faculty of Technical Sciences of the University of Novi Sad, and Public Sector Projects Implementation Unit Ltd. (PIU) Belgrade.
- 2. Establishment of a limited liability company that will be managed by the Science, Technology and Innovation Park Novi Sad
- 3. Deciding whether the procurement of works within Phase II will be carried out by PIU or the Public Investment Management Office. If a decision is made that the works are to be managed by PIU, the Government's conclusion should be changed. Depending on this decision, it will be determined who will prepare the documentation necessary to implement the project Phase II.
- 4. Completion of the contract works by the end of 2018

Developing the specification of equipment necessary for the common premises of the Science, Technology and Innovation Park Novi Sad, defining the sources of funding for the procurement of equipment, conducting the procedure and procurement.

14) Science and Technology Park Niš

<u>Details</u>: Construction of the Science and Technology Park Niš, which will provide a space of approximately $14,000 \text{ m}^2$ for training of students to use advanced technologies and learning through practice. The space will also include a business incubator for around 30 startup companies, while there will be a separate space for research and development of the products of larger companies.

Projected budget: EUR 10 million (European Investment Bank loan)

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development, Cabinet of the Minister without Portfolio in charge of innovations and technological development, Public Investment Management Office

<u>Next steps</u>: Commencement of construction works on the Science and Technology Park Niš is planned in April 2018, while the completion of works is planned in August 2019.

15) Upgrade of the building of the Faculty of Electronic Engineering in Niš

<u>Details</u>: Expansion of the Faculty of Electronic Engineering of the University of Niš by building a multifunctional annex to the faculty building of $6,950.38 \text{ m}^2$, equipped with new generation laboratory equipment. This expansion will enable increase in the faculty capacity for applied research in new technologies, as well as incubation of a number of innovative entrepreneurial ventures. Two centers of excellence will be formed, for 3D technologies and augmented reality.

Projected budget: EUR 5 million and 200 thousand (European Investment Bank loan)

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development, Cabinet of the Minister without Portfolio in charge of innovations and technological development, Public Investment Management Office

<u>Next steps</u>: The commencement of works is planned in April 2018 with the deadline for completion in March 2019.

16) Faculty of Organizational Sciences

<u>Details</u>: A long-term solution is required for the lack of spatial capacity, by constructing a new building for the Faculty of Organizational Sciences in Serbia and in the region. The project for the construction of a new building implies the construction of a building that would accommodate new amphitheaters, computer classrooms, centers, etc. This would allow for better use of the present building to organize courses using the most advanced methods and with significant participation of IT community in the ecosystem $-7,500 \text{ m}^2$ (two levels of garage and auxiliary facilities with a gross area of 4,277.4 m² and a building with the following number of floors: ground floor plus 4 floors, gross area of 3,342.24 m²). Estimated value of the construction and furnishing works on the building is EUR 5.5 million. In this way, the conditions will be created for a significant increase in capacity and the Faculty of Organizational Sciences will be able to enroll 750 students instead of the current 430 in the department of Information Systems and Technologies. In this way, the Faculty of Organizational Sciences will have 550 instead of 260 graduate IT engineers per year.

<u>Projected budget</u>: EUR 5 million (loan from the European Investment Bank) and EUR 500 thousand (contribution of the Faculty of Organizational Sciences)

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development, Cabinet of the Minister without Portfolio in charge of innovations and technological development, Public Investment Management Office

Next steps: It is necessary to prepare all the required documentation and commence the works in 2018

17) Verrocchio Institute of Physics

<u>Details</u>: Together with strategic partners – leading world centers such as CERN, INFN (the network of national institutes of Italy), DESY (the largest scientific plant in Germany) and the Petnica Research Station – the Verrocchio Project of the Institute of Physics in Belgrade aims to link the existing expertise in the field of supercomputing; modeling of complex systems; collecting, visualizing and analyzing large data sets; development and application of new non-invasive measuring systems; and to focus this expertise on solving specific problems related to the development of new generations of accelerators and detectors, i.e. for solving social challenges in contact with areas such as archeology, sociology and biomedicine.

In accordance with the concluded Project Implementation Agreement, construction of a building of 3.000 m^2 and a building of 1.000 m^2 for production of prototypes is planned.

<u>Projected budget</u>: EUR 5 million (European Investment Bank loan) while the rest is provided by international partners (5 million) and the property of the Institute of Physics (1 million).

