

# Serbia

## Smart Solution



IT SECTOR

SERBIA  
INVESTMENT AND EXPORT  
PROMOTION AGENCY

SIEPA

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## Serbia – A Smart Solution



### Serbia in Motion

Over the past several years, the Serbian economy has experienced growth due to strong foreign investments and continuous improvement of its business environment. Major steps to improve the business climate and reduce the state's footprint in the economy have been implemented with the aim of providing momentum for investments, economic diversification, and sustainable private sector growth in order to create jobs.

The European Council granted Serbia the status of a candidate country in March 2012 and decided to open accession negotiations in June 2013, the same year when the Stabilization and Association Agreement between Serbia and the EU entered into force (in September). Accession negotiations were formally launched in January 2014. Serbia has continued to build a satisfactory track record in implementing its obligations under the SAA as noted in the EC's latest report from October 2014.

Serbia's external position is more balanced than before the 2008–09 crises. This is reflected by a lower current account deficit, a more competitive exchange rate and a comfortable level of international reserves. The banking system is liquid and well-capitalized, a result of cautious economic policies pursued before and during the crisis.

The new Labour Law has been adopted in June 2014, granting more flexibility to employers and providing job options previously not available. Amendments to the Pension and Disability Insurance Law were adopted in July. In August, amendments to the Bankruptcy Law were adopted, regulating in more detail the role of the bankruptcy administrator and creditor's rights.

Serbia intends to secure a three-year loan agreement with the International Monetary Fund this year-end to help reach debt and deficit goals.



IBM Global Business Services\* measured that Serbia ranked as a global number one investment destination in 2013 by the number of jobs relative to the size of the population.

\*IBM Global Business Services, Global Location Trends, 2014 annual report

One of CEE's Premiere Investment Locations



Based on the comparison between the number of FDI projects secured over 2004-2008 and 2009-2013 periods, Serbia is the only country in CEE that has raised its FDI attractiveness.

FDI Projects by Countries

	Czech Rep.	Romania	Hungary	Serbia	Slovakia	Bulgaria	Poland
2004-2008	512	612	597	164	305	287	802
2009-2013	321	311	308	284	201	148	622

Source: EY European Attractiveness Survey 2014

The improvement of Serbia's overall business climate was certainly not left unnoticed and unappreciated by the investors.

According to EY\*, Serbia was one of Europe's favourite investment locations in CEE in 2012. The success continued in 2013 - number of new jobs was up by 18%, placing Serbia on the 5th position in Europe, while 63 new projects made Serbia the second most attractive location in CEE, second only to Poland.

\*EY European Attractiveness Survey 2014



Who is Leading the Way?

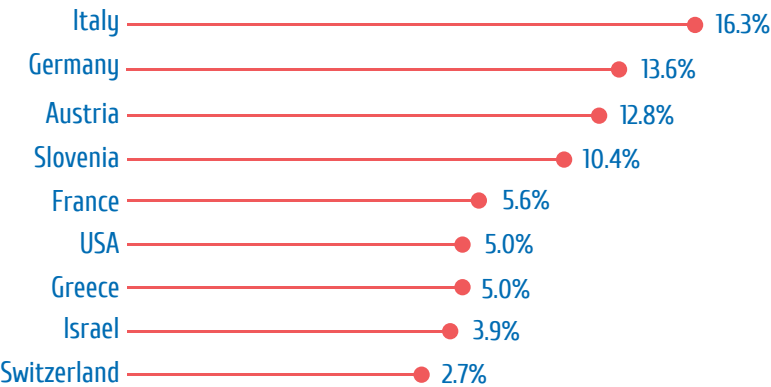
Many world-renowned companies have recognized Serbia's potential and decided to set up operations in Serbia. For some of them, Serbia serves as a manufacturing hub that enables duty-free exports to a market of almost 1 billion people. Others are attracted by the country's adept level of English language proficiency, highly skilled and easily trained workforce and generous tax and incentives environment. Regardless of the reason for their initial interest, businesses that decide to start operations or conduct trade in Serbia encounter a reliable

and dynamic country that enables them to have an opportunity much greater than they initially perceived.

EU countries dominate the investment scene although US and Russian companies have been showing a strong interest, as well. US companies were active in the manufacturing sector for over a decade but recently showed strong interest in the service sector with KKR fund acquiring a regional cable and internet provider named SBB/Telemach and with NCR opening a global centre in Belgrade.

Sector-wise, Serbia's investment landscape is still dominated by traditional sectors. Apart from what we could mark as expected FDI results such as the financial sector (vast majority of banks operating in Serbia are now foreign-owned), telecommunications, retail and real estate, Serbia has recorded large investments in the automotive sector, both in value and project numbers.

FDI RANKING BY N° OF PROJECTS



Source: SIEPA database of investment projects

# 02

## Serbia's ICT Industry

### Putting the ICT into Perspective

However, don't let the investment track-record statistics fool you. Just because it's not on the top-ten list of key investment sectors doesn't mean there's nothing much going on there, because there is. By its very nature this industry is neither labour nor capital intensive enough to offset manufacturing and financial activities. But underneath that, the sector is extremely vibrant, pulsating with activity, not always visible to the naked eye. Both local and international players are riding the wave of talented skilful people, either coming up with new solutions or developing and upgrading existing ones.

- **Microsoft's** fifth development center globally opened back in 2005;
- Serbian-owned **Comtrade** is one of the largest IT companies in CEE with over 1,000 engineers on 16 locations globally;
- **Asseco**, one of the IT leaders in CEE acquired a Serbian banking software development company employing almost 500 engineers;
- Local company **DMS** made the best software solution for energy distribution and entered a JV with Telvent, now Schneider Electric. Together they employ over 1,000 engineers;
- **HTec** – Deloitte's 3<sup>rd</sup> fastest growing technology company in Central and Eastern Europe from 2009-2013;
- **Nordeus** is a leading and award-winning European game developer. Officially the best European gaming start-up of 2011.

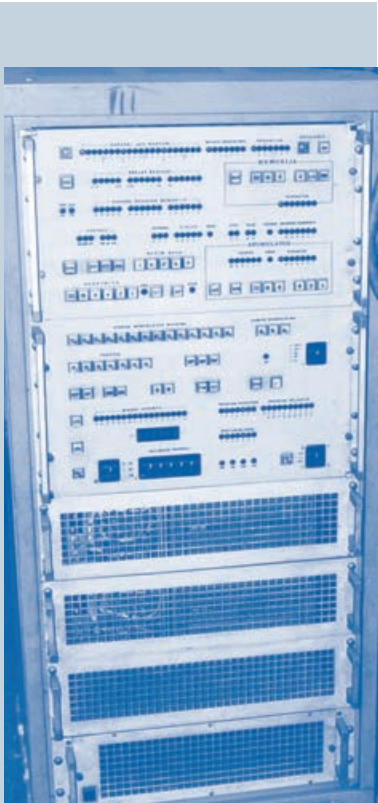
These are only some of the landmarks of the ICT scape in Serbia. But, let's take it to the roots.





The first digital computer in Central Europe was manufactured in Serbia back in 1960.

Early Days



CER-10

The first digital computer in Central Europe was manufactured in Serbia back in 1960. At the time, Serbia was also one of the six countries in the world with the capability and know-how needed to do that. The name of the computer was CER-10. Although with a lower capacity than today's bottom-end cell-phones and a size of a smaller room, it was very high-end at the time and was used for business and military purposes, but also by the Soviet Academy of Science and many technical universities around the globe.

