IT Market in Eastern Europe:
Full Overview of Top Software Development Destinations
Today’s technological revolution fundamentally alters the way we live, work, and communicate. It creates ample business opportunities and brings disruption to every sector of the economy. The transformation is driven by an exponential increase in computing power and growing amounts of data. AI, robotics, big data, blockchain, Internet of Things, autonomous vehicles, 3D printing, VR and other technological breakthroughs offer endless possibilities to businesses.

Companies are leveraging digital technologies to automate production, boost productivity, penetrate new markets, and satisfy ever-changing consumer needs.

Digital skills are becoming the key to success of any organization. No wonder the demand for talented tech professionals rises along with the overwhelming need to embrace technological innovations.

The change is global. Yet the IT resources organizations need today are spread unevenly. That’s why, businesses often struggle to find the necessary expertise in the USA, the UK, the Nordic countries, India etc. This report aims to find out whether Eastern Europe can close this gap.

The world’s data stock is doubling every 20 months, the number of Internet-connected devices has reached 20B, and mobile payments will soon top the $1T mark.
The main purpose of this report is to give a comprehensive overview of the Eastern European IT industry as one of the most productive sectors of the region’s economy.

The scope of the report uncovers the latest trends in the industry and examines the current state of information technology in Ukraine, Poland, Belarus, Hungary, România, the Czech Republic, Bulgaria, Moldova and in the Baltic region. It aims to help businesses, investors and decision-makers choose the most advantageous IT destination for mutually beneficial cooperation.

N-iX has provided a wide array of software development services and cooperated with international clients for over a decade. Therefore, we understand how challenging it is to navigate a global IT market.

In this report, we try to cover major outsourcing trends and present a comprehensive overview of the IT industry dynamics in the Eastern European and Baltic countries.

We have collected the data from various sources including reports and surveys by PwC, Deloitte, Bloomberg, Tholons, A.T. Kearney, and more to inform you about the latest trends and challenges of the major software development destinations in this region.
Choosing an effective method of accessing talents is one of the most strategically important decisions a company can make. If companies are successful in this decision, they may unleash a whole world of new digital possibilities. With this in mind, organizations weigh up all the pros and cons of outsourcing and insourcing as the most widely-used strategies.

The GSA report states that nearly 70% of the companies are going to outsource more in the upcoming years. And nearly half of those plan to do it extensively. This will significantly impact the way we understand outsourcing:

1. **It is more than just a simple cost-cutting solution.** Businesses increasingly see outsourcing providers as partners for introducing innovations.

2. **Companies are redefining the ways they enter into outsourcing relationships and manage the ensuing risks.** Cyber security and industry regulations are now major risks outsourcing vendors manage to mitigate while fostering innovation.

3. **Companies are changing the way they are managing their relationships with outsourcing providers.** More and more often, they enter into mutually beneficial partnerships enabling more transparent cooperation.

**In what way is outsourcing bringing value to businesses?**

- creating a vibrant pathway for driving innovation;
- allowing companies to focus on core competencies;
- giving flexibility to change the size and scope of any IT activity;
- offering a perfect price to quality ratio;
- creating possibilities for implementing digital technologies;
- presenting vast availability of all kinds of IT resources;
- enabling easier and faster project scaling.

According to Stratistics MRC, Global IT Outsourcing Market is expected to reach $481B by 2022 growing at a CAGR of 6.2%.
In today’s highly competitive and dynamic business environment, few decisions are as critical to the success of an organization as selecting a trustworthy partner. Most entrepreneurs, at some point, consider outsourcing to Eastern Europe to create fresh momentum by accessing skilled labor, reducing costs and pursuing new growth opportunities.

Eastern Europe remains one of the most vibrant software development destinations due to constant growth and development of its IT sector and a high level of digital technologies adoption. Countries like Ukraine, Poland, Hungary, Belarus, Romania have already defined IT as a major catalyst for their sustainable growth and technological advancement.

A strong educational system that yields highly skilled workforce, capacity for innovation, favorable business climate, modern infrastructure, and moderate costs of services are some of the prime considerations that influence the choice of an outsourcing provider.

So which country has the biggest talent pool and the strongest technological expertise for delivering projects of any scope and complexity?
Ukraine has emerged as one of Europe’s leading and fastest growing destinations for global software development services. According to 2019 CEE report, the country’s software development sector grew by 19% in 2018 and is progressing steadily year by year.

The country offers a wide array of benefits — from its vast IT talent pool and extensive expertise, to cost effectiveness and strong technical education.

