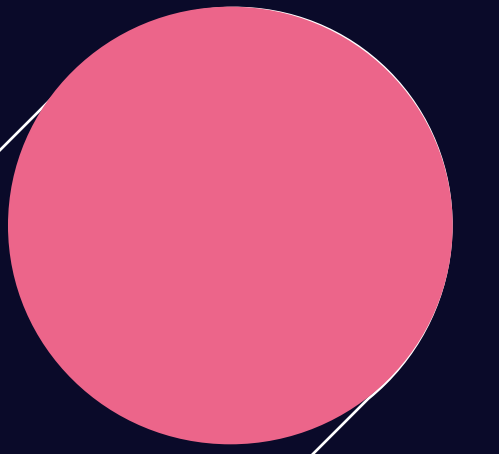
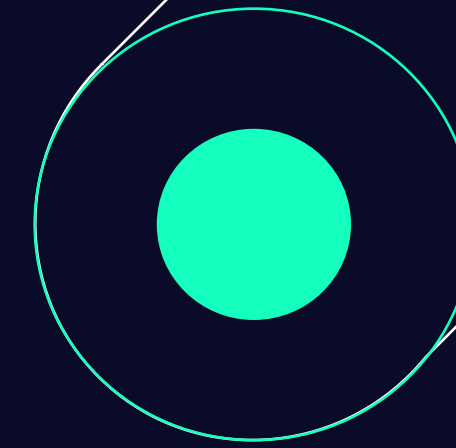
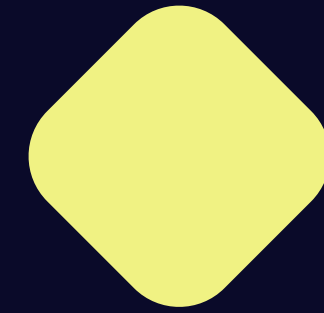
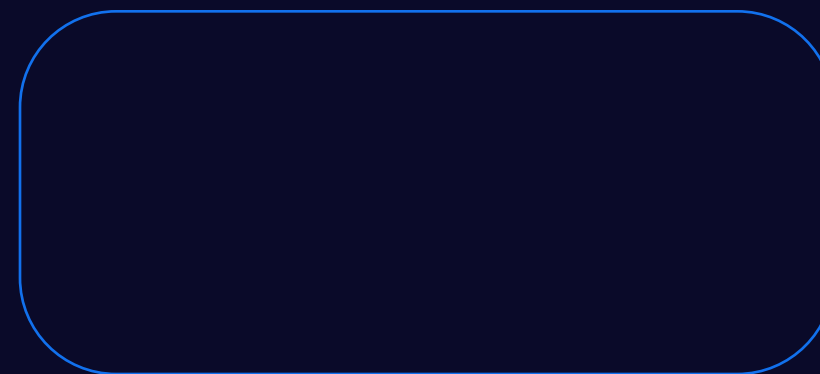
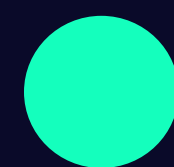
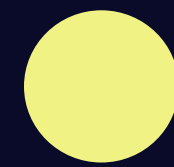




IT specialists in Central



and Eastern



Europe

Competences, expectations and level
of salaries in the IT industry in the region



Table of Contents

01	Aim and methodology of the study	3
02	Profiles of IT specialists	8
03	Competences and specializations	15
04	Forms of cooperation and level of salaries	19
05	Job search	25
06	Approach to relocation	30

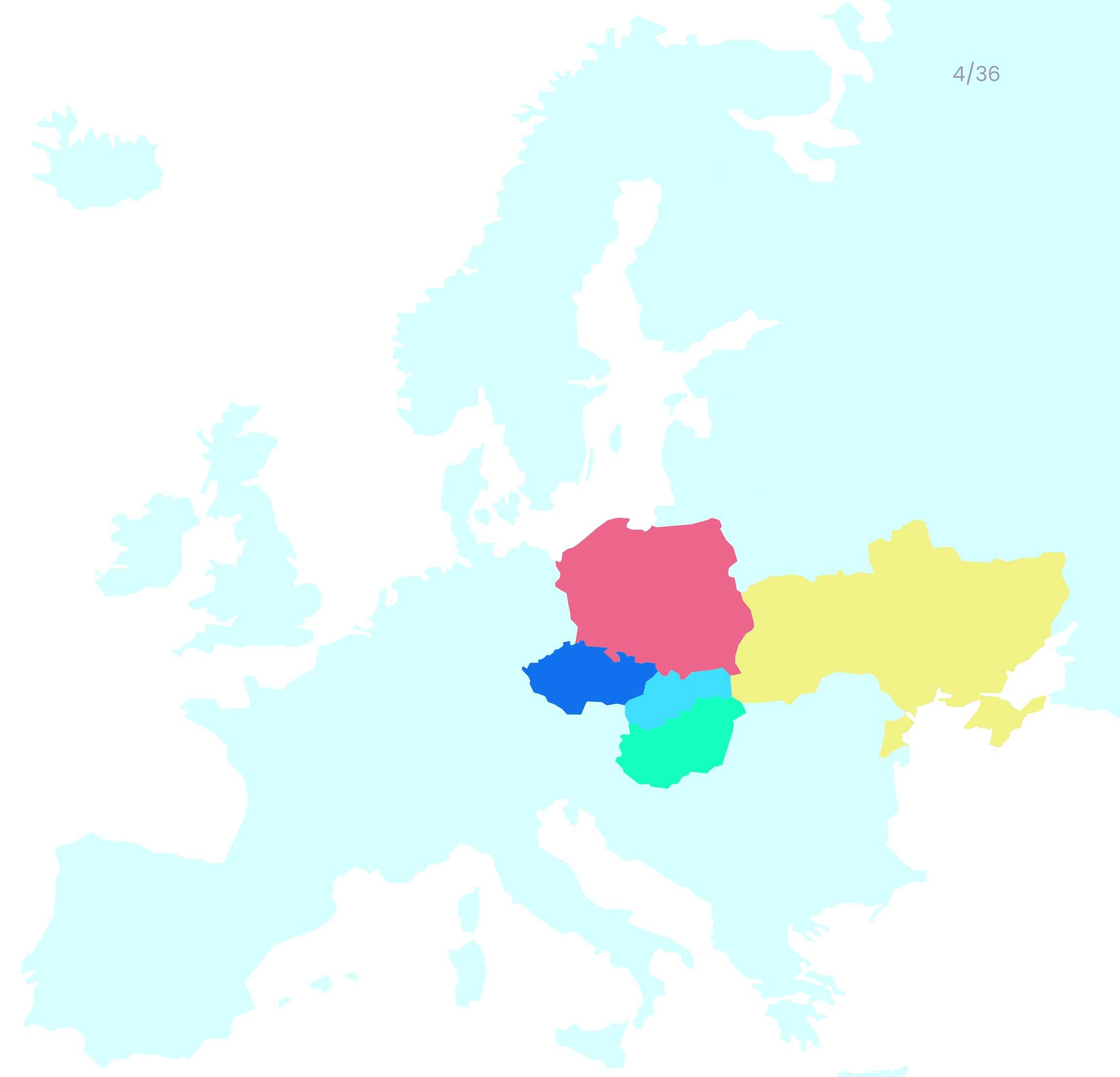
01.

Aim   **and** 
  **methodology**  **of the study** 

The main goal of the study was to find out what the profile of an IT specialist in Central and Eastern Europe looks like. Are workers in the technology sector in various countries similar or significantly different? An additional area of research aimed at discovering which country in the region is the leader in earnings, in which country programmers and other industry specialists often consider switching to a new job, and what is their attitude towards relocating.

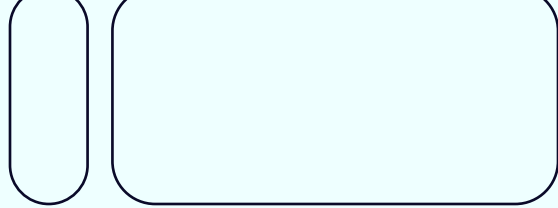
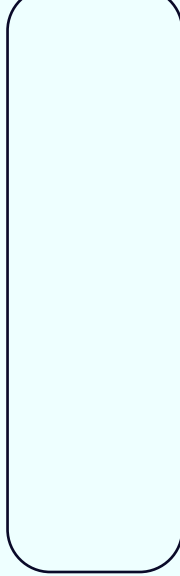



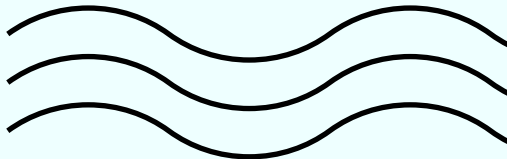
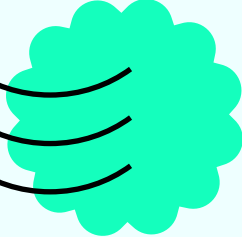
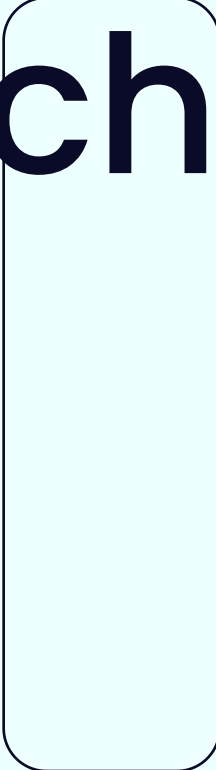

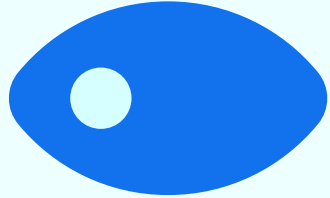

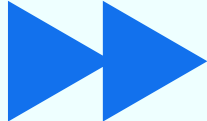
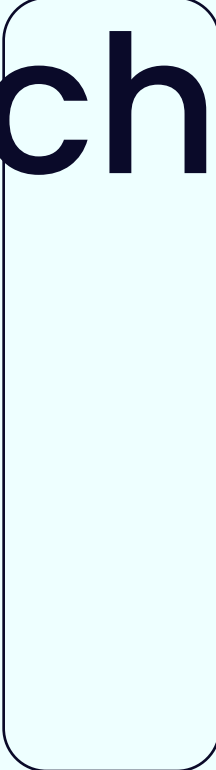

The study was conducted between May and July 2021, and 4,185 IT specialists from 5 Central and Eastern European countries (Poland, the Czech Republic, Slovakia, Hungary, Ukraine) took part in it. For each country, an appropriate research sample was determined that was based on the approx. number of IT specialists working in a given location. Details on the study can be found in the table below.

	PL 🇵🇱	CZ 🇨🇪	SK 🇸🇰	HU 🇭🇺	UA 🇺🇦
NUMBER OF PROGRAMMERS	300000	95000	30000	80000	200000
NUMBER OF RESPONDENTS	1164	774	624	807	816
MAXIMUM ERROR	3%	4%	4%	3%	3%



You are viewing the **standard version** of the report. Please visit [No Fluff Insights](#) to sign up and receive notice regarding the enhanced version release

Report partner:

→ **Transferring**  
knowledge  
and experience 
  **is much** 
easier,  
when you can   
get along on a
«human» level. 