In early nineteen-eighties in Former Yugoslavia computers were a rare luxury. A ZX Spectrum or Commodore 64 could easily cost a month's salary. In 1983, Serbian enthusiast Mr. Voja Antonic came up with an idea and invented a do-it-yourself computing machine based around the same microprocessor Z80 as its renowned siblings Spectrum and Commodore. Galaksija (Galaxy), that was the name of the computer, was born and a computer revolution with it. The detailed diagrams for the machine were freely available and published in the popular Yugoslavian science magazine. More than 8,000 enthusiasts made their own Galaksija computers within only a few months following the launch. With the third edition of the magazine this number was raised up to 40,000 copies and made Galaksija computers.



COMMODORE 64

Nowdays

Computer software is one of Serbia's main export products. Serbia is globally acclaimed for being the biggest exporter of raspberries, but the value of exported software and services is almost twice as big as the export of raspberries. In 2013, Serbian IT industry ranked 40<sup>th</sup> globally when it comes to value of exported software, while the overall industry was ranked 79<sup>th</sup>. This made it the most successful and export-oriented industry in Serbia.

Sector's export is on the constant rise especially when it comes to export of computer and information services i.e. software development. In 2008 the value of exported services was €96 million and by 2013 it reached as much as €265 million, which is a blazing 165% increase. Serbian IT market was worth around €410 million in 2013, which is still far less than before the global financial crisis outbreak in 2008, when it was worth €550 million. The potential for reaching and exceeding that result is evident. Also, the mentioned substantial export results were achieved with the state investing around €60 per capita in IT development which is far less than the European average (€800). ICT is considered a priority sector for the Government and it will increase the support for this sector over the years, especially given the sector's strong results in attracting investors and employment.

In order to really further step up this result, the state also has to increase investment into research and development and science which nowadays stand at 0.3% of GDP (the EU average is around 2%). Serbia is currently investing only €60 per capita into the development of the ICT industry, far less than for example Croatia (€200). The EU average is €800.

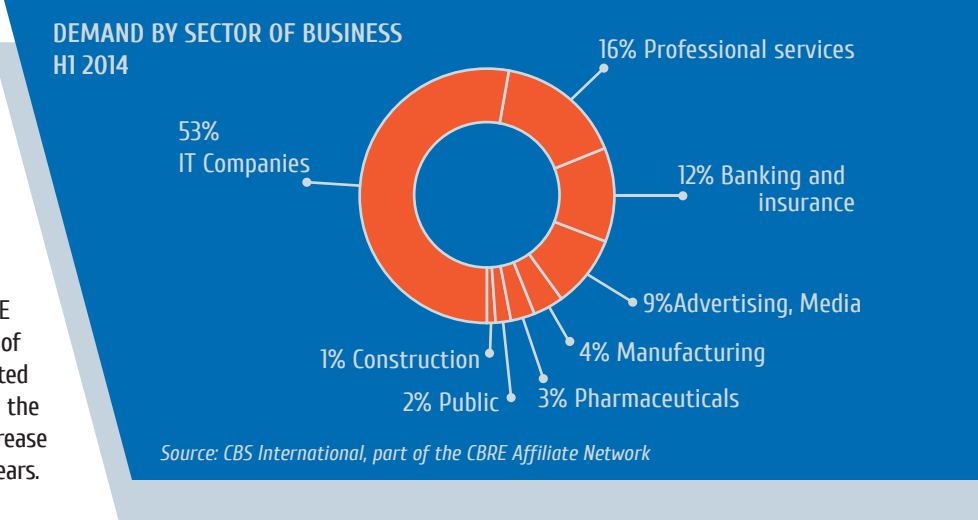
Many key global players such as Microsoft, SKF Group, Adobe, Oracle, Google, Hewlett Packard, SAP, IBM, Siemens, Intel, Cisco, NCR Corporation, Erickson and others, have already tapped into this potential, either by establishing their development centres in Serbia or outsourcing services to local IT companies.

Vibrancy of the sector is also obvious when analyzing the distribution of lease activities in Belgrade by sector in the first two quarters of 2014. IT companies are still the most dominant with a share of 53%, followed by professional and financial services.

Key trends and outlook for CEE IT market

According to PMR, a British-American company providing market information to international businesses interested in Central and Eastern Europe, the IT market in Central and Eastern Europe (CEE) will increase by 4.5% annually in 2014-2018.

In 2013, the value of the IT market in CEE totalled at €14.6bn, which meant a growth of 2.5% compared to 2012. Despite this limited growth rates which have been attributed to the CEE countries in recent years, the faster increase of the IT market is expected in the coming years.



Sector's Close up

According to Serbian Business Registration Agency (SBRA) there were 1,786 active companies registered for performing ICT related activities with the Serbian Business Registration Agency in 2013. The scope of their activities included software development, consulting services in the field of ICT, computer equipment management, data processing, hosting services, web portal-related services, and other services related to ICT. The whole sector employed 11,003 people in 2013 and turned over around €62 million netting €5,083,318 in profit.

The average number of employees is close to 6, which is no wonder since the vast majority of these companies were classified as micro companies, meaning they turn over up to €700,000, employ up to 10 people on average, and have the value of assets less then €350,000. However, an interesting thing about micro-sized companies is that only 1,381 do have registered employees, whilst only 226 companies from the list have 10+ employees. Since the companies formally not employing a single employee have together earned more than €0.5 million in 2013, it seems that

Sector's key indicators (2011-2013)

	2011	2012	2013
Number of active companies	1,496	1,638	1,786
Annual turnover (EUR)	40,905,947	51,074,901	61,985,867
Number of employees	8,312	10,369	11,003

Source: SBRA

Biggest Employers / No. of employees

Schneider Electric DMS NS, Novi Sad / 686  
Asseco SEE, Belgrade / 470  
GTECH, Belgrade / 183  
Comtrade ITSS, Belgrade / 160

the reported number of employees does not correspond to the actual number of people working for those companies and that there's a lot going on in the freelancing part of the developer's pool or informal commissioning. Freelancing is an increasingly popular concept among young educated people in Serbia, especially in creative industries, software development etc. According to [elance.com](#) Serbia is among the top 5 countries in Europe based on freelancers' earnings, while the number of freelancers rises by 70% annually. When it comes to income, 546 companies have earned more than €10,000. Together, they employ 9,190 employees (close to 17, one average).

Almost two thirds of all companies registered in the sector are based in Belgrade (1,088), Novi Sad falls far behind with 207, and the same applies to Nis with 72 companies. This discrepancy in favour of the capital doesn't seem that big with reference to the number of employed people – Belgrade based companies employed as many as 7,280 people, Novi Sad (1,894), and Nis (542).

All together, 250 new companies have joined the sector in 2013, which is slightly more than in 2012 (240), and 2011 (229). New companies gave employment to 485 new employees in 2013. Belgrade is also the most vibrant environment when it comes to growing new ICT companies with 157 new companies, giving employment to 318 IT professionals. Most of these new companies were engaged in software development (91).

Number of companies by size in 2013  
Micro 1.670  
Small 102  
Medium 13  
Large 1

Source: SBRA

Closer Look Software Development Sub-sector

Software and IT service sub-sectors have become the most challenging markets. System integrators and software companies which recognised the fast growing service market and went for it, achieved success. Additionally, companies that have partnered global IT vendors progressed rapidly thanks to the adoption of international experience and knowledge. The international IT vendors have strengthened their local presence significantly in the past few years by establishing their own companies for global services. Microsoft, Intel, Cisco and Red Hat – each have one of their few global developing centres in Belgrade.

There were 1,255 companies registered for software development (computer programming). This sub-sector earned €45,896,983 in 2013 which is around 75% of the total annual income of the entire sector. It is also the biggest employer in the sector (8,828) and the sub-sector with the largest annual growth rate over the respective period (2011-2013) – around 23%. In 2013, software development companies generated a collective profit of €3,645,400. Oddly, but this is also the sub-sector with the largest number of zero-employee companies, 261.

