

# ECONOMIC SECTORS OF WROCŁAW AND LOWER SILESIA

IT



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supporting decision makers

Poland, located in the centre of Europe and boasting the largest number of residents in the CEE region, is one of Europe's leading markets for IT services. According to the AT Kearney Global Services Location Index, the country is among the top ten best locations in the world for the IT and BPO industries. The 60,000 IT enterprises operating in Poland are indicative of the region's attractiveness. The Information Technology Market is both one of the youngest and the most dynamically developing sectors in the country. This is influenced by growing interest from foreign investors, significant spending on digitalization of administration and the public sector, and increased exports.

The broader ICT sector plays an increasingly important role in the structure of Poland's GDP. In recent years, advanced digital industries in Poland recorded a growth rate almost 3 times higher than other industries in the country, and in 2010-2015 their cumulative annual growth rate was 4.8%. Poland is effectively catching up to the largest European economies while maintaining the advantages that come from low labor costs and the support of European funds. Most people employed in ICT are IT service specialists. Companies in the industry are mainly concentrated in larger cities, particularly in Warsaw, Wrocław, and Kraków.

#### IT sector hotspots in Poland



One of the most important elements affecting the development of the sector in Poland is the government and the public sector, which, through support programs and public procurement, as the largest recipient of IT solutions in the country, stimulates the development of the IT industry in Poland. The Ministry of Digitization, via numerous projects and initiatives, also actively contributes to increasing the availability of Internet around the country and enhancing the skills of Poles in the IT industry. One of the institutions supporting the country's digitization is *Centrum Projektów Polska Cyfrowa* (Digital Poland Project Centre, CPPC), implementing the Operational Program Digital Poland (POPC), which deals with support from particular organizations like telecommunications companies, scientific entities, and non-governmental organizations. The support offered by POPC includes investments in high-speed Internet connection as well as backbone and distribution networks. Financing initiatives from EU funds spurs enhanced innovation by enterprises and the implementation of numerous projects impacting the development of the industry.

A friendly business ecosystem translates into increasing numbers of IT companies operating in the country. Despite the existence of large international players on the Polish market, small enterprises account for as much as 90% of IT companies. Companies of domestic origin comprise a strong group, actively cooperating with foreign corporations while at the same time creating their own products marketed around the world. The IT services market is characterized by great diversity and competitiveness, which is why most entities try to provide services in several segments, thus expanding their range and adapting to the evolving requirements and expectations of the environment. The IT sector in Poland is traditionally based on the provision of subcontracting services for international corporations or large state-owned enterprises. Recently, domestic companies from the industry have begun creating and promoting their own innovative products and solutions.

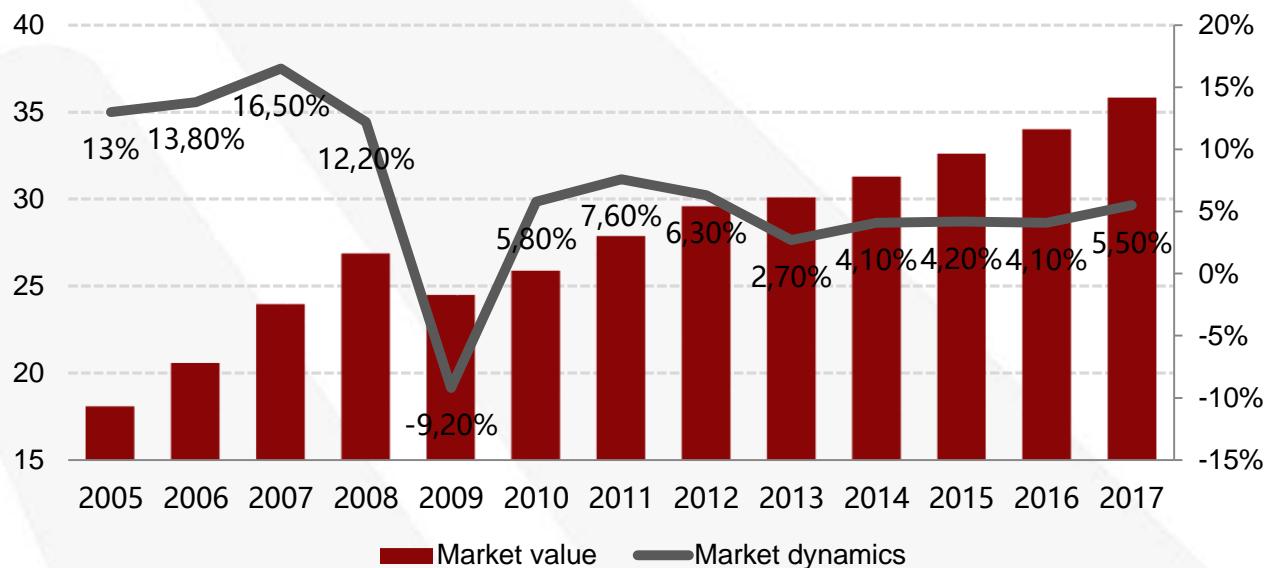
**The most important segments of the IT market are:**