Central and Eastern Europe is an extremely interesting job market. The cultural and economic familiarity between the countries in this region is an undeniable advantage also in terms of recruitment. Transferring knowledge and experience is much easier when you can get along on a human level.

The No Fluff Jobs study has confirmed that in Poland and in its close vicinity there are many experienced IT specialists, with technical education gained at good universities and a lot of determination for self-study. All this, together with high diligence, means that Western countries often look enviously at talents from our region and actively try to find employees from there.

It is worth mentioning that this is a reciprocated notion because candidates from Central and Eastern Europe are open to working in the West and it would often be their first choice, were it not for family and patriotic reasons. In Poland, we have no reason to complain either - specialists from Ukraine, the Czech Republic, Slovakia and Hungary often indicate Poland as one of their desirable work destinations, both due to financial reasons (Poland has an attractive salary range in the region), but also because of high work culture, development opportunities and the presence of foreign capital investments.

For employers in Poland, further care for high standards in the IT industry should become a key goal in order to raise awareness of the fact that work conditions in Poland are comparable to those observed in the even more affluent countries. After all, all regions face a similar problem of shortages of qualified IT staff. Nowadays, it is natural to look for employees abroad. Being open to candidates from other countries is practically a necessity today.

The Central and Eastern Europe region has several advantages over the West in terms of new technologies. The first issue is openness to innovation and broadly understood new technologies. Poland is recognized as one of the world leaders in implementing innovative solutions, e.g. in the area of banking and fintech for a good reason. A large number of young people directs their interests, including the professional ones, in this direction.

In addition, in this part of Europe, we have a relatively large number of graduates from technical faculties as well as people who pursue development in this area on their own. As a result, the supply of candidates on the market is greater than in other countries. In my conversations with managers from abroad, I often hear that they are impressed by the efficiency and proactivity of our specialists, by skilful problem-solving on the projects, and by suggesting new directions for development.

If I were to point out one aspect that sometimes causes difficulties in cooperation with the West, it is the fact that not all countries in the region belong to the European Union. It sometimes causes problems with the processing of personal data. Besides, I can't imagine a better place to build IT teams.

Łukasz Olechnowicz,
President of the Management Board, Infopulse Poland

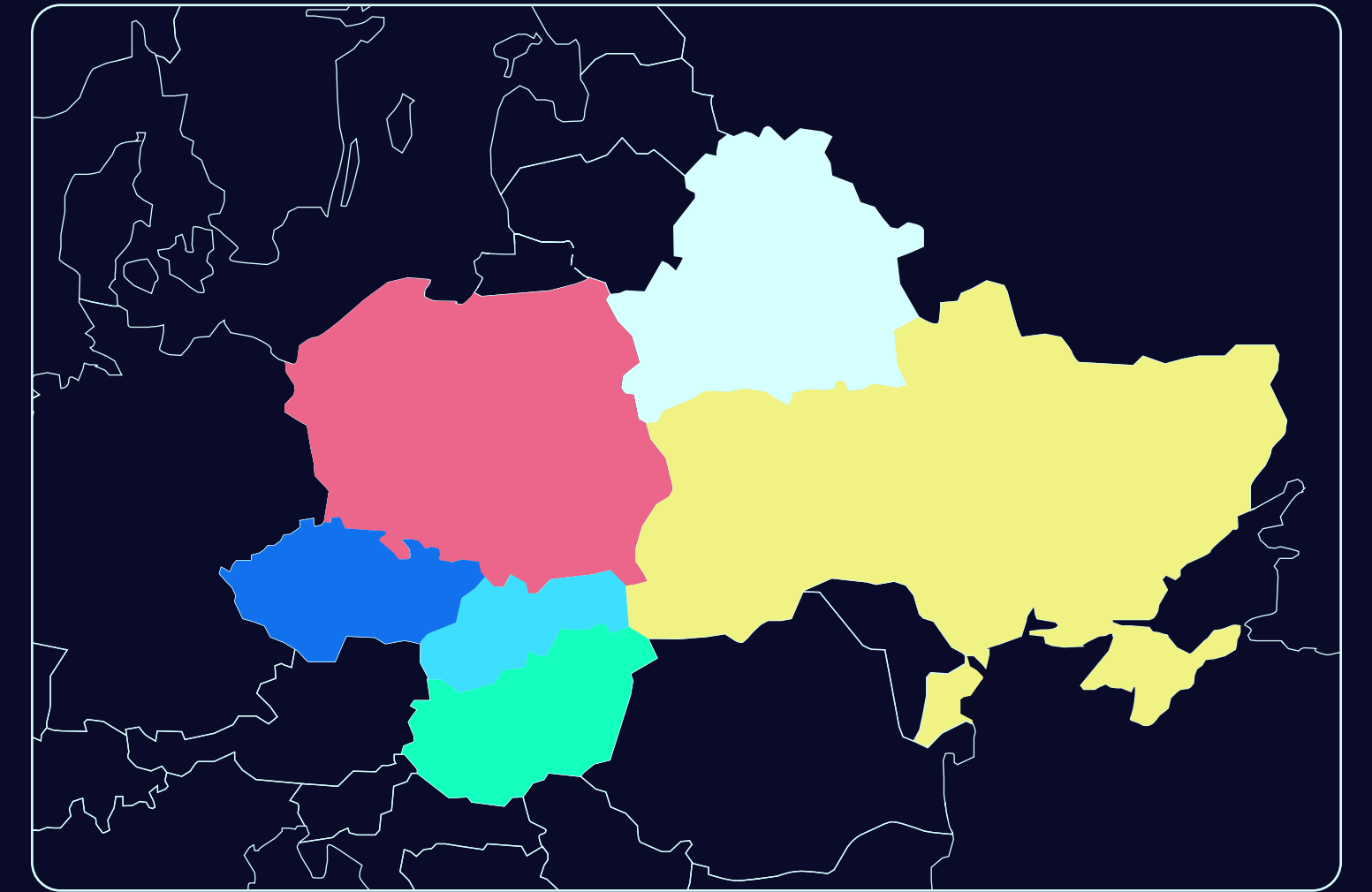
* The Central and Eastern Europe region has several advantages over the West in terms of new technologies.



No Fluff Jobs – the only IT job board available in 6 countries and 8 language versions



CHOOSE COUNTRY



CHOOSE LANGUAGE



FIND A JOB IN CENTRAL
AND EASTERN EUROPE

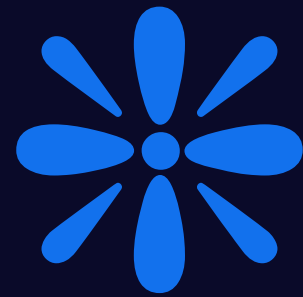
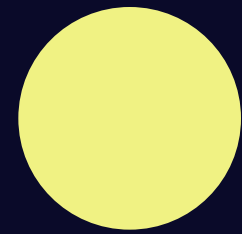
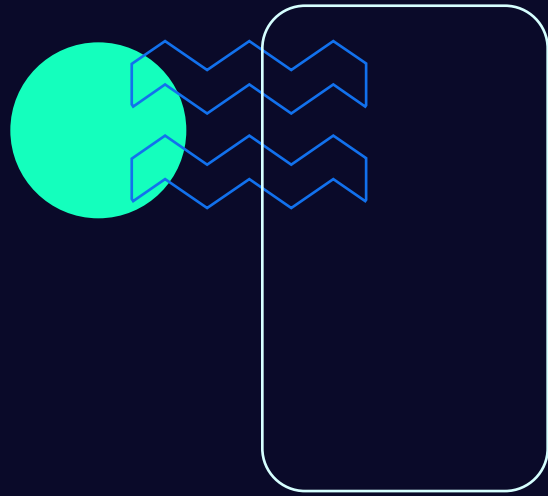
02.

Profiles →



of IT

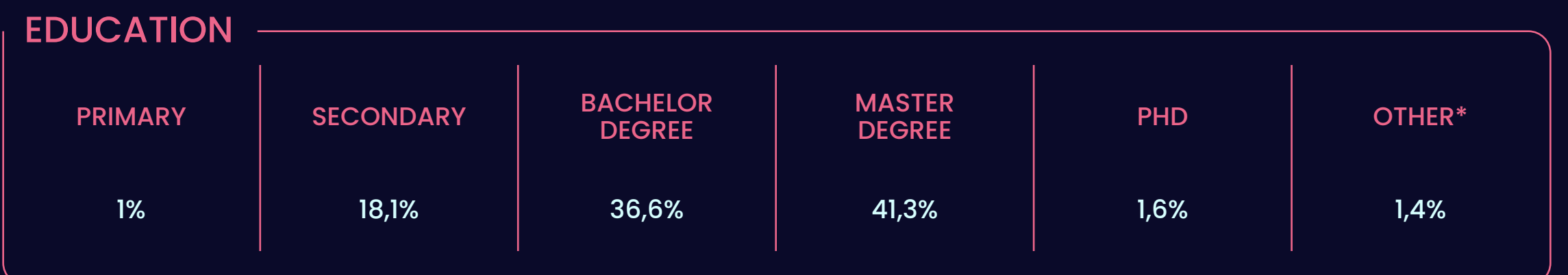
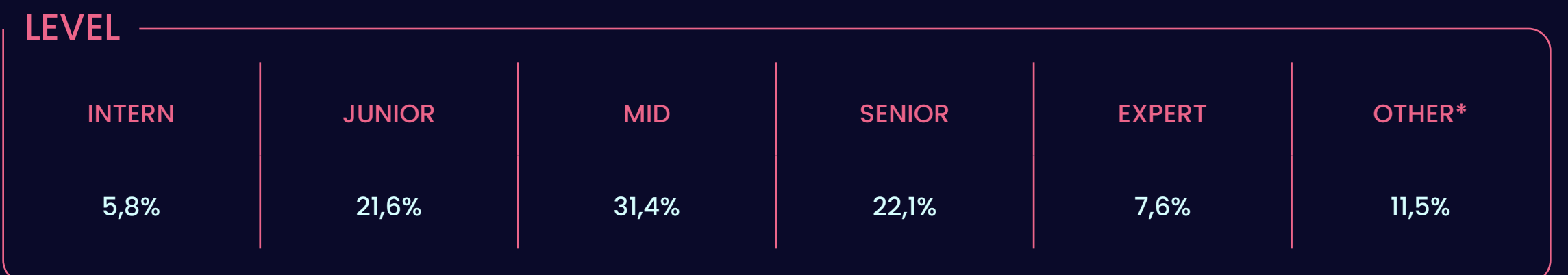
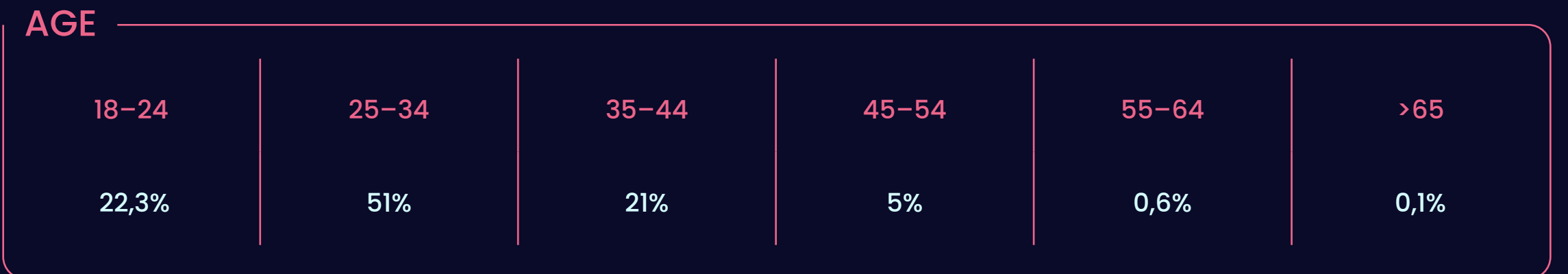
specialists



Poland

In Poland, slightly more than half (51%) of IT specialists are people aged 25–34.

