



RESILIENCE

WAR'S IMPACT ON UKRAINE'S IT INDUSTRY



Ministry
of Digital Transformation
of Ukraine



USAID
FROM THE AMERICAN PEOPLE



Western NIS
Enterprise Fund

IT RESEARCH RESILIENCE

IT Research Resilience is the only comprehensive, in-depth study of Ukraine's tech industry during the war, which aims to analyze the current situation and forecast the future scenarios for development.

OUR APPROACH TO THE STUDY



Due to the IT community's mass relocation and the dynamic situation in the country during the war, the IT Research Resilience sample was formed, taking into account the prior assessment of the main regions of internal relocation.



As a result of the assessment, it was indicated that the top regions for relocation are Lviv, Ivano-Frankivsk, Ternopil, Zakarpattia, Chernivtsi, Rivne, and Volyn regions.



Therefore, conducting a survey with a specialized modular sample in these regions provided coverage of IT community representatives who were on the territory of Ukraine during the research period.

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UKRAINE'S TECH INDUSTRY BEFORE THE WAR AND TODAY

1. UKRAINE'S TECH INDUSTRY BEFORE THE WAR AND TODAY

1.1 Key indicators of the IT industry in 2021

\$6.9 billion



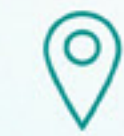
export revenue*

285 000



of IT specialists**

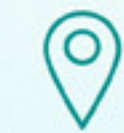
Main tech hubs:



Kyiv



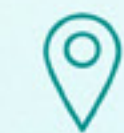
Dnipro



Lviv



Odesa



Kharkiv

+38%

industry growth
in 2021 compared to 2020



34-38%



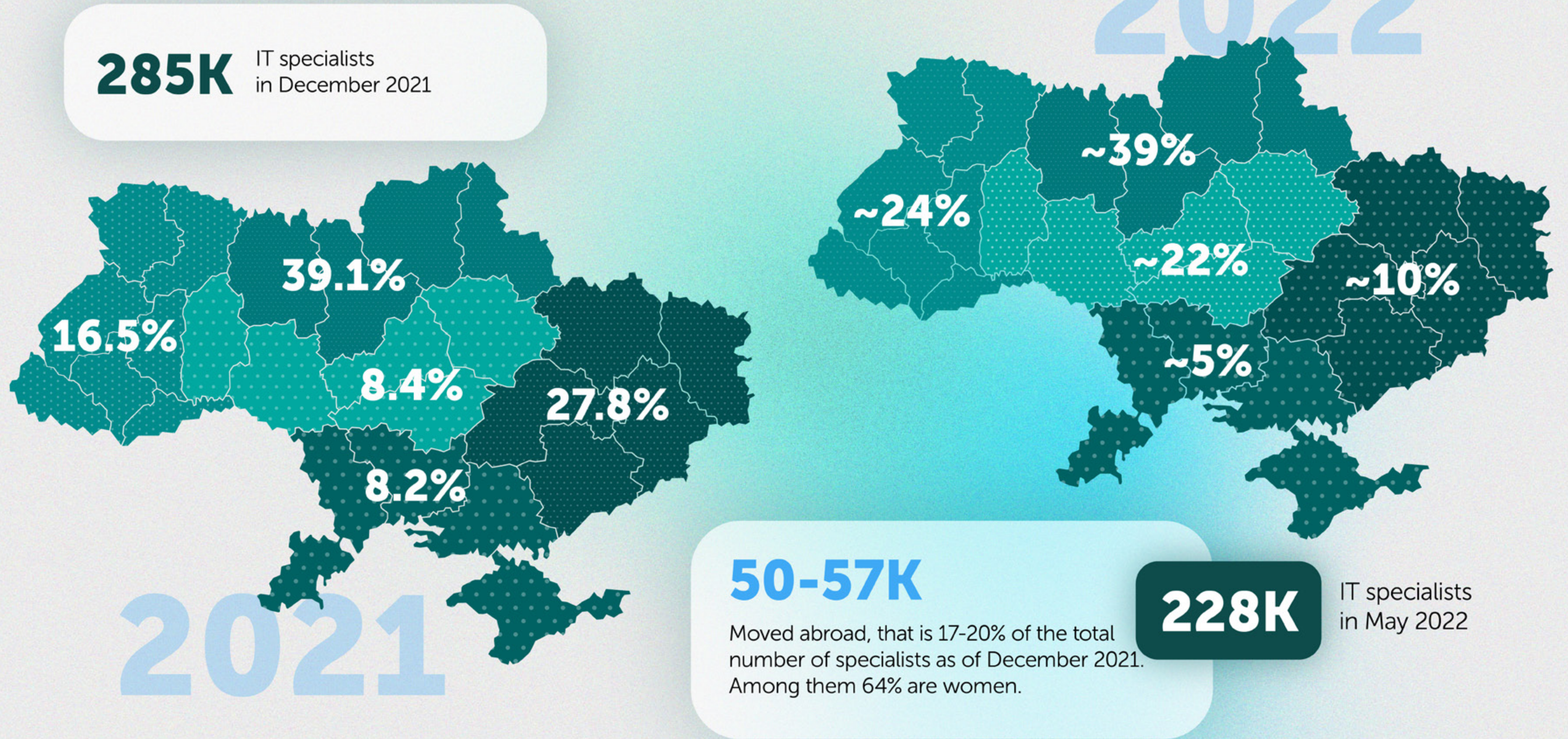
62-66%

* NBU data

** According to the IT Ukraine Association Ukraine IT Report 2021

1. UKRAINE'S TECH INDUSTRY BEFORE THE WAR AND TODAY

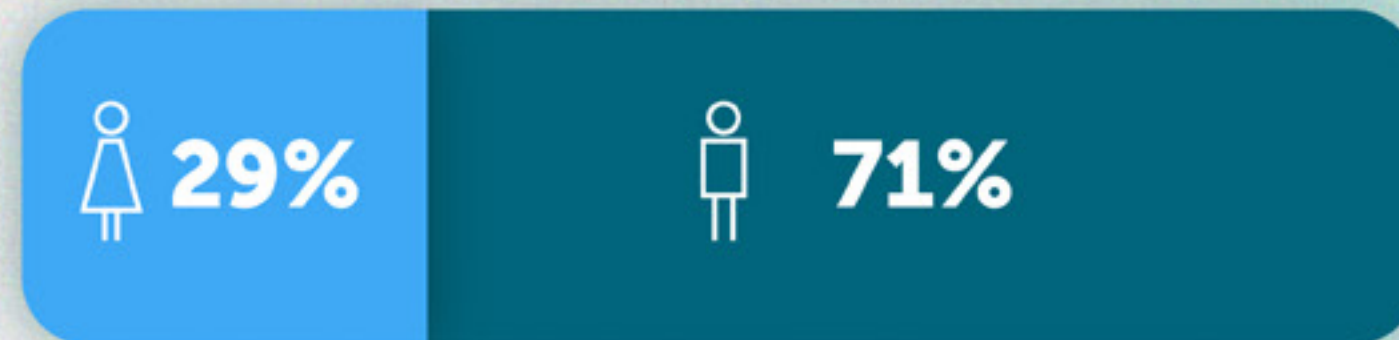
1.2. Changes in the IT market landscape due to the war



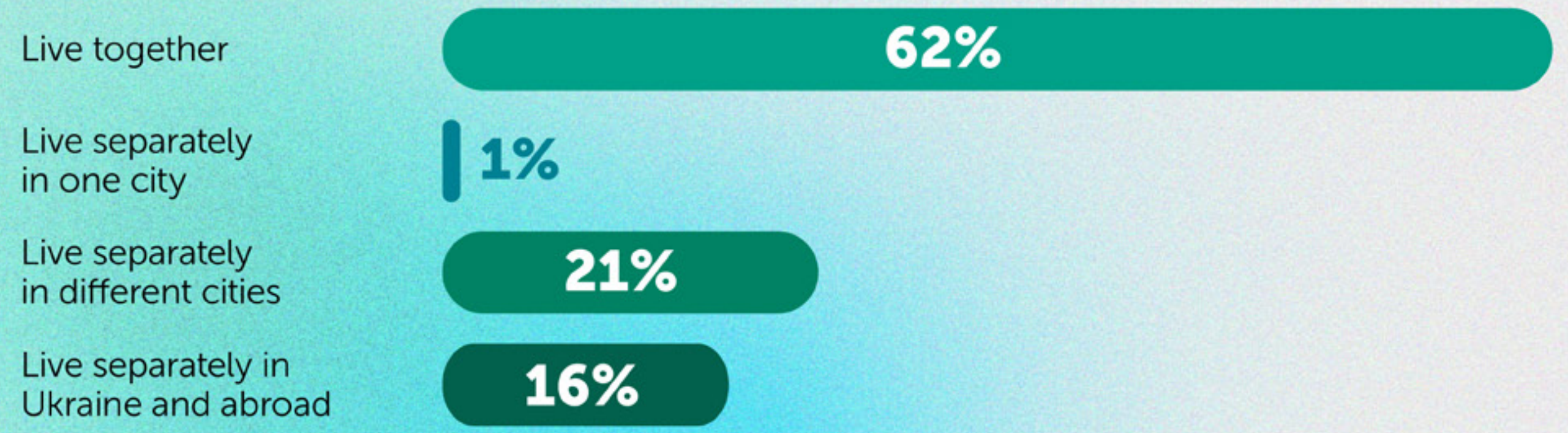
1. UKRAINE'S TECH INDUSTRY BEFORE THE WAR AND TODAY

1.3. IT specialist profile and work specifics

Average age of IT specialist



1/6 of IT specialists have family members abroad, including those who have moved because of the war. In the case of living apart from their families, in different cities in Ukraine or abroad, the migration intentions of IT specialists increase.