- » software development
- » IT services
- » computer equipment

Although the last of these segments has the largest share in the sector's revenues, the other two have been characterized by regular and high growth over the recent years and greater resistance to economic fluctuations, and are thus considered directions for the sector's future development.

The domestic ICT is developing rapidly. According to a report by PMR Research \*, in 2016 it was valued at 32B EUR. It is estimated that in 2017 the ICT sector was responsible for 6.06% of Poland's GDP.

### IT market sales in Poland in 2005-2017 [billion PLN]



Source: Own graphic based on PMR Research 2016

The IT market is a sector featuring a high level of innovation, which makes it crucial to provide companies operating in Poland with proper conditions for development. Clustering is becoming increasingly popular. According to ABSL data from 2015, 30% are clusters from the IT industry. Currently, 28 of them are operating in Poland.

Enterprises see an opportunity to establish cooperation within a cluster, because it facilitates process optimization and allows enterprises to achieve a better competitive position than when acting alone. Examples of such initiatives are the "Cluster Community of Knowledge and Innovation in the Field of Information and Communication Technology" and "IT Corner" operating in Lower Silesia.

One of the factors distinguishing Poland in the international arena is the availability of qualified staff. Universities offer excellent education and Polish graduates of IT chairs are valued specialists. Recent years have seen an increased interest in hard science majors, which means that students are most frequently choosing technical universities. Its high quality of education allowed Poland to take third place worldwide for programmers' abilities according to the 2016 HackerRank ranking.

\* PMR Research is a research company offering a full range of services in market and marketing research.

## Selected Polish companies in the IT sector

### Techland

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Initially, Techland's activities focused on software distribution in Poland. Currently, the company employs nearly 300 people working on high-budget productions for all major entertainment platforms. The company's offices are located in Wrocław, Warsaw, Ostrów Wielkopolski, and Vancouver.

### CD Projekt

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The CD PROJEKT Capital Group has been operating in video games - the most dynamically growing electronic entertainment industry - for 20 years. The company's business model is based on two pillars: the production of games as part of the development studio and global digital distribution. The company is known around the world for its The Witcher trilogy. Currently, CD Projekt has branches in Warsaw and Krakow, as well as an office in Los Angeles coordinating sales activities in the USA.

### LiveChat

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LiveChat Software S.A. is an IT company operating on the global market and which offers services supporting sales and customer service in the Software as a Service model. The LiveChat tool created by the company is used for direct communication between website visitors and owners. The product's objective is to modernize traditional sales methods going on in enterprises. LiveChat currently serves over 13,500 customers in 130 countries around the world.

### Asseco

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Poland's largest IT company, listed on the Warsaw Stock Exchange. For over 25 years Asseco created software for companies, including from the banking, Energy, and healthcare industries. Currently, the company employs approximately 4,500 specialists in 18 cities in Poland and 24,000 people in over a dozen countries around the world.

