

Importance of the ICT sector for Slovakia

2016

Úvod

IT Asociácia predstavuje pod názvom „Význam IKT sektora pre Slovensko“ v poradí už tretiu analýzu postavenia sektora informačných a komunikačných technológií na Slovensku. Dokument opäť podáva ucelený obraz o tom, čo IKT sektor prináša pre Slovensko v detailnom delení podľa jednotlivých kategórií odvodov a daní, prehľad zamestnanosti ako aj pridanej hodnoty a návratnosti štátnej pomoci.

Štúdiá opakovane dokazuje, že IKT odvetvie je kľúčovým ťahúňom slovenskej ekonomiky s podstatne lepším výkonom na pracovníka ako napríklad automobilový priemysel. V najbližších rokoch to budú stratégie a revolučné vývojové zmeny ako Smart Industry/ Industry 4.0 alebo digitálna transformácia podnikov, ktoré podstatným spôsobom ovplyvnia celý slovenský priemysel ako aj odvetvie služieb. Podniky budú digitalizovať svoje procesy aby udržali krok s konkurenciou a budú potrebovať významne viac IKT odborníkov ako doteraz, čo len posilní význam IKT sektora a IKT

špecialistov. Slovensko je tradične silnou priemyselnou ekonomikou, ktorej sa tieto zmeny dotknú najviac. V záujme udržania konkurencieschopnosti slovenskej ekonomiky musí vláda podporiť digitalizáciu ekonomiky a zaujať k IKT sektoru zásadne pozitívny postoj a to na všetkých úrovniach počnúc vzdelávaním, ktoré je najväčším problémom sektora, cez rekvalifikácie až po motiváciu podnikov k inovačným aktivitám a intenzívnemu nasadzovaniu IKT prostriedkov.

Som presvedčený, že štúdiá, ktorú pre IT Asociáciu Slovenska vypracoval aj tento rok Inštitút ekonomických a spoločenských analýz INESS Consult, poskytnú ucelený prehľad o rastúcom význame IKT sektora pre slovenskú ekonomiku. Na ďalších stranách nájdete súhrn najdôležitejších výsledkov analýzy a celá štúdiá je k dispozícii na www.itas.sk.

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Summary

- As a result of implementing new technologies and solutions, the ICT sector holds a significant position in the Slovak economy. Because of the sector's high value added, individuals and organizations in the sector contribute nearly twice as much to the system in form of taxes and contributions than (is) the Slovak average.
- ICT companies offer four times more jobs than (is) the available workforce supply. However, ICT sector growth potential is significantly limited as the educational system fails to prepare suitable individuals (workers) for the sector. The remedy to the current state is two-fold: reforming the educational system and funding that is more effective and efficient.
- Industry 4.0 is a great opportunity for the Slovak economy to develop production with a higher value added. To achieve the benefits from developing new technologies, however, it is imperative that the state creates suitable conditions for the growth of the ICT sector, otherwise it will be yet again the Slovak companies importing new technologies rather than developing them.
- Instead of supporting industrial production ineffectively, the government should use existing

sources to support business environment and remove all the obstacles for the growth.

Task of the ICT sector in the Slovak economy

Despite its relatively small volume (4.6% of the GDP) in the Slovak economy, the ICT sector plays a rather important role. The average wage in the ICT sector in 2014 was 1,968 euros, i.e. 93% higher than the average wage in the Slovak economy¹. In spite of the fact that the share of ICT workers in the overall employment was just 2.3% in 2014, they contributed 5.2% (€404m) from the total volume of contributions. The paid contributions grew by 5.5 %, even though the total number of ICT employees had decreased.

In 2014, ICT sector employees paid over 129 m euros in tax money. On the other hand, ICT sector companies contributed 8.6% (€167m) of the overall taxes paid by legal entities in 2014. The total sum of the paid contributions, direct taxes and VAT for the ICT sector is estimated to have been 849 m euros for the year 2014. Return of the state aid in ICT is 0.7 years whereas in automotive industry it is 4.2 years.