Nearly 80% of industry employees graduated from higher education institutions

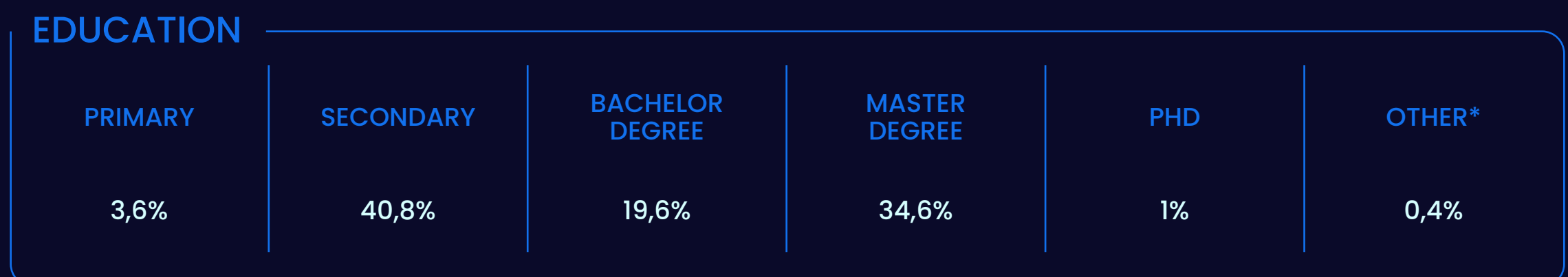
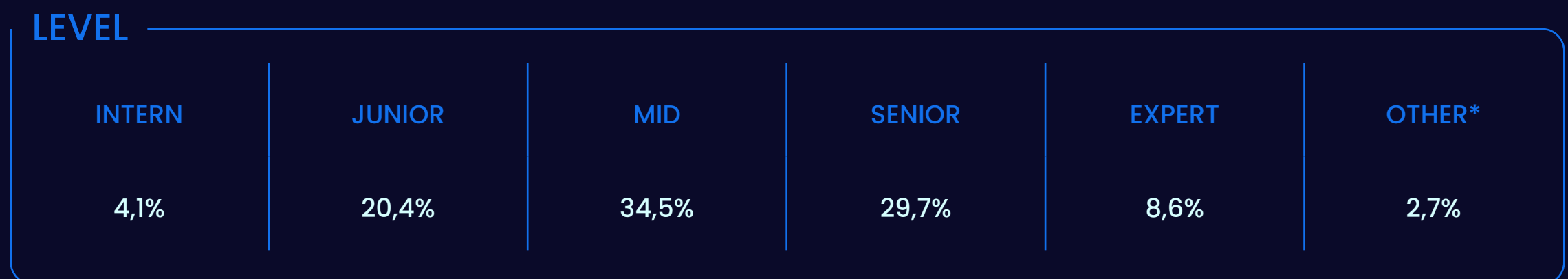
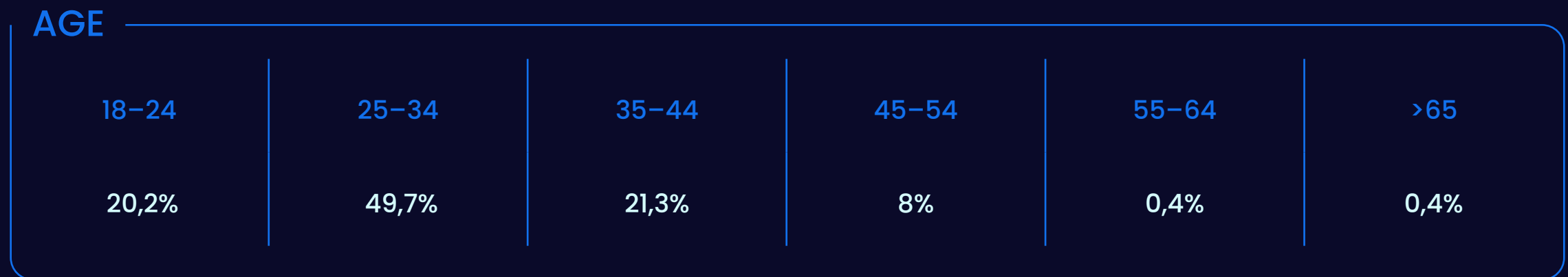


* in the case of the level, „other” applies to people who do not want to specify it or have no defined seniority level; in the case of education, „other” indicates a different answer that does not match any of the defined categories



Czechia

Among IT specialists in the Czech Republic, as many as **44.5%** received primary or secondary education.



* in the case of the level, „other” applies to people who do not want to specify it or have no defined seniority level; in the case of education, „other” indicates a different answer that does not match any of the defined categories

Slovakia

Slovakia is the leader among the surveyed countries in terms of the percentage of specialists at the mid-level. They count for **36.5%** of the IT market in this country.

AGE

18-24	25-34	35-44	45-54	55-64	>65
23,4%	48,5%	21,5%	6,3%	0,1%	0,2%

LEVEL

INTERN	JUNIOR	MID	SENIOR	EXPERT	OTHER*
5,5%	24,2%	36,5%	26,3%	6,7%	0,8%

EDUCATION

PRIMARY	SECONDARY	BACHELOR DEGREE	MASTER DEGREE	PHD	OTHER*
0,7%	26,3%	19,2%	43,9%	2,7%	7,2%

MAIN SPECIALIZATIONS

BACKEND		22,6%
FULLSTACK		21,5%
FRONTEND		12,5%
TESTING		7,5%

* in the case of the level, „other“ applies to people who do not want to specify it or have no defined seniority level; in the case of education, „other“ indicates a different answer that does not match any of the defined categories

Hungary

One will not find many IT professionals under 24 in Hungary. They represent only **8.9%** of the industry in this country, whereas in each of the other surveyed countries this percentage is over 20%.

* in the case of the level, „other” applies to people who do not want to specify it or have no defined seniority level; in the case of education, „other” indicates a different answer that does not match any of the defined categories

AGE

18-24	25-34	35-44	45-54	55-64	>65
8,9%	51,1%	31,1%	8,6%	0,2%	0,1%

LEVEL

INTERN	JUNIOR	MID	SENIOR	EXPERT	OTHER*
2,3%	20,6%	32,2%	32,3%	11%	1,6%

EDUCATION

PRIMARY	SECONDARY	BACHELOR DEGREE	MASTER DEGREE	PHD	OTHER*
0,4%	19,8%	55,8%	20,7%	0,7%	2,6%

MAIN SPECIALIZATIONS



Ukraine

Ukraine has the lowest rate of IT specialists in the region at the **junior level (15.4%)**. This is several percentages fewer than in any of the other surveyed countries.

AGE

18-24	25-34	35-44	45-54	55-64	>65
23,9%	38,5%	28,3%	8,2%	1,1%	0%

LEVEL

INTERN	JUNIOR	MID	SENIOR	EXPERT	OTHER*
7,7%	15,4%	25,9%	21,7%	9,7%	19,6%

EDUCATION

PRIMARY	SECONDARY	BACHELOR DEGREE	MASTER DEGREE	PHD	OTHER*
3,4%	8,7%	31,5%	51,1%	2,2%	3,1%

MAIN SPECIALIZATIONS

BACKEND		21,6%
FRONTEND		13,7%
FULLSTACK		9,7%
TESTING		9,3%

* in the case of the level, „other“ applies to people who do not want to specify it or have no defined seniority level; in the case of education, „other“ indicates a different answer that does not match any of the defined categories

For many years, IT companies in our region have been recruiting specialists across other Central and Eastern European markets. The aforementioned similarities in terms of education, experience and skills undoubtedly are the competitive advantage of the candidates. They are also a source of benefits for us - employers. Cultural similarity facilitates communication within the company and the day-to-day management of teams. Similar skills and experience drive the multidimensional development of the organization.

The recently observed increased mobility of candidates and legislative solutions, such as The Poland Business Harbor program operating in Poland is a catalyst for changes taking place on the recruitment market. In the era of growing shortages of specialists in the IT industry, the possibility of relocation or remote work of highly qualified professionals allows to efficiently build and develop teams and focus on the development of business processes.

Radosław Świętoń, Head of People & Talent Acquisition w EPAM Poland



Cultural

similarity facilitates
communication

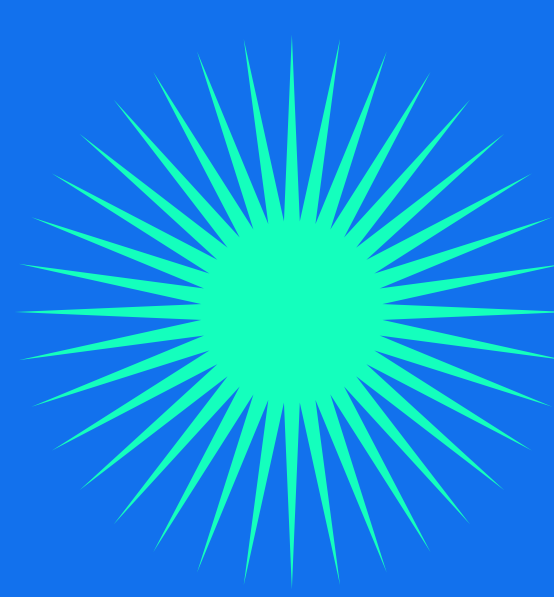
within the company

and the — day-to-day

management 

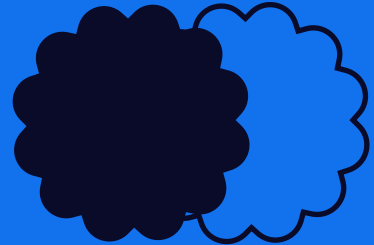
of teams. 

Key Competences 03.



