Project “Promoting the advantages of investing in Bulgaria” BG 161PO003-4.1.01-0001-C0001, with beneficiary InvestBulgaria Agency, has been implemented with the financial support of the European Union through the European Fund for Regional Development and the national budget of the Republic of Bulgaria.
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Overview of the IT sector 16
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Success Stories 40
INTRODUCTION
Bulgaria has strong traditions and skilled workforce in the ICT sector

Stock of high-skilled and low-cost programmers; known as the Silicon Valley of Eastern Europe. Business Monitor International

Hundreds of small software companies do contract programming for some of the biggest customers in the world, including Boeing, BMW and Nortel. Other giants, such as SAP and Computer sciences have local labs in Sofia. Business week

Bulgaria offers a good mix of high skills, fairly low labor costs and good production quality. Accelerance

Bulgaria was among the only four SEE countries to be placed and even show improvement in its position in the IT Industry Competitiveness Index 2011, issued by The Business Software Alliance (BSA) and The Economist Intelligence Unit.

In 1981 the Bulgarian Microcomputer was represented in an exhibition for robotics in England. It controlled the robot “Robko-01”. It was a 1st time a robot was controlled by a microcomputer.

Bulgaria was the largest manufacturer of PCs within the CMEA, its biggest market being the former USSR.
...and has already become a hub for high value added and R&D IT services

In 2010 Bulgaria became one of the 6 designated delivery hubs that support the client demand for cost-efficient, scalable services that effectively meet business needs.

The first SAP investment in Southeastern Europe. Similar software development is made only in Germany, Israel and USA.

The center for research and development of new products in Sofia is the largest one of all 8 centers for car electronics worldwide.

The largest Global Development Center for VMware in the EMEA region and the 3rd largest R&D site for VMware globally.

Sofia is one of three World Sourcing Services centres in Eastern Europe. The main function of centre is software development, Business Intelligence tools, Server Applications and Network administration, BPO.

The largest SAP integrator in Bulgaria (ERP, CRM, BI, HR).

CSC has been represented in Eastern Europe for over 15 years. Since 2008, CSC EE has been operating in Bulgaria, employing over 600 employees in the field of software development, integration and maintenance.
Bulgaria offers excellent infrastructure and HR quality providing conditions for the future development of the sector

...If you want first-class mathematicians, try looking in Bulgaria.

William Fitzsimmons, Dean of Admissions and Financial Aid, Harvard College

Bulgaria – 5th in the world, 3rd in Europe in broadband quality.

Annual Broadband Study by Cisco, 2010

Bulgaria holds 3rd place in Europe and 10th position worldwide regarding the absolute number of certified IT professionals (third place world-wide according to certificates per capita).

Cisco

In 2011 the top 100 largest technology companies in Bulgaria generated revenues amounting to 6.8% of GDP

Annual research of CBN - Pannoff, Stoytcheff & Co.

In 2010 the ITO sector had 25% share in the national outsourcing sector and generated 27.5% of revenues.

Business Week

Bulgaria, Romania and other locations on the outskirts of Europe are playing a new twist on the craze for sending technology development offshore.
OVERVIEW OF BULGARIA
Bulgaria has a strategic location, political stability and low costs of doing business

Bulgaria is strategically located and provides access to the following markets:

- South-East Europe – a 122 million inhabitant, high growth market
- European Union - Bulgaria offers the lowest cost access to a market of 500 million consumers
- Russia/CIS, Middle East and North Africa

Bulgaria offers a combination of political and macroeconomic stability and incentives for doing business:

- Stable parliamentary democracy, EU, NATO and WTO member
- Bulgaria’s currency is fixed to the Euro under a currency board arrangement
- Lowest tax rate and one of the lowest labour costs in the EU coupled with special incentives for investors
- EU funding – more than €10 bln in EU funds
**Bulgaria: Summary Statistics**

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population:</td>
<td>7.4 million</td>
</tr>
<tr>
<td>Labour force:</td>
<td>3.4 million</td>
</tr>
<tr>
<td>Urban Population:</td>
<td>73%</td>
</tr>
<tr>
<td>Capital:</td>
<td>Sofia</td>
</tr>
<tr>
<td>Time zone:</td>
<td>EET (UTC+2)</td>
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<tr>
<td>Summer (DST):</td>
<td>EEST (UTC+3)</td>
</tr>
<tr>
<td>Total area:</td>
<td>110 879 sq. km</td>
</tr>
<tr>
<td>Land area:</td>
<td>108 489 sq. km</td>
</tr>
<tr>
<td>Water area:</td>
<td>2 390 sq. km</td>
</tr>
<tr>
<td>Climate:</td>
<td>temperate</td>
</tr>
<tr>
<td>Languages:</td>
<td></td>
</tr>
<tr>
<td>Bulgarian (official)</td>
<td>85.2%</td>
</tr>
<tr>
<td>Turkish</td>
<td>9.1%</td>
</tr>
<tr>
<td>Roma</td>
<td>4.2%</td>
</tr>
<tr>
<td>English, German, Russian, French</td>
<td>widely spoken</td>
</tr>
<tr>
<td>Religions:</td>
<td></td>
</tr>
<tr>
<td>Christian Orthodox</td>
<td>76%</td>
</tr>
<tr>
<td>Muslim</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>14%</td>
</tr>
<tr>
<td>Currency:</td>
<td>Lev (BGN)</td>
</tr>
<tr>
<td>Fixed exchange rate:</td>
<td>€1 = BGN 1.95583</td>
</tr>
<tr>
<td>Corporate income tax:</td>
<td>10%</td>
</tr>
<tr>
<td>Personal income tax:</td>
<td>10%</td>
</tr>
<tr>
<td>VAT (standard):</td>
<td>20%</td>
</tr>
<tr>
<td>Government type:</td>
<td>Parliamentary Democracy</td>
</tr>
<tr>
<td>Supreme legislative power:</td>
<td>Unicameral 240-seat National Assembly</td>
</tr>
<tr>
<td>Executive state body:</td>
<td>Council of Ministers, head: Prime Minister</td>
</tr>
<tr>
<td>EU member since 2007</td>
<td></td>
</tr>
<tr>
<td>NATO member since 2004</td>
<td></td>
</tr>
<tr>
<td>WTO member since 1996</td>
<td></td>
</tr>
</tbody>
</table>