¹ Statistical Office, Data for the year 2014

Average growth of the ICT market between 2012-2015

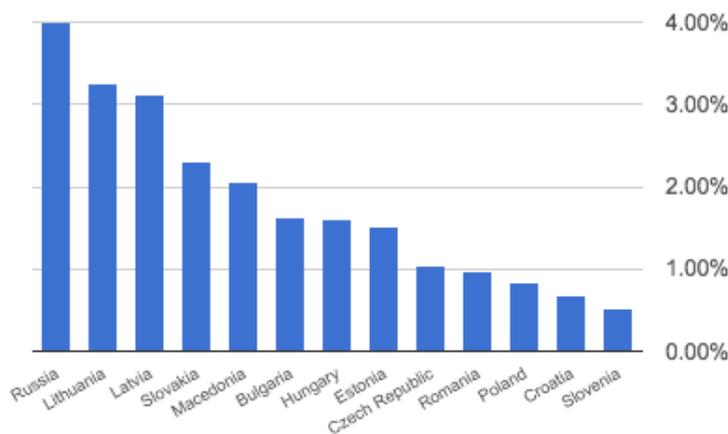


Chart 1: Average growth of the ICT market between 2012-2015 in the CEE countries

Source: ICT Market Report 2014/2015, EITO

The ICT sector is characterized by its dynamic growth. Whereas the average wage in the economy grew by 4.1%, the average wage in the ICT sector increased year on year by 8.3%. Thus it is highly likely that in the long run the ICT sector will continue to be a sector with the highest average wage from among all industries. The European Information Technology Observatory (EITO) also forecasts a positive future development for the ICT sector. In its report it estimates the growth of the ICT sector in Slovakia between 2012-2015 to be above the average.

The growth potential of the ICT sector is of the utmost importance for the entire Slovak economy. Information technologies are not solely about electronization of processes (e.g. e-government) but also about improving effectivity and efficiency across sectors. Especially important they seem to be in the area of industrial production where it is already common to speak of a new technological revolution referred to as Industry 4.0. Based on the estimates of the Boston Consulting Group² - analyzing implementation of new technologies in the German economy - these new innovations are going to increase productivity of the manufacturing sector by 5 - 8 %, with a possibility for car makers to grow by more 10 - 20%. Foreign investors will understandably want to implement these innovations also in Slovakia where it is possible to count with similar values of growth. This presents an immense opportunity for the ICT sector as well as a possibility to increase the manufacturing share of high added value in Slovakia. This potential may well be hindered or even reversed under the current conditions in which the ICT sector works in Slovakia.

International standing of the Slovak ICT sector

As to the share of people employed in the ICT sector, Slovakia is from among its neighbors on the penultimate place. Only Poland has a smaller share of people employed in the ICT sector (1.73) in comparison with Slovakia (2.04). Therefore, despite the potential and present growth of this industry there is still a space for improvement.

Table 1. Share of the people employed in the ICT sector

	2011	2012
Czech Republic	2,89	2,59
Hungary	1,96	2,23
Austria	2,72	2,71
Poland	1,55	1,73
Slovakia	2,3	2,04

Source: Eurostat (methodology differs from the data reported by the Slovak Statistical Office)

Analysis of the information society development based on the international rankings shows that Slovakia achieves the average or even below-the-average values and the tendency is both for the values and the standing of Slovakia to fall back or at best to stagnate. In one of the rankings that assesses the overall development of the ICT sector, Slovakia has fallen behind other six countries in comparison with 2011. The same applies to unfavorable 20th position from among 28 EU countries in the ICT Development Index where Slovakia appeared on the 45th position and which resulted in lower position in Digital Economy and Society Index 2015 with a total score of 0.42. In this regard, Slovakia is in the same group with other countries with low performance that achieve results only slightly above the average.

Weaknesses of the business environment in Slovakia

When comparing various indexes and criteria, the weakest link in the chain appears to be the public sector. Slovakia lags behind in areas like enforcement of the law and public procurement of advanced technologies where it ranks among the least progressive not only in comparison with other Eastern European countries but also in global rankings. Slovakia's competitiveness from the vantage point of the ICT sector is being reduced due to the following four problematic areas with rather big influence of the state:

- Inefficiency of the public administration - enforcement of the law, weaknesses in the public procurement.
- Human capital – lack of human capital, lack of high-quality teachers in the field.
- Market environment – weaknesses of the business environment, delayed payment of invoices, non-compliance with contracts.

² https://www.bcgperspectives.com/content/articles/engineered_products_project_business_industry_40_future_productivity_growth_manufacturing_industries/?chapter=3#chapter3_section2

- Infrastructure – availability of the broadband Internet connection.

