

Pursuant to Article 45, paragraph 1 of the Law on Government (“Official Gazette of the RS” No 55/05, 71/05 - corr., 101/07, 65/08, 16/11, 68/12 - decision of the Constitutional Court, 72/12, 7/14 - decision of the Constitutional Court and 44/14)

the Government hereby adopts the following

STRATEGY ON DEVELOPMENT OF INFORMATION TECHNOLOGY
INDUSTRY
FOR THE PERIOD FROM 2017 TO 2020

I. INTRODUCTION

Rapid development of information technology (hereinafter: IT), and application of "smart solutions" offered by information technology in other branches of industry represent a development opportunity for the overall commercial and the economic growth of our country. Previous positive results of IT industry in the Republic of Serbia point to the need for systematic support in this sector, as well as to creating an enabling environment for the convergence of information technology and other technological innovations in order to strengthen the technological ecosystem in the Republic of Serbia.

Serbian software industry is located between 30th and 50th place in the world lists, which is the best result of our economy. Export revenues from IT services in the period from 2008 to 2015 were tripled, while the revenues from computer services have increased by four times. It is necessary to take advantage of the production and export capacities to further contribute to Serbian economy, by improving business conditions for domestic IT companies, encouraging the establishment of new IT companies and production of their own software products.

It is estimated that, until 2020, between 50,000 and 100,000 new jobs in the information technology sector could be opened in the Republic of Serbia, and that there is a great lack of qualified IT personnel, which is also registered in the European Union. Therefore, it is necessary to invest in and support the development of IT personnel in order to take advantage of the employment opportunities. It is necessary to exploit the potential of the information technology application in other branches of industry, education, business, public administration, through investment in research and development.

According to data from the study “IT industry of Serbia, 2015-2017”, Serbian IT industry has significantly developed in the period from 2006. Today, close to 2,000 companies operate in the IT industry (700 more than in 2006), the number of employees has doubled from 10,000 (2006) to 20,000, and the operating income has doubled to over 1.5 billion euros. Total equity since 2006 has increased from 150 million to half a billion euros. Over 200 IT companies are established annually. The average IT company has less than ten employees, and annual revenue per employee of 80,000 euros. The programming industry is most successful.

Investing in the IT industry is very important for economic growth and company’s operations, as it develops the IT technology used in company’s operations,

which contributes greatly to the increase of labor productivity, more efficient operations, reduction of the costs in the process of work, which leads to the growth of company's resources and revenues. According to data from the above study, the IT industry is much more profitable than other industries. IT sector index of profitability per employee is 560%, compared to the index of profitability of the whole economy. In addition, the sector's needs for funds are considerably lower than in other industries – in this sector, assets (net) per employee is close to 49% of the whole economy level. This means that one IT worker with half of average resources achieves 6 times larger profit.

The use of new technologies in business is the basis for development of new products and greater availability of product information to potential buyers. Thus, IT technology leads to changes in business relationships, emergence of new products and improvement of business activities.

New technologies are the foundation for the new products, they provide a better connection with customers. The use of information technology has greater use in the formation of new products and services. Its main role is changing the business relationships, and improving the business activities within each company.

According to data of the Serbian Chamber of Commerce and Industry for 2015, the Republic of Serbia invests 62 euros per capita in the IT industry, which is at the level of the Republic of Bulgaria and Romania. By comparison, the Republic of Croatia invests 200 euros per capita, while the average in the European Union is 800 euros. The World Economic Forum has presented the data that the Republic of Serbia is in the top countries in departure of experts in the field of IT, as well as the experts in the field of electrical engineering, mechanical engineering and medicine.