Source: Bulgarian National Bank, National Statistical Institute
Bulgaria has exemplary macroeconomic fundamentals

<table>
<thead>
<tr>
<th>2012 Economic Snapshot:</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP (€ bn):</td>
<td>39.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exports (€ bn):</td>
<td>26.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net FDI (% of GDP):</td>
<td>3.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP growth (%):</td>
<td>0.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment (%):</td>
<td>11.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation rate (annual change,%):</td>
<td>3.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government deficit (% of GDP):</td>
<td>-0.5e</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government debt (% of GDP):</td>
<td>18.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current account balance (% of GDP):</td>
<td>-1.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term credit ratings:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moody’s:</td>
<td>Baa2 stable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S&amp;P:</td>
<td>BBB stable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fitch:</td>
<td>BBB stable</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


- The Bulgarian economy had a constant growth of above 6% in the period 2000-2008
- The economy stabilized in 2011 with GDP growth of 1.8% for 2011, and 0.8 % in 2012
- The budget deficit in Bulgaria is one of the lowest in Europe for for 2012: -0.5%
- There are no currency fluctuations due to a currency board, introduced in 1997 – the Bulgarian Lev is pegged at 1.95583 to the Euro
- Bulgaria has the lowest government debt to GDP ratio in the EU27 in 2012

Bulgaria is the only European country with an increased credit rating by Moody’s since the beginning of 2010.
Overview of Bulgaria

GDP Breakdown 2012

- Agriculture 5.6%
- Industry 31.2%
- Services 63.2%

Exports Breakdown

- Metals 16%
- Oil products and electricity 14%
- Food 8%
- Machines and equipment 17%
- Other raw materials 20%
- Consumer goods 25%

Population:
- Sofia: 1,291,591
- Blagoevgrad: 177,441
- Plovdiv: 338,153
- Stara Zagora: 160,108
- Ruse: 167,585
- Varna: 343,704
- Bourgas: 212,902
- Veliko Turnovo: 88,670
- Plovdiv: 167,585
- Varna: 343,704
- Bourgas: 212,902
- Veliko Turnovo: 88,670

Exports Breakdown:
- Metals 16%
- Food 8%
- Other raw materials 20%
- Consumer goods 25%
- Machines and equipment 17%
- Oil products and electricity 14%
Bulgaria offers a unique lifestyle experience within easy reach of Sofia

...vibrant cities with many art galleries, festivals, concerts, museums

...emerging world-class golf courses

...beautiful coastline with white and golden sand beaches

...numerous spa resorts

...ski resorts including the 2012 World Cup host town of Bansko

...hiking and adventure sports in the beautiful Rila, Pirin, Rhodopes and Balkan mountains

...fine cuisine and boutique wineries
and boasts some of Europe’s greatest historical treasures

…Thracian and Roman ruins and artifacts

…Medieval fortresses and artifacts from the time of the First and Second Bulgarian Kingdoms

…monasteries and temples dating back as far as 4th century AD

…picturesque villages from the period of the Bulgarian National Revival

Sofia is among the oldest capital cities in Europe and the only city besides Jerusalem with an Orthodox church, a Catholic cathedral, a mosque and a synagogue within a square kilometer.
OVERVIEW OF THE IT SECTOR
Bulgaria has remarkable long-term experience

The Atanasov–Berry Computer (ABC) is the world’s first electronic digital computer. The machine was not programmable, but solved systems of linear equations and employed parallel computation.

1937

A court ruling in a patent dispute found that the patent for the 1946 ENIAC computer derived from the Atanasoff–Berry Computer.

1973

“Pravec 16” – Initially made under the name IMKO-4 was an analogue of IBM PC/XT. Bulgaria started producing 60,000 computers/year, thus becoming the number one producer and exporter for USSR and CMEA.

1984

Established the first Factory for Computing Technology in Bulgaria.

1967

1st Bulgarian Microcomputer “IMKO 1” (Analogue of Apple II plus) was made.

1980

“Pravec 8M” was made – very modern for its time with more memory and 2 microprocessors. Apple did not have such analogue. The military version introduced QWERTY keyboard used for the 1st time.
and traditions in the IT sector

Came in Bulgaria through the purchase of part of ProSyst company.

The Global IT IQ Report by Brainbench Inc. ranked Bulgaria (with 8,844 Certified Professionals) 8th in a ranking of the top 10 countries based on number of certified IT professionals.

Three Bulgarian companies were included in the "Deloitte" ranking of the 50 fastest growing technology companies in Central Europe.

80% of Bulgarian software companies’ revenues already resulted from contracts with European and US partners.

The first Bulgarian Internet Browser was created.

Software Company "Vayant" became a technological partner of the German airline Lufthansa.
Bulgaria is well prepared for becoming a regional hub because it hosts a number of world and local IT leaders

...and has established strong NGOs in the IT sector

Bulgarian association of software companies is the industry association of leading Bulgarian software development companies. It was established in 2001 and to date has more than 50 members.

One of the core centers of cluster knowledge in Bulgaria. It is a member of several European cluster platforms and networks and maintains relationship with many European and world clusters.

Activities are directed to the benefit and defense of legal entities and natural bodies, working on design, arrangement, organization, realization and hosting of Internet sites, web design and Internet advertisement.

Bulgarian association of information technologies was established in 1995 and to date has nearly 100 members.
The total size of the Bulgarian IT market in 2011 is around $947mln, up from $902mln in 2010 and is expected to grow annually by 6% during the 2011-2015 forecasted period.

Export destinations of Software products

- 2009: 28% Germany, 30% CEE, 5% UK, 31% Rest of the world, 6% Others
- 2010: 28% Germany, 29% CEE, 5% UK, 33% Rest of the world, 5% Others
- 2011: 32% Germany, 29% CEE, 5% UK, 29% Rest of the world, 5% Others

Over 56% of the Software companies’ sales for 2011 are realized abroad.

Exports to the US for 2011 (29%) are decreasing, those to Europe (66%) show slight increase.