Net profit

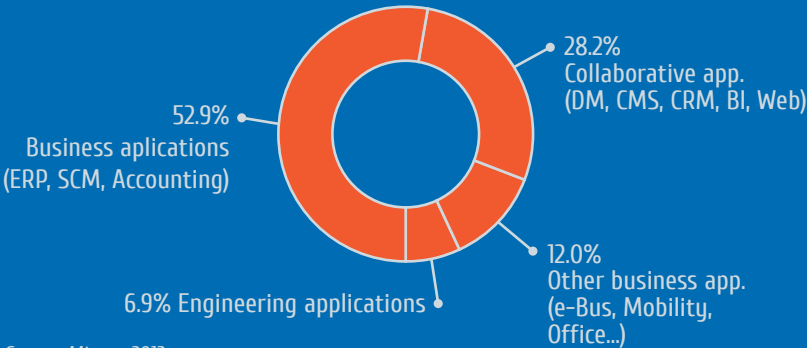
2011	4,104,388
2012	3,931,687
2013	3,645,400

Source: SBRA

Annual turnover (Software Development sub-sector)  
2011 30,828,271  
2012 37,102,133  
2013 45,896,983

Source: SBRA

APPLICATION SOFTWARE STRUCTURE



Source: Mineco 2012



## Outsourcing Opportunities

The outsourcing sector of the software development industry has long favoured Asian countries for low costs of service, thus helping the software development outsourcing to India gain momentum over the years. However, tables are turning and Eastern European countries are asserting their presence in the IT outsourcing market, especially Serbia which is recognized as high level and one of the most promising IT outsourcing destinations.

### Why outsourcing to Serbia?

Serbian companies have proved to be able to provide cost-effective, yet at the same time quality and functional IT outsourcing. There are many reasons companies choose Serbia for IT outsourcing:

#### Highly skilled talents at competitive costs

Competitive advantages of outsourcing, such as lower costs, IT expertise, economy of scale and increased labour flexibility, may become core strengths through outsourcing arrangements with IT companies in Serbia. Serbian educational system is based on strong mathematical and logic background and will increasingly be able to provide quality software engineering education and produce excellent IT experts due to the awareness of high-level demand for this type of professionals.

#### Cultural alignment with no language barrier

People of Serbia have a strong understanding of Western culture and values, both on a personal and business level, which, combined with fluency in English, enables constructive and gratifying communication, both written and oral.

#### Time zone / geographic position

Serbia is in the Central European Time Zone, one hour ahead of Greenwich Mean Time (GMT+1). This location is especially advantageous for near-shoring outsourcing contracts. Serbia is well connected with the rest of Europe and almost any destination can be reached within 3 hours. So, control workloads through outsourced projects are guaranteed.

#### Safe and secure IT outsourcing services

In line with the growing trend of its economy, Serbia has recently (January 2014) commenced the membership negotiations with the EU and already undertaken structural and legal reforms towards full compliance with the EU standards and regulations. This has been recognized also by many leading global ICT companies, such as Cisco Systems, Adobe, Motorola, Ericsson, Oracle, Google, Hewlett Packard, SAP, IBM, Siemens, Intel, Telenor, Microsoft and SKF Group, which have already tapped into the advantages of developing software and doing business in this country.

#### Growing IT industry

Government support geared towards IT sector in Serbia is the best evidence of awareness about the Serbian potential in world's IT industry.

## Gaming Industry

Bearing in mind that hundreds of millions of people worldwide spend hours playing games; it comes as no surprise that the gaming industry has become exceedingly popular nowadays. Serbian gaming companies have already achieved global success with their creativity, enthusiasm and talented professionals. Some of the best examples are the Belgrade-based Nordeus and Cofa Games and Eipix Entertainment from Novi Sad.

**Nordeus**, publisher of the most popular football manager in the world -Top Eleven, which has reached 100 million registered users, has grown into an international company with more than 160 employees, with offices in Belgrade, San Francisco, Skopje, London and Dublin. The company received many awards as one of the hottest European hi-tech companies (Techtour) and the best gaming start-up (Europe's Awards) in 2011.

**Eipix Entertainment** represents another very successful gaming company in Serbia. Founded in 2005 in Novi Sad, this Serbian company has 140 employees today. In 2011, they teamed up with the famous American publisher Big Fish Games. The most successful Eipix's project - Hidden Expedition Smithsonian Hope Diamond was done in cooperation with the Smithsonian Institution, which is one of the national symbols of America. Eipix is currently producing one to two games per month, which is probably one of the fastest paces in gaming in the world.

Another successful Serbian company is **Cofa Games** from Belgrade. It was started when a small group of video game fans from Belgrade stepped into an ambitious project called the Awakening of Heroes in July 2013, which became a true hit in the region even months before its official promotion. Awakening of Heroes was the first domestic MOBA game - Multiplayer Online Battle Arena.

Cofa Games was selected by the EU Innovation Fund among the 12 Most Innovative Enterprises in Serbia and made it to the Top 3 Start-ups in the Game & Entertainment Category of Midnight Pitch Fest.

Last, but not least of good examples is **GTECH** Belgrade, the Serbian software development house now employing 200+ people operating in all areas of development (Oracle, Microsoft, Java ...). The roots of GTECH's Belgrade branch lie in 1998 and a Belgrade branch of Finsoft LTD, which was acquired by GTECH and became its Belgrade Branch in 2007, employing 97 people. In 2012, the

company G2 and its subsidiary GTECH Belgrade have been joined with Spielo International, forming a new brand, Spielo G2, which was ultimately united under the single name and brand - GTECH. Today, GTECH is a leading gaming technology and services company, providing innovative technology, creative content, and superior service delivery. GTECH is teamed up with one of the world's largest commercial lottery operators - Lottomatica Italy and together they form a fully integrated lottery operator and gaming technology solutions provider. Lottomatica Group S.p.a is now GTECH S.p.a with more than €1.6 billion in revenues and 6,300 employees in over 50 countries.





# 03

## Why Serbia?

### Educated Talent Pool

In 2013, the Serbian IT industry employed around 11 thousand workers. However, Vojvodina ICT Cluster estimates that this number is a smaller part of a much bigger ICT work corpus of nearly 50,000 ICT specialists. The estimation is that, beside the IT industry, nearly 35,000 ICT specialists work in the telecommunication sector, in end-user companies (companies which are IT users) and entrepreneur ICT sector. In comparison to 2007 (the year before the crisis), all IT subsectors have increased the number of employees, which confirms a developing character of the sector.



### Quality Education

Universities and colleges in Serbia produce around 47,500 graduates annually. One third of them are produced by business and administration universities, while another third comes from technical universities. Leading institutions in this field such as the School of Electrical Engineering or the School of Mechanical Engineering in Belgrade or the Technical University in Novi Sad are recognized internationally for their expertise. University of Belgrade has confirmed its ranking from 301-400 places at the 2014 Academic Ranking of World Universities (ARWU), also known as the Shanghai List of top 500 universities globally. Although the list is considered informal, it is a prestigious ranking comprising only two percent of all universities globally.

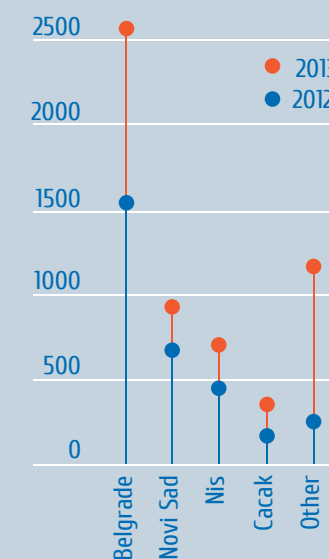
Introduction of ICT educational courses to technical universities' curriculum dates back to 1980's. Faculties of Electrical Engineering, Mathematics and Organisational Sciences in Belgrade, Electronic Faculty in Nis, Faculty of Technical Science and Faculty for Natural and

Mathematical Sciences in Novi Sad were the first to adopt such practices. Nowadays (2012/2013), with around 800 graduated IT experts annually, these faculties represent the backbone of the Serbian high IT education (Tertiary-type A) in the IT area, as well as the base for research and development in this area. In addition to that, almost the same number of IT talents is produced by their departments, with skills related to information technology.