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development, Cabinet of the Minister without Portfolio in charge of innovations and technological development, Public Investment Management Office

<u>Next steps</u>: It is necessary to prepare all the required documentation and commence the works in 2018

18) New building for the education of IT engineers

<u>Details</u>: For years, Serbia has been facing the lack of infrastructure capacities for the teaching process and research in the field of information technologies. By constructing a new building of approximately $12,000 \text{ m}^2$, a large number of these problems would be solved. The building would meet the highest standards and would be built in New Belgrade.

Projected budget: EUR 6 million (European Investment Bank loan)

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development, Cabinet of the Minister without Portfolio in charge of innovations and technological development, Public Investment Management Office

Next steps: It is necessary to create all the required documentation and start the works in 2018.

It is also necessary to support new initiatives for creating local start-up centers and science and technology parks:

19) Support to the development of the Science and Technology Park Čačak

Details: Science and Technology Park Čačak was established in 2011 by the City of Čačak, Faculty of Engineering, Faculty of Agriculture, Fruit Research Institute, business association Gradac 97, and association of private enterprises and entrepreneurs Unija Čačak 2000. Over the past years, it has developed and gained trust of local community in the activities of infrastructural and expert support to innovations and startup companies. The Science and Technology Park Čačak encourages the development of new products and technologies, transfer of technologies and innovations to the economy, commercialization of the results of scientific research, and enables creation of new jobs. The Science and Technology Park Čačak provides support for the work of 20 startup companies, 60 new jobs have been opened, with obvious success at national and international level in technological innovation competitions, as well as the organization of more than 70 events aimed at the development of entrepreneurship among young people. Development of the Science and Technology Park Čačak is supported by the city administration, economy and faculties, which provides an excellent basis for the Park to continue to develop rapidly in the direction of encouraging digitization of manufacturing industries already present in Čačak. However, the main problem of work and an obstacle to further development is the lack of office

space which prevents the increase in the number of startup companies that would use the services of the Park. The interest is high and today about 20 startup companies are waiting to move in, and these companies would provide over 150 new jobs in the first year of operation. Providing and equipping office premises for business incubation needs would strengthen the capacity of the organization for creation and growth of innovative companies that would offer young professionals the opportunity to stay in Čačak and use their knowledge for the development of local economy.

Expansion of the spatial capacity of the Science and Technology Park Čačak can be carried out in two ways.

A) Taking over for the management and use the Tehnos site (cadastral parcel no. 5751/15 (6930 m²), cadastral parcel no. 5751/14 with buildings 1 and 2 (6488 m²) and cadastral parcel no. 5751/10 with buildings 1, 2 and 12) which is owned by the City of Čačak. The required space is 5500 m² in the area of about 3.5 ha.

Upon cleaning the site and implementing the spatial development plan, a phase of construction and reconstruction of the facilities would follow. After young business entities move in, conditions would be created for opening 300 new jobs.

Adaptation and implementation schedule of the project is 24 months.

B) Purchase of equipped space at the CER site where young business entities could move in, which would create the conditions for opening 500 new jobs.

Implementation schedule is maximum 6 months.

<u>Projected budget</u>: Depends on the selection of the implementation method, namely:

A) The City of Čačak invests in land and entire infrastructure in the amount of EUR 2,500,000, while the participation of the Republic in the construction and rehabilitation of existing facilities should be EUR 3,500,000.

B) In case of purchase of finished facilities at the CER site, the City of Čačak would invest EUR 1,000,000, while the Republic would contribute with EUR 3,000,000.

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development, Cabinet of the Minister without Portfolio in charge of innovations and technological development

<u>Next steps</u>: In 2018, adoption of the decision of the Council for Innovative Entrepreneurship and Information Technology on the selection of one of the two ways of the project implementation and in accordance with that, adoption of the decision on how to secure the necessary funds - from the European Investment Bank loan or another loan, or donation or other sources, in order to start the works in 2018.

It is necessary to improve the infrastructure in elementary and secondary schools and allow all the students to have an opportunity to use modern means in education. Investing in telecommunications infrastructure is also one of the priorities of the IT Council.

20) Procurement of IT equipment for primary and secondary schools

<u>Details</u>: Implementation of IT education in primary schools, as well as in high schools that will form classes of students with special abilities for computer and information science, requires continuous furnishing with the necessary ICT equipment.