UK receives more than half of the exports for Western Europe.

Bulgaria’s software sector registered a growth of 3.3% in 2011 year-on-year.

Source: BASSCOM, Barometer 2012
The IT sector is concentrated in Sofia, but destinations for foreign companies or branches of Bulgarian ones.

Industry Snapshot
other big cities also represent outsourcing or branches of Bulgarian ones
Optical network and 3G coverage of the main telecom operators (2011)
the main telecom operators (2011)
Bulgaria offers excellent internet infrastructure

According to the third Annual broadband study by Cisco, Sofia ranks 11th in quality of the Internet connection and 6th out of European cities.

Having in mind the internet speed, I would like to live in Sofia.

Fernando Gil de Bernabe, senior director at Cisco

A recent study shows that Bulgaria ranks third in the world in terms of fastest internet connection (download speed Kbps)

<table>
<thead>
<tr>
<th>Country</th>
<th>Speed (Kbps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Korea</td>
<td>2202</td>
</tr>
<tr>
<td>Romania</td>
<td>1909</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>1611</td>
</tr>
<tr>
<td>Lithuana</td>
<td>1462</td>
</tr>
<tr>
<td>Latvia</td>
<td>1377</td>
</tr>
<tr>
<td>Japan</td>
<td>1384</td>
</tr>
<tr>
<td>Sweden</td>
<td>1234</td>
</tr>
<tr>
<td>Ukraine</td>
<td>1190</td>
</tr>
<tr>
<td>Denmark</td>
<td>1020</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>992</td>
</tr>
</tbody>
</table>

Source: BuddeComm based on ITU data; Pando Networks Sep. 2011
Sofia is among the worldwide leaders in broadband quality
(Broadband Quality Score 2010 (BQS))

<table>
<thead>
<tr>
<th>City</th>
<th>BQS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yokohama (1)</td>
<td>85</td>
</tr>
<tr>
<td>Nagoya (2)</td>
<td>82</td>
</tr>
<tr>
<td>Seoul (5)</td>
<td>68</td>
</tr>
<tr>
<td>Sofia (10)</td>
<td>56</td>
</tr>
<tr>
<td>Bucharest (14)</td>
<td>52</td>
</tr>
<tr>
<td>Tokyo (18)</td>
<td>49</td>
</tr>
<tr>
<td>Chicago (27)</td>
<td>43</td>
</tr>
<tr>
<td>New York (29)</td>
<td>42.5</td>
</tr>
<tr>
<td>Budapest (38)</td>
<td>39</td>
</tr>
<tr>
<td>Houston (56)</td>
<td>33.5</td>
</tr>
<tr>
<td>Los Angeles (63)</td>
<td>32.5</td>
</tr>
</tbody>
</table>

The third annual study from Saïd Business School, Oxford University, looks at broadband quality in 72 countries and 239 cities. Bulgaria was among the 14 of them already prepared for the Internet “applications of tomorrow“, such as high definition Internet TV and high quality video communications services (consumer telepresence) etc.

By this criteria Bulgaria topped the list of Efficiency-driven economies with a 57% increase in BQS.

Bulgaria ranks first in the world in terms of the Internet price - € 0.41/Mbps

Source: netindex.com, Cisco & Said Business School (Oxford University)
HUMAN RESOURCES
Bulgaria’s solid traditions in informatics education bring high-qualified ICT specialists to the market

Bulgaria stands for a critical mass of highly-qualified, well-educated professionals who bring together proven practical understanding of business with high-level theoretical skills to deliver efficient, cost-effective international solutions.

A.T.Kearney

Key facts on Human Resources Availability:

- 220 high-schools with ICT-focused curricula backed up with a solid language preparation
- Over 15 Universities offering majors in ICT
- A range of ICT Certificate programs available, ranking Bulgaria 3rd in Europe with regard to ICT Certified professionals
- Substantial supply of specialists, including educated abroad
- Competitive wages
Bulgaria has an unusually well-developed educational system specializing in electronics, engineering, and computer sciences.

3,500 students get a degree in IT from Universities in Bulgaria each year. Data indicate an upward positive trend as total enrollment has doubled since 2001.

**Breakdown of enrolled students per IT curriculum**

- Computer science, information systems and technologies: 5,270
- Business informatics and information technologies: 3,900
- Communication and network technologies: 3,500
- Mathematics and applied mathematics: 620
- Statistics: 490
- Software technologies and engineering: 470
- Computer media technologies: 320
- Others: 100

**Around 90% of the employees have graduated from two universities:**
- Technical University – Sofia: 41.5%
- Sofia University: 38.8%

Source: Ministry of Education, BASSCOM Barometer 2011
The Bulgarian branch of Samsung Electronics in cooperation with the National Art Academy launched a new educational project called “School of Art and Design of Samsung”. The initiative is aimed at students aged 10 to 12 years. Within the new project, every Saturday at the National Art Academy will take place lessons in painting, illustration and fundamentals of composition.

The new Bulgarian University opened a new specialty - “Technology for computer games.” Students will study in detail all elements related to the creation of a computer game. Training will be accompanied by internships at Software companies.

NASA elected Bulgaria to be among the hosts of the event “Space Apps Challenge”. The technological race will be held on 20-21 April 2013 in Sofia and other 74 cities in 41 countries, and will virtually bring together people from all over the world in order to develop technological solutions for improving life on the Earth and to contribute to the accomplishment of the research missions in space.
Human Resources

Sample Universities

Sofia University
- 25,000 students
- Faculty of Mathematics and Informatics has around 2,500 enrolled students annually
- Attracts winners of prestigious regional and global competitions
- Laboratories run by IBM, Oracle
- Affiliate center of Harvard University
- 16 Faculties: Modern languages, Law, Economics and Business Administration, Natural Sciences, etc.
- Double diploma programs with Paris Sorbonne and Bordeaux IV, City University of Seattle
- Business and technical majors taught in English, French or German

Technical University of Sofia
- 14,000 students
- Faculties in Electronics, Computer Science, Machine Building, Transport, Telecommunications, Business Administration
- Three Engineering faculties with foreign language tuition, respectively English, French and German
- Partnerships with international technological companies such as Siemens, Ericsson, Hewlett-Packard, Microsoft, Daimler Chrysler, Globul, etc.