ICT education is taught at 35 Higher Education institutions, 16 of which state-owned, 6 private faculties and 13 state-owned vocational colleges. These institutions are located in 18 cities across Serbia, which allows enrolment of a wide base of ICT students for Tertiary-type A and type B studying programs and six sub-programs.

Private universities are still attracting a lower number of students (9%), mostly because tuition fees are still an advantage of the state-owned faculties where more than 80% of ICT studies are covered from the budget.

NUMBER OF NEW ICT ENROLEES ACCORDING TO CITIES



Source: Mineco 2012





In addition to this, there is a number of certified private training institutions usually set-up around big ICT companies.

The Serbian ICT sector and the ever-increasing number of international companies on the market absorb a vast majority of ICT graduates, minimizing the effect of "brain drain" which was once a big problem. However, the growing demand for ICT professionals, both locally and throughout Europe, puts a lot of pressure on the Serbian educational institutions to produce more students.

### Number of ICT Enrolees and Enrolment capacity – Estimations and Trends

In 2012, ICT enrolees accounted for more than 10% of the total number of newly enrolled students which shows a huge interest of young people in studies related to informatics.

The total number of new ICT enrolees in the 2011/2012 school year was 5,523, out of which 3,042 began their ICT education with tertiary type A studying program (OAS) and the remaining 2,481 with tertiary type B (OSS). Some of the tertiary type A graduates will continue their studies, so it seems reasonable to expect for

The Microsoft development centre has estimated that Serbia is losing from 50-100 thousand Euros from each IT engineer who leaves the country in order to be employed abroad (that's the amount the state is investing in their education). The company aims at facilitating creation of 16 IT developers per thousand people in Serbia by 2025, as opposed to 1.6 nowadays to meet the needs of the industry.

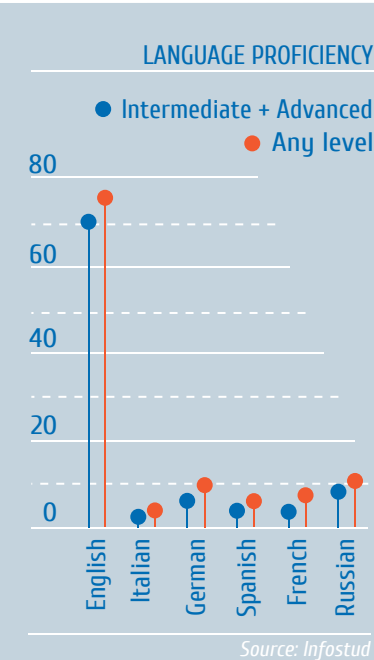
Serbia to have more than 3,500 new ICT experts on an annual basis. Another 800 IT graduates from economical sciences and around 500 from math schools should be added to the equation, as well as almost 1,500 mechanical engineering graduates.

### Language Skills

Foreign languages are taught from elementary school and throughout students' entire education. Usually Serbian schoolchildren begin with English at the age of 9 or 10, while a second language (French, German, Italian or Russian) is introduced at the fifth grade. Private language schools are also very popular and attended by students who want to hone their language proficiency or learn another language (usually Spanish, German or Italian).



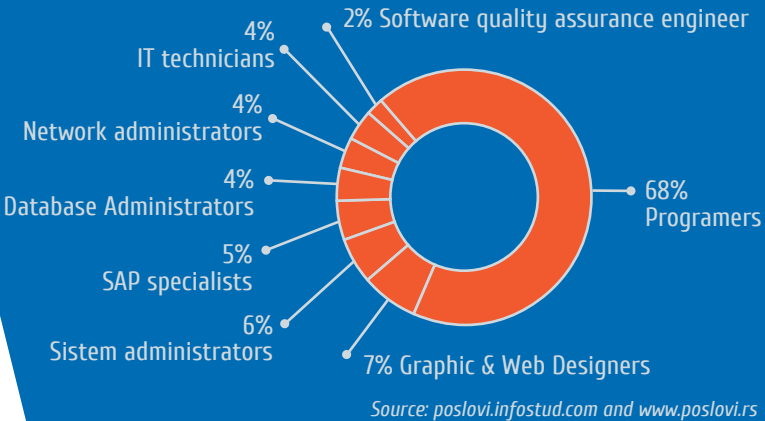
Based on 35K+ job seekers sample



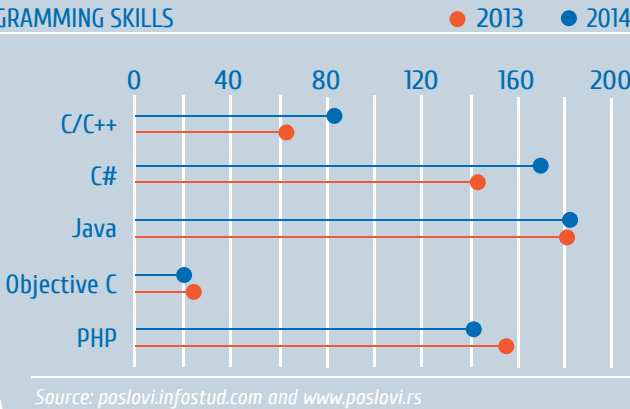
English language proficiency is particularly strong. In 2012, Serbia was ranked fourth out of 76 reviewed countries in Business English proficiency by the Business English Index (BEI). Serbia also scored 6.38 while the average BEI score among 108,000 test-takers around the world is 4.15 (on 1-10 scale). The average rank for professional and financial services is 5.19 and 4.68, respectively.



### OPEN JOB POSTS (2014)



### PROGRAMMING SKILLS



### Labor Market – Demand

Software developers were in highest demand among ICT professionals in the first half of 2014. Namely, more than 2/3 of all open ICT-related job posts\* advertised were in need of software developers, followed by designers, system administrators, SAP specialists, IT technicians, network administrators, and database administrators.

When it comes to actual programming skills the list is topped by Java, C# and PHP, with rising demand for Java programming compared to Q1 2013.

\*Advertised at  
poslovi.infostud.com and www.poslovi.rs



Costs of Labor

The competition for talents tightens and they don't come cheap. Yet, the price a company needs to pay for hiring or commissioning IT professionals in Serbia is still competitive compared to prices in CEE and especially in Western European countries. Depending on the platform and technology used, and especially the level of experience, the net cost scheme for software developers may resemble the following:

Net salary (EUR)

	Junior level (0-2 years of experience)	Middle level (2-5 years of experience)	Senior level (5+ years of experience)
	400-800	800-1,200	1,200+

Source: SIEPA

Favorable Business Environment

Legislation Framework

Doing business in the ICT field in Serbia is increasingly becoming easier and more accessible to (foreign) investors. Legislation and regulation on the state level has been impressively improved in recent years. In general, Serbia's tax regime is highly conducive to business. Corporate profit tax is still one of the lowest in Europe, while VAT, salary tax and social insurance contributions are among the most competitive in Central and Eastern Europe. Export of software is treated as both product and service, and there are no legal obstacles in realization of any contracts in this area. Any problems that may arise in implementation

of regulations (which are in line with EU best practice) due to wrong interpretation on the side of civil servants who implement them will be solved along way with specific by-laws.