Especially the area of human capital is crucial from the perspective of the ICT sector and is going to be an important factor determining how many and what kind of ICT companies will do business in Slovakia in the years to come. The entire ICT sector begins to be hindered in Slovakia mainly due to the lack of a qualified workforce. Another chapter is dedicated to the human capital and education. Let us mention a few more important factors that lower the quality of the market environment and thus the ICT sector competitiveness.

Regulation on how to handle electrical and electronic waste

A new law on waste introduces loftier, more ambitious objectives for the collection of waste and thus imposes more administrative requirements such as the obligation to indicate the amount of the recycling fee on an invoice across the distribution chain, which means higher costs for importers and distributors in ICT. A positive effect on the business environment is to be expected from removal of the detrimental Recycling fund. The law, however, introduces new instruments - licences that may lead to restrictions of the market environment and to higher costs also for the ICT sector.

Authorization as a potential barrier to entry

PRO authorization presents an artificial barrier to entry that makes it difficult for a group of companies that is not favored to enter the given market. It prevents from having a fair competition and usually leads to monopolizing efforts (everything is in the hands of the officials of the Ministry of Environment). For payers, i.e. producers, it presents additional administrative expenses and higher costs resulting from the lack of competition among PROs.

Unnecessary increase in costs for the industry

The threat of monopolization presents an unnecessary increase in costs for the industry. So does the obligation to indicate an amount of the recycling fee on any tax document (e.g invoice) across the entire distribution chain as well as the additional and redundant selection of the submitted electrical and electronic waste based on age into historical and current and based on brands.

Failure to do away with counterfeit receipts

EU directives define for each member state quantitative

objectives regarding waste management and for the producers they define an obligation to take care of their waste that is at their disposal as part of the extended producer responsibility (EPR). The law on waste imposes these more ambitious goals directly on the producers.

All of this is done despite the fact that the producers are not the only channel to handle waste. As a result, the producers are not capable of meeting the ambitious targets of the waste management. However, as there are penalties for not meeting the objectives, there is a phenomenon of trading with counterfeit receipts (a waste that never existed)

Regulation of copyrights

A new Copyright law may have a positive influence on the business environment as it is more up to date and more fitting for digitization of the protected works than its previous version. On the other hand it extends a group of devices and media for which it is necessary to pay so-called compensations of rewards, that is a kind of compensation for the legal right of a user to make a copy without an author's or other copyright holder's prior consent. At the end of the day, the sum of these compensations of rewards grows, too. The costs are borne by consumers of the devices and media (i.e end users) which may negatively influence the volume of sales (i.e profits) of Slovak producers and importers. Ultimately, it may have a negative effect on the amount of VAT paid as well as on the income tax paid by producers and importers of the devices and media.

Public procurement

From the perspective of the ICT sector sales revenues, state is the key procurer of software and hardware solutions. However, there are many weaknesses in the area of public procurement. Representatives of different ministries or public organizations responsible for public procurement lack suitable education and experience that would enable them to rightly define the subject matter of the contract and its connection to the existing state infrastructure. Uncertainty in the subject matter of the contract, frequent changes and a rather lengthy procurement process result in growing costs of public procurement. Failing to

effectively manage procurement of the technologies in combination with rather sporadic (not systematic) EU funding lead to delays and accumulation of big projects in a short timespan. This may be seen simultaneously in decreasing number of employees and increasing wages in the ICT sector. Therefore, it is important to coordinate building of IT infrastructure and invest in a high-quality human capital.

Investment incentives in the industry

Investment incentives concentrate economic resources in the selected sectors or rather specific businesses. A portion of taxes paid mainly by the private sector are transferred to direct or indirect competitors of the taxpayers. This happens often regardless of fiscal impacts of such subsidies. As far as the incentives for the automotive industry are concerned, the fictitious paying off of such subsidies by means of paid taxes and contributions by the subsidized organization and its employees is six times longer than (it is) in the case of ICT sector subsidies. Construction of the fourth car maker facilities will probably swallow a subsidy of €130m. This sum does not, however, contain costs for the construction of the necessary motorway feeder for additional €10m. The entire sum is four times greater than all the incentives for the ICT sector ever provided by the state. The government has yet to define the structure of the subsidy but in compliance with the revised rules, it may be used for wages and/or purchase of the fixed assets or it may be used in form of tax holidays. Based on estimates, the subsidy amounts to €32,500 per job created. Over the past ten years, the state has provided subsidies of more than €0.75bn to the automotive industry (the fourth car maker is NOT included).