New Bulgarian University Sofia
- 12,000 students
- Private university
- Specializes in Social sciences, Natural Sciences and Technologies, Arts
- Affiliated by the Open University in Great Britain
- Attracts honorable lecturers from all over the world
- Modern equipment and established research activity

www.uni-sofia.bg
www.tu-sofia.bg
www.nbu.bg
American university in Blagoevgrad
- 1 200 students
- Private University
- Departments of Languages and Literature, Business, Computer Science, Economics, Journalism and Communication, Mathematics and Science, Political Science
- Provides graduates with the opportunity to continue their education at prestigious universities in the United States and Europe, such as Harvard Business School, Columbia, UCL, MIT

Varna Technical University
- 4 500 students
- IT majors include:
  - Software and Internet Technologies
  - Computer systems and technologies
- The University offers 7 specialized laboratories with the latest IT technologies
- The project developed by the department “Integration of Virtualization and Mobility for Learning” won a world award for 2009 in “HP Innovation in Education 2009 Grant Initiative”

University of Plovdiv
- 12 000 students
- Faculties of Economic and Social studies, Mathematics and Informatics, Modern languages, Law, Philosophy and History
- Collaboration with other educational institutions from the EU, India, Indonesia, Canada, Columbia, Mexico, Russia and Turkey
Bulgaria holds 3rd place in Europe and 10th position worldwide regarding the absolute number of certified ICT professionals

IBM, Microsoft, and ESRI offer a variety of intensive training programs

- 56 CISCO Academies:
  - 3 000 students annually
  - 17 000 persons were trained in Cisco programmes over the past five years

- SAP University Alliances program:
  - Sofia University
  - Sofia Technical University
  - University of National and World Economy

- Oracle Academy works with high schools and universities’ IT departments

- Over 1 000 Bulgarians have received accreditations in HP Education Centre Bulgaria

53% of employees in ICT have a master degree.

53% of network specialists have obtained recognized ICT certificates.

Currently there are **220 schools** in different regions in Bulgaria that offer specialized preparation in ICT.

- Approximately 15,000 students receive a solid background in ICT right after graduating from school.
- English is the language offered in addition to ICT training in most schools (82%) with German and French programs being also widely spread.

Bulgarian schools are traditionally providing high-quality education in the fields of mathematics and informatics. In the last 15 years Bulgarian students have won 10 gold, 22 silver and 22 bronze medals at the International Olympiad in Informatics.

... The International Olympiad in Informatics was proposed by the Bulgarian Professor Sendov, delegate to the UNESCO.

... The first Olympiad took place in the town of Pravets, Bulgaria, in May 1989.
Bulgarian high schools - Examples

**Pravets Vocational School of Computer Technology and Systems**

- Accredited by the Technical University of Sofia in 1986
- Over 2,000 ICT graduates
- Curricula includes advanced classes in microprocessor techniques, computer architecture, multimedia, etc.
- More than 950 hours of English are provided
- Teachers in the school are outstanding lecturers from the Technical University of Sofia

**Sofia High School of Mathematics**

- Specializes in mathematics and informatics for students between the grades of four and twelve
- Intensive language programs introduced in the curricula
- Regular participation in contests in mathematics and informatics
- A record of Champions from the International Mathematics and Informatics Olympiads

---

Bulgarian Informatics Team won the highest score in the 19th Central European Olympiad in Hungary in 2012, defeating the teams from Romania, Poland, Czech Republic, Croatia, Hungary, Slovakia, Germany, Israel, Switzerland and the Netherlands.
Bulgaria has one of the highest proportions of students abroad from all European countries and 17% of those returning to the country have majored in Technical studies.

![Chart showing students in another EU / EEA country, (%) of all](image)

### Breakdown of students who returned to Bulgaria by university majors, 2006-2010 (%)

- **Business & Economics**: 28%  
- **Social sciences**: 19%  
- **Technical studies**: 17%  
- **Medical studies**: 9%  
- **Law**: 8%  
- **Language studies**: 7%  
- **Others**: 12%

Besides the good working environment and attractive renumeration, an IT specialist has a lot of opportunities to build a career and gain experience in Bulgaria. Most of my colleagues in Vienna have either returned to Bulgaria or plan to do it after their graduation.

*Jordan Naydenov, Software engineer at ProSyst, Bachelor degree in Informatics and Management, Vienna Technical University*

I believe that we ourselves determine our lives, not the country we live in. To me the people we surround ourselves with are what's important. In Sofia I found an excellent and stimulating working environment and people I love to communicate and live with, while at the same time I am close to my family and friends in Serbia.

*Petar Schwartz, Head of Melon Interactive Media Department*
Bulgaria boasts with very well supplied IT sector in terms of qualified specialists

Bulgarian IT labour market is among the fastest developing in Europe, with remuneration packages, qualifications of professionals and development opportunities reaching the highest levels in Bulgaria’s labour market.

Goal Europe

Total employment by sectors, 2011

- Telecom services: 8,584
- Other IT services: 7,592
- Export: 6,987
- Hardware sales: 4,589
- System integration: 3,701
- Software sales: 3,348
- Software development: 2,980
- Training: 2,161
- Distribution: 1,651
- SCS: 1,364
- E-services: 1,273
- Consulting: 838

Concentration of ICT experts in Sofia and large cities with population over 100 thousand (74% of workers in the sector)

- Basically young professionals - 74% are aged under 45 years

- The majority of ICT professionals work in Bulgarian private companies - 69%

Source: ICT Top 100, Computerworld, 2011

Expected biggest source industries for new contracts in Bulgaria (%)

- IT & Internet: 40
- Telecom: 26
- Transport & Tourism: 17
- Other: 17

Source: exentix, 2012
working at competitive wages

Salaries in the ICT sector are dependent on several factors: location, education, qualifications and experience.

In 2012 the level of salaries raised by nearly 9%. However, wages in Bulgaria for ICT specialists remain relatively lower compared to neighboring countries and vary significantly among different cities.