Low Operating Costs

Corporate Profit Tax rate is set at very low 15%, Salary Tax to 10% and the VAT is levied at the rate of 20%. In addition to these low tax rates, the package of incentives makes business ventures in Serbia even more profitable.

New employment entitles companies to a tax return of up to 75% of paid Personal Income Tax and contributions. Alternatively, companies can apply for the financial support scheme administrated by SIEPA and tailored to the needs of SS & BPO in order to receive financial grants of up to 50% of the invested amount or sum of new employees' gross salaries over a two-year period. The condition for eligible companies is to invest over €0.3 million and create more than 20 new jobs (more at [www.siepa.gov.rs](http://www.siepa.gov.rs)).

Financial grants of up to 50% of the invested amount or sum of new employees' gross salaries over a two-year period

Ready for Business

Easy Travel to Serbia

Owing to its position on the geographic borderline between the East and West, Serbia is often referred to as a gateway of Europe and a perfect place for a company to locate its operations if it wants to closely and most efficiently serve its EU, SEE or Middle Eastern customers. Bordering the EU, Serbia still offers the possibility of enjoying all benefits of working outside the EU while being able to provide services and transport goods in projected and flexible time frames.

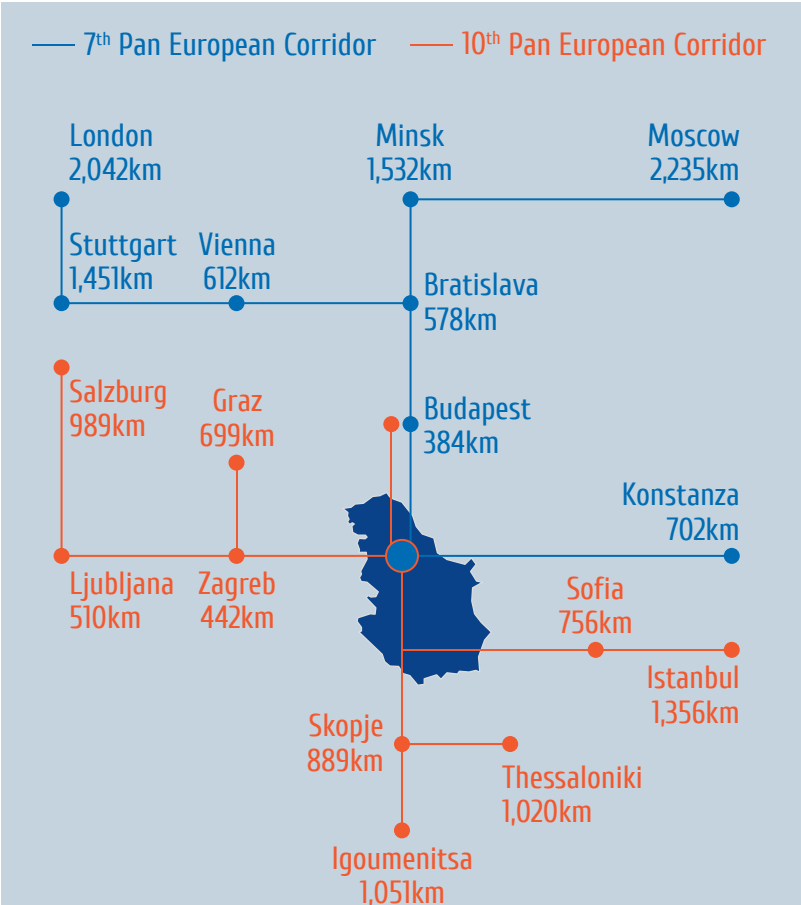
The most efficient way to reach Serbia is by air, using one of the two available international airports in Serbia - Belgrade Airport and Nis Airport. The ease of travelling from Belgrade to almost every destination in the world, either directly or with a layover is provided by almost all major international airlines. The daily flight schedule to major transportation hubs such as Frankfurt, Rome, and Moscow includes more than four flights.

Amsterdam	1,722km
Hamburg	1,547km
Berlin	1,255km
Frankfurt	1,282km
Zurich	1,175km

Once in Belgrade, the Nikola Tesla Airport is only 18 km away from downtown and, by taking the highway, it is no more than 20 minutes to reach the heart of the city. The road network connects the airport with major international roads E-75 and E-70 which link the capital to Zagreb, Nis, Novi Sad, Subotica, and other cities in Serbia and the region.

Air traffic to Nis is less frequent, but it provides a good international connection to the city.

Munich	930km
Milano	1,009km
Rome	1,289km
Prague	907km
Warsaw	1,067km
Kiev	1,302km
Bucharest	641km



There were over 3,570 Facebook accounts in Serbia in 2013, which, in relation to the population, puts Serbia among Europe's top Facebook users.

Telecommunication and ICT Infrastructure

Relevant indicators show that the telecommunication sector in 2013 remained stable enabling further market development. The development of broadband access market and Internet usage is particularly significant and, measured by the ICT Development Index (IDI), Serbia was among the top 50 countries in 2013, based on the ITU data.

The International Telecommunication Union (ITU) publishes the indicators of ICT development with the aim of measuring and monitoring the development of information society and determining the digital divide among UN Member States. The Index combines 11 indicators divided into three sub-groups: ICT Readiness (infrastructure and access), ICT use (primarily by individuals, but also households and undertakings) and the intensity of use, as well as ICT Capability (skills necessary for the effective use of ICTs).

The value of IDI Index for the Republic of Serbia in 2013 amounted to 6.03, which is a significant growth compared to 4.23 in 2008. Considering the ITU data for the previous years and clearly rising trend (4.80 in 2009, 5.10 in 2010, 5.47 in 2011, and 5.62, in 2012), it seems that the place among the first 50 countries on the list is quite secure.

The latest data of the National Bureau of Statistics show that, for 2014, a computer was owned by 63.2% of households in Serbia, (up by 3.3% compared to 2013), while 62.8% has internet connection which is a 7% increase YOY.

Regionally wise, Belgrade leads the way with 70%, both on owning the computer and having the access to the Internet.

Internet was accessed mostly on desktop computers (80.5%), followed by cell phones (61%), and laptop computers with 57%. ADSL is the most common technology used (54.6%), cable internet followed by 35.3%, while the outdated dial-up technology was used by only less than a percent of households. Broadband Internet connection was available to 55.1% of households, 11.7% up from 2013. Almost entire youth population (16–24 years) uses the Internet, with 95.6% of them having accounts on social networks such as Facebook and Twitter.

When it comes to businesses, research showed that the entire pool of them use computers and Internet, 98% of which with broadband Internet connection, and 74% having corporate websites.



ICT Infrastructure

Fixed (landline) telephony service is offered by a number of licensed operators. Telekom Srbija is the biggest and still the most important active operator of the fixed telecommunications network, both in financial and technical terms. However, the market has been fully liberalized with the introduction of number portability in April 2014, enabling entities to take benefit from an open competition.

Mobile telephony service is offered by three mobile operators: Mobilna telefonija Srbije (MTS), still in majority state ownership, Telenor, fully owned by Telenor A/S, Denmark since 2006, and Vip mobile, owned by Mobilkom CEE Beteiligungsverwaltung GmbH, Austria since 2006.