★ What are the skills of IT specialists from the region



 and what category of industry



category

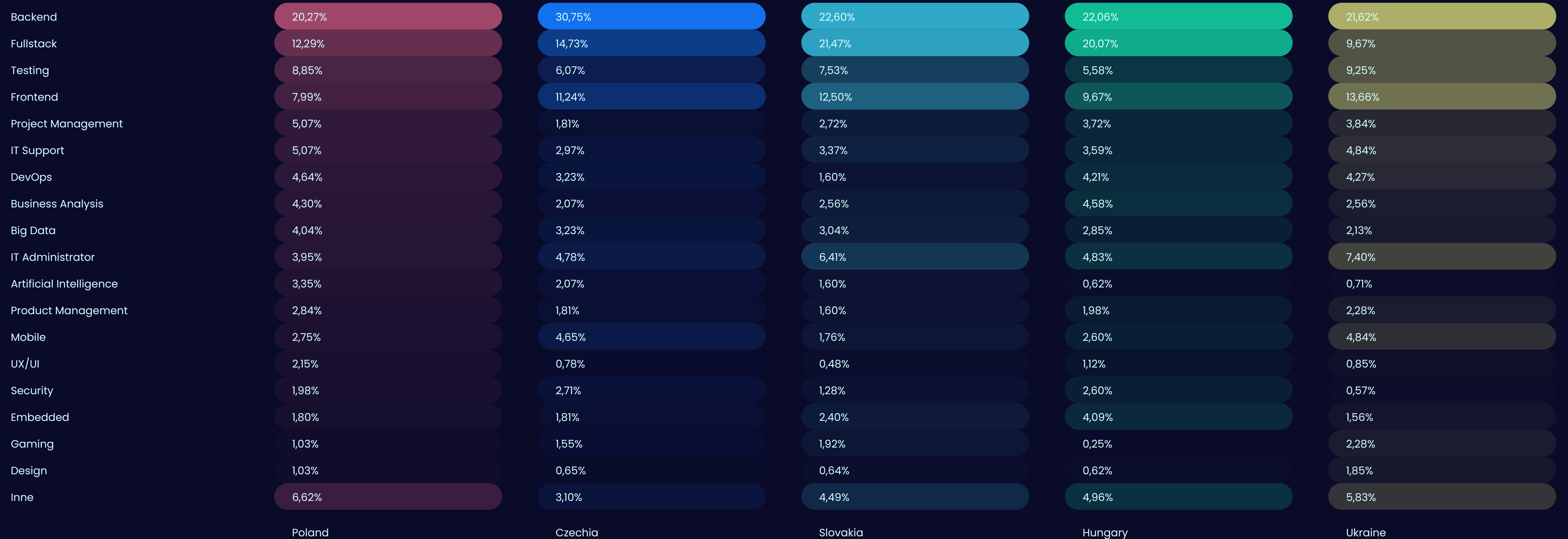


do they

represent?



IT Category



Legend



0%

31%

Backend & fullstack

→ top IT

categories

in the region

Central and Eastern Europe shines with backend! As a matter of fact, the percentage of specialists in this field is very high here – in each country, the backend is represented by at least every fifth IT specialist, and in the Czech Republic, it is even over 30%!

Slovakia and Hungary stand out with regards to the popularity of the highlighted categories. The percentage of fullstack developers is similar to the backend one there. The fullstack category is recently the most popular field of IT. According to the Stack Overflow * study, as many as 49% of programmers indicate that the term „fullstack“ best reflects the scope of their current duties. At the same time, fullstack specialization is the one most wanted by the industry employers **.

Considering the context of the other categories, it is worth noting that Ukraine has the highest percentage of frontend developers in the region (13%), and there is a similar number of testers and fullstack devs there. Testing is also a strong category in Poland (3rd place, higher than the frontend). Another phenomenon is worth noting here. Poland is the only country among the respondents where the „IT iron four“ (Backend, Fullstack, Frontend, Testing) is followed by Project Management and Support instead of admins as in other countries.

*2021 Developer Survey, Stack Overflow

**2020 Developer Skills Report, HackerRank

The post-pandemic demand for technological development and digital transformation has resulted in an incredible increase in the number of IT projects. Consequently, necessary specialists to implement them are needed. Clients from Western Europe and other continents have long ago stopped looking at our part of the world as a source of lower-cost IT competencies. Now different aspects of the market have become of key importance to them.

First of all, they are very impressed with the education, including the knowledge and skills of our engineers. Secondly, communication skills, many years of experience in cooperation with international teams, and competencies related to proactively proposing new solutions in implemented projects are all highly valued.

Cultural aspects are also important. Specialists from Central and Eastern Europe, due to their innate openness, perfectly cooperate with clients from Scandinavian countries, the Mediterranean, but also other regions of the world. It makes them a valuable competition against specialists from more developed markets.

Yarina Krymova, HR Manager, Infopulse Poland

IT specialists

from CEE

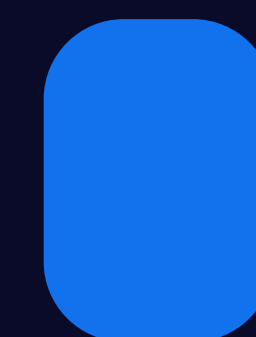


from CEE

highly valued

by the rest

of the world



Forms of cooperation and level of salaries

04.

What type of contract  is the most popular



and       how much

do IT specialists from the region



earn?

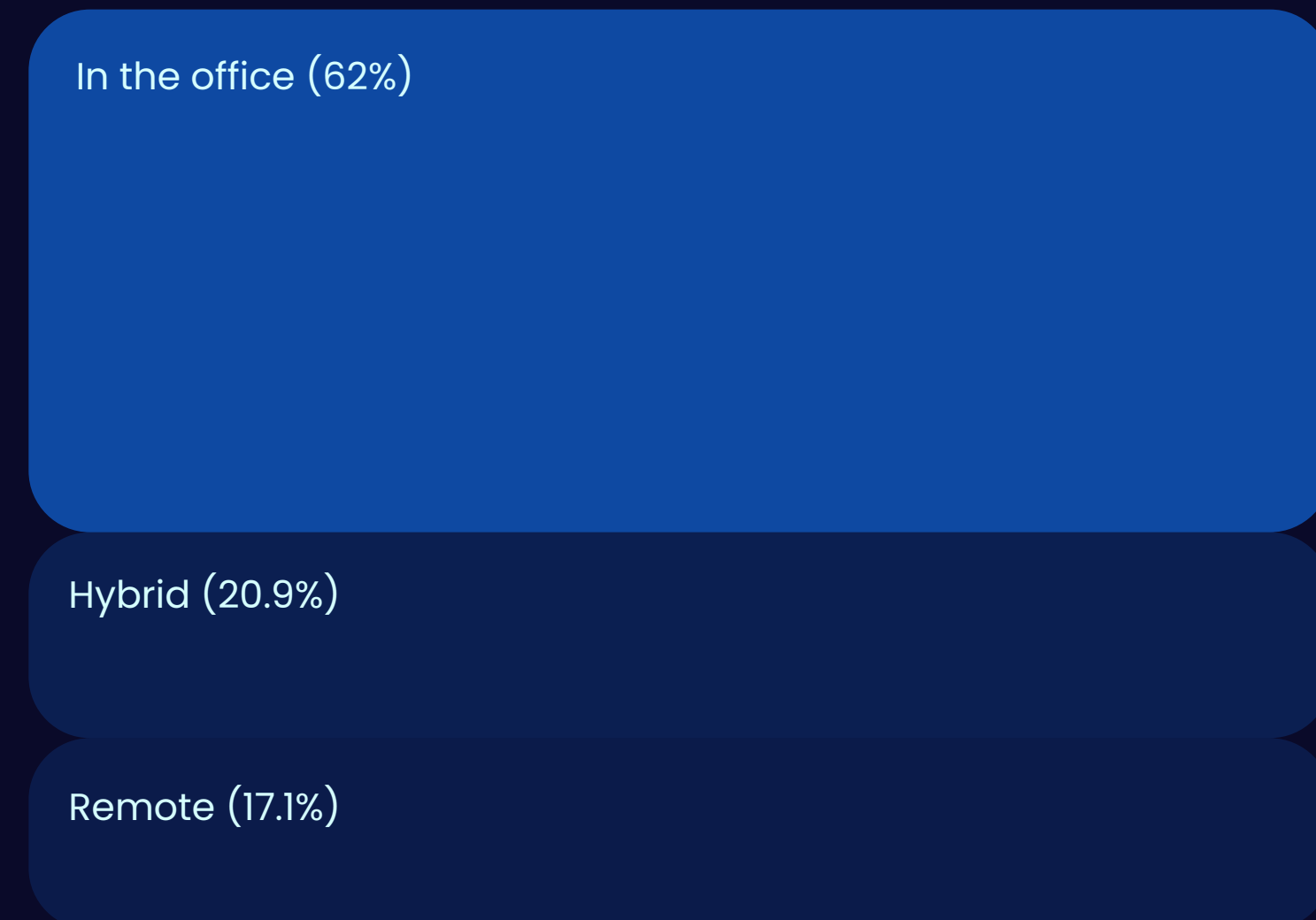
The pandemic accelerated the remote revolution

Before the pandemic, most IT specialists in the region worked stationary, despite the increasing number of opportunities for remote work.

When the pandemic struck, the proportions changed, but the IT industry had little trouble adapting to the change. In 2020 alone, the percentage of remote job offers on nofluffjobs.com was 31%, while in the previous year it was only 9%*. The importance of hybrid mode is also growing. Even before the pandemic, 25% of Czechs worked like this, and after - over 30%. When viewed through the lens of workers' reluctance to return to their offices**, the hybrid may prove to be a Solomonic solution.

Quite a few companies have undergone an accelerated digital transformation over the past 1.5 years. The IT industry has gone through it rather smoothly. Most IT specialists claim that their remote work environment is comfortable. This is yet another argument on the side of employees to negotiate with the employers.

Where did you work before the pandemic?



Where did you work after the pandemic started?



How would you rate your remote work environment?



* Source: IT job market in Poland in 2020, No Fluff Jobs

** LinkedIn survey: <https://www.linkedin.com/feed/update/urn:li:activity:6815923583324352512>

Commentary



Poland

Many companies in our market were well prepared to work remotely at the time of the outbreak of the pandemic. One ought to remember that the Polish IT sector works to a large extent for clients from other countries and continents. Hence companies had already had previous experience in working in a distributed model. On the other hand, those organizations that were slightly worse prepared were able to adapt to the new situation exceptionally efficiently and fast thanks to the high motivation of employees and managers.

Zuzanna Przybyła, CEO, World Is Your Office



Hungary

Most companies have treated the shift towards remote-first as a COVID induced temporary situation. Few realize that this is indeed game changing for the Local and the broader EU Market as well. Now with the openness and increasing preference towards remote-first amongst developers is forcing them to reconsider. More and more companies are starting to embrace it to tap into more distributed talent & improve work-life balance. Employers who champion remote-first now have a significant advantage.