Over 1,600 companies in Ukraine provide a myriad of IT-related services. More than 184,700 IT professionals have developed strong expertise in different verticals ranging from fintech, healthcare and telecom to automotive, manufacturing and agritech.

The country is home to more than 100 R&D subsidiaries of international companies from a variety of industries including software, gaming, telecoms, and e-commerce. Global companies like Microsoft, Samsung Electronics, Wargaming, Skype, eBay, Siemens, IBM opened their R&D centers in Ukraine.

Ukraine’s vibrant IT industry was recognized in a lot of recent reports and ratings. The country was included in Gartner’s top 30 offshoring and outsourcing destinations and recognized among the top outsourcing destinations in Europe. What’s more, 12 Ukrainian IT companies, including N-iX, were featured in 2017 Global Outsourcing 100 list by the International Association of Outsourcing Professionals as the best outsourcing providers.
Poland is one of Eastern European fastest growing economies, which makes it an attractive software development destination for various organizations overseas. The country has the largest working population in Central Europe, comprised mostly of people under 34 years old. Over 279,800 Polish professionals are involved in the IT sector along with 500+ IT companies offering software outsourcing services. Additionally, around 15,000 IT graduates enter the Polish software development market annually.

The country’s IT services market reached $4.62B in 2018 with a growth rate of 5.9% CAGR. Moreover, Poland was ranked 15th in Tholons Services Globalization City Index in 2019 with Krakow and Warsaw as the major centers of the country’s IT development.

In addition, Polish R&D activities are becoming increasingly financed by the private sector thus fostering interest among global market players. For instance, companies like ABB, Google, Siemens, Motorola, Delphi Automotive, Intel, and McKinsey opened their R&D centers in Poland.
The Czech Republic is one of Europe's top locations for outsourcing IT-related services. Around 95,300 professionals are employed in its information and communication sector.

Every year approximately 4,000 technical graduates enter the Czech IT market driving rapid industry development.

The country is experiencing 10% increase in IT outsourcing year over year. Czech IT industry growth is fueled by the strong inflow of high-value-added projects of the local IT companies and interest of global investors.

Such world-leading companies as Google, Microsoft, Oracle, IBM, CA, RedHat, Microsoft, Skype, NetSuite, Tieto, and IBM chose the country for both direct investment and outsourcing. The investment in Czech IT R&D amounted to €336 million in 2013. Moreover, internationally recognized IT brands such as Avast, AVG and Socialbakers were started in the Czech Republic.

95,300
IT professionals

4,000
IT graduates annually

Brno

Ostrava

Prague

IT cities
The IT industry in Romania employs over 116,100 IT professionals and boasts a 15% annual growth rate. In 2018 the IT industry growth has accelerated and reached $4.5B, with a 13.4% CAGR of this industry. Also, export of software and IT services constitutes 1.9% of Romanian GDP.

After Romania joined the EU in 2007, its IT business has prospered and attracted global companies like Hewlett-Packard, Huawei, Ericsson, and Gameloft. Moreover, regional department of Microsoft in Romania runs two global business support centers in Bucharest and Timisoara and makes a significant contribution to the development of country’s tech industry. Additionally, Oracle employs more than 3,000 Romanian specialists.

Romanian government actively supports IT industry development by exempting software developers from the 16% income tax and introducing a number of incentives for local IT companies.

116,100 IT professionals

6,700 IT graduates annually
The Hungarian software development industry is one of the most dynamic sectors, representing about 6% of the country’s economy. The country has a large share of outsourcing within the IT market in Eastern Europe with **80,100** specialists employed in the IT sector.

According to Hungary Information Technology Report, IT services sales are expected to grow from **$760M** (in 2016) to **$993M** in 2020.

Budapest remains the driving force behind the country’s development and is ranked 22nd in Tholons Services Globalization City Index in 2019.

In addition, the country has attracted a number of multinational companies such as Siemens, Microsoft, Deloitte, Ericsson, Nokia and TATA to establish their R&D centers.

The Hungarian government has doubled the amount of financial support for R&D sector for the 2016–2020 period and launched a number of incentives, giving fast access to technical knowledge by means of regular workshops, meetups, and conferences.
Belarus hosts around 500+ IT companies with over 54,200 employees providing quality outsourcing services to multinational companies. The country’s IT talent pool is constantly expanding with approximately 3,000 new software engineers graduating from 50+ higher educational establishments every year.

The total production and sales revenue of the IT industry in Belarus amounted to $3.4B in 2018. The exports of IT services in the country have been steadily growing over the recent years at an annual pace of 10%.