In the report of the Statistical Office of the Republic of Serbia “The use of information-communication technologies in the Republic of Serbia, 2016”, it was stated that 99.1% of companies have internet, but on the other hand, only 22.6% of companies in the Republic of Serbia employ ICT specialists. There are the least IT experts in the construction industry (9.5%), and the most in the companies that provide information and communication services (54.1%). Only 25.5% of companies have provided ICT trainings to their employees. One of the main reasons for distrust to the introduction of new technological solutions in business models is the fear of loss of jobs, despite the estimates that 2.6 new jobs can be opened for every job cut due to the introduction of information technology. The above shows that there is a risk of loss of jobs for the employees who have no IT knowledge and skills, while on the other hand, there is a possibility of employing the persons with such knowledge. Consequently, solving the problem of certain jobs cut due to technological improvement of the work process is provided for in the framework of this strategy through the measures of formal and informal education.

One of the segments that has been recognized for development, is to encourage the development of own products, as opposed to the current situation where most of the companies in this field are oriented to the so-called outsourcing, which includes the development of products that are not domestic. Regarding that, this strategy provides for the measures designed to solve this problem, and concerning the support to local businesses and business associations for participation in foreign markets, as well as the promotion of Serbian information technology industry.

The main strategic priorities in this area are:

- 1) Development of successful companies and products in the field of information technology;
- 2) Improving the administrative environment appropriate for development of IT industry;
- 3) Strengthening personnel potentials;
- 4) Modernization of business operations in all branches of industry, using IT.

II SUPPORT MEASURES

The measures in the following areas are to be implemented, according to the prominent strategic priorities:

- 1) Support for IT entrepreneurship and startup projects;
- 2) Encouraging tax policy;
- 3) Support to performance in foreign markets;
- 4) Support to the use of information technology to modernize the business operations in all branches of industry;
- 5) Improvement of the legal framework;
- 6) Improvement of personnel potentials;
- 7) Promotion of Serbian information technology industry.

These strategic measures will contribute to the growth of IT production, and will affect the overall economic growth, as well as the reduction of economic gap between urban and rural areas, which represents the general objective of this strategy. As a technology of the future, and a base of networking and application of "smart solutions", information technology is a solid foundation for the rapid growth of GDP, job growth, transparent and competitive market and "smart growth" of the entire economy.

1. SUPPORT FOR IT ENTREPRENEURSHIP AND STARTUP PROJECTS;

1.1. 1.1. Incentives for investment in startup projects

The aim of this measure is to increase the number of commercially successful Serbian startup business entities, in whose projects the information technology has a dominant role. This measure should include the projects for development of new products and types of services within the existing companies, thus raising the level of the companies' business operations and their performance in the market.

In the context of this measure, the financial incentives would be provided to the investments in the field of venture capital through appropriate assistance schemes. At that, the investor will be expected to have a successful history of investing in IT startup projects, and to intend to invest the venture capital in micro and small enterprises with innovations/products of great market potential in the Republic of Serbia.

1.2 Support to the development of a startup ecosystem

The aim of this measure is to strengthen the associations (IT clusters, startup hubs and technological incubators, etc.) in order to increase their ability to support the establishment and rapid development of a large number of new business entities in the field of IT.

Technological incubators provide support to young startup businesses, by reducing the costs of starting a business, through the Integrated Services Administration (accounting, legal services etc.), as well as through the opportunity to quickly acquire new knowledge and skills (in the areas of management, finance, marketing, product development, conquest of new markets, etc.).

The financial support to technological incubators, startup hubs and IT clusters, which have measurable performance results (a number of startups in their space, implemented training programmes, signed agreements on cooperation with higher education institutions, implemented agreements with IT companies on professional practices, etc.) would be provided in the context of this measure.

Special attention would be given to support measures for regional development and establishment of regional incubators, clusters, hubs, in order to encourage employment in the economically less developed areas, especially in regions with high rates of youth, in order to keep young people and to reduce the outflow of young people from the mentioned areas.

1.3. Capacity utilization of technology parks and development of local technology centers

Technology parks have been built in Belgrade and Novi Sad, using the credit funds of the European Investment Bank, and the construction of the technology park in Niš is expected to be completed soon.