Average gross monthly compensation 2011, €

<table>
<thead>
<tr>
<th>Service</th>
<th>Compensation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telecom services</td>
<td>1016</td>
</tr>
<tr>
<td>Consulting</td>
<td>997</td>
</tr>
<tr>
<td>Training</td>
<td>929</td>
</tr>
<tr>
<td>Software development</td>
<td>920</td>
</tr>
<tr>
<td>Export</td>
<td>861</td>
</tr>
<tr>
<td>Other IT services</td>
<td>850</td>
</tr>
<tr>
<td>E-services</td>
<td>828</td>
</tr>
<tr>
<td>Software sales</td>
<td>827</td>
</tr>
<tr>
<td>System integration</td>
<td>823</td>
</tr>
<tr>
<td>Distribution</td>
<td>760</td>
</tr>
<tr>
<td>Hardware sales</td>
<td>726</td>
</tr>
<tr>
<td>SCS</td>
<td>595</td>
</tr>
</tbody>
</table>

Note: Depending on the experience the salaries could be higher.

On average ICT remuneration in Sofia is 1200 euros and is around 20% higher than the average for the country.

Comparison of Annual Salary in Bulgaria and other European countries ($/month)

<table>
<thead>
<tr>
<th>Software Developer</th>
<th>Sr. Software Engineer / Developer / Programmer</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 536</td>
<td>20 752</td>
</tr>
<tr>
<td>17 830</td>
<td>28 487</td>
</tr>
<tr>
<td>20 345</td>
<td>38 119</td>
</tr>
<tr>
<td>20 484</td>
<td>27 043</td>
</tr>
<tr>
<td>22 736</td>
<td>35 729</td>
</tr>
<tr>
<td>23 949</td>
<td>29 730</td>
</tr>
<tr>
<td>23 989</td>
<td>27 320</td>
</tr>
</tbody>
</table>

Source: Computerworld 2012, Payscale 2012
SUCCESS STORIES
Ranked #1 System integrator in Bulgaria for 2010 (According to Computerworld IT Top 100 Companies in Bulgaria)

The largest SAP integrator in Bulgaria (ERP, CRM,BI, HR) with more than 60 implementations on the local market


The Bulgarian subsidiary of the company was a part of the project. Atos integrated, managed, backed up the giant IT system that sends the competition results and athlete information to the various audiences and media representatives in less than 0.3 seconds. As Worldwide IT Partner of the International Olympic Committee, Atos was responsible for leading the consortium of IT partners to design, build and operate the massive, mission critical IT infrastructure and solutions that supported the London 2012 Games.

Bulgaria could be a perfect provider of boutique IT services as well as the EU platform for penetration in the smaller Eastern European markets. The country’s biggest advantage is its macroeconomic predictability and the risk management capabilities of Bulgarian software engineers.

Veska Davidiva, CEO, Atos,Bulgaria
Bulgaria is one of the few locations worldwide for CISCO’s software development core activities.

» Completed major infrastructure projects for Bulgaria’s largest telecom companies.

Investor in educational initiatives:
Cisco has a long history in education and talent development with Cisco Networking Academy. Cisco Networking Academy program was launched in Bulgaria in 1999. Currently there are 50 academies and over 3,500 students participating in the program across the country. Since the launch of Cisco Networking Academy, over 17,000 Bulgarian students participated in networking academy courses.

Sofia R&D Office
Cisco Sofia R&D office is a part of the Cisco Enterprise Collaboration Platform. Currently employs around 70 people who work in various roles covering the full spectrum of software research and development.

Bulgaria is the perfect location for a small and medium investment in the IT sector, which needs a wide spectrum of services provided by qualified multilingual human resources at optimal price.

Borislav Dimitrov, General Manager, CISCO Bulgaria
As an essential Solution Center for CSC in Europe, CSC Bulgaria has been providing innovative, customized and easy to implement IT solutions.

The Company portfolio of services includes full scope of software development activities and various IT services such as. Net and Java applications development, dataware house solutions development, database administration, etc.

CSC Bulgaria manages projects in their entirety (writing of specifications, developments, tests, integration and maintenance).

Amongst CSC clients are some of the biggest companies from the Financial Services sector.

CSC manages projects in their entirety (writing of specifications, developments, tests, integration and maintenance).
Products driven by the team in Bulgaria are: vSphere Client, VC Orchestrator, PowerCLI. The team has significant contribution towards: vCloud Director, Virtual Center, Site Recovery Manager, vCOPs.

“VMware has made and continues to make significant investments in Bulgaria. The team in Sofia is adding strategic value to the overall product portfolio of the company and the plan is for a continuous growth and development. The company also invested in a state of art office facilities for 400 people, high-quality in-house lab space, and a co-location datacenter, which is hosting equipment for the EMEA R&D Engineering teams.”

Diana Stefanova, Managing Site Director for VMware Bulgaria.
Established: 2001  
Personnel: 500  
Activities: Automotive Research & Development Engineering Center  
www.johnsoncontrols.com

- Created more than 120 electronic devices which you can see in 8 out of 10 cars in Europe
- Performs testing and validation of products safety
- Has 8 centers worldwide for research and development of new products, but the one in Sofia is the largest for car electronics
- Created software for the operation of electronics in the dashboard and multimedia systems in models of almost all car companies
- Funds programs in four technical and one business-oriented universities and has an internship program

Client: Peugeot

Description: Johnson Controls – Bulgaria recently was named a winner of a 2010 PSA Peugeot Citroen Innovations Award for this head up display. The product software was developed entirely in Bulgaria. This optional device displays key vehicle information such as speed, cruise control, speed limiter status and distance alert times, directly in the driver’s primary field of vision, so there is no need for drivers to take their eyes off the road.
Client: BMW

**Description:** BMW PL6IC is a high end instrument cluster product with several variants (high line, mid line, Rolls Royce and M-sport) for BMW L6 carline (including F01, F10, Rolls Royce, M-Sport and others) It was designed to serve as a multifunctional device with main features related to representation of driver information on its own big TFT display, control lamps, stepper motors, etc. It also generates the picture on the Head-Up Display. It is developed by JCI (develops the Cluster Sub System) and Robert Bosch (develops the Graphics Sub System).