Projected budget: RSD 26 million

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development

Next steps:

- Summarizing the needs of high schools and primary schools for computer equipment.
- Choosing primary schools and high schools that require computers for teaching process
- Equipping high schools with desktop computers (300 computers)
- Equipping primary schools with desktop computers (375 computers)

21) Project for the improvement of information and communication infrastructure in the schools in the Republic of Serbia

Details:

The goal of the project is to establish standardized and sustainable information and communication infrastructure in all the schools in the Republic of Serbia. Establishment of technical prerequisites for the provision of information and communication technology (hereinafter: ICT) services for participants in education such as: digital educational content, e-learning and distance learning, e-register, etc. Improvement of the digital competencies of teachers and students in terms of qualification for independent and critical use of ICT in teaching and learning, preparation and carrying out the teaching process, but also the use in everyday life. Providing support to teachers to use ICT in education to more easily adapt educational material to the individual needs of students, which additionally enhances the motivation of advanced students and contributes to the development of poorly motivated students, and provides appropriate support to the students with special educational needs, as well as equal opportunities for education and reducing the differences between rural and urban environments. This project allows implementation of the concept of BYOD (bring your own device), which will significantly increase the number of students and teachers who have access to ICT through the use of their devices, not only when they are in school but also from their homes. Inclusion of parents and legal representatives in the educational process through access to digital educational content, distance learning systems, data on the students' engagement and success in school, improvement of communication with teachers, and the like. Achieving a higher level of security in schools, both on the physical level through the introduction of

video surveillance and on the information level through more secure Internet access by using adequate technology, but also by increasing the relevant competences of teachers and students.

<u>Projected budget</u>: EUR 70 million, the Budget Law for 2018 provides for a loan from the European Investment Bank

<u>Responsible body of the Government of Serbia</u>: Ministry of Trade, Tourism and Telecommunications, Ministry of Education, Science and Technological Development

Next steps:

Estimated duration of the project is 36 months. The first 9 months to define the scope, project approval by the creditor and signing and ratification of the loan agreement, and the remaining 27 months for the implementation.

- January March 2018 Defining the project, appropriate contributions and coordination with EIB telecommunication and education teams.
- April September 2018 Loan approval procedure by EIB, conclusion of the loan agreement and ratification in the National Assembly of RS
- October December 2018 Implementation of tender procedures

22) Implementation of the Pilot Project CTC Industry 4.0 - Center for Technological Competitiveness for Cyber-Physical Production Systems at the Faculty of Mechanical Engineering of the University of Belgrade

<u>Details</u>: Large-scale digital innovation of production processes and logistics chains of the European industry – the concept of Industry 4.0 is the Europe's strategic priority and a global trend for which economic policies of a very wide social engagement are built encompassing scientific-research and educational community. This project is a **pilot project, with the primary aim of practical verification of a broader strategic program** for directing a part of investments allocated by the Government of the Republic of Serbia for the development of ICT technologies in the Serbian industry sectors and the development of the Industry 4.0 national program.

The main objective of the project is the organizational formation and physical implementation of the Center for Technological Competitiveness in the Field of Cyber-Physical Production Systems – CTC Industry 4.0, which would be physically located at the Faculty of Mechanical Engineering of the University of Belgrade as an educational and research and development resource for the interaction of science and industry of Serbia (cooperation with factories, industrial associations, investors, startup programs and innovative entrepreneurship), highly specialized for industrial ICT, namely: robotics, intelligent industrial automation, manufacturing mechatronics, industrial software and related technologies on which the Industry 4.0 concept is based.

CTC Industry 4.0 would include 5 research and development units provided with state-of-the-art

equipment of the latest generation, with research and development and educational potentials that would bring it to leading position in the Western Balkans Region in the field of digital industry innovation.

CTC Industry 4.0 project will be implemented in partnership with the Faculty of Mechanical Engineering of the University of Belgrade, through modernization, reorganization and expansion of existing content (spatial, program, experimental) of the Laboratory for Cybernetics and Mechatronic Systems at the Faculty of Mechanical Engineering of the University of Belgrade.

<u>Projected budget</u>: The projected budget for the project implementation is estimated at EUR 750,000. Adoption of the decision of the Council for Innovative Entrepreneurship and Information Technology on the project implementation in 2018, as well as making a decision on how to provide the necessary funds - by a loan from the European Investment Bank or other loan, or donation or other sources, in order to start the works in 2018.