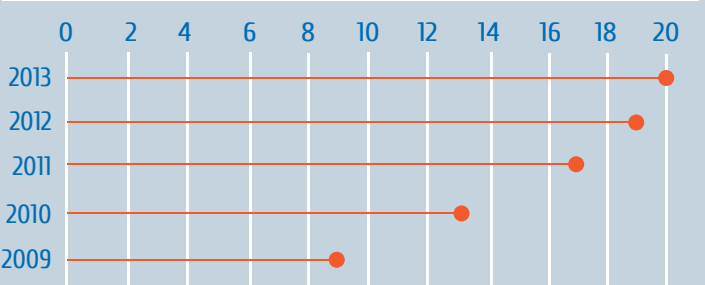
Prices of Internet access

2013		
Access bitrate	Access Technology	Amount of monthly subscription fee for permanent Internet access (VAT included) in RSD
5120/1024Kbps	ADSL	1,549
15360/1563Kbps	Cable	1,594
3072/2048Kbps	wireless (2.4GHz)	1,279
3 GB with full access rate included in the price	Mobile network	690

Source: RATEL

The Internet market in the Republic of Serbia has been experiencing expansion for years. This refers in particular to the number and structure of Internet connections and total revenues from the Internet service provision. In December 2013, there were 221 Internet service providers (ISPs) registered in Serbia.

BROADBAND PENETRATION RATE (%)



Source: RATEL

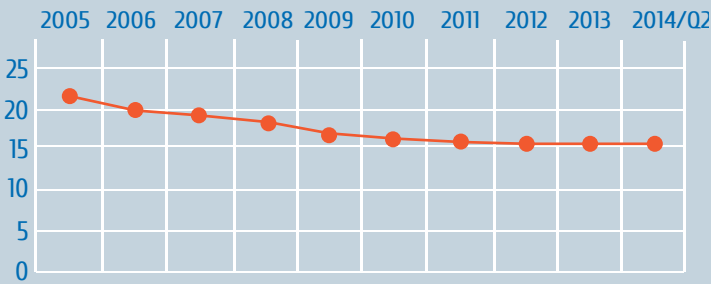


Office Space

In Q2 2014, the vacancy rate dropped below 10% (as compared to the total stock), with two fastest growing industries, ICT industry with 53% and SS & BPO with 16%, taking up most of the stock.

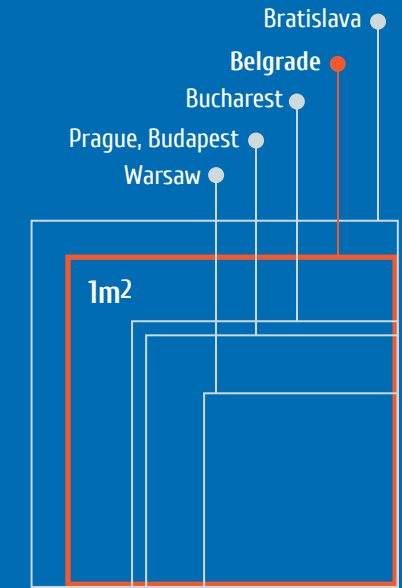
A couple of new developments are underway for 2015 and will better the supply/demand ratio. Class A office buildings recorded asking rents ranging between €14-16/sq.m/month, while average asking rents of Class B stock vary between €11-12/sq.m/month. Prime yields range between 9-9.5%.

PRIME RENTS €/m²/MONTH



Source: Jones Lang LaSalle, April 2013

WHAT YOU ARE GETTING FOR AN AVERAGE RENT OF €15/MONTH



Source: Jones Lang LaSalle

Cradles of Businesses

Business and Science & Technology Parks in Serbia

As a result of joint initiatives of universities, state institutions and the donor community, a total of 23 incubators were established in Serbia (as of February 2014; not all survived), with initiatives to establish additional five business incubators (BIs). As a result of substantial support of BI Programme, the majority of BIs were founded and initiated in Vojvodina with eight BIs, Eastern & Southern Serbia regions hosted also eight BIs together,

Sumadija & Western Serbia region followed with six BIs and the City of Belgrade with three already established BIs and one initiative for BIs establishment.

Companies residing in BIs in Novi Sad, Zrenjanin, Belgrade and Kragujevac are mostly engaged in ICT and software development activities while the incubators in other cities host companies which predominately

engage in business, finance and other services, as well as various advanced manufacturing activities.

Most of the incubators (primarily those where ICT companies dominate the tenant's pool) provide office space, common office services, ICT infrastructure, and some of them even IT training centres. In terms of services, the array of services also includes legal advice, coaching, accounting, education, business consulting etc.

Costs of Living and Quality of Life

Mercer's 2014 Cost of Living Rankings, published 10 July 2014, compare the cost of living for expatriates in 211 cities worldwide. Cities are ranked based on data from our annual Cost of Living Survey, the most comprehensive of its kind. The survey helps multinational companies and governments determine compensation allowances for employees on international assignments. The survey measures the comparative cost of more than 200 goods and services in each location, including housing, transportation, food, clothing, household goods, and entertainment.

According to the study, Belgrade, as the most expensive city in Serbia to live in was ranked 184<sup>th</sup>, 8 places up from 2013's ranking. The quality of life is exactly what one could expect from a capital of two million people, with international schools, quality medical services, and infrastructure to host a large expat community.

In 2007, the Financial Times' fDi magazine picked Belgrade as the City of the Future and is described by the portal Lonely Planet, as the No. 1 nightlife destination in the world.

City Ranking

Munich	55
Zagreb	120
Budapest	132
Warsaw	142
Sofia	172
Bucharest	159
Belgrade	184

Incubator	Year of establishment	Number of companies incubated	Number of jobs created	Current number of tenants	Current number of employees	Current occupancy rate (%)
Subotica	2006	32	60	14	52	70
Novi Sad	2010	12	43	10	35	60
Zrenjanin	2005	24	82	13	32	75
Belgrade	2006	35	200	20	50	100
Kragujevac	2008	31	100	11	50	70
Uzice	2008	32	80	12	60	100
Krusevac	2008	51	n/a	21	39	90
Prokuplje	2007	11	45	11	41	90
Vranje	2006	24	123	24	198	80

Source: Strategic Development Plan for Business Incubators and Science and Technology Parks in Western Balkan Region (WBCInno)



IT PARK, INDJIIJA

## Key Establishments

### IT Park, Indjija

The Embassy Techzone's IT Park is the maiden venture in Europe of the Embassy Group, a leading Indian real estate development firm. The park is located in the municipality of Indjija, near Belgrade, Serbia – one of the top investment destinations in this part of the world.

This multi-phase development has been built for LEED® Green Building Gold Certification. This development includes single and multi-tenant state-of-the-art offices across 25,000 m² spanning four office buildings. It is envisaged that in the next five years this park could be expanded to offer 250,000 m² of office space.



[www.embassytechzones.rs](http://www.embassytechzones.rs)

The IT Park in Indjija has been conceptualized as a business support and technology transfer initiative that will encourage and support the start-up and incubation of innovation-led, high-growth, knowledge-based businesses. It will provide an environment where large, global businesses can set up specialized centres of knowledge creation.

Besides significant cost advantages, the benefits of this IT Park are manifold – master planning, strict covenants pertaining to building design, construction material and green space requirements. It will enable lower density offices, state of the art infrastructure with uninterrupted telecommunication lines, on-site data hosting and business continuity with disaster recovery management solutions. Shared transportation services with excellent interstate/highway access will be provided on site.

### BITF

The Business and Technology Incubator of Technical Faculties Belgrade (BITF) has been established as a partnership between the four technical faculties of the University of Belgrade (Civil Engineering, Mechanical, Electrical and Technological/Metallurgical), the Municipality of Palilula and the Democratic Transition Initiative. The establishment has also received support from the Organization for Security and Cooperation in Europe (OSCE).

The incubator operates on 600sqm of renovated office space. Key achievements include:

- 550 students have passed the trainings on entrepreneurship,
- 250 young people engaged in the incubator and enterprises-tenants
- 42 small enterprises tenants of the incubator
- 30 new technologies/services developed in innovation projects
- 9 patents applications
- 3 clusters/networks established
- 1 service centre developed (set of legal, accounting and financial services, business plan).