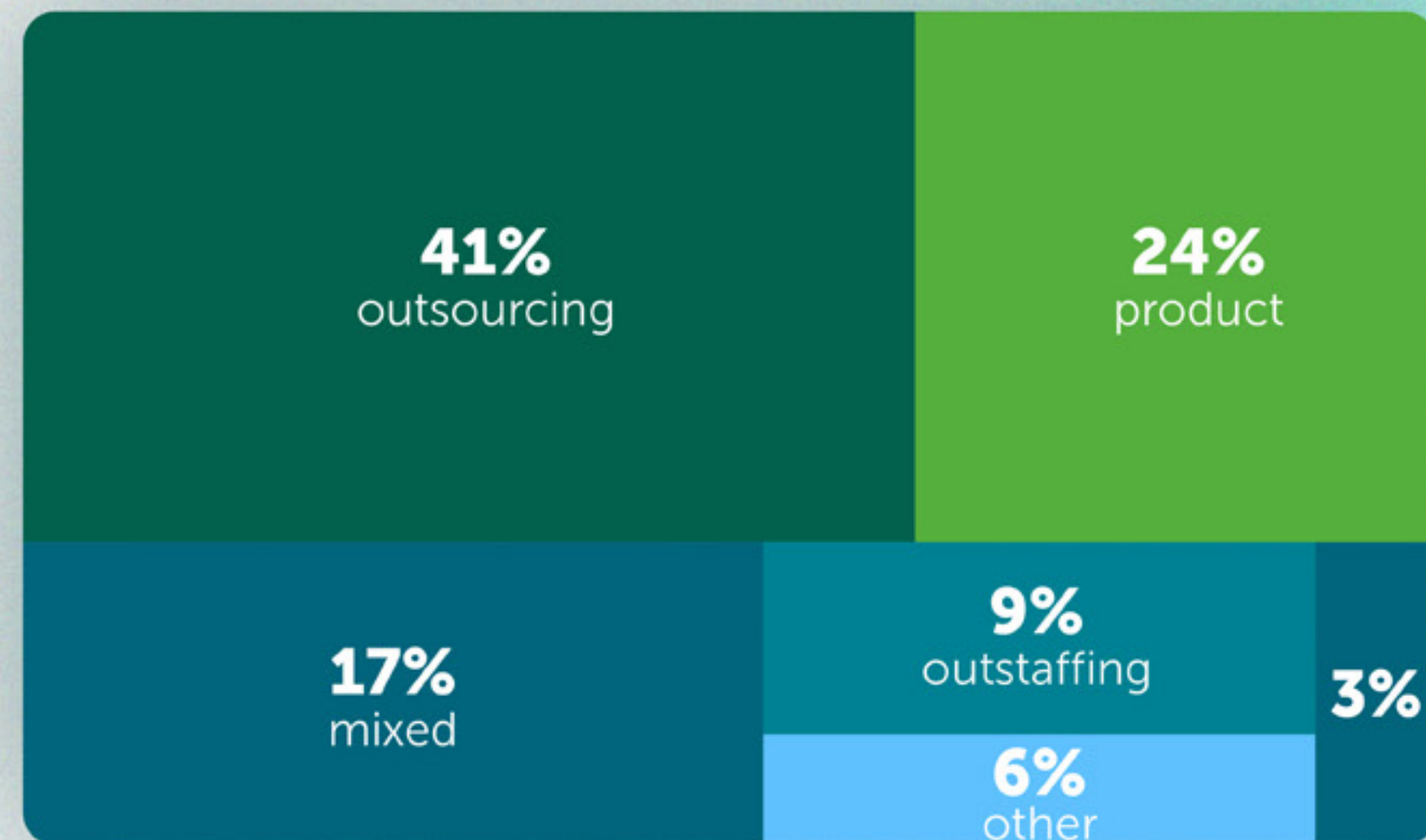
1. UKRAINE'S TECH INDUSTRY BEFORE THE WAR AND TODAY

1.3. IT specialist profile and work specifics

1/3

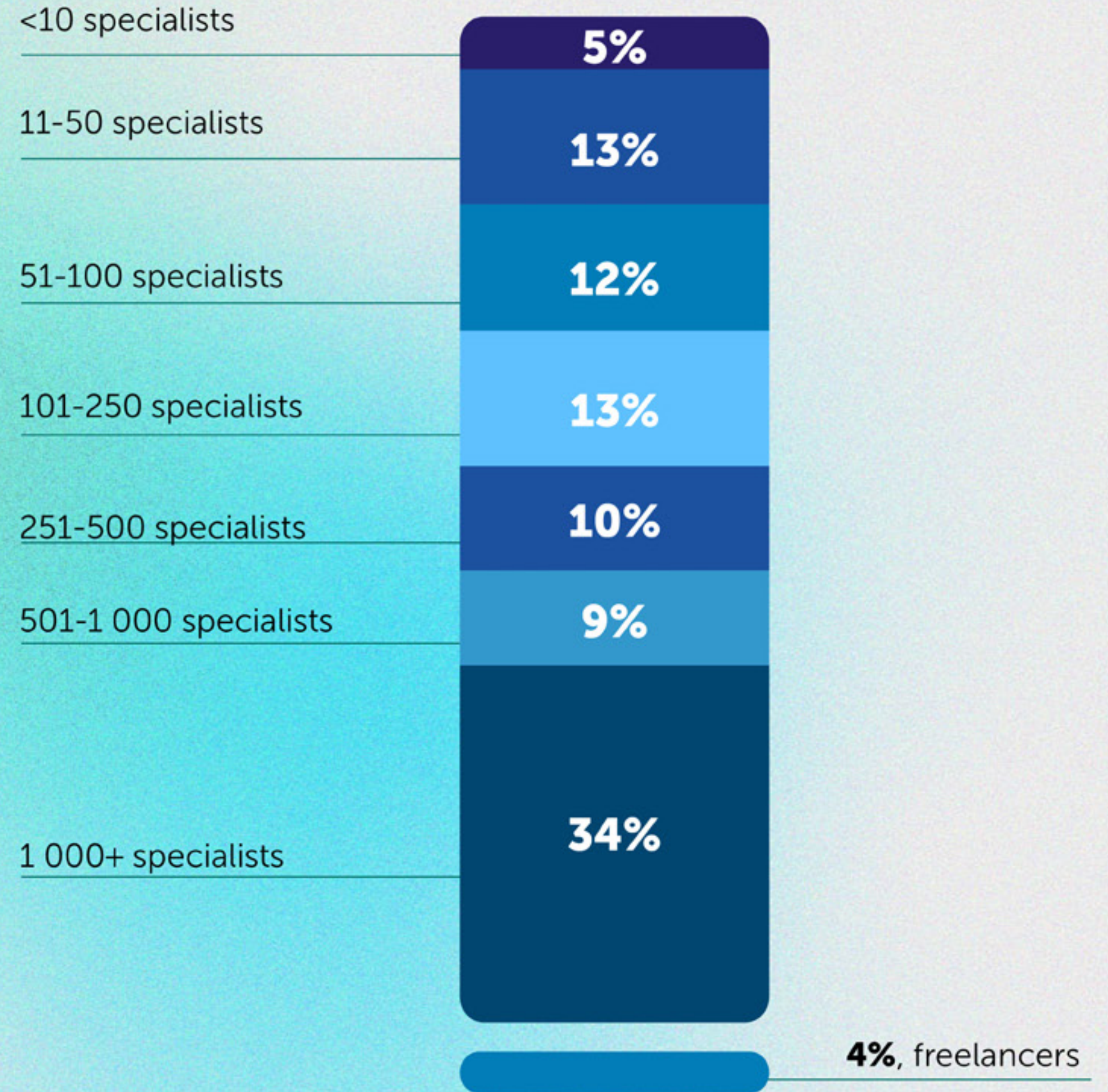
of IT specialists work in large companies of **1000+ employees**

