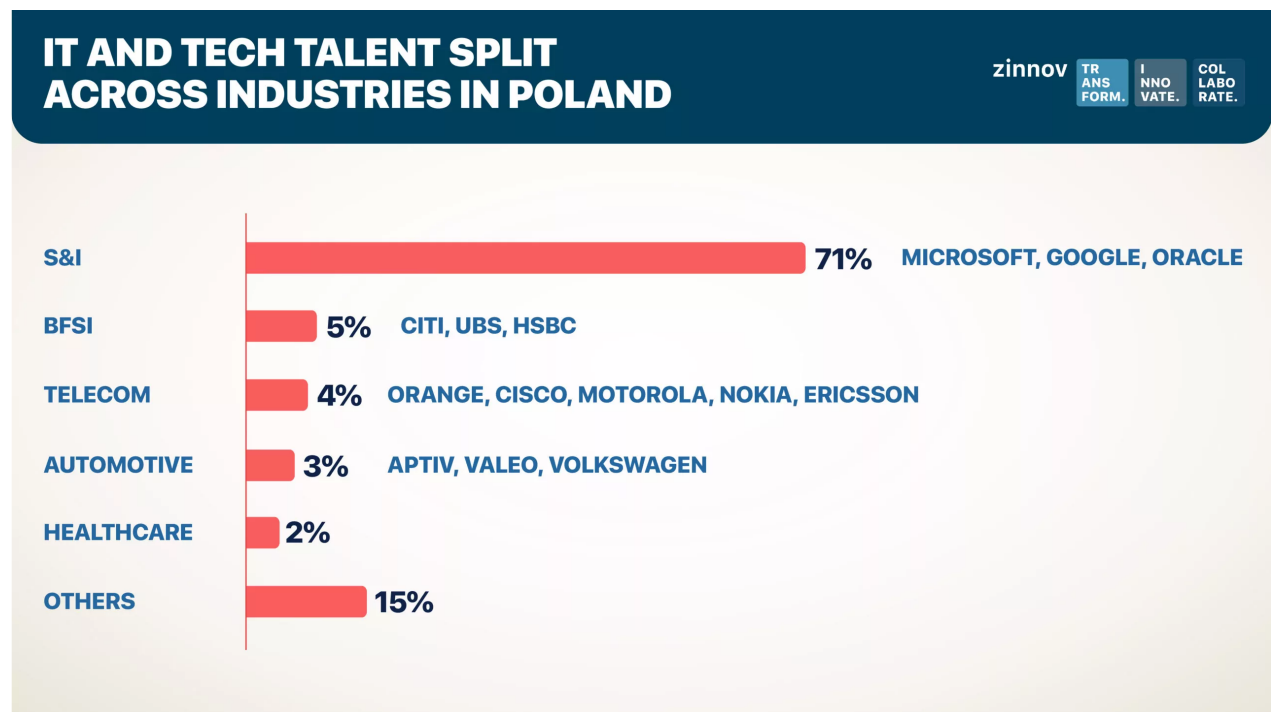


1. Talent

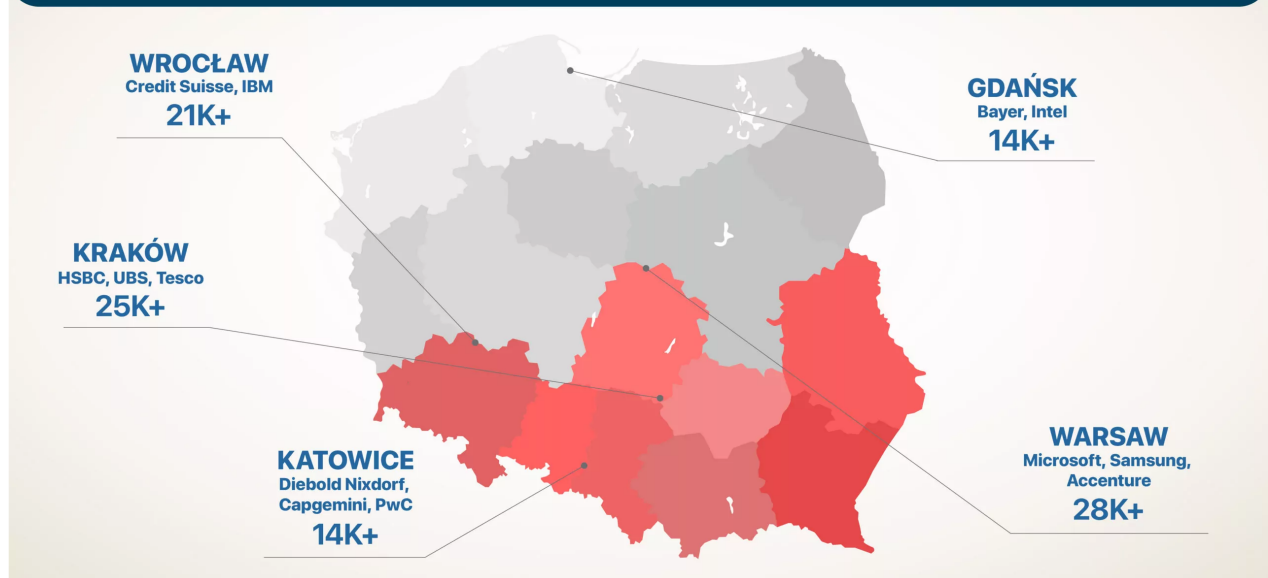
Poland is the 7th largest country in Europe, with a technology talent pool of **170K+**, with Warsaw and Krakow boasting 55% of the IT talent pool. Amongst Eastern European countries, Poland has the **largest talent pool** both in terms of installed talent as well as expatriate talent (talent coming in for jobs and higher education), especially from countries like Ukraine which have been experiencing soaring geopolitical unrest in recent years.