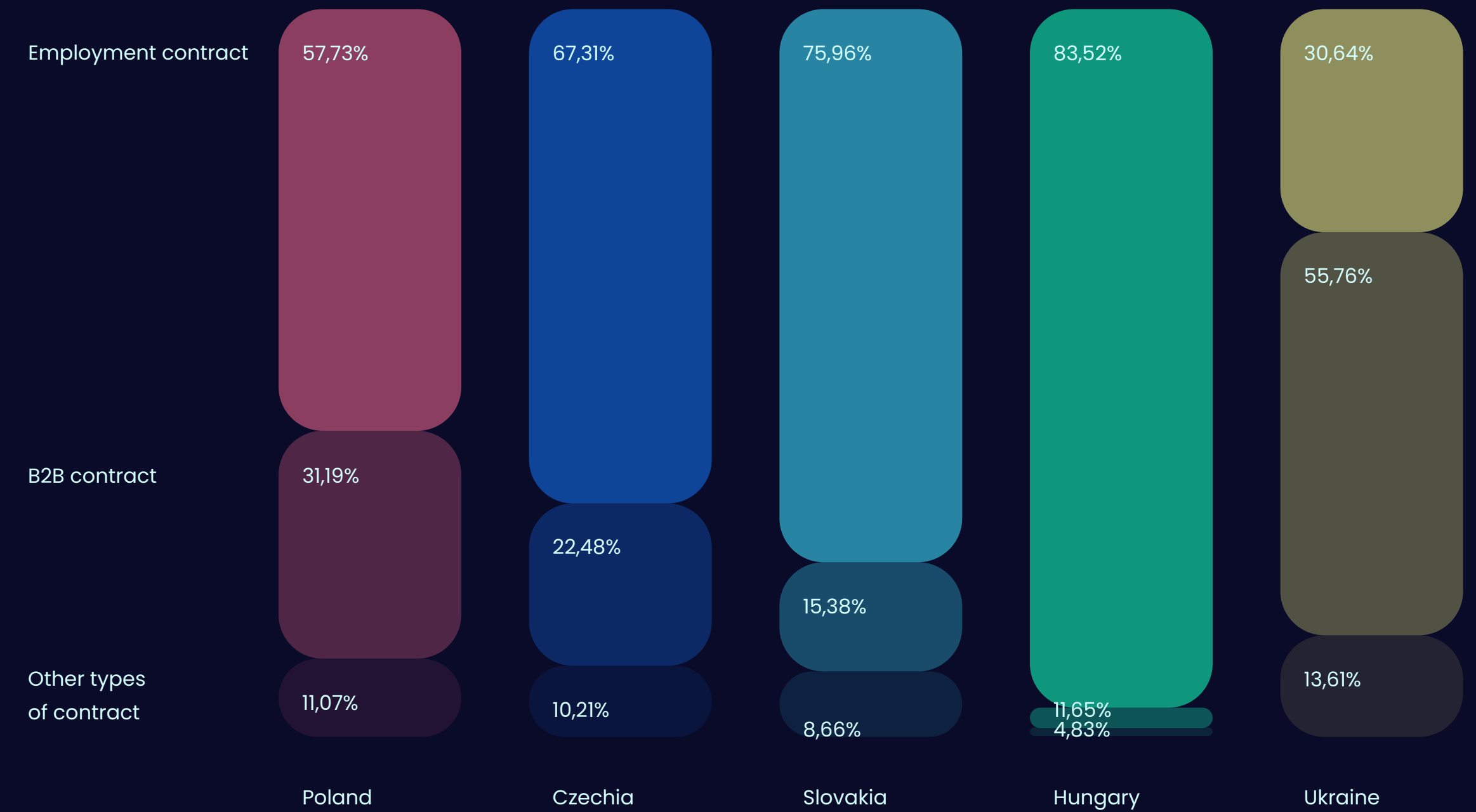
Peter Kaszt, Co-founder & Senior Consultant, TalentStack

Type of contract*

The most popular form of agreement between a company and an IT specialist in the region is the **Employment contract** (or its equivalent in a given country). This type constitutes as much as **83.5%** in Hungary, and nearly **76%** of the employment agreements in Slovakia. However, in Ukraine, 30.6% of respondents declare work based on this type of agreement. Hence it is not rated the most popular type there.

The majority of IT specialists there work with the local equivalent of **B2B agreement** (Приватне підприємство, which translates to 'Private enterprise'). This type of agreement is indicated by as many as **55.8%** of employees in the industry.

B2B is a form of agreement that has already become popular with **more experienced specialists** in Poland. Also on nofluffjobs.com, employers offer this type of contract to seniors much more often (**87.2%**) than an employment contract (**36.5%**)**.



Legend



0%

100%

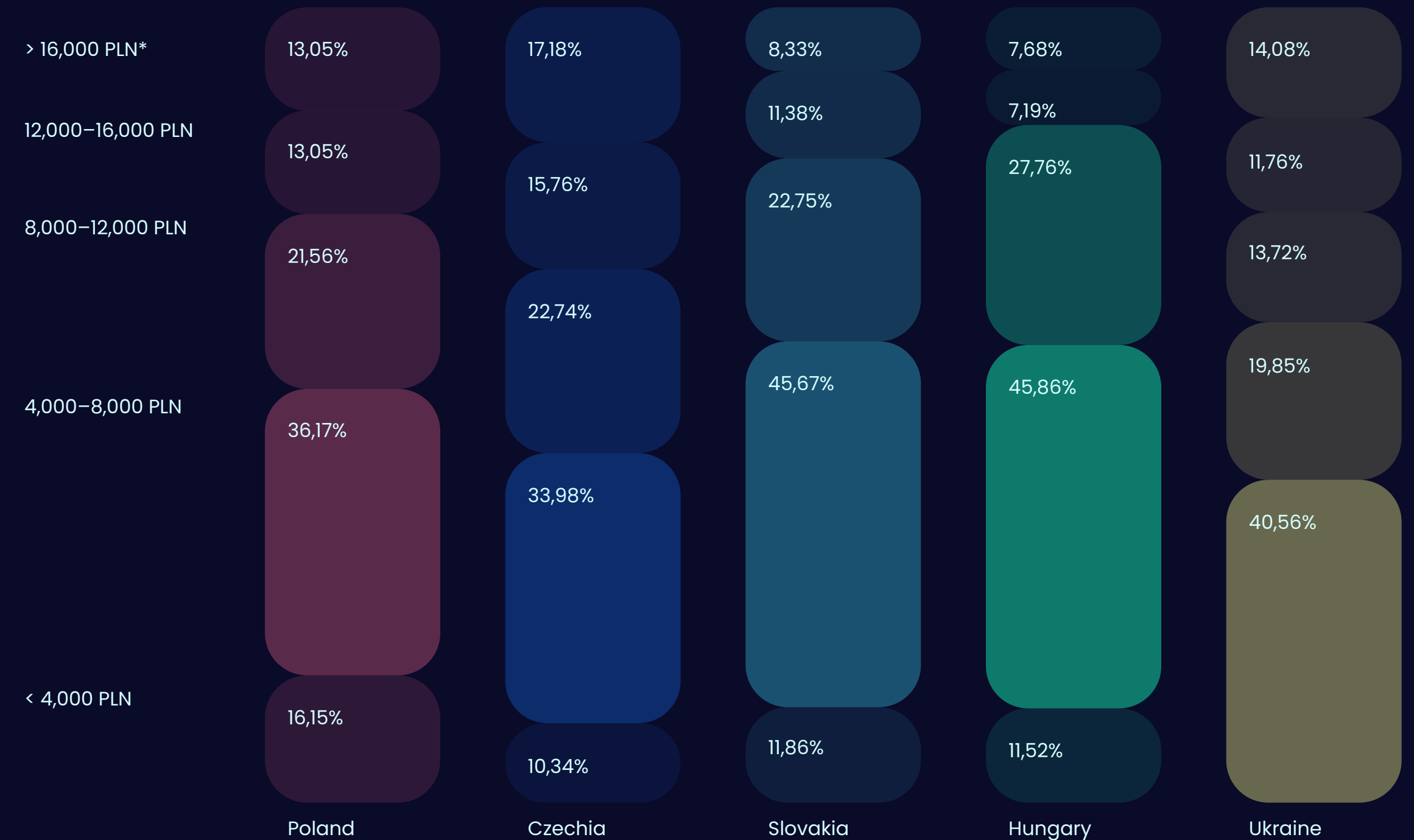
*The types of contracts that could be selected in the survey consisted of the local equivalents of contracts used in Poland. E.g. Zaměstnanecká smlouva, which in the Czech Republic and Slovakia is an equivalent of the Employment contract or Vállalkozói szerződés in Hungary, which is closest to our B2B Agreement.

** One can often find 2 or more types of contract offered in the job ads. Data from the report "IT job market in Poland in 2020", No Fluff Jobs

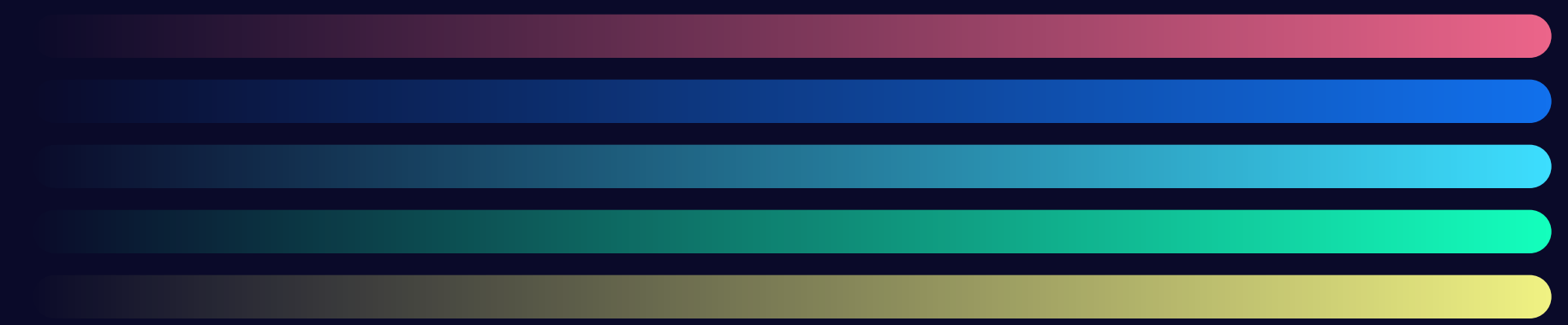
Remuneration of IT specialists

By analyzing the declared remuneration received by IT specialists from Central and Eastern Europe, we can arrive at several interesting conclusions:

- The **Czechs** receive the highest salaries (1/3 of the representatives of this region earn **over 12,000 PLN net**),
- In Slovakia and Hungary, we can clearly observe something resembling the **“IT middle class”** - in both countries, more than 2/3 of people working in the industry earn between 4 and 12 thousand PLN,
- In Ukraine only 33.5% falls within this range. A significant financial stratification is noticeable here, as many as 40.5% of IT specialists earn **less than 4,000 PLN**. Interestingly, the percentage of those who earn over 16,000 PLN is similar to Poland and much higher than in Slovakia or Hungary.



Legend



0%

100%

* The remuneration range for each country is the equivalent of the specified PLN range converted to the local currency (currency exchange rate - 9th of July 2021). The table presents general net salary values, regardless of the type of the contract.

For several years, we have been observing a dynamic growth in the role of the technology sector in the Polish economy. The COVID-19 pandemic only accelerated this process and even further emphasised the importance of digitization and outsourcing processes. It is not surprising that employers are constantly reporting a growing demand for IT specialists. According to various sources, the shortage of specialized IT personnel on the Polish market ranges between 50,000 to over 100,000.