Company type



startup

Company size

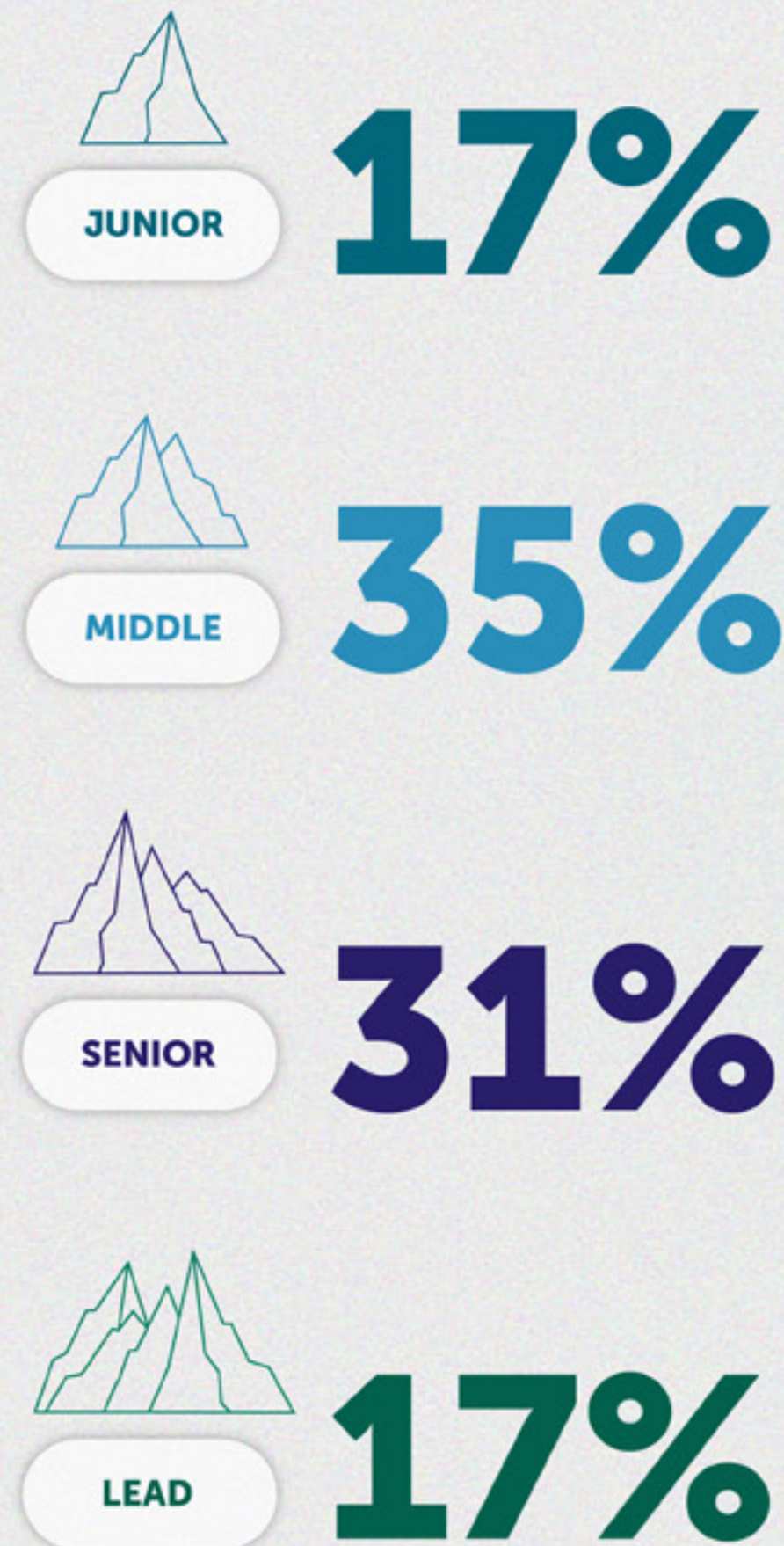


4%, freelancers

1. UKRAINE'S TECH INDUSTRY BEFORE THE WAR AND TODAY

1.3. IT specialist profile and work specifics

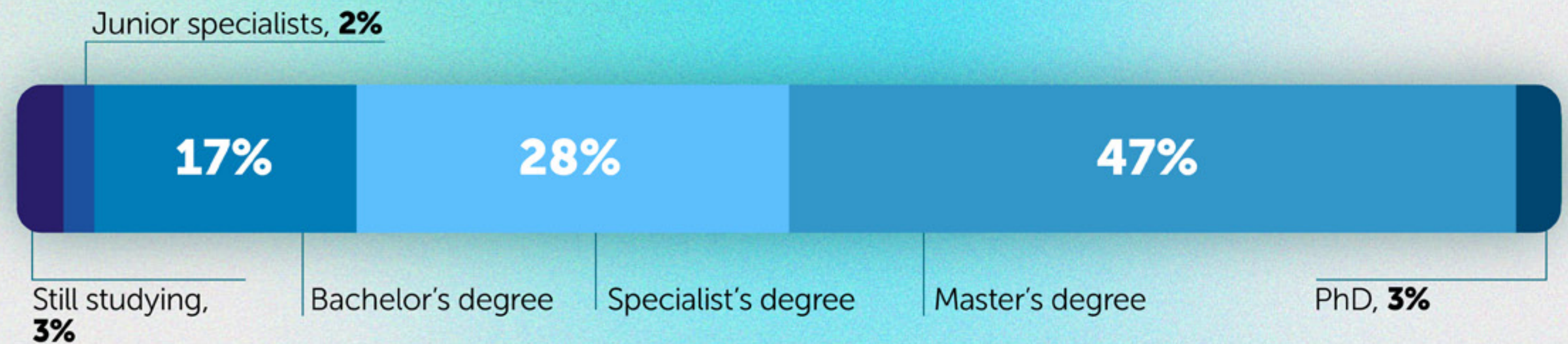
Qualification level



Work experience in IT



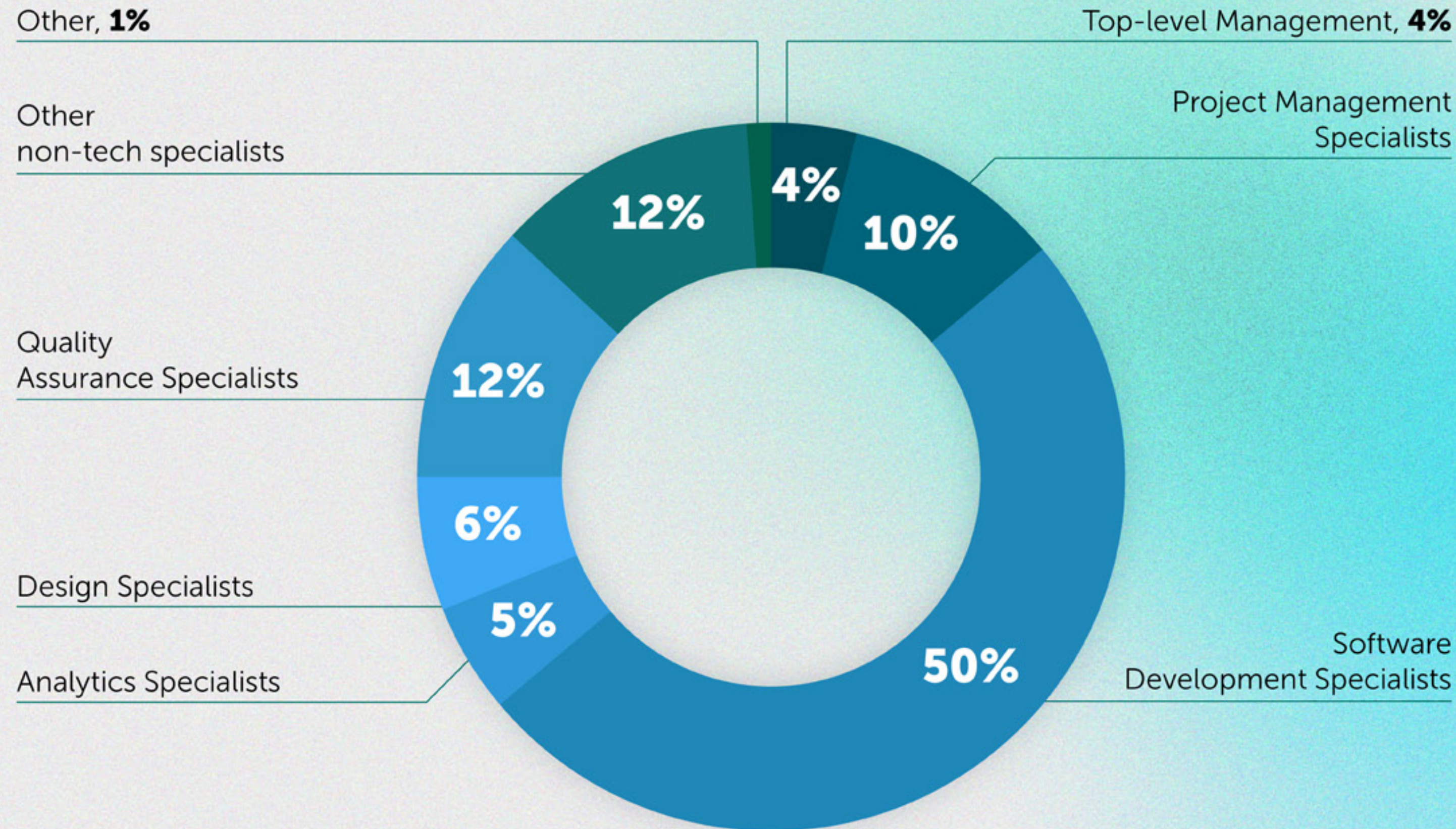
Education level



1. UKRAINE'S TECH INDUSTRY BEFORE THE WAR AND TODAY

1.3. IT specialist profile and work specifics

Position



Half of all IT specialists work as Software Development specialists.

62% the share of tech specialists in general

1. UKRAINE'S TECH INDUSTRY BEFORE THE WAR AND TODAY

1.4. Changes in work of IT specialists caused by the war

In addition to the usual changes in work, which were typical before the war, such as changing the place of work or switching to another project, new ones have also appeared – **part-time employment** and **unemployment**.