### IT Kontrakt

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A Wrocław-based IT company focused on building specialized teams for large IT projects. The company currently employs 1,300 people executing IT projects in the field of creating and implementing modern technologies for businesses in Poland and abroad.

### GetResponse

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An international company offering tools for email marketing and online campaign management under the name "GetResponse". The platform is available in 21 languages, and over 300 professionals work on its development in offices in Poland, the United States, Canada, Malaysia, India, and Russia.

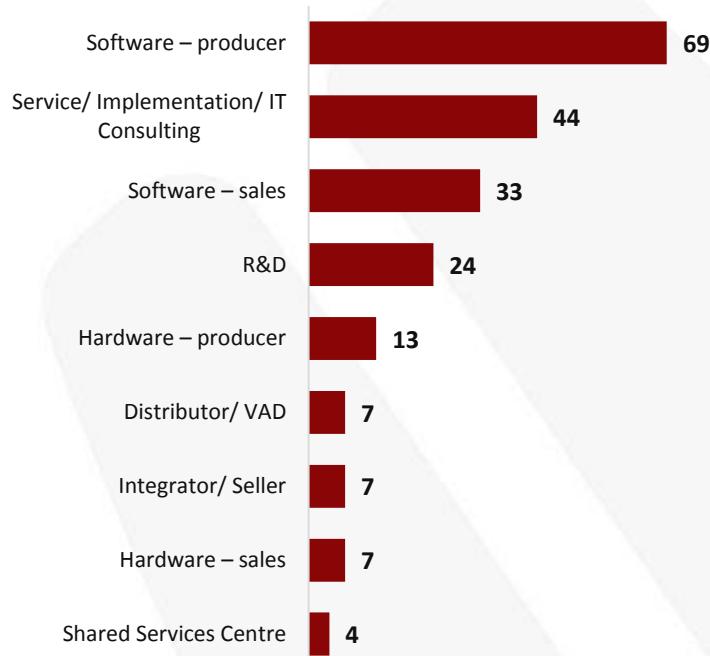
Wrocław is a special location on the map of the Polish IT sector. The city is considered one of the most developed and innovative information ecosystems in the country. Thanks to numerous investments by both foreign and Polish companies, this is a market riding a wave of growth that remains highly attractive. The history of the Wrocław IT market began in 1963 with the start of production of the first "Odra" computer by ELWRO. Until the 1990s, Wrocław was the only city in Poland where computers were manufactured on a mass scale. The next stage of market development was an investment in 2000 by Siemens, which opened its Software Development Center. Since then, Wrocław has attracted a significant number of investors, leading it to sometimes be called Poland's Silicon Valley. A large number of investors are foreign capital. In 2016 alone, 547 new international companies were registered in Lower Silesia, a 16% increase year-on-year. Most companies with foreign capital (413) were registered in the capital of the region (COIG). Over the last decade, well-known international corporations such as Nokia, HP Inc., Google, Opera Software, IBM, Redknee, Atos, and Tieto have opened branches and development centers throughout the city.

Wrocław is a city of creative and talented people, with a large student population. In academic year 2016/2017 almost 125,000 people studied at Wrocław's universities, making it the third-largest academic center in Poland. Young people choose Wrocław because of the high quality of education and wide range of jobs available in local enterprises. Among the 26 higher education institutions operating in Wrocław, those most deserving of mention are the Wrocław University of Technology (second place in the Perspektywy 2017 ranking of technical universities), which offers such majors as IT (8,666 students) and Automatics and Robotics (2,766 students). Information Technology can also be studied at the University of Wrocław (Computer Science - 586 students), University of Economics (Computer Science in Business - 686 students), and at several non-public universities, such as the Wrocław School of Applied Computer Science (991 students). Numerous awards and distinctions for Wrocław's universities are proof of the excellent education given to students who go on to become valued specialists on the labour market.