A part of each technology park should be adapted and made available to the technological incubators, shared workspaces and IT clusters, under beneficial lease conditions.

In addition to using the technology parks, it is necessary to develop a network of local technology centers. Local technology centers would be established in cooperation with local self-government units and other public authorities, and would be used in order to provide the infrastructure at the local level for development of the startup ecosystem.

For the purposes of planning and implementation of the measure, it is necessary to create a map of existing and potential capacities in this area.

2. ENCOURAGING TAX POLICY

2.1. Tax incentives for investments in research and development

The aim of this measure is to support companies that invest in research and development.

In this regard, the need for changes in tax policy instruments, whose purpose would be the realization of this objective, will be considered in the coming period.

At that, it should be borne in mind that salary costs of employees in the IT industry make up a dominant part of the expenditures of enterprises, which is especially

noticeable in software development. Therefore, the tax and contributions on earnings rates are extremely important factor in the business environment for the IT industry.

2.2. 2.2. Incentive tax rates to base the business operations in the Republic of Serbia

In addition to a favorable business environment for development and production in the field of IT, it is necessary to enable the favorable conditions for investors to base the larger part of their business operations in the Republic of Serbia.

In this regard, the tax policy incentive measures in this field will be considered in the coming period, taking into account the conditions that exist in other countries whose tax policy contributes that IT companies base their business operations in these countries.

2.3. International treaties on the avoidance of double taxation

The Republic of Serbia have signed international treaties on the avoidance of double taxation with over 50 countries, with respect to income taxes and property taxes. Considering that this type of tax is applied in traffic of intellectual property, whose role in the IT industry is extremely important, international treaties on the avoidance of double taxation remove the barriers in business cooperation with partners from countries with which such treaties were signed.

Therefore, it is necessary to intensify the efforts to conclude the treaty on the avoidance of double taxation with countries with which such treaty has not been concluded, and in which the major IT companies are based.

3. SUPPORT TO PERFORMANCE IN FOREIGN MARKETS

The aim of this measure is to support business entities that export products and services in the field of information technology (software, designing services for IT solutions, other IT services, hardware products and components, etc.).

3.1. Covering the costs of performance in foreign markets

Companies and business associations will be able to apply for grants for performance in foreign markets, for activities such as:

1) Internationalization of the products by strengthening the competitiveness (certification of IT products and solutions, certification of quality management systems, product localization costs for the foreign market);

2) Protection of industrial property (trademark registration costs, design of integrated circuits, industrial design and depositing the software with the Copyright Office);

3) Performance in the context of organized business missions, visits and B2B (business to business) events in foreign markets (travel and accommodation costs, registration fee costs);

4) Opening of representative offices in foreign markets (space rental, staff costs, overheads);

5) Performance at international fairs (renting the exhibition space, stand construction costs, etc.).

6) Strengthening of marketing capacities (design and production of promotional material).

3.2. Support to the promotion and export of domestic IT products and services through bilateral cooperation

This support would consist in organizing B2B meetings and visits of state economic delegations to the countries with the markets with export potential, so the local companies can present their products and services in these markets.

The possibility of introducing the new instruments, modified for IT industry, in the scope of the Export Credit and Insurance Agency of the Republic of Serbia (AOFI) will be considered.

4. SUPPORT TO THE USE OF INFORMATION TECHNOLOGY TO MODERNIZE THE BUSINESS OPERATIONS IN ALL BRANCHES OF INDUSTRY

In the history of industrialization, the use of energy as the main factor of revolutionary changes in the second half of the twentieth century has been replaced by the use of information technology. The current wave of integration of technology in all aspects of the economy blurs the clear boundaries between physical, digital and biological sphere, and is often referred to as the fourth industrial revolution¹ or Industry 4.0.

The term “Industry 4.0” comes from the High-tech strategy which was adopted by the Federal Republic of Germany in 2006, which describes technological changes in production that make up the Industry 4.0, and sets the strategic priorities in order to maintain global competitiveness of German industry.