Proofs of incongruity between supply and demand on the labor market in the ICT sector

Indications that the human capital in the annual educational process in Slovakia is wrongly allocated may be seen in the data on the areas of interest to job seekers and the data on the jobs advertised on profesia.

sk (Tables 2 and 3). When it comes to interest in IT jobs, ICT finished on the 15th place, which amounts to merely 6% out of all applicants for jobs. On the other hand, in the area of the advertised jobs, ICT came second (14%) immediately after commerce. In absolute figures, there are 3,007 actual job seekers interested in working in the ICT sector while there are 13,531 job advertisements looking for people interested in working for the ICT sector. In other words, **the demand for qualified IT workers is according to the data from profesia.sk four times greater than the supply.**

Table 2. Areas of advertised jobs:

Order	Area	Share
1	Commerce	21%
2	Information Technologies	14%
3	Administration	12%
4	Economics, Finance, Accounting	11%
5	Management	11%

Source: profesia.sk

Tabuľka 3. Oblasti záujmu o prácu uchádzačov

Order	Area	Share
1	Administration	35%
2	Commerce	26%
3	Tourism, Gastronomy, Hotels	25%
4	Transportation, Forwarding, Logistics	22%
5	Auxiliary Works	17%
...
15	Information Technologies	6%
...

Source: profesia.sk

Proofs of incongruity between obtained formal education of the university graduates and the subsequent demand from the part of employers can be found in the study of the Institute of financial policy (2015), where the authors state that the major workforce shortages are especially in the ICT sector. According to the study, the job supply meets only a half of the required number and there are significant IT graduates shortages. On the other hand, IT graduates always find a job and it is almost always in the area they graduated in.

Human capital and the educational process in Slovakia

ICT and educational institutions

The success of the ICT sector in Slovakia is to a great extent dependent on the level of the human capital in the country. The ICT sector requires highly skilled and at the same time relatively narrowly specialized people. On the other hand, the human capital is indelibly connected with functioning of the educational institutions that are directly controlled or to a great extent regulated by public institutions. The fate of the ICT sector is thus relatively straightforwardly related to the well-being of the public institutions in the country.

In Slovakia, the quality issue of the educational process has been criticised for several years and experts voice their reservations ever louder and call for a broader school reform and higher wages for teachers. In order to reform the current educational system and to provide adequate sources of funding one must be willing to plan ahead, well beyond the boundaries of the electoral period. The education system and reform thereof face the same problems as the ICT sector when compared to, for instance, the automotive industry where politicians tend to support projects with immediate, tangible results.

Weakness of the educational process in Slovakia

In 2014, 36,369 day students graduated as bachelors or masters. From among all the students only 3.8% (1,378) were those who graduated in IT. On the other hand, students who graduated in educational sciences, teaching and teaching combination of subjects were 4,616 (more than 12%), which is three times more.³ What can be seen here is a great disproportion and it is rather questionable as to what extent this “product” of the tertiary education correspond with the actual requirements of the labor market.⁴ Moreover, from

the total number of those students who graduated in pedagogy, only 17 (i.e. 0.3%) graduated in teaching of IT in combination with another subject (mostly biology).

Thus, not only does Slovakia suffer from the acute lack of IT specialist graduates but it also suffers from the lack of IT teacher graduates (despite the high number of teacher graduates as such) who could teach IT in elementary schools. One cannot expect that this gap will be filled with IT specialist graduates who would abandon their jobs in the ICT sector in favor of teaching. The average wage of teachers is 762 euros whereas the average wage in the ICT sector is 1,968 euros (for the year 2014). Therefore, an IT specialist teaching in elementary school is highly unlikely.