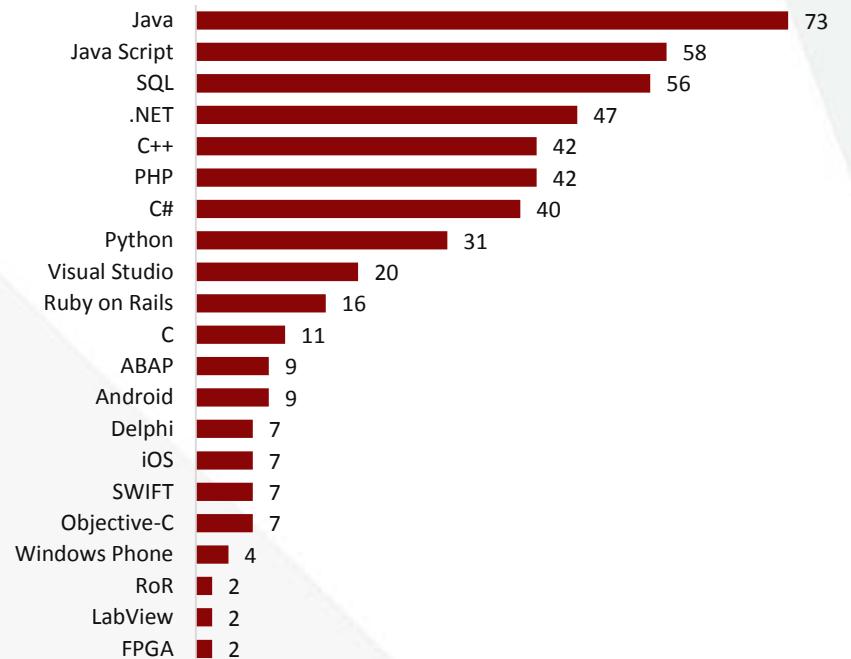
Wrocław is a city which features not only foreign corporations, but also many Polish IT companies. Their continual expansion has seen them become globally recognized brands, acquiring foreign competitors and achieving the status of equal partners for foreign enterprises. Polish IT companies operating in Wrocław mainly deal with software development and the production of computer games, such as Neurosoft or Techland. Many of these companies began as startups that made the most of their opportunity, expanding their business through innovation, support for startup organizations, and cooperation with foreign corporations.

### Structure of the IT market in Wrocław

Business profile of Wrocław IT companies (%)



Programming languages sought - Wrocław (%)



Source: IT Industry & Education in Wrocław Report, 2016.

According to the IT Industry & Education in Wrocław report from 2016, prepared by ARAW and HRK, the most common specialty in the IT field is software development (69% of surveyed companies). Less than half of the companies (44%) deal with service, implementation, and IT consulting, while 1/3 of them are involved in software sales. A large part of the Wrocław IT market consists of companies involved in R&D (24%). Only two organizations declared their main activity as the provision of IT outsourcing services.

Java is the most sought-after programming language (73% of respondents). Developers with knowledge of this programming language have a definite advantage on the Wrocław labour market. Java Script and SQL for database operations are only slightly less popular. Over 40% of surveyed employers are seeking candidates with .NET, PHP, and C# knowledge, while slightly more than 30% with knowledge of Python. The number of companies looking for specialists in low-level languages such as C++ and C is quite high in Wrocław. Meanwhile, the number of companies providing services in the mobile technologies field has increased over the past years, yet it remains a small part of the market.

Lower Silesia is a place full of passion and initiatives created by people who want to develop their interests. This makes it an ideal place for organizing diverse types of industry meetings to establish new contacts, expand knowledge, and exchange experiences. Here are some examples of the more significant IT industry events taking place in Wrocław:

### **BOILING FROGS**

The organizers of Boiling Frogs say that a good programmer is distinguished from an average one by a certain universal range of knowledge and skills that are always applicable, regardless of the specific language. The conference's objective is to create conditions conducive to inspiration and finding new ways to solve problems in everyday work.