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Client: Ford

**Description:**
The cluster is inheritor of well known Ford HEV cluster and is especially developed for Lincoln cars. As its predecessor, it has 2 TFT displays (800 x 480 pix) and a central speedometer pointer.

**There are few software extra additions:**
- New Lincoln color graphics (the gray gauges on the picture)
- New Lincoln warning sounds
- ECO flowers on the right hand screen – with this new feature, Ford’s idea is in form of a game to motivate people to drive more efficiently and ecologically (to have more flowers, you should drive more efficiently)
Success Stories

Instantly locate more than 2 000 bank offices and 3 400 ATMs in Bulgaria
Bankomati for iOS or Android scours the neighborhood and generates an interactive map complete with cash-point machines and bank offices where you can replenish your wallet. Bankomati is also equipped with a user-friendly search functionality. This comes in really handy when researching ATM availability while planning your next business trip or vacation to Bulgaria.

For more than a decade StangaOne1 has been the preferred partner of leading interactive agencies and brands worldwide, among which:

Technologies: HTML, HTML5, xHTML, CSS, CSS3, JavaScript, cufon, Adobe Photoshop, Adobe Illustrator, Adobe InDesign, Adobe Flash, PHP, etc.

Stanga in years:

1999 - Founded in Sofia as a professional provider of custom software and web solutions.
2007 - The global enterprise One1 became a shareholder in the company and the brand of StangaOne1 was born.
2011 - Two new development centers were launched in Plovdiv
2012 - Based on company’s revenue, the 2012’s edition of Computerworld ICT Top 100 ranked StangaOne1 among the top 3 software services exporters of Bulgaria.

Established: 1999
Production centers in Bulgaria: Sofia and Plovdiv
Personnel: 250
Specialties: Web Development Applications, Digital Production, Engineering Services, QA & Testing

www.stanga.net

Vassil Guenov (on the left), General Manager of StangaOne1, receives the first prize in the IT Services category from Svetlozar Petrov, Managing Director of JobTiger, at the Top ICT Employer 2012 awarding ceremony in Sofia
Bianor

Established: 1998
Personnel: 60
Activities: Mobile & Wireless Software Solutions

www.bianor.com

- Provides consulting services and delivers technology solutions to clients around the Globe
- Projects range from Telecom-grade back-end services to enterprise and consumer mobile applications

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**iMediaShare - Experience Personal TV**

- iMediaShare transforms the smartphone into a remote control, allowing seamless streaming of online media on TV, and requires no setup or cables
- Allows one-click wireless streaming of personal and favorite online multimedia to home media centers via a mobile phone
- Addresses the issue of convenient on-demand access to online video content from home TVs and access to channel subscriptions anywhere on any device
- The service aims to provide distribution technology to media companies and video pre-roll ad space for targeted advertisement
The company was founded in 1997 in Cologne, Germany

Software development is entirely made in Bulgaria or in cooperation with the offices in Germany and South Korea, with the leading role of the Bulgarian team

Production is entirely exported

In 2000 with half of the employees of the company was formed ProSyst 1, which was bought by SAP. In the process of negotiations and commercial transactions, it was renamed InQMy, then became part of the software giant SAP and its technology center under the name SAP Labs Bulgaria.

ProSyst has a truly global customer base ranging from Fortune 100 corporations to individual developers: Philips, Audi, BMW, Samsung, Deutsche Telekom, Nokia, Siemens, Motorola, Alcatel-Lucent, Cisco, Miele, Johnson Controls, SAP, HP, Bosch, Telefonica etc.
The Busch-ComfortTouch

- The Busch-ComfortTouch combines the functions of a house control, a home infotainment centre and entertainment centre
- With the Busch-ComfortTouch, you can operate or dim the lights, control your blinds, regulate the room temperature, play MP3 or video files, access email, surf the web or set the wake up alarm – even by remote control
- Busch-ComfortTouch runs ProSyst mBS OSGi technology

Miele@home – features:

- With SuperVision, the current status of networked appliances can be read in a central location, for example on the display panel of the oven
- The connectivity feature allows communication between hobs and cooker hoods, with results being a good room climate and protection of the environment as unnecessary energy consumption is avoided
- With the “InfoService” function, appliances can send status updates, instructions and error messages by e-mail – accompanied by tips on how to resolve them

With the use of a Miele Gateway, networked household appliances are integrated into the existing domestic bus system. This allows the remote control and management of connected household appliances, for example from a personal computer via the internet, or a mobile phone

In a Smart grid, electricity prices vary throughout the day and reflect supply and demand. With smart grid technology, Miele appliances are able to use lower-rate tariffs offered by electricity boards
SAP is the world’s largest business software company – with more than 54,000 employees and development locations in more than 50 countries worldwide.

Eleven years ago SAP came to Bulgaria to fill out a concrete product gap and stayed because of the talent. By leveraging that potential, over the last years the SAP Labs Bulgaria grew to more than 500 employees and managed to position SAP as a key player in the worldwide Java community. The Sofia Lab investment into the Enterprise Java space powers up practically all Java-based products at SAP.

Plamen Tilev, Managing Director, SAP Labs Bulgaria.

The first SAP investment in Southeastern Europe. Similar software development is made only in Germany, Israel and USA.
As a technological center involved in the R&D of SAP’s platforms for developing business processes and applications, the Lab contributes to the foundation of the on-premise deliveries such as SAP NetWeaver, Composition Environment, BPM, PI, Enterprise Portal – including their administration and lifecycle management. In the on-demand space, the Lab is delivering the major part of SAP’s Java OnDemand Platform.

The Lab is one of the pioneers and leaders in applying Lean thinking and agile methodologies to large-scale software development in Bulgaria.

The company is an active member of the Bulgarian business community organizing and supporting business events with focus on software development. It also collaborates with Bulgarian universities under the SAP University Alliances program.