Despite these problems IT literacy of the students in elementary and secondary schools is not particularly low or insufficient. Conversely, in 2014 the International Association for the Evaluation of Educational Achievement (IEA) revealed its ICLS results. The study tested elementary/secondary school students' computing skills especially in the area of searching for, creating and communicating information. The objective was to join and participate in work at home, at school, at work and in society as such. Slovak students fared in the test relatively well. Their average score was 517 points and they found themselves in the same group with countries as Germany, Russia, Slovenia and Croatia (the study average score was 500 points). The reason of such positive result rests quite likely in the fact that the students taking IEA tests can learn all the necessary skills to pass the tests through individual study. However, this is not true when it comes to high skills that are to be provided by university study. The ICLS results show that in Slovakia there is a fairly big opportunity and potential in the case of well-equipped elementary/secondary school students. What

teachers were to be replaced every year by new graduates of the 14 (!) pedagogical faculties, it would be possible to change all the teachers every 15 years. On the other hand, as it was already demonstrated above, the demand for IT graduates is significantly higher than the supply.

³ Source: Institute of Information and Prognoses of Education

⁴ In Slovakia there are 70,000 preschool, elementary and secondary school teachers. That means that if the current

remains a problem is taking advantage of this potential in university study.

Universities as a stumbling block

Therefore, the major threat for the ICT education may be seen in the last and most significant stage, i.e. university study. This last part of the educational chain in Slovakia clearly fails to tap the potential of young people. The problem of universities (as well as in earlier educational stages) is in the lack of high quality teachers. A proportion of students per teachers in Slovak universities is significantly higher than in other successful universities and colleges abroad. For instance, Faculty of Information Technologies at the Slovak Technical University has 28.8 students per 1 teacher.

Because of that it is rather unrealistic to expect that without any changes in universities, the solution will simply come from increasing the number of ICT students.

As the public sector fails to promptly respond to all the needs and changes on the labor market, the only right solution seems to be more intensive collaboration between educational institutions and private/nonprofit sectors. There are two positive examples of such collaborations in Slovakia.

Attractiveness of IT

Nonprofit organization Aptech Europe with the support of Accenture is preparing a 4-month re-

qualification software tester course and internship within Accenture for the unemployed graduates. The objective of the educational project is to improve IT skills of young people and thus help them improve their chances on the labor market.

In 2014, 41 unemployed graduates took the course and 27 out of them found a job thanks to the course, 6 of them directly with Accenture. In 2015, the plan was to take on 60 participants.

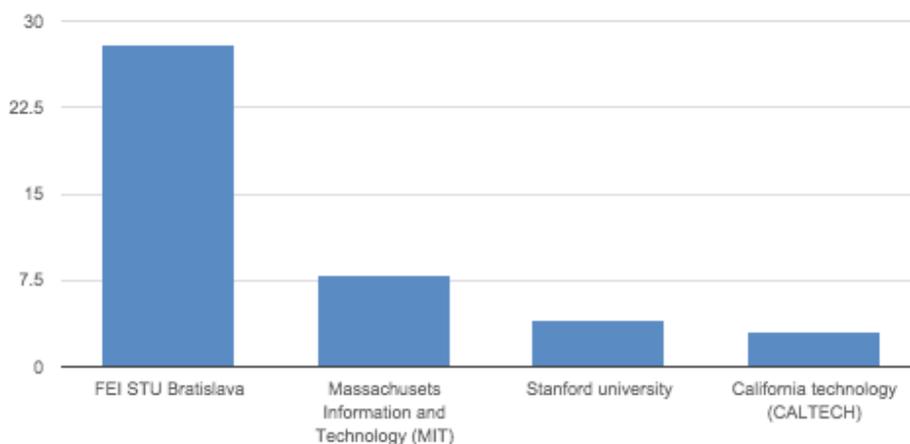
T-systems Slovakia

T-Systems Slovakia in collaboration with Košice Self-governing Region opened a three-year higher technical study defined as 2695Q Computer systems (ISCED 5B) at the High School of Electrical Engineering in Košice. The first class started studying in the school year 2013/2014.

According to the makers this higher technical study is special because it applies a German model and the volume of practical training reaches 70%. The graduates may earn a certificate which is of equal value to the one which is given to German students. The study is to prepare graduates for the work in the area of specialized administration of servers, networks, disk arrays, databases and other ICT technologies.

There are two conditions that must be met to make one eligible for the study in Košice: secondary school graduation (not more than 5 years before) and an interview with T-System Slovakia before taking admission test itself at the school.

Chart 2: Number of students per one teacher



Scenarios

A great challenge for the Slovak labor market in the ICT sector will be especially the nearest years to come. These years will be also decisive from the perspective of the ICT sector development in the future. As a result of the renewed economic growth and the EU economy, the demand for workers with sufficient IT skills will prevail even more over the supply. Here, one can see basically only two future ICT sector development scenarios: one pessimistic and the other optimistic.