<u>Responsible body of the Government of Serbia</u>: Cabinet of the Minister without Portfolio in charge of innovations and technological development in cooperation with the Ministry of Education, Science and Technological Development, Serbian Chamber of Commerce, Public Investment Management Office, and other relevant institutions.

<u>Next steps</u>: CTC Industry 4.0 project is implemented through four groups of activities conducted in parallel, with a view to shortening the total project implementation time that is estimated at six (6) months.

23) Raising the innovation-oriented capacities of the Petnica Research Station near Valjevo

<u>Details</u>: Petnica Research Station near Valjevo is an example of successful innovation and one of the leading institutions of this kind in Europe. This institution, with its quality programs, professional and young lecturers and dedicated work of the management attracts children who are eager for knowledge and in search of innovations, not only from Serbia, but from the entire region and beyond.

However, in spite of the efforts to provide the best conditions for work both to students - participants in the program, and to lecturers among which there are doctoral and postdoctoral students, the level of furnishing of the laboratories and cabinets of the Petnica Research Station remains non-uniform. Taking into account the significance and previous results of this institution, the continuous support of the Government of the Republic of Serbia and other relevant institutions is very important.

The project envisages the **procurement of a set of equipment for advanced experimental-innovation research**, which would connect and improve the capacities of laboratories and cabinets and create the possibility of carrying out the project work at the level of the most developed EU countries (EUCYS standards) in two areas:

a) Innovation technologies: electronics, applied physics, automation and robotics

b) Bioengineering: biochemistry, molecular biology and biomedicine, production and quality of food.

Projected budget: RSD 12 million

<u>Responsible body of the Government of Serbia</u>: Cabinet of the Minister without Portfolio in charge of innovations and technological development, Ministry of Education, Science and Technological Development, Public Investment Management Office, and Research Station Petnica, in cooperation with other relevant institutions.

<u>Next steps</u>: Adoption of the decision of the Council for Innovative Entrepreneurship and Information Technology on the project implementation in 2018, as well as making a decision on how to provide the necessary funds - by a loan from the European Investment Bank or other loan, or donation or other sources in order to implement the project in 2018. The project can be implemented within three (3) months from the approval, i.e. securing the funds.

24) Support to the implementation of the innovative project Self-Sustaining Desert House

<u>Details</u>: Innovative project Self-Sustaining Desert House presents a unique opportunity to promote the innovation potential of Serbia and the knowledge of our students in the country and abroad. The authors of the project are students and their professors from the Faculty of Architecture, Faculty of Electrical Engineering, Faculty of Mechanical Engineering, Faculty of Technology and Metallurgy, and Faculty of Forestry of the University of Belgrade, gathered in the Twist Box team.

At the competition of 20 universities from 16 countries, from four continents, the project Self-Sustaining Desert House of a team of about 100 students and mentors from Serbia entered the final phase of the international competition Solar Decathlon Middle East (SDME), which will be held in November 2018 in Dubai. This international multidisciplinary student competition aims to raise awareness of the energy and bioclimatic approach to designing architectural structures and all the resulting benefits.

The Twist Box has the task to build a house according to its project design, using the cutting edge solutions and materials in the field of green building. The ultimate goal is to build a multifunctional, energy-efficient and self-sustaining pavilion/house of 60 m² for 6 family members (3 generations), which only uses solar energy for its functioning.

The project is implemented by the students and their professors from the Faculty of Architecture, Faculty of Electrical Engineering, Faculty of Mechanical Engineering, Faculty of Technology and Metallurgy, and Faculty of Forestry of the University of Belgrade, gathered in the Twist Box team.

Bearing in mind that the implementation of this complex task requires continuous two-year work on the project design development and testing of all elements and components, which is a challenge even for the most famous universities in the world, **the Twist Box team needs dual support to the project, that is:**

A) phased financing in the amount of EUR 300,000 during the next year (for the construction, transport, stay and insurance of people, participation in workshops) and

B) possibility of assembling a desert house/pavilion in natural size in an attractive location in Belgrade.

While in the interest of supporting this project of exceptional scientific and research and economic significance, in cooperation with the management of the City of Belgrade, the possibilities are considered to find the most suitable place at which the pavilion could be installed, it is necessary to provide financial support for its implementation.