[www.bitf.rs](http://www.bitf.rs)

## SCIENCE & TECHNOLOGY PARK ZVEZDARA

### Science & Technology Park Zvezdara

The Park was developed as an EU-funded Greenfield project with a prime goal to encourage development of knowledge-based small and medium-sized enterprises by providing the modern venue for integrating economic and intellectual resources and promoting high-tech entrepreneurship based on indigenous knowledge. It is a modern complex consisting of five modular buildings, common entrance lobby and connective structures with a total surface area of 14,000 square meters, including 8,000 square meters of Class A office space. The complex is designed and built to comply with the highest international standards of design and quality, and it includes innovative open-plan interior style with centralized HVAC and IT support systems. It is also built using innovative energy-efficient building techniques and offers



[www.piu.rs](http://www.piu.rs)

the convenience of a parking lot, security and professional property management services.

The Park is conveniently located in the central area of Belgrade, in the vicinity of the international highway E75 and Belgrade airport. Tenants have opportunity to enjoy calm surroundings of green landscape while being close to a metropolitan centre with amenities including education, housing, entertainment, shopping and health care.

Share of export in tenant's revenues exceeds 75%, while some of the start-ups have achieved a huge growth and became very successful players. After only a few years of operation Bitgear and HTech companies were listed on Deloitte's list of fastest growing technology companies in CEE. In 2013, Bitgear was the runner-up, while HTec ended up on third place on the list for 2014.

STP Zvezdara is also positioned close to technical universities and fully accessible by good public transport system. The price of lease is favourable, it is determined in public auctions, with starting price determined by the municipal authorities.

Zvezdara is suitable for companies at all stages of their development – from early-phase start-ups to those that have already set their footprint on the market.



# 04

## Success Stories

[www.microsoft.com/serbia/mdcs](http://www.microsoft.com/serbia/mdcs)

### Microsoft Development Center Serbia (MDCS)

The centre was established in 2005 as the fifth of its kind on the global level. The centre specializes in software engineering and applied mathematics and currently employs 130 highly qualified engineers.

MDCS has been created with a mission to take an active part in conception of novel Microsoft technologies by hiring unique local talent from Serbia and the region and to contribute components to some of Microsoft's premiere and most innovative products. The centre in Belgrade is becoming widely recognized across Microsoft as a centre of excellence for the following domains: computational algebra engines, pattern recognition, object classification, computational geometry and core database systems. The common theme uniting all of the efforts within the development centre is applied mathematics.

The centre's team consists of software engineers with solid industry experience and fresh college graduates with a common trait - hunger for achieving and making a substantial impact. The team also boasts with the highest concentration of champions in international mathematics and programming competitions such as Olympics, ACM, and Imagine Cup.

There are four teams within MDCS that maintain collaboration with engineers from various Microsoft development centres around the world (Redmond, Israel, India, Ireland and China), and Microsoft researchers from Redmond, Cambridge and Asia.

#### Handwriting Recognition Team

This team is focused on the development of handwriting recognizing technology for tablet pc. This early effort culminated in 7 language handwriting recognizers and Math recognizer shipped in Windows 7. Reco team also enabled shape recognition technology in PowerPoint 2010.

#### Image Analysis Platform Team

Image Analysis Platform Team started with document layout analysis project for MS Live Book Search and later on moved towards development of common Microsoft image analysis platform. The most recent projects focused on improving online search experience for mobile devices.

#### SQL Server Team

SQL Server Team was founded in 2007 focusing on development of spatial type extensibility support in SQL Server - first deployed as part of SQL Server 2008. SQL team specializes in complex data analytics, and is now in charge of all SQL Server features related to spatial and XML data types, improvements in the area of data warehousing, and other related projects. It is the only SQL Server engine team outside of USA and it has made a noted contribution to the SQL Server 2012.

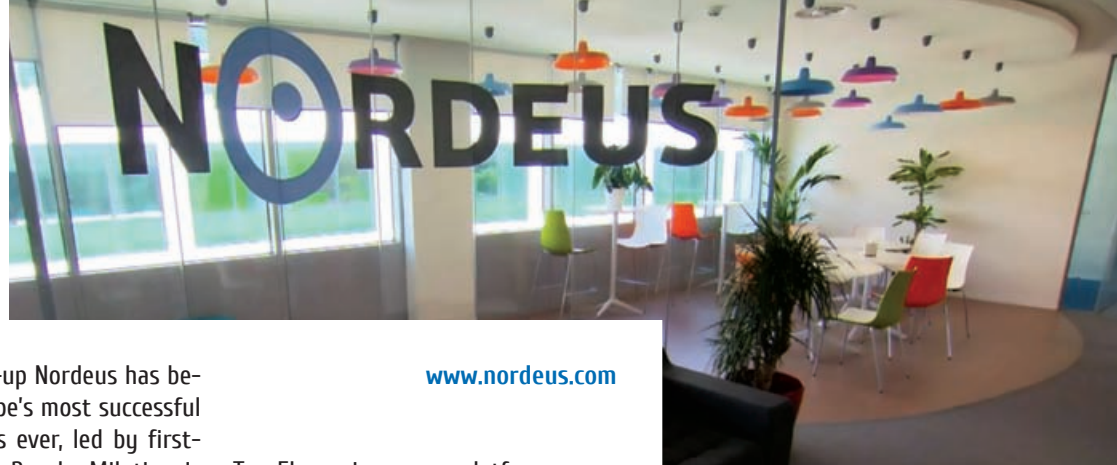
#### Office Team

Office MDCS Team was originally tasked to improve existing MS Mathematics suite with the MS Office Education Group. The team has completely redesigned the product and delivered technology improvement in two flavours: Math add-in for the Office Word and OneNote and MS Mathematics standalone product as a standalone product. In addition, Office team joined Office 2013 efforts and worked on a PDF Reflow feature: a brand new Word 2013 feature that converts PDF to DOCX. Some key areas of expertise of MDCS Office team include machine learning and layout analysis, services, and math.





## Nordeus



The Serbian start-up Nordeus has become one of Europe's most successful gaming companies ever, led by first-time entrepreneur Branko Milutinovic who has decided to jump ship and launch his own start-up after spending almost two years at Microsoft.

Nordeus was born in 2009 in Belgrade and it has become one of the biggest mobile gaming companies in Europe thanks to the hit game, the most popular football manager in the world -Top Eleven which has reached 100 million registered users and 5 million DAU. The company now employs more than 160 people; it has offices in Belgrade, San Francisco, Skopje, London and Dublin. Nordeus has a very strong corporate culture that makes it a cool company to work for to the extent where only one person has left the company in four years of the company's existence.

[www.nordeus.com](http://www.nordeus.com)

Top Eleven is a cross-platform game, without Facebook exclusivity and the first game ever that allowed one to play it on a laptop, close it, and then continue playing it on a Smartphone. The company invested a lot in technology, mobile and learning how it all worked at a time when very few gaming studios had done it.

Asked about whether it would have been easier for Nordeus if it were in London or Berlin instead of Serbia, Mr. Milutinovic said: "I think it would have been equally tough and there are pros and cons. Serbia and Eastern European countries have started to receive tax incentives when it comes to fundraising, which is good for companies established there. But I do see a lot of pros when it comes to building from

Serbia: very good talent, less expensive, less competition from other companies and thus that talent will be more passionate and involved in the company, etc".

Nordeus has received many awards, such as ranking Among 25 Hottest European Hi-Tech Companies (Tech-tour, November 2011), The Best Gaming Start-up (Europas Awards, November 2011), The Best Facebook Application (Web Fest, November 2011), and People's Choice Award- The Best Start-up (London Web Summit, March 2012).