What’s more, some of the Belarusian IT companies were included in the Software Magazine's Software 500 ranking of the world’s largest software and service providers and were recognized by the International Association of Outsourcing Professionals (IAOP).
Bulgaria

**Bulgarian IT market capacity comprises almost 500 companies employing around 70,000 of specialists** and this number is expected to reach 80,000 by the end of 2021.

The country also benefits from the presence of the global IT giant — Hewlett-Packard, which employs more than 6,000 IT specialists.

Approximately 3,000 IT graduates enter the market annually and more than 220 educational establishments offer diverse opportunities for technical students.

The country’s IT outsourcing sector added **$2.5B** to the state budget in 2018 and it has been showing a double-digit revenue increase for the fourth consecutive year and reached **1.86% of the GDP**.

Bulgaria has a rather high number of R&D offices of multinational IT corporations such as HP, SAP, Johnson Controls, Oracle, VMware, CISCO, ProSyst, and Atos. Moreover, in 2015, the country was named “Offshoring Destination of The Year” by the UK’s National Outsourcing Association (NOA). Overall the BPO sector’s contribution to the country’s economy reaches almost 5%.
The Moldovan IT industry is one of the most dynamic sectors of the country’s economy so it remains the priority area for development and expansion for the Moldovan government. According to the Biroul National de Statistica, the contribution of ICT to the national GDP was 15.2% in 2018, which resulted in the creation of high value working places and improvement of employee retention within the country.

More than 11,000 specialists are involved in the IT sector with around 3,000 students graduating from Moldovan universities with degrees in computing or a related field every year.

According to IDC, IT services market in Moldova grew at a 6.8% CAGR of through 2018. Moreover, the total value of outsourcing services reached $56M in 2013, and by 2018 was expected to grow at a CAGR 14.5%. The ICT services exports surpassed $200B in the same period and are likely to double in the upcoming years.
The Baltic region is recognized as one of the most economically stable locations in Europe, boasting high levels of digital solution adoption and effective legislation that creates favourable business climate. The launch of e-programs, ease of doing business, strict cyber security policies and low corruption rates foster IT industry development in the region.

Nevertheless, the pace of software development market growth and digital technologies adoption in Estonia, Latvia, Lithuania are still moderate compared to the Eastern European market leaders. The main reason behind this is a much smaller talent pool. So let's take a closer look at the engineering resources these countries can offer.
The ICT sector in Estonia employs around 20,700 specialists with less than 1,000 people graduating with degrees in technical disciplines every year. Estonian ICT services exports reached $4.17B in 2018. It constitutes 5.5% of the country’s GDP and increased by 1.5% compared to 2017 due to the value added in software development services.

IT is expected to become the leading sector of the economy and will constitute 20% of the country’s total exports. Two major cities contribute the most to the development of the Estonian IT industry — Tallinn taking the lead (67.5%) and Tartu as a runner-up (12.5%).

Estonia is known as the birthplace of Skype and TransferWise along with other influential startups including Pipedrive, Cloutex, Click & Grow, Grabcad, Erply, Fortumo, Lingvist, etc. Moreover, the country attracted such global market players as Microsoft, SAP, Acronis, Parallels to open their R&D centers.

According to Statistics Estonia, 17% of local enterprises have a formally defined ICT security policy and around 42% of them are engaged in the IT sector. The policy was developed mainly to avoid the potential risk of destruction or corruption.
Latvian ICT sector employs more than 18,600 specialists in 5,000+ companies. Less than 1,000 computer science students graduate every year from Latvian universities thus accelerating industry growth.

The ICT services turnover reached $3.98B in 2018. As a result, the information and communication technologies (ICT) sector has become the third largest exporter in Latvia, following timber and food products sectors.

The evolution of the Latvian IT market led to the birth of such large IT service providers in the country such as Tieto, Evolution, Accenture Latvia, and Lattelecom Technology. Moreover, international companies including IBM, PwC, Accenture, KPMG, Siemens, ABB, and others. Opened their R&D centers in Latvia.
Lithuania

Around 27,400 specialists are employed in the ICT industry in Lithuania, with nearly 750 future experts graduating every year.

The country has attracted the attention of Google, AIG, and Nasdaq have recently set up their regional development centers in the country. Moreover, such global companies as Uber, IBM, Wix, HP, Virtustream, Exadel, and Unity have already opened their R&D and IT development centers in Lithuania.