Measures to promote the development of IT industry would have been incomplete if the broader objective of improving the level of application of information technology to modernize the business operations in all branches of industry had not been observed. The concept of High-tech company is no longer linked only to companies operating in the field of high technologies, but also to the companies operating in various industries which base their business model on the use of modern technologies.

The measures in this area will be implemented through programmes of support to activities aimed at the exchange of knowledge, experiences and good practice of using IT as support to modern business models in different areas. In addition, in the implementation of other measures of this strategy, the possibility of extending the scope of these measures to promotion of the development of the industry that uses the information technology innovatively will be considered, regardless of the parent branch of industry.

¹ Schwab, K. (2015). The Fourth Industrial Revolution.
<https://www.foreignaffairs.com/articles/2015-12-12/fourth-industrial-revolution>

5. IMPROVEMENT OF THE LEGAL FRAMEWORK

This measure aims to create the legal conditions for the development of electronic payment services (services for e-money, mobile payments, etc.), exchange of electronic accounting documents and electronic communication of citizens and economy with the authorities.

The new legal solutions in the field of electronic document, electronic identification and electronic trust services should improve the existing mechanisms (electronic signature, time stamp) and establish the new mechanisms (legally regulated electronic identification, electronic stamp, reliable delivery, reliable storage) as a systemic legal basis for the use of information technologies and electronic means in business operation.

Relying on the new legislation in the field of electronic document, electronic identification and electronic trust services, the further improvement of the legal framework for electronic accounting documents will be needed, in order to spread the use of electronic invoices.

The necessary measures should be taken for the effective implementation of the Law governing the payment services in the field of e-money and other intermediaries for performance of payment transactions on the Internet.

The legal barriers for the payment of administrative fees with credit cards and other electronic services (POS terminals, e-money, mobile payments, etc.) should be removed.

The amendments to the legal framework should further simplify the business operations of entrepreneurs and freelancers.

At the same time, the Tax Administration should provide support of tax advisers, who would provide the answers to all questions related to the operations in the field of IT.

In accordance with the needs of the IT industry, the negotiations with the countries with which the Republic of Serbia does not have a signed treaty for the avoidance of double taxation should be initiated, in order to conclude such treaties and lower the operating costs.

The Ministry of Finance, Ministry of Economy, Customs Administration and other authorities involved in the quality control system, should, by amending the relevant regulations, provide simplification and acceleration of procedure for import of prototypes, patterns, mechanical and electronic parts, radio devices and similar components used for research and development in the field of IT, as well as for the production of final products in the field of IT.

6. IMPROVEMENT OF PERSONNEL POTENTIALS

Number of IT and related profile professionals is the main long-term limiting factor for the overall development of the IT industry. Therefore, it is necessary, without delay, to take measures both in the field of formal education and through additional training, retraining and continuous learning, in order to accelerate the trend of increasing the number of new IT experts. In this way, it is contributed to the development of industry, the unemployment is directly and indirectly reduced and it is contributed to the economic growth (salaries are the main item of expenditure of most IT companies).

Also, it is necessary to align the national framework of ICT competences with the framework of ICT competences of the European Union, both for ICT professionals and for users of technology.

6.1. Formal education

Measures for improvement of the role of ICT in education, including strengthening of the role of informatics and computing as a science to be studied from the beginning of schooling, are necessary to be implemented simultaneously, at all levels of education.

It is necessary to enable and to encourage a continued increase in number of students financed from the budget in the field of information technology in higher education institutions, founded by the Republic in the field of information technology. In addition to increasing the enrollment quotas in the field of information technology for students financed from the budget, it is necessary to provide for the measures for maintenance and improvement of the quality and number of teaching staff at state higher education institutions in the field of information technology, improvement of spatial and technical capacities, as well as the measures which encourage the use and development of the capacities of private higher education institutions in the field of information technology.