*Source: Posted in Branko Milutinovic, LeWeb, updated December 16th, 2014.*

## RT-RK

[www.rt-rk.com](http://www.rt-rk.com)

RT-RK is a R&D company and national research institute that delivers development services and own products in the arena of real time embedded systems, with strong focus on consumer electronics, communications and multimedia.

In 1991, a small group of professors working at the University of Novi Sad, Faculty of Technical Sciences, Chair for Computer Engineering, launched first projects in the area of telephony and digital signalling protocols. Their interest for business has further evolved to automation processes in Serbian oil and gas industry, in projects for gas pipeline management. After establishing a company named FTN-IRAM-RT and creating a JV with the German semiconductor company Micronas

named MicronasNIT, the team entered the era of expansion in DSP, FPGA and Digital TV technology. In 2009, a new company RT-RK was established, delivering development services to different non-consumer customers such as Tegic, Nuance, Magic4, Openwave (mobile phone industry), lighting for Philips and cooperation with ALTRAN in embedded system design. In April 2009, RT-RK acquired MicronasNIT, bringing the two teams under one umbrella, thus becoming the largest SEE company for embedded system design.

In the following years the company started working on their Android for TV mission and became recognized worldwide as an Android competence centre.

The company has created near shore development centres (NSDC) for different companies: Cirrus Logic for

DSP applications, tools, and industrial MARVELL focused on Android and GoogleTV application and customer applications; VESTEL dedicated team for TV and STB software development and testing tools development; support; SMARTTV dedicated team for CAM and STB software development; and the newest member of the NSDC family TTTech team for automotive software development.

Nowadays, the company's business is structured in two big categories: professional services (outsourcing, near shore development centres), and own products. RT-RK delivers professional services in the field of computer engineering, focusing on: embedded software, TV software, DSP software, Industrial and Automotive software, FPGA, product design, and small scale production. The company offers three lines of products:

- Automated solutions for testing of complex consumer electronic devices such as Integrated Digital TVs (iDTV) and Set-Top boxes (STB), known as BBT (Black Box Testing).
- Interactive system for wireless control of lighting ambience OBLO includes retrofit intelligent switches, dimmers and outlets for power consumption monitoring.
- The latest products introduced on the STB market, powered by iWedia software.

Headquartered in Novi Sad, with an office in Belgrade Serbia, with over 400 employees, 350 of whom are engineers, RT-RK is one of the biggest development houses in Southeast Europe.

## Schneider Electric DMS NS

Schneider Electric DMS NS Ltd. for power engineering, Novi Sad is a high-tech engineering software company engaged in research, development and software engineering in electrical systems – distribution management system (DMS). This company is also part of the scientific research park of the University of Novi Sad. There are nearly 600 employees and it operates projects practically on every continent. Schneider Electric DMS NS

is a strategic partner with Microsoft, and this partnership includes access to the latest Microsoft technologies, Microsoft courses and Microsoft certificates.

The scope of technologies and platforms used include database, .NET programming, artificial intelligence, data mining, cloud computing, distributed systems, real time systems, Web, etc.

[www.schneider-electric-dms.com](http://www.schneider-electric-dms.com)





## Relevant Institutions

**SIEPA** [www.siepa.gov.rs](http://www.siepa.gov.rs)

SIEPA was established more than a decade ago and entrusted with the mission of supporting foreign companies seeking to set up or expand their presence in Serbia and Serbian companies doing business abroad. Today, staff of nearly 50 multilingual employees handles projects from and to all over the world.

We provide professional services to companies interested in setting up business operations in Serbia, focusing on all relevant issues in their decision making process. Our staff is ready to offer information on the general investment environment as well as targeted legal

and industry-specific advisory services. Our network of contacts provides links to all levels of government as well as private service providers.

SIEPA has technically and financially supported thousands of Serbian companies in increasing their competitiveness at global markets. SIEPA's work is widely recognized, with World Bank's MIGA ranking SIEPA

among the top five IPAs of developing and countries in transition topping the list of our international acknowledgements. The list of our clients includes FIAT, Benetton, Panasonic, Bosch and many other global and regional industry leaders.

We invite you to contact our expert staff which is ready to assist you in developing your business in Serbia. Working with us is simple, easy, and still costs nothing.

## Vojvodina ICT Cluster

[www.vojvodinaictcluster.org](http://www.vojvodinaictcluster.org)

Vojvodina ICT Cluster is a business association founded through a bottom-up initiative of ICT companies and several supporting institutions. It is a fast-growing organization that provides a single point of contact with ICT companies in Serbia, with the total workforce of 2,000+ experienced IT professionals working in their member companies.

Over 90% of the members' businesses are export-oriented, exporting software products and services to EU, North America and the Middle East. Member companies also exhibited strong growth in recent years, regardless

of the global recession. Serbian IT companies in general made a noticeable breakthrough on the global markets, putting Serbia on the map as a very interesting alternative location for development of sophisticated software. Vojvodina ICT Cluster gives institutional support to this trend, mobilizing players from the triple helix business–education–government. Strong support from the University of Novi Sad adds to the strength of the cluster.

The strategic objective of the cluster is to increase visibility of the Serbian ICT industry, but also to promote Novi Sad and put it on the regional and European map as the hotbed for ICT in this part of the world. Activities toward this objective include: building an ever-stronger network of international contacts, creating new business

opportunities for the members, compiling and delivering sets of services to members and third parties, policy advocacy for improvement of business environment in Serbia, and popularization of ICT both in terms of generating more ICT professionals and enabling more penetration of these technologies throughout other sectors of Serbian economy.

The cluster has its own Academy, organizing courses, presentations and lectures according to the needs of the members, as well as a separate Project Office that is developing its projects portfolio and revenues every year.

**NI**Cat [www.ni-cat.org](http://www.ni-cat.org)

Bottom up (the need recognized by successful SMEs) and top down (SECEP extensive research on cluster potentials of Serbia) initiatives met in June 2011 in the former city of Electronics.

The key goals of the cluster are the increase of member's turnover both on the national and international markets, strengthening of their capacities for innovations and development of new technological products and services, and promotion of the City of Nis as

a favourable location for business operations in the field of advanced technologies.

Current cluster members include 23 successful companies doing business in the electrical, electro-mechanical and ICT industry, two scientific research institutions (Faculty of Electronic Engineering and Faculty of Mechanical Engineering – University of Nis) and three economic development support institutions (Regional Development Agency RRA South, Regional Chamber of Commerce and Business Incubator Nis).

**Regional ICT Cluster – Kragujevac** [www.ict-cs.org](http://www.ict-cs.org)

The youngest cluster of its kind in Serbia, established in April 2014. It currently represents a pool of 18 companies operating in the area of the City of Kragujevac. The key strategic goals of the cluster include development of ICT technologies in the Region, increase of the competitiveness of the membership, increase of exports of software, creating a favourable business environment for investing in the region's ICT industry and adjusting the educational system to the needs of the industry.

**ICT Net Cluster**

[www.ict-net.org](http://www.ict-net.org)

ICT Network is an association of companies, individuals, academic and research institutions devoted to the development of the ICT sector in Serbia. It was established in 2010 by the merger of two former cluster initiatives, Serbian Software Cluster and [Embedded.rs](http://Embedded.rs).

As a unique information hub, ICT Network provides its members

with access to relevant and up-to-date information from the ICT industry, thus enabling them to boost their competitiveness and grow. As an open organization, it offers its members equality of opportunities and a transparent framework for efficient fulfilment of their interests.

One of Cluster's main objectives is to encourage its members to suggest their own initiatives or projects which can be realized either through Cluster's extensive network of strategic partnerships or in cooperation with other

member companies. Also, the Cluster is focused on obtaining easier access to public and EU funds for its members, giving them possibility of internationalization of their business operations and actively supporting their innovative and enterprising initiatives and projects.

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