On the whole, IT companies in Lithuania received substantial investments over the past years, which stimulated the growth and development of the IT industry within the country.
Leading Eastern European destinations in numbers

### Population, B
- Ukraine: 42.5 B
- Poland: 38.4 B
- Romania: 19.6 B
- Czech: 10.6 B
- Hungary: 9.8 B
- Bulgaria: 7.1 B
- Belarus: 9.5 B
- Lithuania: 2.8 B
- Estonia: 1.3 B
- Latvia: 2 B
- Moldova: 4 B

### Number of developers
- Ukraine: 184,700 developers
- Poland: 279,800 developers
- Romania: 116,100 developers
- Czech: 95,300 developers
- Hungary: 80,100 developers
- Bulgaria: 70,000 developers
- Belarus: 54,200 developers
- Lithuania: 27,400 developers
- Estonia: 20,700 developers
- Latvia: 18,600 developers
- Moldova: 11,000 developers

### GDP, $B
- Ukraine: 130.83 B
- Poland: 585.58 B
- Romania: 239.55 B
- Czech: 244.11 B
- Hungary: 155.7 B
- Bulgaria: 65.13 B
- Belarus: 59.66 B
- Lithuania: 53.25 B
- Estonia: 30.28 B
- Latvia: 34.85 B
- Moldova: 11.31 B

### ICT Grads
- Ukraine: 16,000 graduates
- Poland: 15,000 graduates
- Romania: 6,700 graduates
- Czech: 4,000 graduates
- Hungary: 2,700 graduates
- Bulgaria: 3,000 graduates
- Belarus: 4,000 graduates
- Lithuania: 760 graduates
- Estonia: 710 graduates
- Latvia: 723 graduates
- Moldova: 2,000 graduates
## General comparison (Rankings)

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Afterword

The collected data reflects dynamic growth of the IT market across Eastern European countries. This region has become a number one choice for many global companies looking for a software development partner due to its solid talent pool, technological excellence and great price-quality ratio.

Countries like Ukraine, Poland, and Romania are taking the lead, offering a myriad of cutting-edge technology-related services. The largest tech talent pool has Poland with 279,800 IT specialists. Ukraine remains one of the leading IT outsourcing destinations in Europe, boasting the second largest talent pool with around 184,700 IT professionals and estimated IT market growth of 15-20% year by year. Romania has 116,100 IT specialists. The Czech Republic and Hungary have also attained a competitive position among top 5 Eastern European outsourcing destinations in terms of IT market capacity and annual industry growth rate of 10-15%.

On the contrary, countries like Moldova, Bulgaria, and Belarus are falling behind market leaders in terms of innovation adoption and overall technological capacity. Nevertheless, they’ve introduced a number of incentives to attract foreign investments and foster IT industry development. Meanwhile, Baltic countries launched a number of e-programs and created a favourable business environment in the region.

Key Takeaways:

- Eastern Europe remains one of the most attractive outsourcing destinations due to the constant growth of the IT industry and strong technological expertise.

- Countries like Ukraine, Poland, and Romania are leading the Eastern European software development market, offering a vast availability of IT resources.

- Poland has the largest IT talent pool in Europe (279,800 IT professionals), followed by Ukraine (184,700) and Romania (116,100).

- Starting from 2014, we have witnessed a dramatic increase in outsourcing consumption due to its flexibility and perfect price-quality ratio.

- IT outsourcing to Eastern Europe is now viewed as a major business enabler of digital transformation rather than just an attractive cost-cutting option.
About N-iX

N-iX is one of the leading Eastern European software development vendors with development centers in Ukraine (Lviv, Kyiv), Poland (Krakow), Bulgaria (Sofia), Belarus (Minsk), and offices in the USA (Florida) and Sweden (Malmo). With more than 17 years of experience and over 900 technical experts, the company has developed diverse technological expertise.

N-iX partners with technology leaders across a variety of industries encompassing Fintech, Telecom, Healthcare, Insurtech, Automotive, Hospitality, Media & Entertainment, Aviation etc. to help them effectively implement digital transformations.

N-iX provides a wide array of services in different verticals such as big data analytics, data science, BI, AI, blockchain, cloud solutions, VR & AR, enterprise mobility, embedded software, SAP and OpenText consulting, and much more.

The company has formed strategic partnerships with a number of global businesses including Lebara (renown telecom brand), Currencycloud (global payments platform), Gogo (world’s leading in-flight connectivity provider), to name a few. N-iX has cooperated with over 50 clients across the globe such as OpenText, StreamServe, Novell, Anoto, RateSetter, HotSchedules etc.

The accumulated expertise allows N-iX to offer innovative software solutions to its clients enabling them to reach their digital ambitions.

For more information, connect with our experts.
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