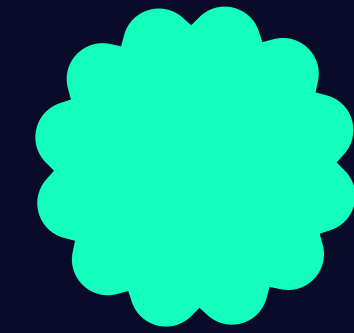
A partial response to such a personnel challenge is the employment of foreigners, mainly from the East, who are increasingly considering Poland as the place for the development of their career in the high-tech industry.

Geographic occupational mobility is encouraged by liberal legal procedures for employing foreigners in comparison to the rest of the EU (e.g. simplified immigration procedures and exemption from the employment market test) and the candidates' perspective for entering other markets in the world. It is important to note here the rapid progress of digitization in Poland and support from the state, for example through the Poland Business Harbor program, a comprehensive package that helps IT specialists to relocate to the territory of the Republic of Poland.

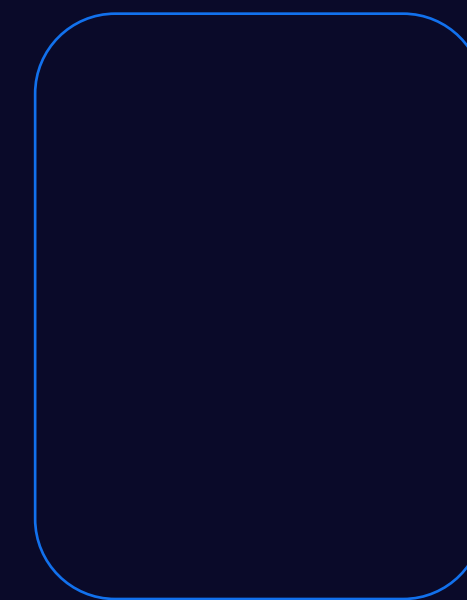
Still, the process of employing an IT employee from abroad is far from ideal. As a tech company, EWL wants to simplify this path. We are creating a migration platform that will transparently connect employees and employers from different countries.

Michał Głowiński, CTO, EWL Group

Geographic occupational mobility



is encouraged by liberal



legal procedures



for employing



foreigners



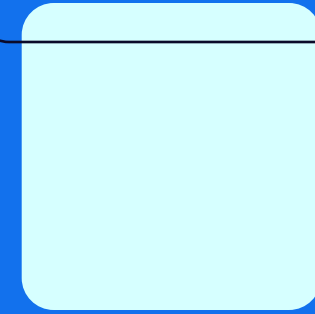
Search for employment 05.

Are IT
from



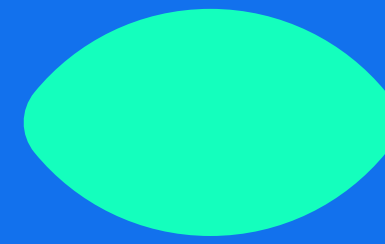
the

specialists



region

actively looking



for a job?



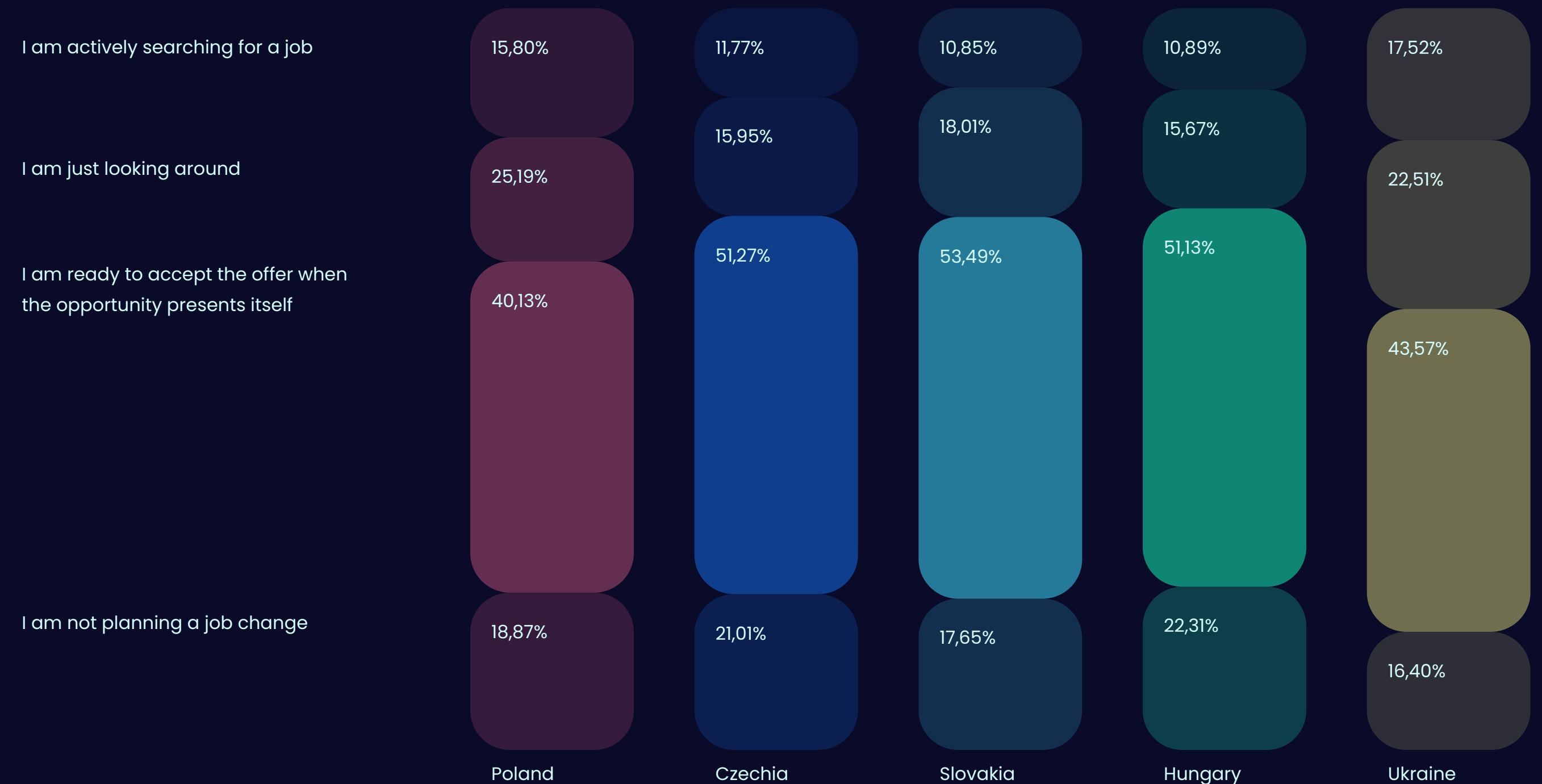
Job search

Compared to colleagues from other surveyed markets, Poles and Ukrainians declare **more willingness to change jobs**.

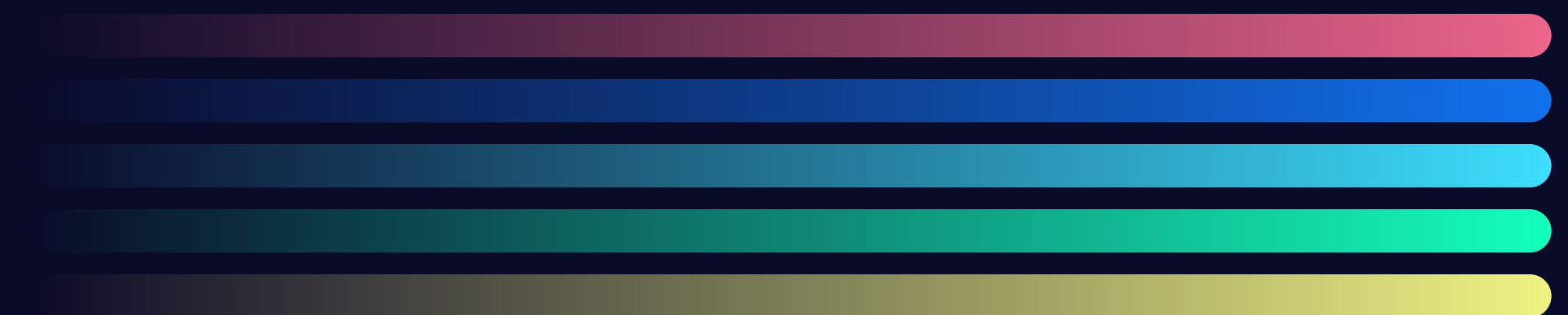
41% of Polish and 40% of Ukrainian IT specialists indicate that they **are either actively searching or only looking around for opportunities**.

The specialists of the tech industry are much less willing to change jobs in Hungary (over 73% **do not plan or rather do not plan to change jobs**), the Czech Republic (72%) and Slovakia (71%).

Acquiring candidates from these regions will require employers **to offer something more**.



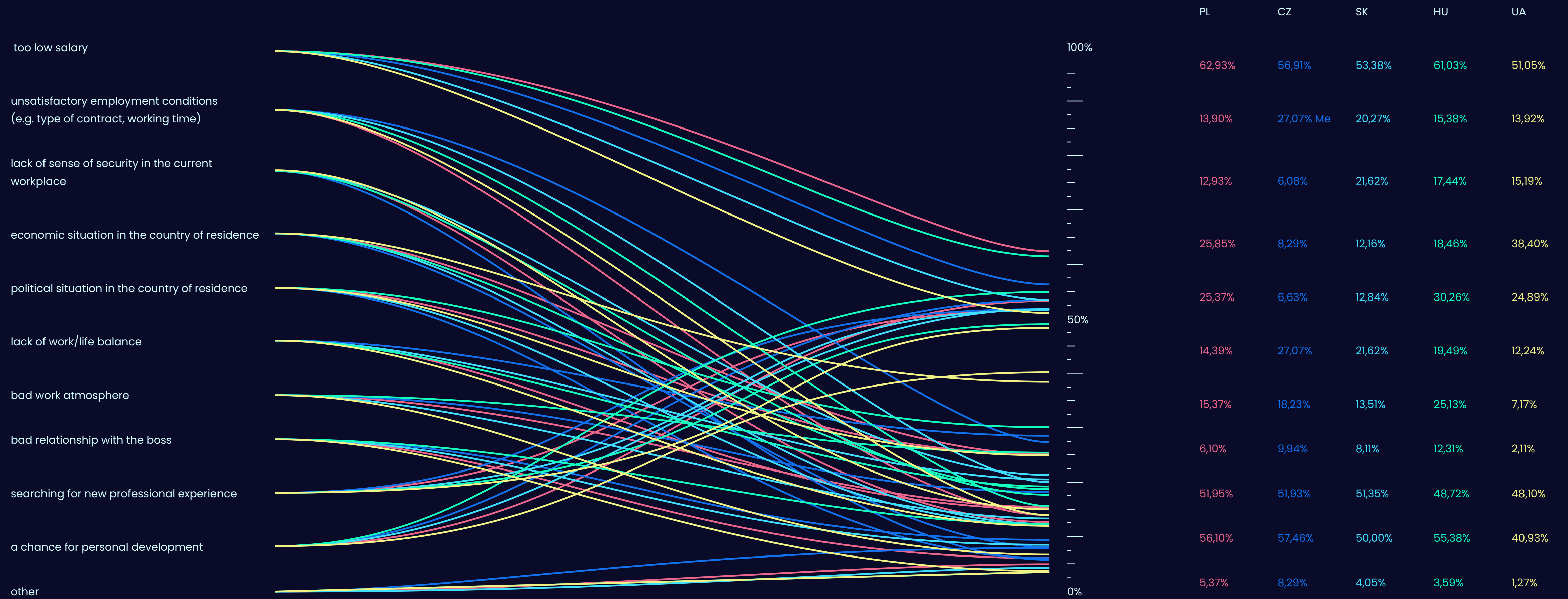
Legend



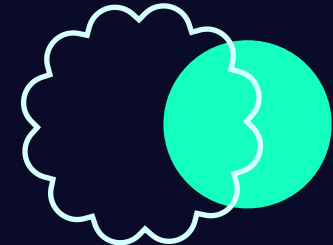


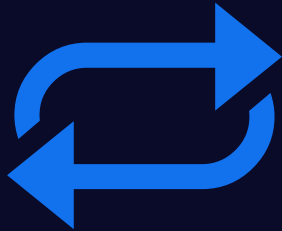

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Reasons for looking for a job



Money is not all that matters. What else influences the decision to change jobs?