Measures at the level of higher education will not have the full effect if secondary schools do not provide better IT education. At that, the students, to a significant extent, already form their professional orientations when they enroll in secondary schools, but also secondary schools require some prior knowledge – so the students, in the age in which they are ready for the adoption of more complex knowledge and skills, would not spend their time on the elementary IT subjects they could and should overcome earlier.

IT education should be directed to the acquisition of the skills of modern approach to problem solving, where the use of technology which allows different methods and ways of working is assumed. Such education is a good common ground for those who are going to professionally develop the IT solutions, because they will better understand their application, as well as for those who are not going to be professionally oriented towards technology, because they will definitely use the technology in their work.

To build such a role of the IT education, computer science needs to be studied from the beginning of primary school, and as a separate compulsory subject at least from the fifth grade. Particularly, primary school period is crucial for the development

of basic digital competences and development of logical thinking using a computer (aimed at problem solving) which creates a good basis for further education in the field of information technology.

Capacity building of teaching staff is of critical importance for the improvement of IT education in primary and secondary schools, including the training of existing and potential teachers. It is important to emphasize that the trainings of existing and potential teachers should be conducted in accordance with the framework of digital competences, developed specifically for teachers. The question of material status and motivation of IT teachers in primary and secondary schools is even more serious than in higher education, where there are more opportunities for career advancement.

It is necessary to further develop the ICT infrastructure at all levels of education, and currently, the need for the development of communication infrastructure of primary and secondary schools as part of the Academic Network of the Republic of Serbia is particularly critical. Accordingly, it is necessary to further improve the schools' equipment for the possibility of introducing the concept of "bring your own device", as well as the ICT application models in teaching that are more and more topical in the world.

The institutionalization of cooperation between the education system and the IT industry should be ensured, so the secondary school and college students are provided with the scholarship programmes and professional practice in the industry, and the industry with the opportunity to actively participate in defining the curriculum. Linking the education system and the IT industry is significant in terms of knowledge transfer between businessmen and teachers, because it allows teachers to access the modern technology used in the industry, ensuring its transfer between the target groups.

6.2 Additional training, retraining and continuous learning

Persons who have the qualifications for which the interest in the labor market does not exist, and who have such background knowledge, experience and interests that, with additional education and training, they could gain qualifications for some positions in the IT industry, should be provided with the quality and affordable additional training or retraining, or training that will be systematically supported by recognition of prior learning and by certification.

Employees who are already working in the IT industry, particularly professionals with secondary education and generally lower level of formal education, should be provided with support in further advancement, in order for them to retain the ability to work in the IT industry, to do more complex jobs and advance in their careers. It is also necessary to provide trainings to the employees with high education, who can not find work in the labor market, through the introduction of short-cycle programmes conducted by universities.

This measure involves co-financing of training, retraining and continuous learning programmes. In doing so, the two models are possible: that the funds are approved to training providers or that the funds, by the model of vouchers, are approved to the participants.

7. PROMOTION OF SERBIAN INFORMATION TECHNOLOGY INDUSTRY

This measure provides for a series of promotional activities aimed at the international representation of the Republic of Serbia as the country of high quality IT products and services, and as a good destination for IT companies. The result of promotional activities should be to build the brand of the Republic of Serbia in the field of IT industry, as well as to raise the level of information about the specific details connected to the business operation in the Republic of Serbia and with the Republic of Serbia.

III STRATEGY IMPLEMENTATION

The implementation of this Strategy is monitored by the Ministry of Trade, Tourism and Telecommunications.

The Government will adopt an Action Plan for the implementation of this Strategy within three months of its publication in the "Official Gazette of the Republic of Serbia".

IV FINAL PART

With the entry into force of this Strategy, the Strategy for development and support of the information technology industry shall be repealed ("Official Gazette of the RS", No 25/13).

This Strategy shall be published in the "Official Gazette of the Republic of Serbia".

05 Number: 345-10971/2016-1
In Belgrade, 17 November 2016

G O V E R N M E N T

PRESIDENT

Aleksandar Vučić