### **CODE DIVE**

A meeting of programmers and software development enthusiasts with world-class experts. In addition to lectures offering tremendous substance, attendees have the opportunity to talk to celebrities from the IT sector. Issues related to programming in C, C++ and D, as well as the latest technologies like BigData, IT Clouds, and the Internet of Things are discussed.

### **WROC#**

The WROC# conference is a chance for 400 .NET enthusiasts to meet with recognized experts in the field and listen to a series of six 60-minute lectures. The main objective of the conference is to gather world specialists to discuss problems close to the heart of every .NET developer.

### **WROITCAMP**

During a meeting lasting several hours, the management staff of IT companies located in Wrocław and members of the academic community exchange experiences and discuss how to improve the qualifications of specialists, retraining people from outside the industry, and acquiring IT talents.

The growing importance of the IT industry and a large number of creative young people mean that Wrocław can be called a city of innovation and new technologies. In order to strengthen this trend in Lower Silesia, clusters associated with the IT sector were created.

### **Cluster Community of Knowledge and Innovation in the Field of Information and Communication Technology**

The cluster's goal is to build a platform for cooperation between Polish and European innovative companies operating in the information and communication technologies (ICT) sector, institutions using information technology, universities, specialist ICT schools, and regional authorities. The tasks of the ICT Cluster are directly related to the development of the information society in Poland and in Europe.

### **ITCorner Cluster**

ITCorner is a Lower Silesian cluster founded in 2013 whose main goal is to work for the broader development of the local modern technologies market. It is an effective platform for communication between companies in the small and medium-sized enterprise sector, associating over 60 organizations employing 1,500 people. In addition to promoting the idea of synergy and innovation, ITCorner supports creativity and initiatives aimed at developing new IT solutions. The annual growth of the average ITCorner member company is 21%, which proves that mutual cooperation of companies in the region brings real opportunities.

The basis for the current, but most of all, the future development of the city's IT sector and agglomeration of startups. According to the "Polish Startups 2017" report prepared by the Startup Poland Foundation, Wrocław is home to the largest number of young technology companies in the Internet of Things (16 percent of all companies in this area) in the country. The city itself is second in Poland only to Warsaw in terms of startup activity. Wrocław can also be considered as a thriving startup ecosystem in the wider context of Visegrad Group countries. While the concentration of young technology companies in the Czech Republic, Slovakia, and Hungary is mainly in capitals, in the case of Poland they are more dispersed. Some companies with an established international position have already grown out of some Wrocław startups. This group includes LiveChat Software, a producer of software for direct communication on the Internet, and Techland, a creator of computer games popular around the world. Other Wrocław companies are still developing their business potential and intend to follow a similar path. Some of these worth paying attention to are: Brand24 (offers a tool for Internet monitoring), Piwik PRO (a web analytics specialist), PiLab (develops solutions in Big Data), and T-Bull (mobile game producer), as well as startups that link IT solutions with other fields - education (Explain Everything, Funmedia) or health care (Infermedica, Nestmedic, Cancer Center).

## Selected IT sector companies operating in Wrocław

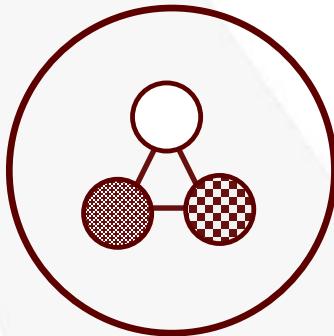
Name	Country of origin	Field
Accenture	USA	Video services
Accesto	Poland	Mobile applications
Atos	France	IT services
Birlasoft	India	IT services
Capgemini	France	IT services
Cogniance	Ukraine	Software development
DataArt	Russia	Software development
Divante	Poland	E-commerce
Dolby	USA	Software development
Etteplan	Finland	Software development
Gigaset	Germany	Software development
Hicron	Poland	Software development / Services
HCL	India	IT services
IBM	USA	Software development / Services / Equipment
IT Kontrakt	Poland	Services (outsourcing)
Intive	Poland	Software development
GlobalLogic	Poland	Services / Software development
LiveChat	Poland	Software development
Luxoft	Switzerland	IT services
Mphasis	India	IT services
Nokia	Finland	Software development / Equipment
Neurosoft	Poland	Software development
Objectivity	United Kingdom	Services / Software development
Opera Software ASA	Norway	Software development
QAD	USA	Software development
RST	Poland	Software development
RedKnee	Canada	Software development
Softserve	Ukraine	Software development / Consulting
Sii	France	IT services
Techland	France	IT services
Tieto	Finland / Sweden	Services / Software development
PGS Software	Poland	Software development
Sygnity	Poland	Services / Software development
Tequila Mobile	Poland	Mobile applications/ Computer games
UNIT4	Poland	Software development
Volvo	Sweden	IT services