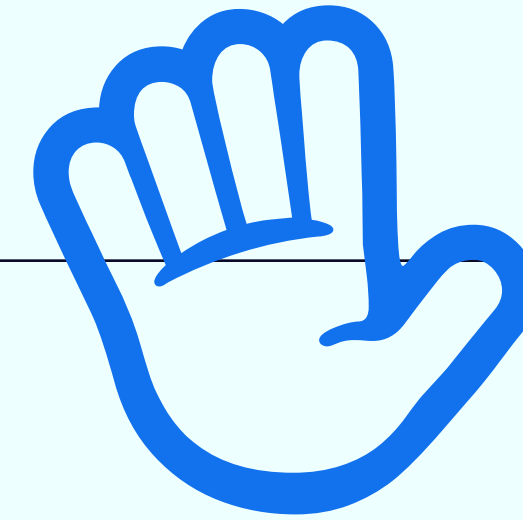
The question about the reasons for looking for a new job showed again how [similar the IT specialists from the region are](#). In each of the surveyed countries, the 3 most important issues were: too low salaries, searching for new professional experience and looking for a chance for personal development.

It gets even more interesting when we analyze the answers with a smaller percentage of respondents. Here the differences are so contrasting that it is worth paying attention to them more closely.

And so:

- IT specialists in the Czech Republic and Slovakia sometimes suffer from [unsatisfactory employment conditions and a lack of work-life balance](#). The Slovaks also complain about the lack of a sense of security in the current workplace
- [38.4% of Ukrainian and 25.9% of Polish](#) IT specialists search for new employment due to the economic situation in the country, but in the Czech Republic, it is a marginal problem (<10%)
- If we add politics to it, Ukraine (24.9%) and Poland (25.4%) will be at the top again, but both countries were overtaken by Hungary – here [30.3% of specialists](#) indicate the political situation in their country as the main reason to change jobs.
- Hungarians are also motivated to seek a change by the [bad atmosphere at work](#) (the percentage is way higher than in the other countries)
- We also have good news for all managers: a bad relationship with the boss does not make an employee immediately look for a new job – in each of the countries surveyed, this answer achieved a [low result](#) (only in Hungary is a two-digit result, and in Ukraine, a record low of 2.1%). We are therefore able to take a rational approach to carrying out our duties.

Commentary



Czechia

There is a relatively significant lack of experienced IT professionals across a range of different types of specializations. At the same time, new projects are constantly being created that more or less use the services of IT specialists, so there is a high probability that even if a developer loses his job, he will not face much trouble getting a new position. From the perspective of the employer, finding experienced developers is often a matter of many months of intensive searching, which can even be unsuccessful.

Martin Polák, Product Manager, Artinii



Ukraine


IT specialists in Ukraine more often are deciding to change employers in search of new professional challenges. This may be due to the fact that the IT sphere in Ukraine is rapidly developing, the professions are transforming and require more qualified professionals, experience in solving complex problems is the right way to build a successful career. It is no less interesting to solve such tasks, and the result is always valuable, it serves as a great internal motivator for employees.

Alina Neverova, Talent Acquisition Team Lead, OBRIO

Relocation



05.

Are IT specialists
from   the

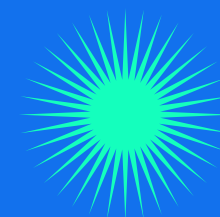
region 

ready to



relocate

for work?



Is finding a job in another country a difficult task?

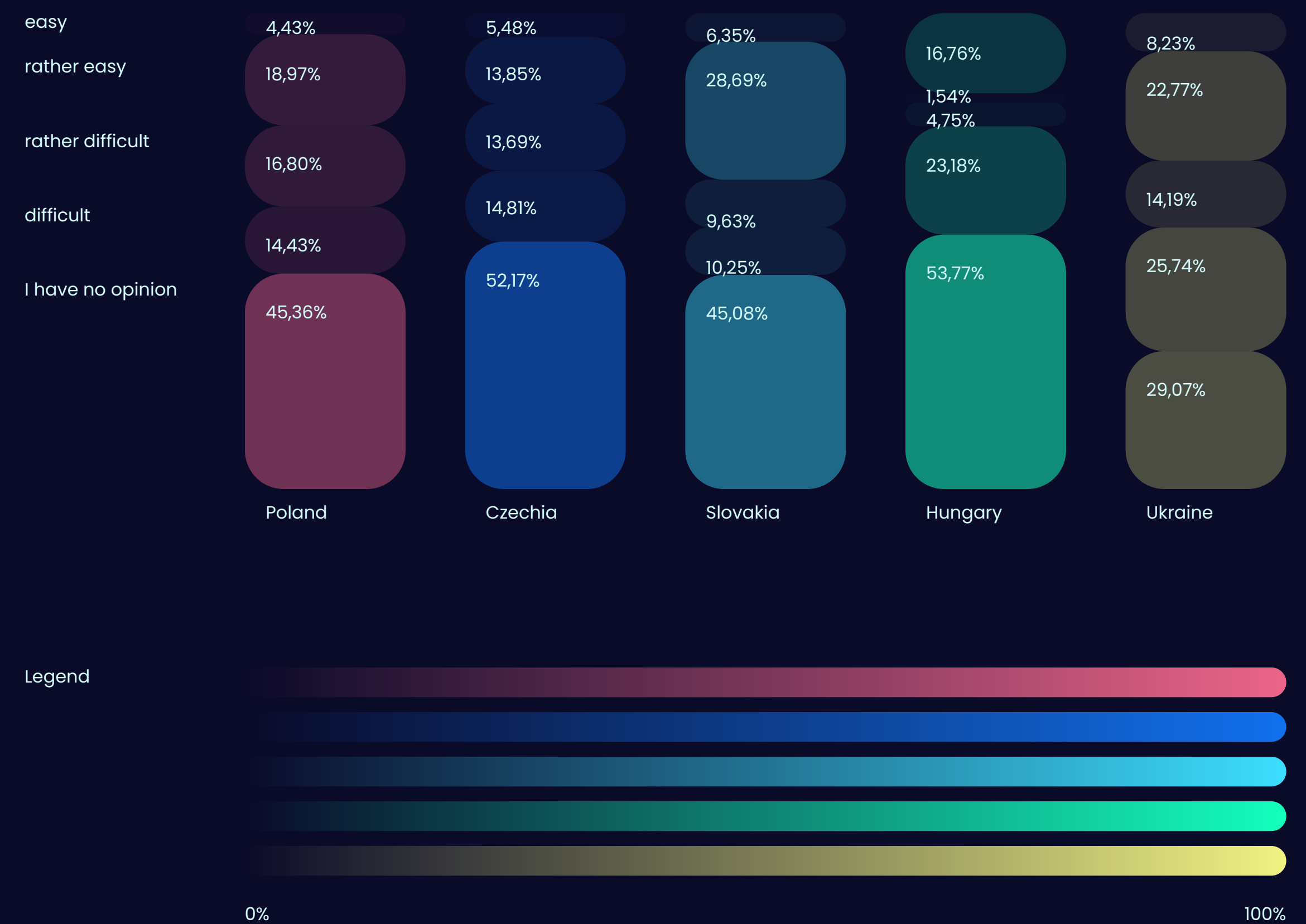
Finding a job abroad causes problems to some degree. Similarly, the analysis of the answers to this question causes problems. The answers are diverse in each of the surveyed communities.

Most of the respondents do not have an opinion on the subject, which may be due to little attempt to find a job in a foreign country. Looking further, it's also hard to find any distinctive trends.

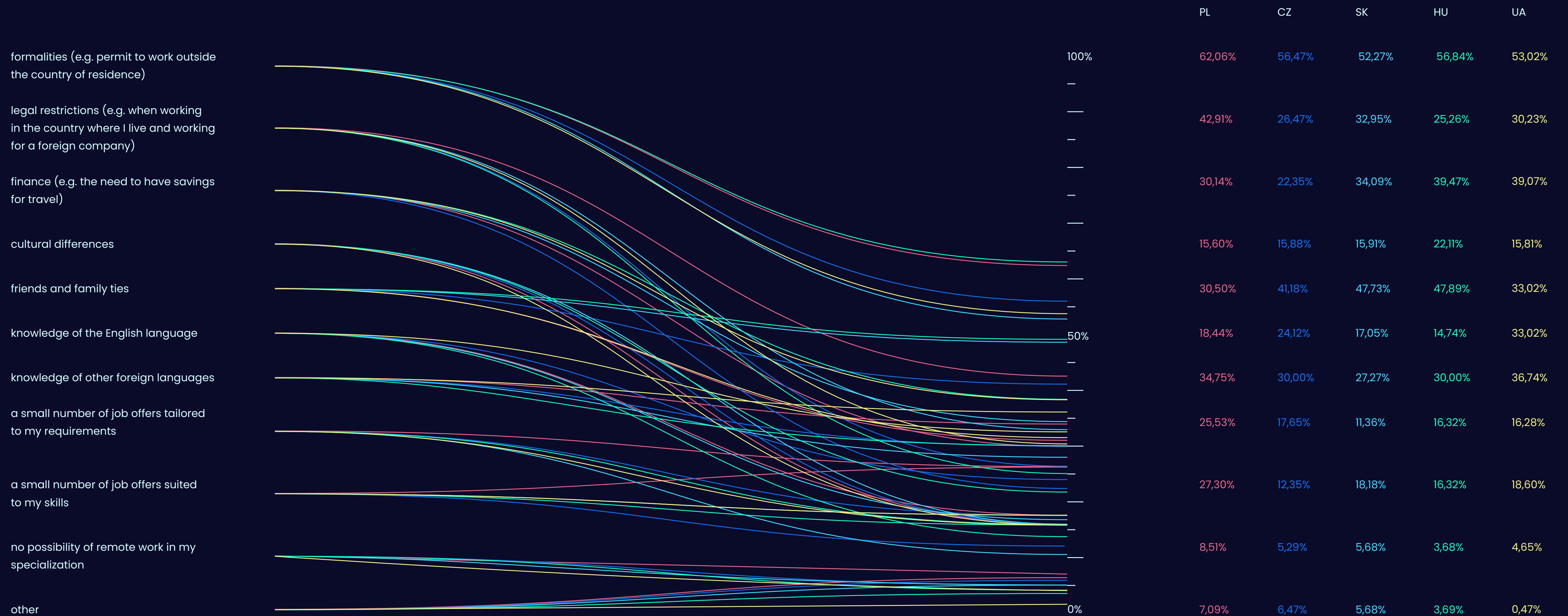
Almost 40% of IT specialists in Ukraine report that it is difficult or rather difficult. It is the highest result among the countries surveyed. At the same time, 31% of the country's respondents answered 'easy' or 'rather easy', so we have two opposing (and strongly represented) groups here.