Partial financing of the project by the Republic of Serbia would give an incentive to the domestic economy to financially support its implementation. In this way, close cooperation between the academic, economic and state sector would be achieved and it would be possible for the team of students and professors of the University of Belgrade to present this innovative project to the local and world public in the best possible way.

<u>Projected budget</u>: Adoption of the decision of the Council for Innovative Entrepreneurship and Information Technology on the support to the project implementation in 2018, as well as making a decision on how to secure partial financing – from a loan, or donation or other sources, in order to implement the project in 2018.

<u>Responsible body of the Government of Serbia</u>: Cabinet of the Minister without Portfolio in charge of innovations and technological development and the City of Belgrade, in cooperation with other relevant institutions.

<u>Next steps</u>: According to the competition propositions, the first presentation of the project to the world public was held at the Dubai Solar Show from 23 to 25 October 2017 where the model, audiovisual and promotional material were exhibited.

After that, in the period May – June 2018, the desert house/pavilion should be installed in natural size at one of the attractive locations in Belgrade in order to present the project to the local public. That pavilion will be moved to Dubai in November 2018, where it will remain until the world exhibition Expo 2020.

25) Support to the establishment of the Technology Park in Bor

<u>Details</u>: The Municipality of Bor and the Regional Development Agency Eastern Serbia (RARIS) have launched an initiative to establish a technology park, aware of the fact that Eastern Serbia has the need to develop specific services to support the economy (and above all SMEs), as well as the scientific research institutions in the region. Future Technology Park in Bor should link science and economy and stimulate innovative entrepreneurship in eastern Serbia by:

- managing the flow of knowledge and technology between faculties, institutes, companies, markets, along with the support of local self-government, economy, development support organizations and state institutions;

- facilitating the creation and growth of innovation-based companies through incubation and spin-off processes and provide servicing services to increase added value along with high-quality ambient and equipment services;

- providing system support to the economic development of eastern Serbia through direct intervention; - support to business entities and scientific research institutions.

The term "Technology Park" at this initial stage implies a number of possible forms of organization such as: science park, scientific and technological park, technopark, research park, technopolis, material testing center or the like. It is expected that the future Technology Park will primarily deal with the metal sector, but the needs of the economy in other sectors, such as wood processing and the like, will be considered. The exact name of the future Technology Park as well as the services it will provide should be defined after the preparation of the Pre-Feasibility Study or a similar study on the needs of the economy and scientific-research organizations. This research should cover not only Bor and eastern Serbia, but the whole Serbia, as well as neighboring countries.

Establishment of the Technology Park should create a unique system that will focus on the development of new economic activities based on the use of modern technologies and innovative solutions.

In order to establish the Technology Park it is necessary to:

- gather all stakeholders;

- develop a pre-feasibility study or similar research on the needs of the economy and scientific and research organizations that should not only include Bor and Eastern Serbia, but the whole Serbia, as well as the nearest neighboring countries;

- define the services, model of establishment, method of organization and financing;

- provide adequate space and required infrastructure.

The space for the Technology Park will be defined by the Pre-Feasibility Study or a similar document, and it is expected that space of 1200 m^2 in the "Kapija Bora" facility, owned by municipality, will be used.

<u>Projected budget</u>: Adoption of the decision of the Council for Innovative Entrepreneurship and Information Technology on the support to the project implementation in 2018, as well as making a decision on how to secure partial financing – from a loan, or donation or other sources in order to implement the project in 2018.

In 2018, the Cabinet of the Minister for Innovation and Technological Development will organize consultations of representatives of the future Technology Park Bor with the representatives of already established science and technology parks and start-up centers from Serbia in order to provide professional support for the establishment of the Technology Park Bor.

At the beginning of 2018, the Bor Municipality will establish a working party that will lead the process of establishing the Technology Park and, after establishment, prepare the Pre-Feasibility Study. The Minister's Cabinet also will support the local self-government in an effort to ensure the presence of all relevant institutions and organizations (e.g. Technical Faculty in Bor, Serbian Development Agency, Chamber of Commerce and Industry of Serbia, etc.) in the aforementioned working party.

<u>Responsible body of the Government of Serbia</u>: Cabinet of the Minister without portfolio in charge of innovation and technological development, Municipality of Bor and RARIS, in cooperation with relevant institutions.

<u>Next steps</u>: The initial projected budget amounts to RSD 7 million and it is necessary for the preparation of Pre-Feasibility Study, getting acquainted with examples of good practice in Serbia and the region, beginning of spatial planning, etc.