Pessimistic scenario: Despite the growing demand from the part of employers for a qualified workforce in the ICT sector, there will be no improvement on the part of the educational institutions. The proverbial scissors will keep opening ever more between what the labor market needs and what it receives from the universities.

Implications:

- This development will mean the loss of potential employers of highly-qualified work with high value added. Sad about this scenario is a possibility that the companies already based in Slovakia will leave as well. The ICT sector is known for its great mobility that enables investors to relocate their activities, in the event of deteriorating business conditions such as insufficient capacity of qualified workforce, away from Slovakia.
- Lower performance of the ICT sector will not appear only in the form of lower incomes for the state but also in slower growth of Slovak economy and its ever higher dependency on importing innovations.
- Missing capacities in the ICT sector will not enable industrial producers to catch the proverbial train in form of Smart Industry that calculates with intensive participation of information technologies in the production process and production planning.

Optimistic scenario: Provided that the changes necessary to be made in order to educate potential ICT sector employees have been made, it is likely the employment in this sector will in the near future gradually grow.

Implications:

- Arrival of new investors or the existing investors extending their investments
- Higher economic growth
- Higher growth of average wage in the economy
- Growing tax and contribution revenues for the state
- Multiplication effects stimulating other sectors of economy - more developed Smart Industry
- Higher employment

SWOT analysis of the Slovak ICT sector:

Strengths

- potential of elementary/high school students with above the standard IT knowledge and skills
- the number of free jobs advertised in the ICT sector is staggering 13,531 and the number will likely grow even more in the near future
- diversification of the services supplied
- high average wage in the ICT sector that results in high volume of paid taxes and contributions to the public budgets

Weaknesses

- rather demanding on the qualification and language skills of the employees
- too dependent on the public sector
- universities that cannot generate sufficient number of IT graduates. The reason is low capacity of teachers and rather high demands on the IT study.
- enforcement of the law and little transparency of the public procurement

Opportunities

- more intensive collaboration with the private sector, development of Smart Industry / Industry 4.0
- new markets abroad
- only 3% of females in the ICT sector in Slovakia (30% in the EU)

Threats

- ever wider gap between the requirements of the market and the product of educational institutions – lack of human resources
- better competitiveness of the neighboring countries capable of attracting more foreign investors from the ICT area
- deteriorating business environment
- raising the tax burden

Memorandum

The government will adjust the system of financing universities by the introduction of a differentiated financial allocation for those faculties that prepare the highest numbers of graduates for the needs of economy. It will follow measurable indicators such as graduates landing jobs in the field studied or the height of their average salaries.

For successful implementation of the Smart Industry, including digital transformation of the Slovak

industry and businesses, the government will create conditions for labor market to be adequately supplied with qualified experts specializing in informatics, robotics and automation. The experts will come from high school and university graduates and high quality requalification programs in collaboration with associations of employers and academia.

The Ministry of Education will commit to make sure that the number of pedagogy students specializing in IT grows to at least 5% (from current 0.3%) and the wages of IT teachers at elementary and secondary schools be raised by 20%.

The Ministry of Education will support accreditation of new educational programs in the area of IT that will not be conditioned by a study of unnecessarily difficult mathematical subjects.

The government will commit not to raise the tax burden of the sector that delivers an excess contribution to the public Treasury.

The government will commit to support positive changes in the business environment and to improve enforcement of the law.

ICT has a significant and ever growing influence on the economy and employment therefore it should be among the priorities of the government program not only on paper but also in reality.

Last but not least it is important to mention that the energy intensity of the ICT sector is much lower than that of traditional industrial sectors.

In order to achieve a successful development of the ICT, to increase productivity and bring more innovations within the economy, for Slovakia to become more competitive and have ever better knowledge society, **IT Association declares its main goals within Strategy ITAS 2020.**

1) Education in accordance with needs of the labor market.

- a) Motivate youth to study ICT and technical subjects in general.
- b) Build and develop school programs and additional training courses and workshops that will offer a modern form of education at all levels starting from elementary school to vocational secondary schools and grammar schools, universities and lifelong education, re-qualification and popularization of digital technologies for elderly people.
- c) Create, fill in and cover a group of specializations Informatics and Computation for vocational secondary education and develop effective collaboration between schools and businesses.
- d) Provide more high-quality graduates for the fields demanded by the market.
- e) Lead graduates of the fields that are not successful on the labor market to gaining ICT skills. Means: National Coalition for Digital Jobs (NKDP), collaboration with the Ministry of Education and the Ministry of Social Affairs, communication campaign with motivational videos, adjustments to the legal standards.