44%

noted that their work has changed

27% Changed the place of work

13% Moved to another project within the company

11% Switched to part-time employment

11% Lost jobs and are looking for new ones

6% Changed position within the company

5% Moved to remote work mode

4% Transferred to reserve (bench)

Other changes amounted to 14%:

- Reduced the amount of work (including loss of client/clients)
- Increase in the amount of work
- Lost (career) promotion, salary or bonuses (vacation, insurance)
- Reorganized the work process under new conditions
- Reduced work productivity / feel emotional desolation
- Changed the team composition, including the layoffs
- The company changed the market/expanded into new markets

1. UKRAINE'S TECH INDUSTRY BEFORE THE WAR AND TODAY

1.5. Form of employment of IT specialists

18%

plan to legalize
abroad as an
Individual
Entrepreneur

12%

switched to a
simplified single tax
system (2% instead
of 5%)**

4%

plan to change the
place of registration
of Individual
Entrepreneur

Form of employment of IT specialists*:

Contractor agreement
(Individual Entrepreneur)

88%

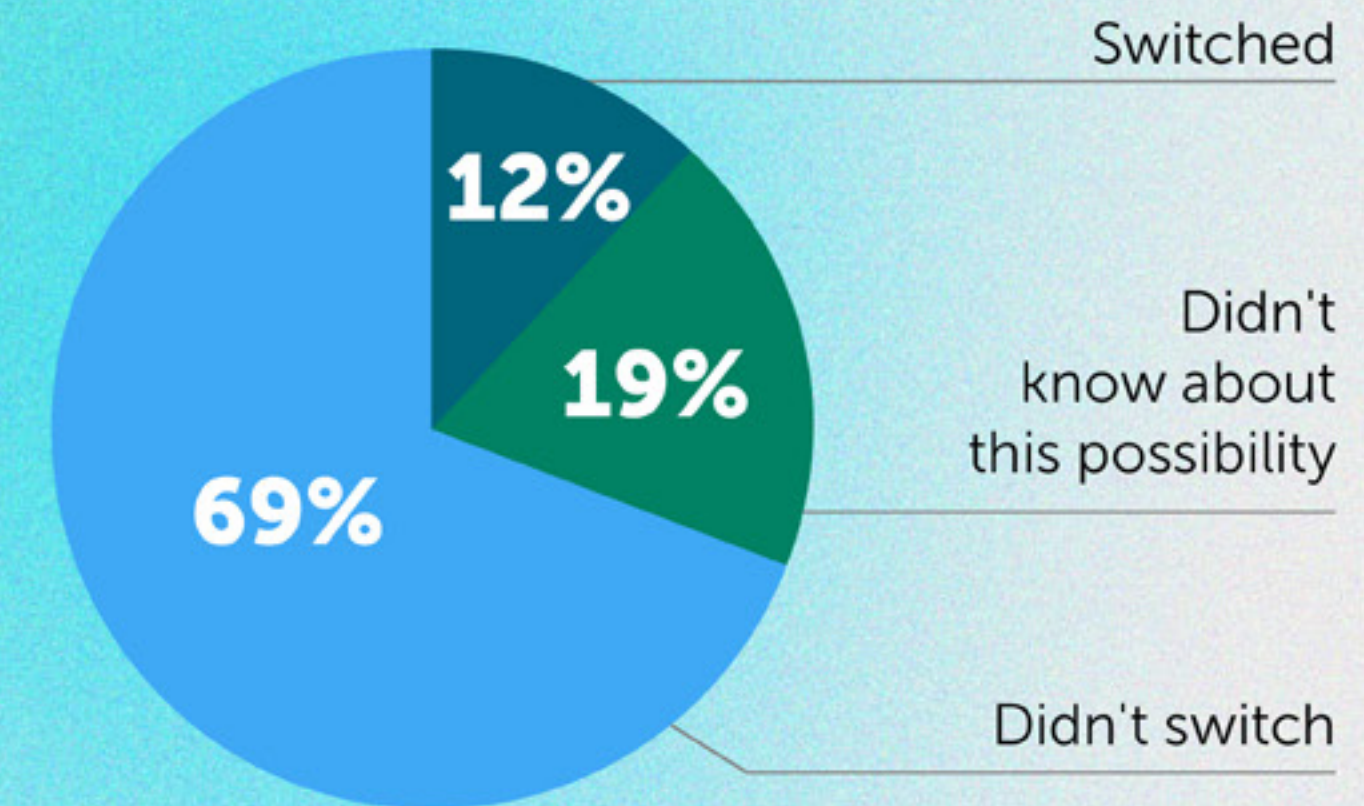
Employment contract

14%

Other

1%

Transition to 2% single tax system:



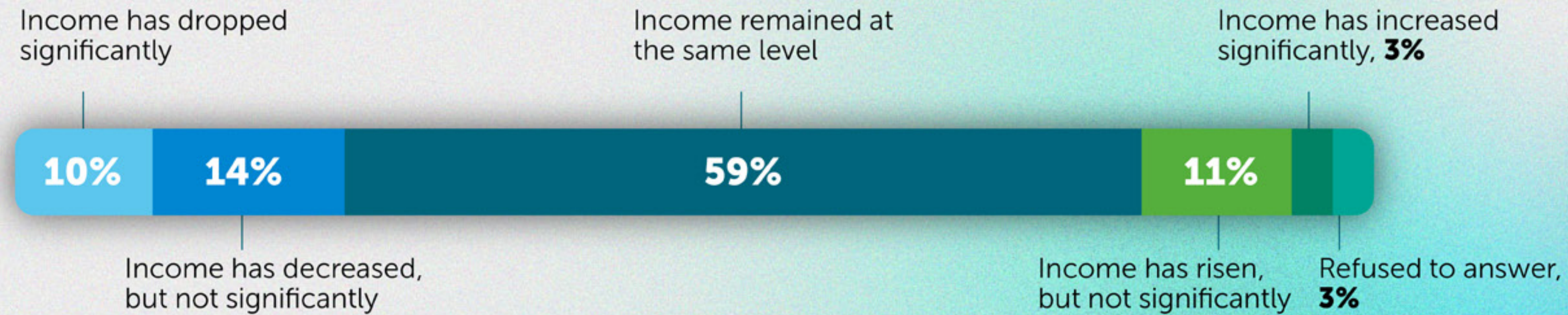
* Respondents had more than one answer option

** Among respondents working under a contract

1. UKRAINE'S TECH INDUSTRY BEFORE THE WAR AND NOW

1.6. IT specialist income and expenses

Estimation of changes in monthly income



Estimation of changes in monthly expenses

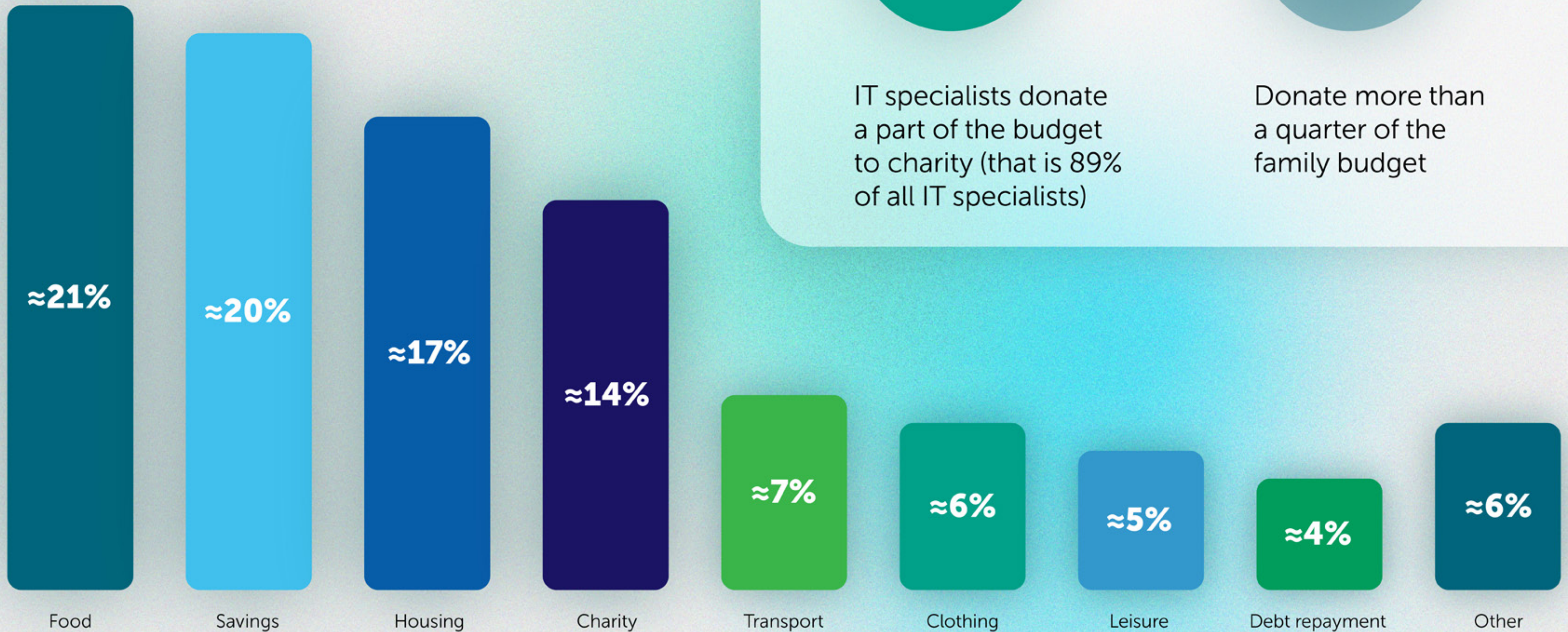


73%

of IT professionals indicate that their income has increased or remained at the same level. However, expenses have also increased.