This niche skilled talent is spread across Software Development, Database Management, Cloud Computing, Big Data Analytics/Business Intelligence, Cybersecurity, Artificial Intelligence (AI), Machine Learning (ML), Data Science, Internet of Things (IoT), and Blockchain domains. Also, the **presence of 600 COEs in Poland that provide software development and IT support services to companies across the globe, underscores Poland's IT prowess.** Additionally, out of them, 35% of centers handle processes in more than five languages. Therefore, the talent here is well-educated, highly skilled, and multilingual, with an overall presence across **Software & Internet, Banking, Financial Services, and Insurance (BFSI), Telecom, Automotive, and Healthcare verticals.** The average annual salary is affordable as well, with software engineers earning USD 48K, while it ranges from USD 37K for technical writer positions to ~USD 60K for product managers.

CITY-WISE IT TALENT POOL SPLIT ACROSS POLAND

zinnov

TRANS
FORM.INNO
VATE.COL
LABO
RATE.

Interestingly, due to the massive demand for talent and tough competition in Poland, the average **attrition rate in the country is at a high of ~20%**. However, this attrition rate can vary from 10-30%, with a satisfactory 10% attrition rate in companies that are focused on developing product offerings or those that have a strong talent management strategy, and a steep 30% in companies focused on services and maintenance or those that lack a strong employee engagement and development strategy.

2. Ecosystem Maturity

a. Universities

Poland is a top destination for education in Europe and has close to 428 higher education institutions. In fact, the country accounts for **50% (94,000) of STEM graduates** across Central and Eastern Europe every year. Students from Ukraine and Belarus are prominent foreign students at Polish universities, with Indians and Spaniards rounding out the 3rd and 4th positions.

ROBUST TECHNOLOGY DOMINANCE

zinnov

TRANS
FORM.

INNO
VATE.

COL
LABO
RATE.

KEY INSIGHT

Poland has 25 universities in top 350 EECA universities (4 in top 50). Almost 50% of STEM graduates in the CEE (Central & Eastern Europe) region are from Poland.

428 HEIs

Higher Education
Institutions

94K

STEM graduates
per year

	QS WORLD TOP 600 UNIVERSITIES IN COMPUTER SCIENCE	QS EECA TOP 350 UNIVERSITIES
UNIVERSITY OF WARSAW	129	7
WARSAW UNIVERSITY OF TECHNOLOGY	222	14
JAGIELLONIAN UNIVERSITY	400	6
AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY	462	52

FACULTY OF MATHEMATICS, COMPUTER SCIENCE AND MECHANICS UNIVERSITY OF WARSAW

RESEARCH FOCUS

Supercomputing calculations,
Computational complexity,
Distributed systems

RESEARCH CENTER

Interdisciplinary Centre for
Mathematical and Computational
Modelling

FACULTY OF MATHEMATICS AND INFORMATION SCIENCE WARSAW UNIVERSITY OF TECHNOLOGY

RESEARCH FOCUS

Geometrical modelling, parallel
calculations, neural networks,
Artificial Intelligence,
decision-making facilitation

RESEARCH CENTER

Center for Innovation and
Technology Transfer Management

FACULTY OF MATHEMATICS AND COMPUTER SCIENCE JAGIELLONIAN UNIVERSITY

RESEARCH FOCUS

Bioinformatics, Software Engineering,
3D Modelling, Artificial Intelligence,
ML, Analytical Computer Science

RESEARCH CENTER

Jagiellonian Center of Innovation

STUDENTS FROM FOREIGN COUNTRIES FLOCKING TO POLAND HEIs (HIGHER EDUCATION INSTITUTIONS)