2) Implementation of ICT technologies

- a) Support and motivate businesses, entrepreneurs, state and public administration (within e-Government projects) so that they invest in ICT technologies, infrastructure and security.
- b) Lead ICT technologies users to use them to the fullest aiming at higher productivity of their activities, opening companies towards local and foreign markets and more intensive use of the Internet for purposes of their business, services and marketing.
- c) Promote simplification, higher transparency and clarify the process of public procurement.
- d) Promote acceptance of accelerated tax deductible items for investments in ICT. Means: communication campaign, adjustments to the legal standards, operational programs OPII, OPVVAI, OPEVS etc.

3) Digital economy

- a) Support businesses that bring innovations and development in the ICT aiming at development of Digital economy especially in new areas such as Internet of Things, modern mobile IT services, apps, 3D printing and production, health care mainly for elderly, Big Data, Cloud, Smart homes/Smart buildings/Smart Cities etc.
- b) Support availability and demand for services of the broadband Internet in white places, bring modern and effective services for citizens and business sphere.
- c) Promote support and investments in R&D / applied research in ICT via operational programs and state subsidies.
- d) Accelerate activities of the Slovak Republic with the aim to support Slovak businesses with export and innovation potential. Means: OPII, OPVVAI, SARIO, SBA, Ministry of Education, Science, Research and Sport, Ministry of Economy, Ministry of Labor, Social Affairs and Family, Ministry of Transportation etc.

4) Single Digital EU Market

- a) Take advantage of the Slovak EU presidency in 2016 and redefine Digital economy for the future as a core topic for the development of EU with the aim to create an effective Single EU Digital Market.
- d) Actively participate in the activities of Slovakia during the EU presidency and co-organize a conference in collaboration with DigitalEurope covering these topics.

Who we are:

Mission:

Position of the ICT sector in Slovakia and Europe:

Threats for ICT and Slovak economy:

IT Association is a professional body comprising major businesses in the digital sector in Slovakia

IT Association of Slovakia (ITAS) is a professional body comprising major Slovak and foreign businesses in the field of Information and Communication Technologies. ITAS was established in 1999 as a business association of legal entities and as of the February 28, 2015 it has represented 90 of its members, companies that employ over 25 thousand people. ITAS is the major collective member of the Republic Union of Employers, member of the Association of Employers of Slovakia and it represents Slovakia in DigitalEurope.

IT Association of Slovakia promotes informatization as a condition for building knowledge society. ITAS members help making the society more productive by introducing ICT technologies to life.

ICT sector is an important pillar of economy that employs tens of thousands of people and plays a significant role in generating social, health and tax contributions as well as ever higher productivity.

ICT sector has a huge potential for economic growth and the post-crisis economic recovery. According to the Slovak Academy of Sciences (SAV) study, 1% increase in IT investments is to result in growth of actual GDP by 0.11%. European strategy Digital agenda 2020 ascribes to ICT a half share of the EU's economic growth for the past 15 years and views this sector as the main drive for the post-crisis convalescence. The drive that is at the same time compliant with the requirements of sustainable development.

ICT sector businesses declare insufficient supply of high school and university graduates specializing in ICT and similar situation may be seen across the EU. It is estimated that by 2020 there will be a shortage of 900,000 ICT experts in the EU. Our school system is not able to supply enough workforce even for simple reproduction in relation to workers leaving for retirement. Practically, every single ICT professional is capable of finding job immediately and what is more the work in ICT guarantees the highest and ever growing wage in the economy of Slovakia. In the near future, the lack of qualified workforce is going to cause stagnation followed by departure of businesses employing tens of thousands of ICT workers and those working in similar fields. Inadequate rate of implementation of digital economy and service economy, weak informatization of the society and slow deployment of e-Government will cause that Slovakia falls back even more as far as its competitiveness and knowledge society are concerned. Concepts of Digital Agenda for Europe, Horizon 2020 or Single Digital Market unambiguously define the ICT sector as one of the main drives propelling the development of the European Union.

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