1. UKRAINE'S TECH INDUSTRY BEFORE THE WAR AND TODAY

1.6. IT specialist income and expenses



203K



14%

IT specialists donate a part of the budget to charity (that is 89% of all IT specialists)

Donate more than a quarter of the family budget

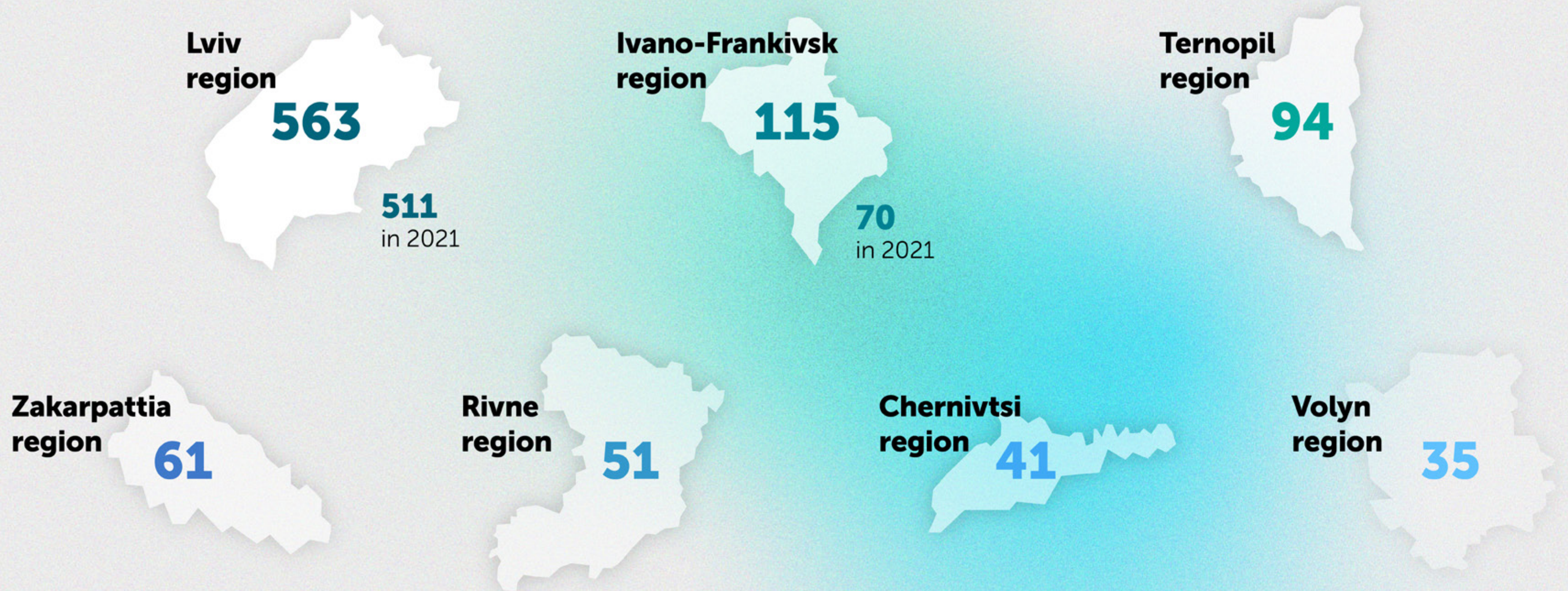
A stylized map of Ukraine is centered in the background, rendered in a lighter shade of teal against a darker teal background. The map shows the outline of the country and its internal regional boundaries.

IT IN WESTERN UKRAINIAN REGIONS



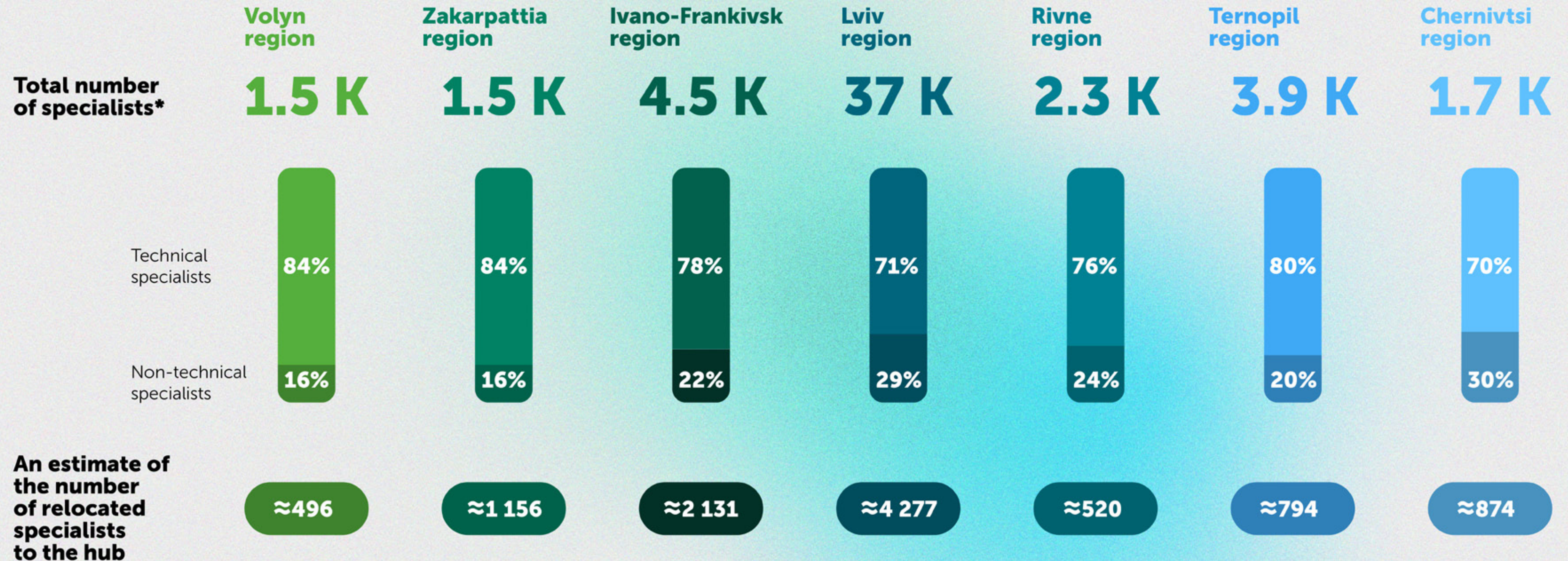
2. IT IN WESTERN UKRAINIAN REGIONS

2.1. Number of IT companies' representative offices



2. IT IN WESTERN UKRAINIAN REGIONS

2.2. Number of IT specialists, estimates on the number of relocated

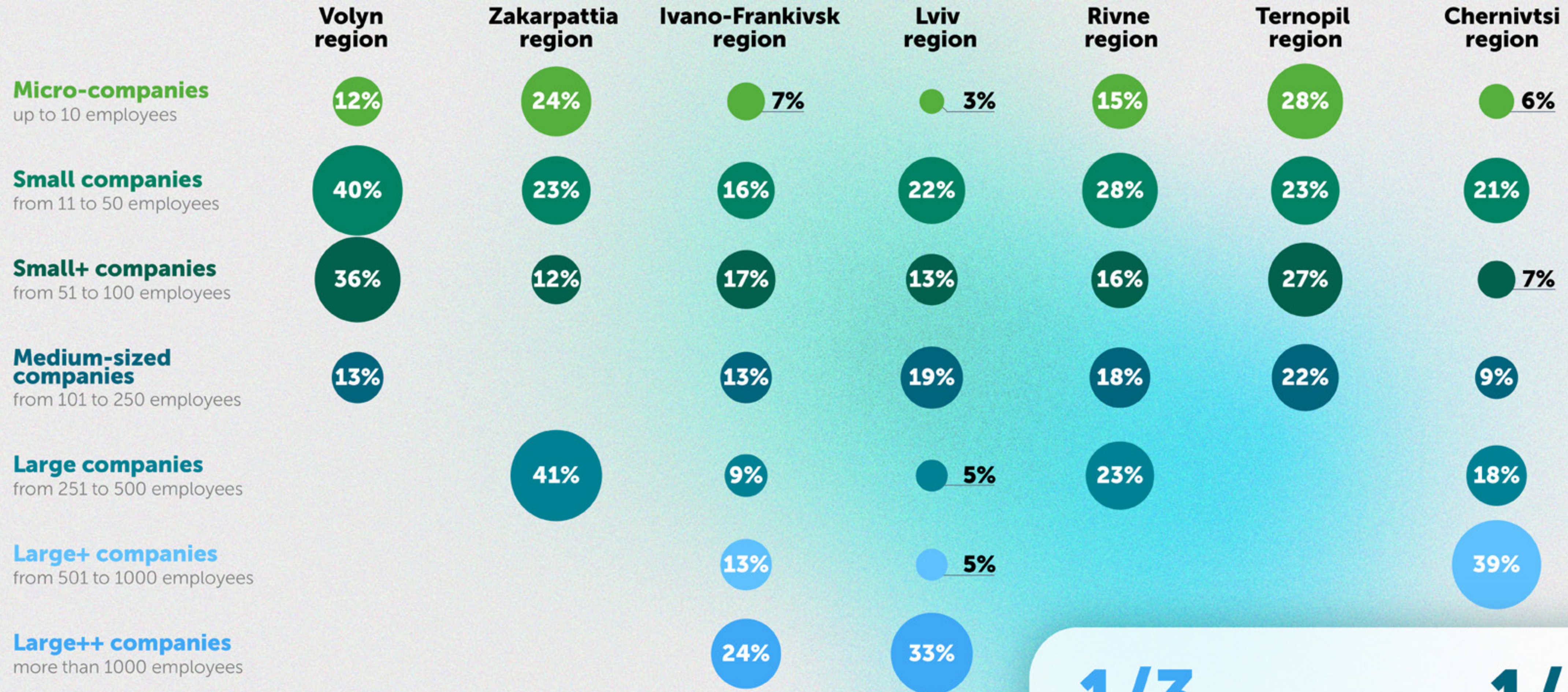


*When calculating the number of IT specialists, the data of IT companies were taken into account without taking into account the number of freelancers.