**1. A THRIVING ACADEMIC CENTER**

Wrocław specializes in the education of students in technical fields, particularly computer science.

**2. AVAILABILITY OF OFFICE SPACE**

Wrocław offers 942,400 m<sup>2</sup> of high-standard office space, the 3rd-largest market in Poland.

**3. DIVERSIFICATION**

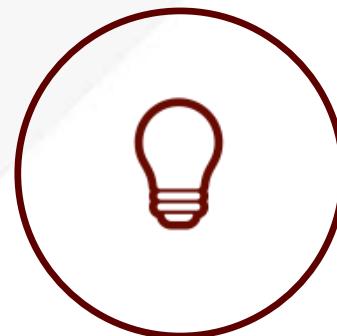
Companies operating in Wrocław offer a diverse range of products and services, such as software, mobile applications, and computer hardware.

**4. BUSINESS ENVIRONMENT**

Numerous IT companies operating in Wrocław, both foreign and domestic, Foster an environment of cooperation and innovation.

**5. TELECOMMUNICATION**

A well-developed teleinformatic infrastructure managed by the first Local Government Shared IT Services Center in Poland..

**6. INNOVATIONS AND STARTUPS**

Wrocław supports the business initiatives of local residents through its municipal startup policy.

Wrocław, alongside Warsaw, is widely recognized in Poland as a city offering the best opportunities for career development, which is verified by research conducted among both students and qualified employees. 75% of the city's population are newcomers from other regions of Poland and Europe, as noted in the 2018 report "Mobility of employees on the modern services market in Wrocław".

The regional labour market is one of the most developed in Poland. This is determined by the availability of human capital, including specialists and managers, as well as the diversity of the sectors of the economy present here, among which the IT sector plays an important role.

In comparison with other European Union countries, labour costs in Poland remain among the lowest. The highest wages, according to Eurostat data for 2017, were received by employees in Luxembourg, Denmark, and Belgium, while the lowest were in Bulgaria and Romania. In Poland, the average hourly wage was 6.30 euros (data from 2016), which puts the country at the bottom of the list.

According to data from the Central Statistical Office, in April 2018, the average monthly gross wage in the private sector (among companies with more than 9 employees) amounted to PLN 4840.44. This represents an increase of 7.8 percent compared to April 2017. Residents of Lower Silesian employed in the private sector earn an average of PLN 4,866.15 (gross), making them 5th in Poland.

The sources of information used in this report include:

- 1) Statistical data and sectoral studies of the Central Statistical Office (GUS)
- 2) Data, analyses and sector presentations of the Polish Investment and Trade Agency (PAIH)
- 3) Data and information of the Wrocław Agglomeration Development Agency (ARAW)
- 4) Data and studies of the Central Economic Information Center
- 5) Information from the websites of Techland, CD Project, Live Chat, Asseco, IT Kontrakt, Get Response
- 6) The publication Wrocław Driven by Knowledge - Wrocław Agglomeration Development Agency / Knight Frank.
- 7) Information from the HackerRank website
- 8) ABSL report "IT services market in Poland 2017"
- 9) AT Kearney Global Services Location Index Ranking 2017
- 10) Report "Mobility of employees on the modern business services market" 2018 - ARAW, JLL, Hays
- 11) Statistical data and sectoral studies of the European Statistical Office (Eurostat)



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