SAP Labs won Hewitt Best Employer Award in Bulgaria for 2006 and 2008. The Lab became ICT company of the year for 2008. It also received the International Investor in South East Europe prize and was nominated for European Business awards.
**Established:** 2003  
**Personnel:** 10  
**Locations:** Sofia and Brisbane, Australia  
**Activity:** Mobile Software, Web-based Applications

**Major clients:**  
- Air Canada  
- Air Holland  
- Big Bus Company  
- Michelin etc.

**Projects:**

**Mobile Ticketing System**  
The system includes PDA software and Back Office system.  
Major PDA software features are: cash, credit card and vouchers payments, multicurrency sales, discounts, annulments, barcode reading and generating, advanced tickets, start of day and end of day procedures, revenue control etc.  
Major Back Office system features: user level access, multiple ticket prices and valid from schedule, end of day procedure, multiple agents’ types, voucher generation, invoicing and comprehensive reporting.

**Truck Analyst**  
Site information management application with reporting and communication modules.

**Mobile Orders**  
Android application for mobile orders collecting.

**E-Commerce System**  
Rich Internet Applications (RIA) that improve the online shopping experience.  
The application delivers higher conversion rates and increase brand equity for retailers who need to differentiate themselves online.  
The e-Commerce system makes the online shopping experience more dynamic, responsive and intuitive.
Established: 1990
Personnel: 170
Activities: Software development and implementation

Provided global distribution system and supports subsidiaries as well as partners’ network in more than 20 countries

Completed over 180 projects across Europe, Middle East, Africa, Asia, and America

Software for insurance business of companies selling Property & Casualty, Life & Pension and Health policies

Modular solution that provides full coverage of all aspects of insurance business area both horizontally and vertically

Global customer base with more than 40 installations for insurance companies

Organizing the straight through processing, which may be activated by INSIS, external systems, customer web sites and agency portals

Ranked N1 in all but 1 areas of analysis in the latest Gartner report discussing the Critical Capabilities for European Non-Life Policy Administration Systems

Recognized for its ability to expand with the business in multiple countries and companies, its flexibility through its rules approach and customer-centric concept
Own products (40+ mobile apps):

- 200 000 app downloads per month
- Over 10 million devices host Melon Apps

Pre-installs for Nokia, est. 5 000 000 devices:

Since 2007 Nokia has licensed a fully functional version of Advanced Call Manager for global distribution with the Nokia E71, E66 and E63 thus making the application instantly available to Nokia users as part of the standard preloaded software offering. Advanced Call Manager, Advanced Device Locks and SMS Spam Manager have been included as part of the built-in software set for the Nokia E-series in the APAC region. Full versions of SMS Spam Manager and Easy Reject are preinstalled on a range of Nokia E-series and N-series phones in Nokia India.

GPS Voice Navigation offers turn-by-turn voice driving instructions for Windows Phone devices. It displays relevant travel information like hotels, gas stations, speed cameras, etc. GPS Voice Navigation offers a choice of four map and routing providers: Google®, Bing®, Nokia® and MapQuest®.

This app consistently ranks in the Top 3 paid Travel applications on the U.S. market and most others.

Established: 2000
Personnel: 150
Activities: Software Development

http://melon.bg
E-Learning products and services

- Learning Management Platform and Authoring Tools
- 50,000+ learners use Melon products and content

Software development services for

- Enterprise Customers (Coca-Cola Hellenic, Nokia, Philips, Egmont, Selecta)
- 25+ Startups, 1/4 based in London (Bookatable.com, fotoalbum.eu)
- Software Companies/Outsourcing Agencies in EU and USA

The Hotel Finder application is regularly featured on Windows. Store holding a leading rank along top industry players’ apps.
Established: 2000  
Personnel: 200+  
Activities: Software Development, Services, R&D, Mobile Products

http://musala.bg

Services
Musala Soft is a software engineering services company, specialized in nearshoring and offshoring, delivery of complex and large scale software projects, IT consulting and solution implementation. Clients include IBM Corporation, Cisco, VMware, SAP, Allianz, HP, Piraeus Bank, OMV, Bulgarian National Revenue Agency, Dutch Customs, etc.

- IBM Premier Business Partner for Software
- Microsoft Gold Certified Partner
- Oracle Certified Partner
- TIBCO Consulting Partner

R&D
The Applied research and development center is focused on research and advancements in the scientific fields related to information visualization (especially on small screens) automated testing on mobile devices, software system analysis, software modernization and software evolution.

Products
The newest product offerings are for mobile devices include:
cAPPalogue - high definition, easy-to-use product catalogue that allows the entire shopping experience to become truly mobile. The focus of this product is to engage the customers into experiencing the products they would like to buy offline or online, anytime and anywhere. Integration with e-Commerce platforms.
The first Bulgarian company to receive International award “Software Excellence” in category “Small and Medium Enterprises” for the successful certification at CMMI Level 3 by the European Software Institute (2010)

Sponsors the National Informatics and Mathematics Team

Annual expenditures of the company for R&D and innovations form 10% of total expenditures

The purpose of Musala Soft’s educational games is to provide children with the opportunity to learn while playing. The games help develop logical thinking, creativity and guidance of children through complex geometric shapes. The first games are iOS based (iPhone / iPad / iPod) but the team considers opportunities to include other popular platforms / devices (Android, Nokia OVI, WP7).

**Smart Source Analyzer** - platform for upgrade, audit and quality management of software development systems. Using the methods of static analysis and artificial intelligence the platform identifies and analyzes software systems, problematic elements and anti-models. Partners in the project are Sofia University, Technical University - Sofia, Bulgarian Academy of Science.
Clients: **220 +**
Projects: **350 +**
Awards: **70 +, 3 times**
“Agency of the Year”

Clients include:
- The World Bank
- Fibank
- Colliers International
- Lindner etc.

Completed over 350 projects for more than 220 large corporate clients in the United States, Europe and Bulgaria, building web sites to international quality standards.

Developed highly sophisticated systems for online media content management, e-shops, portals, intranets.

Integrated clients’ corporate websites with ERPs, CRMs and other 3rd party software.

**Netage**

Established: 1998
Activities: Web Design&Development
Specialties: Online media, E-shops, Corporate websites, SEO

www.netage.bg;

Netage Solutions
Your Edge™

is the premier provider of CRM software and online reporting systems for the alternative assets industry, including private equity and venture capital firms, hedge funds, real estate investment firms, funds of funds, prime brokers, family offices, and institutional investors.