The number of relocated IT specialists was estimated as of April-May 2022. The organizers of the study are aware that during the period 05-07.2022, some of the relocated IT specialists could have already returned to their previous place of residence, or moved again. Factors that complicated the process of counting the number of relocated: 1) since the beginning of the full-scale invasion, some specialists moved several times; 2) they did not always inform the company about their location; 3) relocated independently, including after an organized relocation with the company.

2. IT IN WESTERN UKRAINIAN REGIONS

2.3. Market structure by the number of IT company employees



1/3

of IT specialists work in companies sized 501 or more employees

1/4

work in small companies with up to 50 employees

2. IT IN WESTERN UKRAINIAN REGIONS

2.4. IT specialist income

\$2 360

median income of IT
specialists in Ukraine

Median income

	relocated IT specialists	local IT specialists	
Volyn region	\$1 900	\$1 000	
Zakarpattia region	\$2 900	\$2 100	
Ivano-Frankivsk region	\$2 300	\$1 700	\$1 339
Lviv region	\$3 000	\$2 400	\$2 102
Rivne region	\$1 800	\$1 600	
Ternopil region	\$2 000	\$1 200	
Chernivtsi region	\$2 500	\$1 600	

2. IT IN WESTERN UKRAINIAN REGIONS

2.5. Expenses of the relocated IT specialists

The first month

\$14.7 million

according to an average estimate, IT specialists in the western regions of Ukraine spent on organizing their lives in the first month after moving

Monthly

\$13.6 million

relocated IT specialists spend monthly in the regions they are currently based in

Forecast

\$137.1 million

may reach the total amount of such expenses by the end of 2022 if the relocated IT specialists remain in these regions and spend the same amount monthly

Average expenses of relocated IT professionals, per person

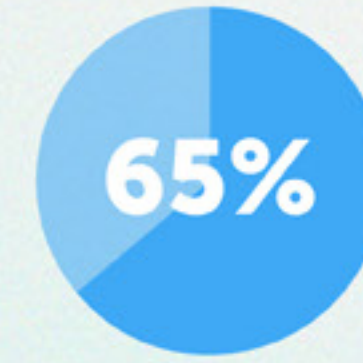
	Volyn region	Zakarpattia region	Ivano-Frankivsk region	Lviv region	Rivne region	Ternopil region	Chernivtsi region
In the first month of relocation	\$1 040	\$1 419	\$1 272	\$1 698	\$1 027	\$1 030	\$1 399
Monthly expenses on food, housing, clothing and leisure	\$971	\$1 637	\$1 267	\$1 395	\$1 085	\$1 141	\$1 288

WARTIME ECONOMY

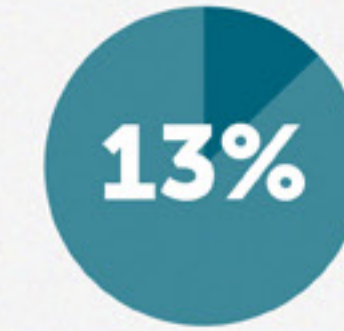


3. WARTIME ECONOMY

3.1. Business activity, income and expenses of companies



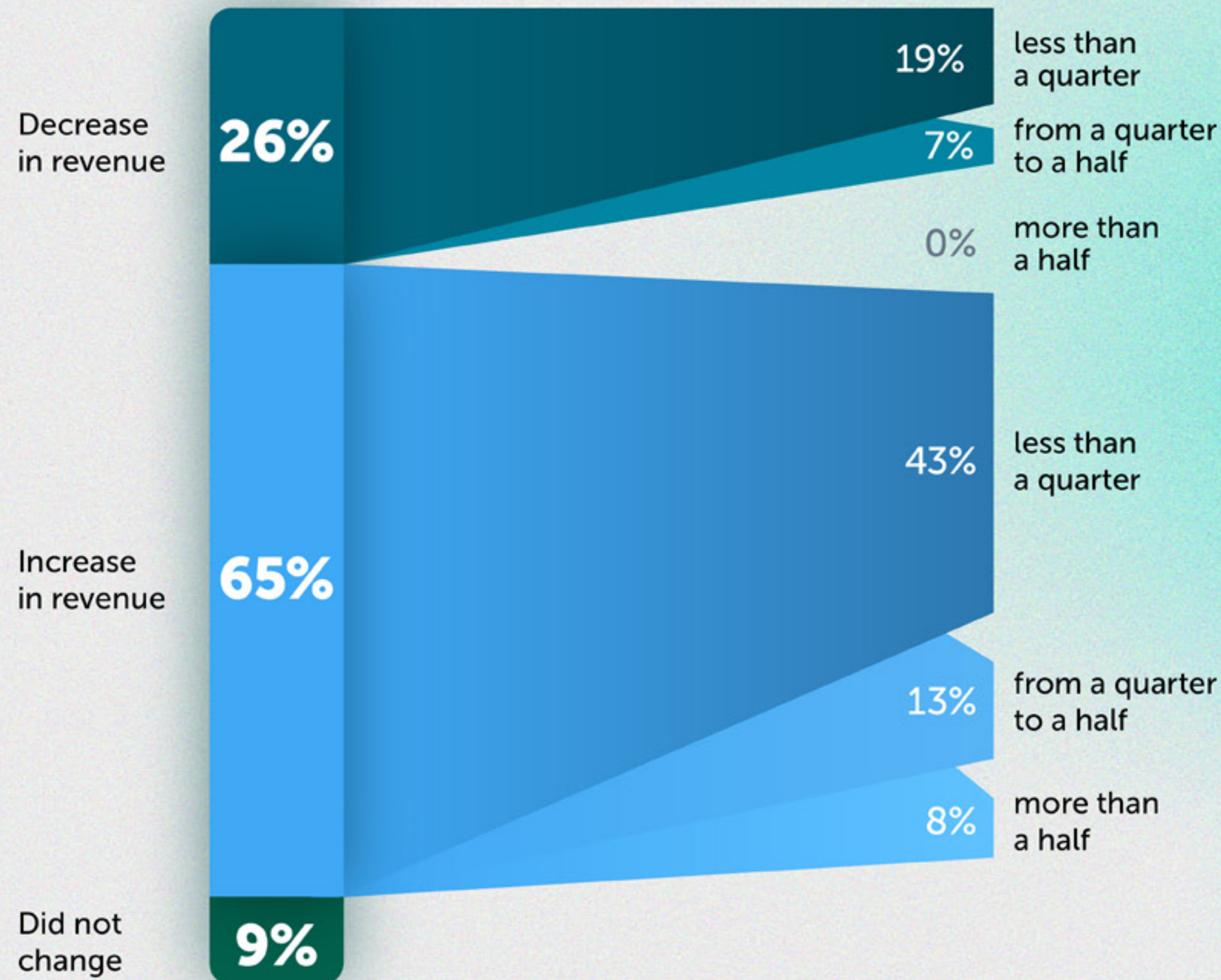
of companies noted a positive financial result



note an increase in income in the range of 25-50%

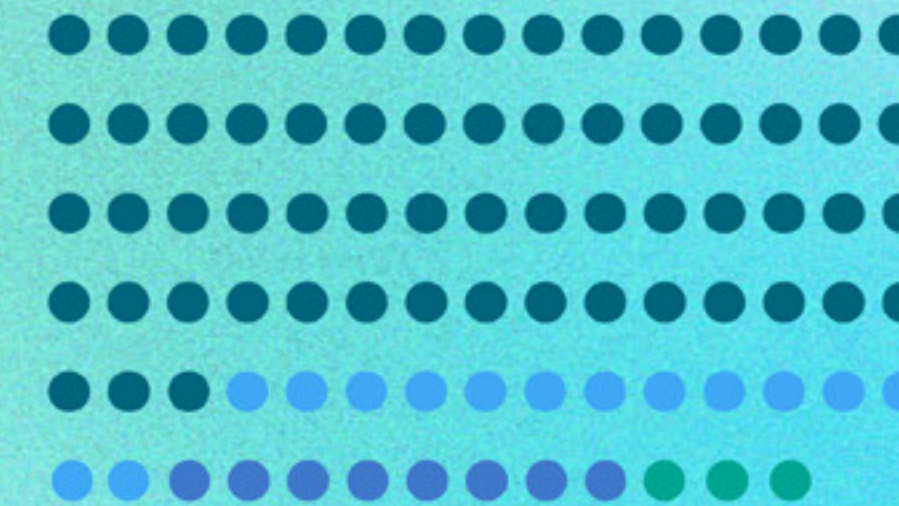
Financial results of companies as of Q1 2022

Share of revenue change



Financial results of companies as of Q1 2022 based on market orientation

IT companies that noted a decrease in revenue:



70% foreign market share is more than 50%

17% foreign market share is 25-50%

9% foreign market share up to 25%

4% focus only on internal markets

IT companies that noted an increase in revenue:



96% foreign market share is more than 50%

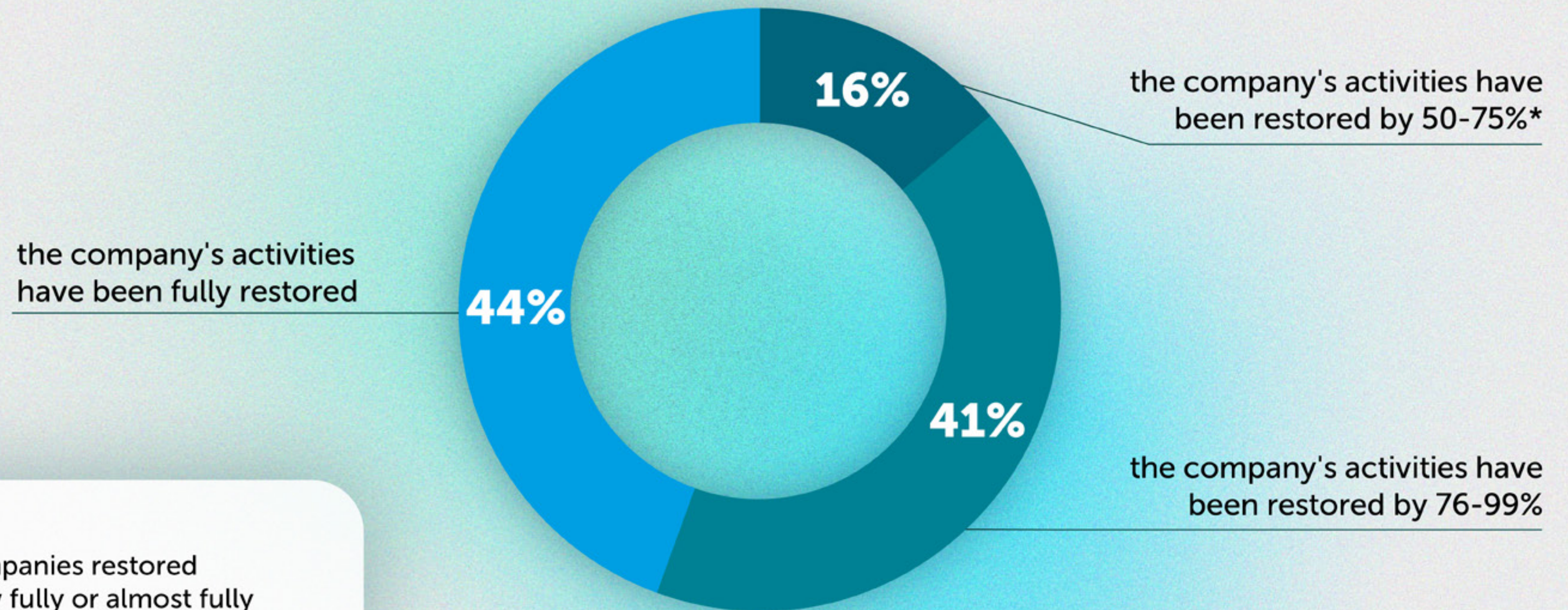
2% foreign market share up to 25%

2% focus only on internal markets

3. WARTIME ECONOMY

3.1. Business activity, income and expenses of companies

Resumption of IT company activities as of May 2022



85%

of companies restored activity fully or almost fully

* Pre-war work activity was taken as 100%

3. WARTIME ECONOMY

3.1. Business activity, income and expenses of companies

Cooperation of IT companies with clients*

have active projects
without sprint changes



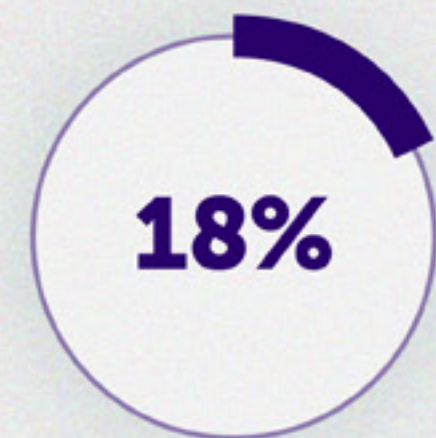
have active projects
with changes in previous
terms and conditions
of the contract



have active projects
with adapted sprints



have projects
put on hold



have new
orders



have terminated
contracts



32%

of CEOs indicate that they received messages from clients on suspension or postponement of projects due to the situation in Ukraine.

55%

of CEOs state that their company received messages from clients on new opportunities for cooperation as an act of support in connection with the war in Ukraine.

58%

of companies indicate that they have new orders from clients.

18%

of them estimate the share of lost revenue as 25-50% connected with the contract termination caused by the war.

7%

lost more than half of the revenue.

* Respondents could choose more than one option.

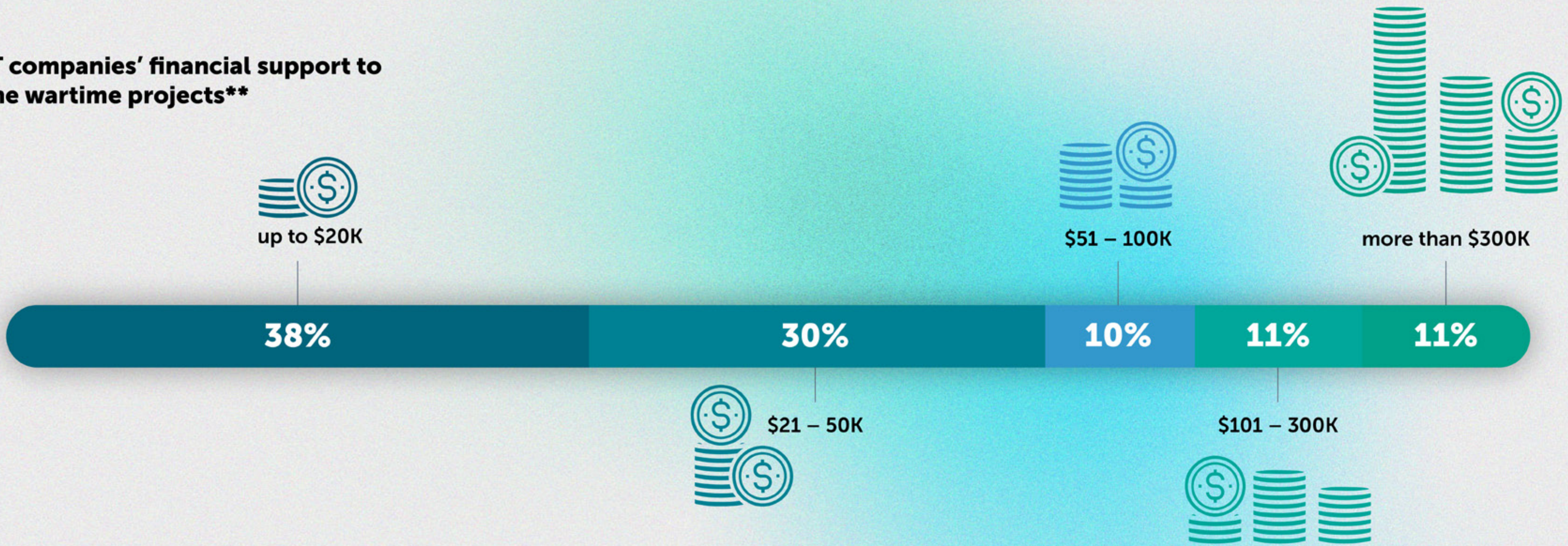
3. WARTIME ECONOMY

3.1. Business activity, income and expenses of companies

96%

of companies state that they financially support the wartime projects that bring us closer to the victory*