26) Project for the construction of a startup innovation center at the University of Priština with a temporary headquarters in Kosovska Mitrovica

<u>Details</u>: Building of an innovative startup center would be of great importance to the entire social community in Kosovo and Metohija and would enable the transfer of modern technologies in this area and the business development of students.

The Innovation Startup Center would provide: 1) support to innovation and establishment of innovative companies; 2) education for the needs of innovative entrepreneurship; 3) services to startup companies, and 4) infrastructure, logistical and technical support. In this way, the development of new products and technologies would be encouraged, as well as the transfer of technologies and innovations to the economy, commercialization of the results of scientific research and creation of new jobs.

The space planned for the construction of innovative startup center would be obtained by upgrading a part of the building of the Faculty of Technical Sciences (part above the amphitheater) and its adaptation, which would provide a useful area of over 500 m^2 .

The Faculty of Technical Sciences and the municipality of Kosovska Mitrovica will provide the necessary utility infrastructure for construction, while the assistance, in addition to securing the funds for reconstruction and construction of the building, is necessary in terms of providing mentoring for students or employees of the Center.

Projected budget: RSD 38 million and 350 thousand.

<u>Responsible body of the Government of Serbia</u>: Cabinet of the Minister without Portfolio in charge of innovation and technological development, Public Investment Management Office, Office for Kosovo and Metohija, University of Priština with temporary headquarters in Kosovska Mitrovica and municipality of Kosovska Mitrovica, in cooperation with other relevant institutions.

<u>Next steps</u>: Adoption of the decision of the Council for Innovative Entrepreneurship and Information Technology on the support to the project implementation in 2018, as well as making a decision on how to secure partial financing – from a loan, or donation or other sources, in order to implement the project in 2018. Activities can be conducted in the period May-September 2018.

27) Relocation of the Computer Center in Belgrade

<u>Details</u>: The University of Belgrade Computer Centre is currently located in the basement of an annex to the Lola building without windows and daylight.

The office space they require amounts to 200 m^2 , and their relocation would open the space for the expansion of Serbian Academic Network (AMRES) system (for which there is already a budget).

Projected budget: No additional funds are required

<u>Responsible body of the Government of Serbia</u>: Ministry of Education, Science and Technological Development and the Ministry of Trade, Tourism and Telecommunications

Next steps: The transfer of the University of Belgrade Computer Centre must be completed by April 2018

28) Enabling faster upload to private users (smaller asymmetry)

<u>Details</u>: Having in mind the European standards by which end users of Internet services have packages that allow reading and downloading the data from networks at the speeds with ratio up to 4:1, it is necessary to encourage the operators in our market to develop Internet infrastructure that supports high-speed Internet, with a requirement that they provide end-users with packages with a maximum download/upload speed of 4/1.

Projected budget: No additional funds are required

Responsible body of the Government of Serbia: Ministry of Trade, Tourism and Telecommunications

<u>Next steps</u>: The Law on Broadband Communication Infrastructure will introduce measures and provisions requiring the operators to allow all end-users to download and read data at the speeds up to 4:1.

Legal framework for investors:

The IT Council will continue activities to attract investments in innovative IT companies, primarily through the improvement of legal framework, and an appropriate incentive mechanism will also be considered.

29) Adoption of the Law on Alternative Investment Funds

<u>Details</u>: We will pass the Law on Alterative Investment Funds, which will regulate, among other things, the registration and the method of work of the so-called Venture Capital funds, very important for the development of innovative and high technology enterprises.

Projected budget: No additional funds are required

Responsible body of the Government of Serbia: Ministry of Finance

30) Adoption of the Law on Non-Banking Financial Institutions (to enable microfinancing)

<u>Details</u>: In many countries non-banking financial institutions are an important source of funding the entrepreneurship, while in Serbia they are still not allowed. A working party is engaged in drafting the Law, and its adoption is expected as soon as possible.

Projected budget: No additional funds are required

Responsible body: NBS

31) Making the operation of crowdfunding platforms possible and adequate promotion of such platforms

<u>Details</u>: Crowdfunding platforms are a popular method of funding for innovative companies because of simple and fast fundraising in this way. It is necessary to enable the operation of these platforms in Serbia, and adequately promote the use of such platforms as one of the mechanisms for providing the necessary funds for business development.