- Ukraine
- Belarus
- India
- Spain
- Germany
- Turkey
- Norway
- Sweden
- China

Of the 428 higher education institutions, **25 Polish colleges rank in the top 350 EECA (Eastern Europe and Central Asia) universities**, with the Jagiellonian University and the University of Warsaw, holding the 6th and 7th positions, respectively. These two and other large tech institutions have developed their research centers to emerge stronger in fields such as AI, Software Engineering, ML, Bioinformatics, Computational Complexity, etc. Additionally, there are **multiple visiting student programs such as the Erasmus Program**, in collaboration with other European Universities, to upskill young minds further.

b. Start-up Ecosystem

Poland is home to **400+ technology start-ups**, with Warsaw, Krakow, Wroclaw, Gdansk, and Poznan being the most developed hubs. These cities have a high focus on Big Data, IOT, FinTech, and EdTech, among other modern technologies.

ADVANCED TECH START-UPS IN POLAND

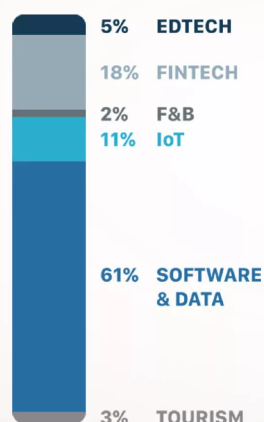
zinnov

TRANS
FORM.

INNO
VATE.

COL
LABO
RATE.

SECTOR-WISE BREAKUP OF START-UPS



inSTREAMLY - Automates the displaying of contents on multiple live stream channels.

FUNDING TILL
MARCH 2020

USD 1 Mn

Airly - Has accurate data about air pollution in your community.

USD 2.2 Mn

Renderro - An IT company providing cloud workspace for AV content creators.

USD 362 K

LOFI Robot - Help investors learn basics about coding, electronics and mechanics.

NA

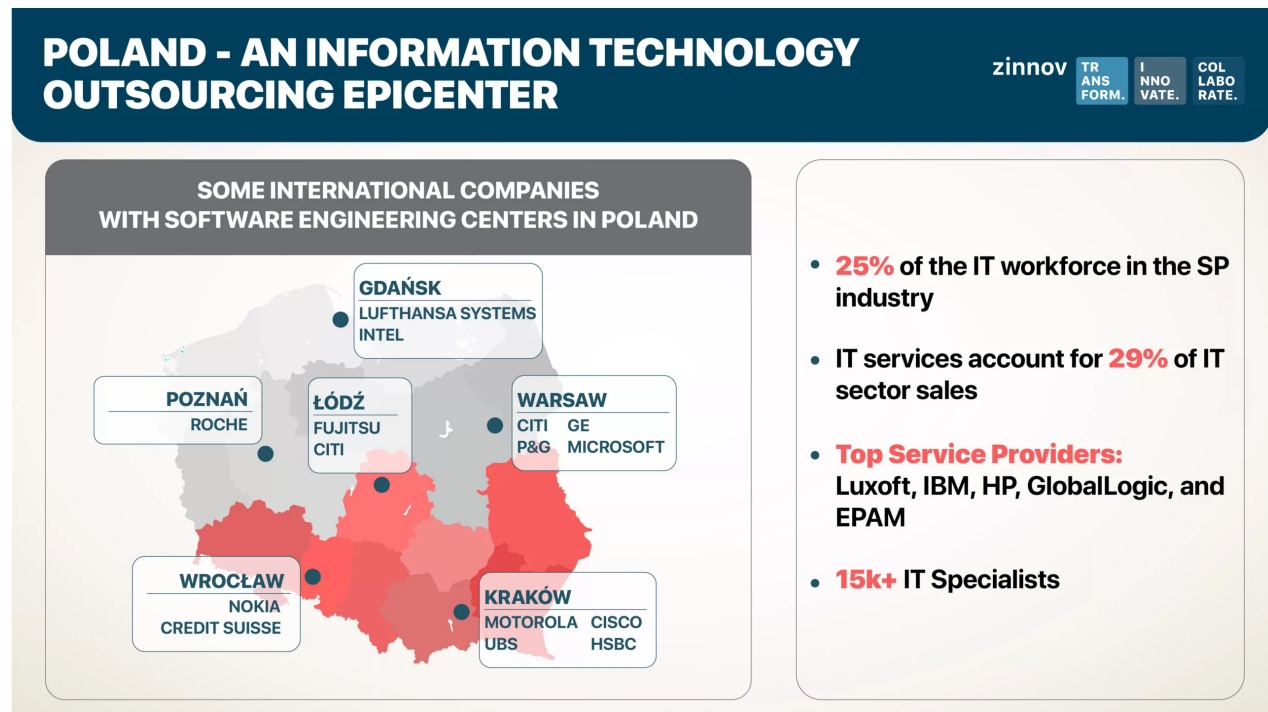
Neptune.ai - Committed to creating a standard for data scientists.