We find a much bigger difference in the responses of IT specialists in Slovakia. Here, nearly 20% indicate difficulties when trying to find a job abroad, while over 35% declare that it is not difficult for them.

Such polarized opinions require additional scrutiny in the analysis to answer what is challenging and what is helpful in the job search process.

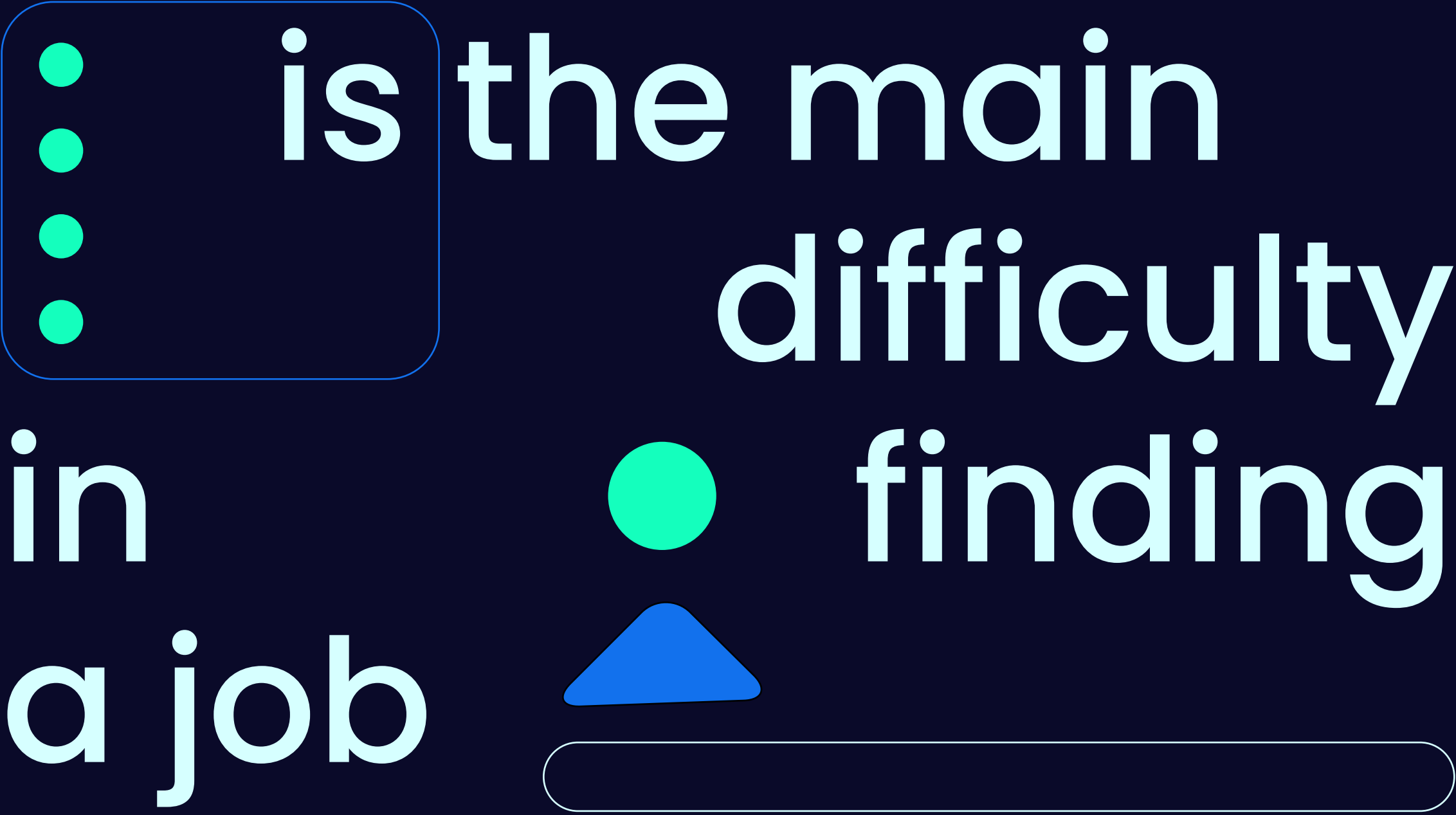


Finding a job abroad is difficult due to:





Handling the formalities is the main difficulty in finding a job abroad



The ones who seek employment abroad lose sleep over [the permits and other necessary documents](#). This is a key problem in each of the countries we have analyzed. Another common issue is the [knowledge of a foreign language](#) (other than English). This applies to a language of a destination country. Learning usually takes a significant amount of time and energy.

Looking at specific countries, one can find interesting trends. For Slovaks and Hungarians, a big problem to solve is figuring out a way to take care of the [relationship with the family and friends](#) after moving out (in each country – over 47% of responses).

Hungarians, together with Ukrainians, also point to the [financial aspect](#). The need to save enough money for the travel is a big problem for over 39% in each of these countries. Some of the biggest difficulties for Polish IT specialists (nearly 43% of responses) appear to be [legal regulations](#) for work abroad.

Another



European country



as a dream 

job destination 

It is not surprising that for IT specialists from our region, the dream place to work in most cases is their **country of origin** or another country **outside the region**. But there are exceptions here as well. For IT specialists from Ukraine, working in Poland is more attractive (39.2%) than working in Ukraine (30.5% - at the same level as working in the Czech Republic).

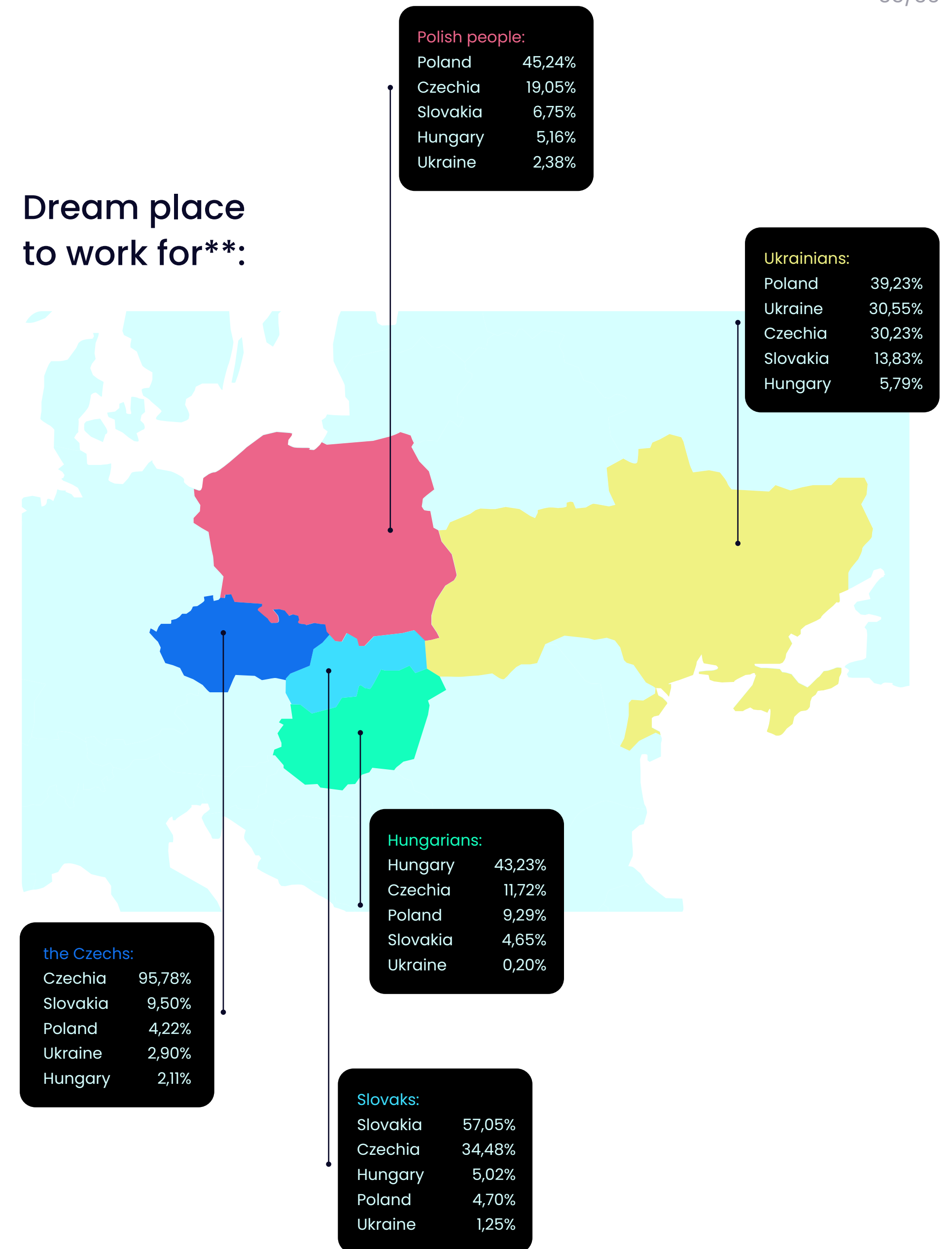
However, the most significant result is in our southern neighbours. **96% of Czechs** indicate that their home country is a dream place to work for them. This result is incomparable to any other surveyed country (PL - 45%, SK - 57%, HU - 43%, UA - 30%). The neighbouring countries are also envious of the Czech Republic - it is an attractive destination for 34.5% of Slovaks (while only 9.5 Czechs chose Slovakia) and for 30.2% of Ukrainians.

Looking more broadly, the entire Old Continent offers a wide range of possibilities to IT employees both in terms of **development opportunities and attractive earnings**. From the perspective of Polish IT specialists, favoured destinations in the context of work would be England (54.5%), Germany (53.5%), the Netherlands (17.2%) and the Scandinavian countries: Sweden (15.3%) and Norway (14.3%) *.

* Source: Multiple Choice Question. Survey "Which countries do you get job offers from?", 2021, No Fluff Jobs

** A fragment of the answer to the survey question (only the researched countries in the region are included)

Dream place to work**:





IT specialists in Central and Eastern Europe

Competences, expectations and level of salaries in the IT industry in the region

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