With over a decade of industry experience, Netage Solutions’ DynamoTM is the proven platform for more than 200 of the world’s premier alternative investment firms. Collectively, company clients manage $400 billion in assets.

www.netagesolutions.com
Established: 1998  
Personnel: 150  
Activities: Software Development Services, Consulting, Product Development

- Has been selected for Best Employer in Bulgaria and is listed in the Top 10 ranking for Best employers in Eastern Europe

- It is among the first 3 Bulgarian software companies, certified against Capability Maturity Model Integration

- Nemetschek has provided software development services through its partners to end customers like Chrysler, Rolls Royce, Maserati, Honda, Biticino, Allianz and others

- Provides software development services to one of the international leaders in EDMS (Electronic Document Management System) DocuWare and additionally implement their solution in organizations like Bulgarian Ministry of Culture, Sofia Municipality, National Assembly, National Library and others

- The CAD (Computer-Aided Design) systems, developed by Nemetschek Bulgaria for its US partner have turned into worldwide leaders and one of the most preferred in Japan

Bulgarian IT sector is mature enough to offer good specialists and technological know-how. What makes it different, is the added value provided to the customers.

George Brashnarov, General manager of Nemetschek Bulgaria
Established: 2004  
Personnel: 30  
Locations: Sofia and Plovdiv  
Activities: Software Testing and Quality Assurance

The first and only accredited ISTQB training provider in South East Europe and a partner with SEETB (South East European Testing Board)

Clients are one of the leading software companies in Bulgaria as well as various multinationals:
- Siemens
- SAP AG
- Infragistics
- CISCO
- Software AG
- Telerik etc.

Major experience in the following business areas:
- ERP Systems for Small and Medium Enterprises (SME)
- SAP Systems
- Web Applications and Specialized Portals
- E-Business Solutions
- Investment Funds
- Online Payment Solutions and
- Invoicing Management
- Mobile Technologies
- Embedded Software for Communications etc.

Portfolio includes the following specific tasks related to Test Automation:
Evaluation of Automated Testing Tools
Fully or Partial Automated Testing of the product/application
Established: 1992  
Personnel: 400+  
Activities: Software Development and Integration Services, R&D, IT Consulting, Outsourcing  

www.sirma.com

- one of the largest software groups in SEE - includes 21 companies and joint ventures.
- represents a new generation of IT ventures where cost effectiveness is only one of the competitive advantages, along with innovative expertise, Agile Software Development, and an extensive know-how in the hottest sub-segments of software engineering.
- solutions are honored with some of the most prestigious professional accolades.

Sirma focuses its efforts on the most advanced fields of software development:
- E-governance
- Mobile services and applications
- Telecommunications
- Banking and Finance
- Web Platforms
- ERP, CRM, BPM and BI
- Semantic technologies
- Corporate Search Tools
- Managed Hosting Services
- Private Cloud Computing
- CAD/CAM, packaging and cutting solutions

The most important thing at the start of every new venture is the team you rely on. People make a difference and bring inspiration to the projects; the rest is simply a matter of resources planning.

Tsvetan Alexiev, CEO

The group has offices and partners in USA, UK, Germany, Norway, Canada, Brazil and Turkey, enabling it to work more efficiently, taking into account specific needs of each local market.
What does Loyax platform stand for?

➤ Cloud solution designed to meet the needs of retailers and service providers, seeking a tool to boost their sales through implementation of scalable loyalty platform
➤ Utilizes sales information into meaningful data that enable vendors to better segment their customers
➤ Provides vendors with a flexible solution that ideally fits to any business model:
  - Standalone solution, easy to run - SMB edition
  - Integration with existing software - Enterprise edition

Main features of Loyax:

➤ Points collection
➤ Discounts
➤ Points exchange
➤ Customer loyalty pattern’s reports
➤ Scalable solution for one or multiple business
Established: 1991
Personnel: 70
Activities: Telecommunications, Networking and Microelectronics
www.smartcom.bg

Provided design, system integration and system support services
More than 100 completed projects throughout the EMEA region
Awarded the 2010 Bulgarian Innovation award in the medium sized enterprise category

In the field of microelectronics the company develops Electronic Design Automation (EDA) software and provides Design Enablement services. The EDA department research agenda includes also modeling, design and simulation of radio-frequency (RF) and microelectromechanical systems (MEMS).

An integrated approach to Active Ethernet based Fiber to the Home (FTTH) triple and quad play services
Uses DHCP relay that allows user identification and better subscriber management
Applies Quality of Service (QoS) and Bandwidth Control mechanisms to ensure high level end user services
Has advanced remote configuration monitoring and management
In October of 2007, Deloitte Touche Tohmatsu ranked Telerik 3rd in its “Rising Star” Technology Fast 50 program for the 50 fastest growing technology companies in Central and Eastern Europe, The award is based upon the percentage revenue growth over the previous three years.

Over 100,000 organizations in 94 countries use Telerik products
Telerik customers include many Fortune 500 companies, as well as renowned educational, governmental and non-profit institutions
9 offices worldwide

Telerik is Microsoft Gold Certified Partner. Microsoft announced Telerik as winner of the 2010 Central and Eastern European Partner of the Year Award. The company was selected based on its Sitefinity content management system (CMS).

Products:
- Data Access – OpenAccess, a convenient tool for building powerful data layers for all popular databases through a visual designer
- TeamPulse – the tool that helps teams organize their work, collaborate and share knowledge
IBA Services:

- Macroeconomic information
- Legal advice
- Information on operational costs
- Regional data on unemployment, availability of skilled labour force, level of education, infrastructure, foreign investors and industrial zones
- Recommendation of vacant land
- Identification of potential suppliers, subcontractors or joint venture partners
- Individual administrative services
- Contacts with the central and the local authorities
- Contacts with industry chambers, local universities and NGOs
Project “Promoting the advantages of investing in Bulgaria”
BG 161PO003-4.1.01-0001-C0001, with beneficiary InvestBulgaria Agency, has been implemented with the financial support of the European Union through the European Fund for Regional Development and the national budget of the Republic of Bulgaria.