USD 10 Mn

The country ranks **4th across Europe in terms of being start-up friendly** and leads in the Venture Capital (VC) funding (in both Central and Eastern Europe), with a total of **USD 722 Mn** invested since 2013.

c. IT Service Providers (SPs)

IT services (implementation, integration, technical service, consultancy, and outsourcing) **account for 29% of IT sector sales in Poland**, with approximately **25% of the IT workforce employed in SP companies**. This is reflected in the presence of top SP companies like EPAM, GlobalLogic, IBM, and Hewlett Packard, among others, in Poland, making it an Information Technology Outsourcing (ITO) hub.



Additionally, there is a large **presence of global companies** operating across verticals. For instance, Microsoft, Intel, Motorola, Proctor & Gamble, etc., have their ER&D centers here, and can potentially leverage the talent in the region.

3. Ease of Doing Business Index



TOP LANGUAGES

- Polish
- German
- English

32%

Gender Diversity
in Software
Engineering
Companies

- **25th most innovative economy** in the world, with its revenue growing beyond 25% since the 2008 recession period
- **Easy Connectivity** for prospects coming in from other EU countries
- High focus on **GDPR Compliance** ensuring Data and IP privacy
- **19%** corporate tax exemption & **17 - 32%** personal tax exemption depending on the location
- Moderately **employee-centric laws**

a. Connectivity

Located near Central Europe, Poland is part of the Schengen area, where 26 European countries abolished their internal borders for the **unrestricted movement of people**. This has helped prospects move in for work from adjoining countries like Latvia, Lithuania, and Denmark.

b. Data & IP privacy

Being part of the European Union, **Poland is an integral part of GDPR Compliance** that ensures stringent data and IP privacy provisions. Companies can leverage GDPR to get data security and protection while building their digital infrastructure in the country.

c. Language

The top languages spoken in Poland are **Polish, German, and English**, which help stakeholders to communicate effectively, without language barriers.

d. Gender Diversity

There is a **32%** gender diversity observed in software engineering companies, demonstrating a diverse and inclusive workplace ecosystem.

e. Taxation

The New **Investment Support Act introduced in 2018**, helps companies with income tax exemption – 19% in corporate tax and 17 to 32% in personal tax, based on the fulfillment of certain location-dependent conditions.

f. Employee Laws

EU citizens do not require any work permit to be hired locally. They can apply for a temporary residence permit (can be arranged from Voivodeship Office) which lasts for 3 years, where they also receive health and social security coverage. However, prospects from **non-EU countries usually need an official employment offer from a Polish company** to qualify for a work permit. SP companies such as Accenture, IBM, HP, etc., are primarily the ones who sponsor these work permits.

30% of the IT workforce is engaged through the B2B model, which is essentially a direct business relationship formed between the specialist and the company, with an agreed notice period of a month usually. Under this model, the CTC (Cost to company) is an agreed-upon monthly amount based on invoicing, VAT (23%), income tax (19%), and social security. The notice period is divided into 3 categories:

- 2 weeks if the time of employment < 6 months
- 1 month if the time of employment > 6 months and < 3 years
- 3 months if the time of employment > 3 years

Polish laws are moderately employee-centric. Severance pay depends on the duration of employment with the employer, ranging anywhere from a month to three months of pay. Also, in case of termination, the employers in Poland need to inform the trade union regarding the intention behind terminating an employee and provide substantial reasons for dismissal.

Poland: A Sought-after Technology Talent Hotspot

Poland's exceptional remote work culture and the availability of **talent** that showcases tech versatility, problem-solving abilities, and software skills have attracted companies across geographies to set up their centers here. Additionally, due to its geographical proximity with other resource-rich countries across Europe, it has become a top global offshore hotspot that enterprises, SMBs, and SPs alike can leverage to access a diverse, tech talent pool.

The developers in Poland are known to be highly enthusiastic and committed. In fact, HackerRank has ranked Polish developers 3rd in the world for their tech skills, underscoring the potential that Poland's talent offers global technology companies.

However, despite having a huge local and expatriate talent pool supplemented by a mature ecosystem, government initiatives like tax exemptions, focus on gender diversity, easy connectivity, etc., the country faces scalability issues due to its smaller workforce. Companies that plan to establish their centers in Poland need to be cognizant of this fact as they look to leverage this budding Eastern European tech talent hub.

Poland, with its X factors holds the pole position as a technology talent hotspot with a lot of potential. Know how you can set up your COE in this Eastern European talent hotspot, by speaking to our consultants at info@zinnov.com