Projected budget: No additional funds are required

Responsible body of the Government of Serbia: Ministry of Finance

<u>Next steps</u>: To make a concrete plan of activities to allow the operation and promotion of crowdfunding in Serbia

32) Incentives for investing in innovative companies

<u>Details</u>: The Council will consider the possibility of introducing the mechanism of financial incentives for the investment in innovative IT companies. The results expected from the increased investment in these companies is a growing number of innovative research and development companies, as well as a growing number of export-oriented IT companies selling their own products instead of outsourcing.

<u>Projected budget</u>: If an appropriate mechanism is defined and adopted, it will be necessary to find adequate sources of funds.

<u>Responsible body of the Government of Serbia</u>: Ministry of Finance, Ministry of Trade, Tourism and Telecommunications, Ministry of Economy, Ministry of Education, Science and Technological Development

<u>Next steps</u>: To make an analysis of the incentives for the investment in innovative IT companies in the leading countries in this area and based on that determine the further steps

Competitive market

It is extremely important that business conditions for IT companies in Serbia are competitive so that IT companies would register their headquarters in Serbia and conduct global business therefrom. It is specific for IT companies that they can easily change their seat and thus the legal and tax framework they operate from, and it is therefore important to keep IT companies in Serbia and improve the competitiveness of domestic business conditions.

33) Improvement of the conditions for global business via the Internet

<u>Details</u>: We will ensure rapid adoption and full implementation of the amendments to a set of relevant laws, such as, for example, the Law on Foreign Exchange Operations, the Law on Trade and the Law on Personal Data Protection, and other regulations that would simplify and reduce the costs of international and domestic trade of goods and services in order to facilitate e-business and global business through the Internet for legal entities registered in the Republic of Serbia.

From 25 May 2018, the business in which personal data are processed will be much more strictly regulated by the entry into force of the so-called GDPR legislation. This legislation will also apply to a large number of domestic companies providing services to European Union citizens, which will result in harmonization of the Amendments to the Law on Personal Data Protection with the EU GDPR legislation.

The use of Blockchain technology is gaining ground, and therefore rapid development of software solutions and blockchain-based applications is expected. In this area, Serbia has the opportunity not only to keep up-to-date, but to be a leader of global development, with unimagined development potential. In order to do this, it is necessary to recognize, define the status and transactions of certain new instruments, such as cryptocurrency.

The current Labor Law includes restrictions and definitions that are not adapted to innovative and digital companies, and it requires to be modernized accordingly. For example, the Labor Law very strictly defines the conditions for concluding the Agreement on Protection against Competition, while it is very important for innovative companies to define such agreements with their employees in a more flexible way.

Projected budget: No additional funds are required

<u>Responsible body of the Government of Serbia:</u> Ministry of Finance, Ministry of Trade, Tourism and Services, Ministry of Justice, Ministry of Labour, Employment, Veteran and Social Affairs (and others as needed)

Next steps:

- Amendments to the Trade Law and the Law on Electronic Commerce, deadline September 2018
- Through close co-operation with the economy, define an adequate legal framework for the development of blockchain technology and innovative solutions based on it in various areas
- Law on Foreign Exchange Operations, planned to be adopted in the first quarter of 2018 in accordance with the National Program for the Adoption of the Acquis Communautaire.

34) Tax exemption for the beginners in business

<u>Details</u>: In 2018, the following laws will come into force: The Law on Amendments to the Personal Income Tax Law and the Law on Amendments to the Law on Mandatory Social Security Insurance Contributions, which define the introduction of tax reliefs for the above mentioned category, and which also define introduction of tax reliefs for the beginners in business in order to encourage entrepreneurship and reduce unemployment.

Projected budget: No additional funds are required

Responsible body of the Government of Serbia: Ministry of Finance

35) Opening of Google Merchant Account and App Store in Serbia

<u>Details</u>: The Government of the Republic of Serbia, in cooperation with the Serbian Entrepreneurs from the United States, contacted the responsible persons of Google and Apple so that these companies would open up the possibility for local citizens and software companies to register, buy and charge their applications through these companies' platforms (the so-called Google Merchant Account by Google, or App Store by Apple for the companies from Serbia) as soon as possible.

Projected budget: No budget is required

Responsible body of the Government of Serbia: Cabinet of the Prime Minister

<u>Next steps</u>: Regular communication with the relevant companies in order to eliminate any obstacles if they are identified.