IT companies' financial support to the wartime projects**



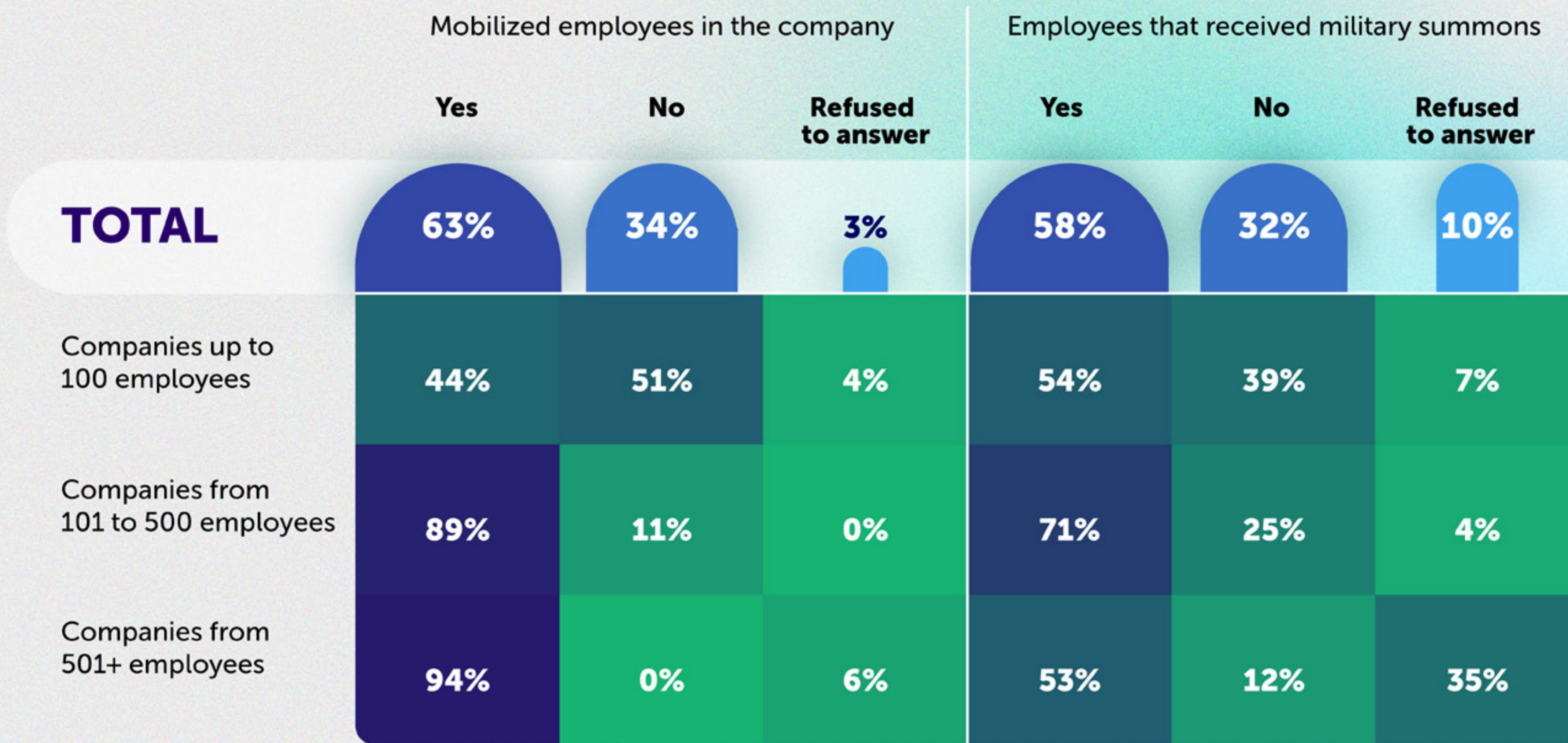
*By wartime projects we mean financial support of the Ukrainian Armed Forces or Territorial Defence, humanitarian missions, purchase of equipment etc.

**As of May 2022.

3. WARTIME ECONOMY

3.2. Mobilization and compensation policies

Situation in IT companies with mobilization and receiving summons*



≈ 7K

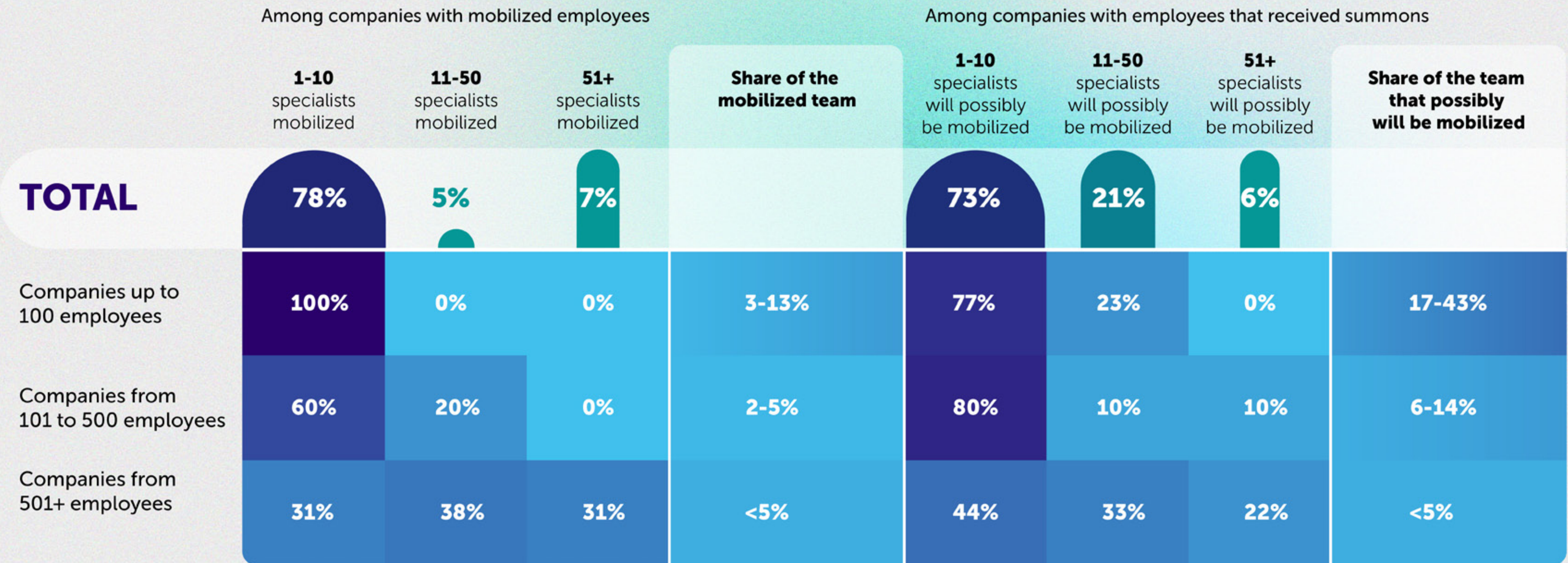
IT professionals
joined the Armed
Forces or Territorial
Defence

* As of May 2022.

3. WARTIME ECONOMY

3.2. Mobilization and compensation policies

Number of employees who will actually or possibly stop working in Ukrainian IT companies due to mobilization and conscription*

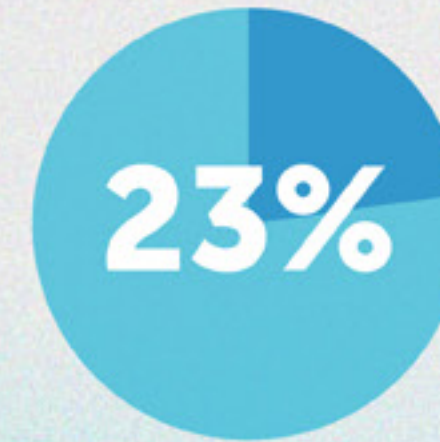
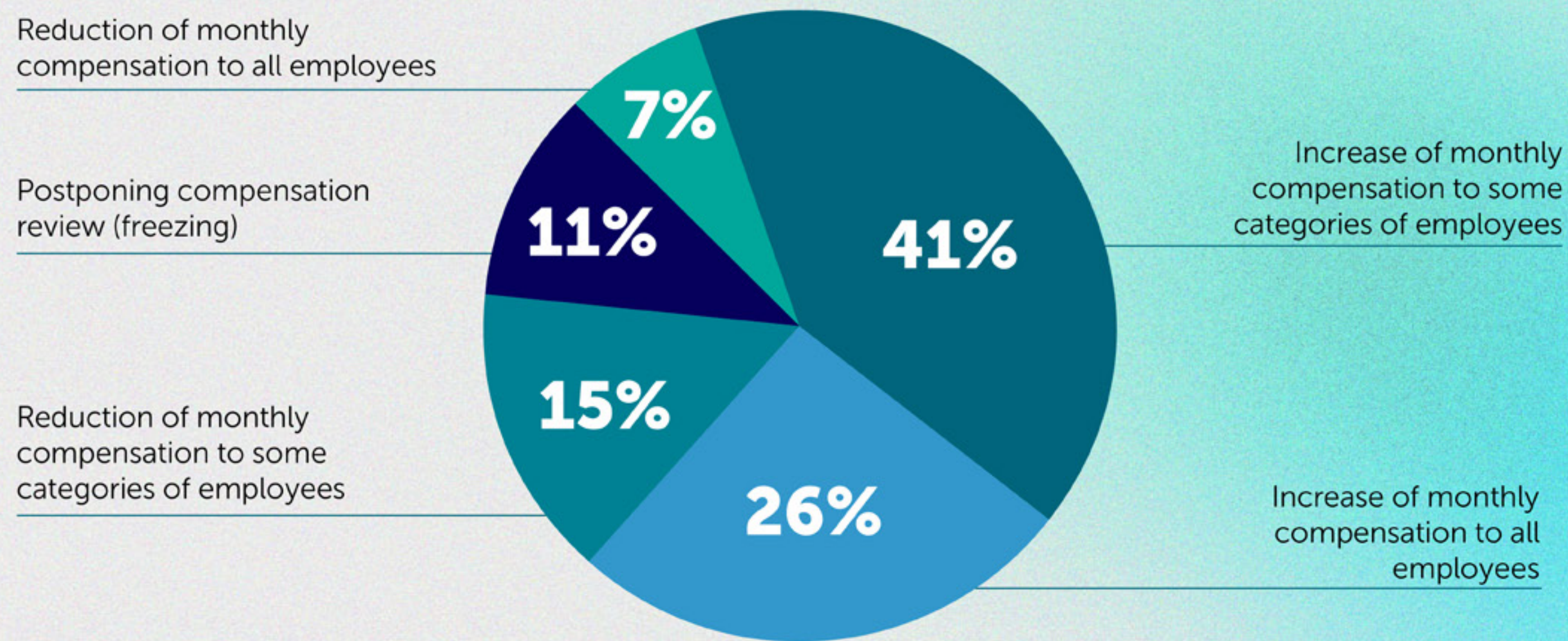


*As of May 2022.

3. WARTIME ECONOMY

3.2. Mobilization and compensation policies

Overall changes in the companies' compensation policy*



23% declared changes in the company's compensation policy since February 24, 2022.

30%

of IT companies froze regular planned salary increases as of the time of the survey after the start of the full-scale invasion.

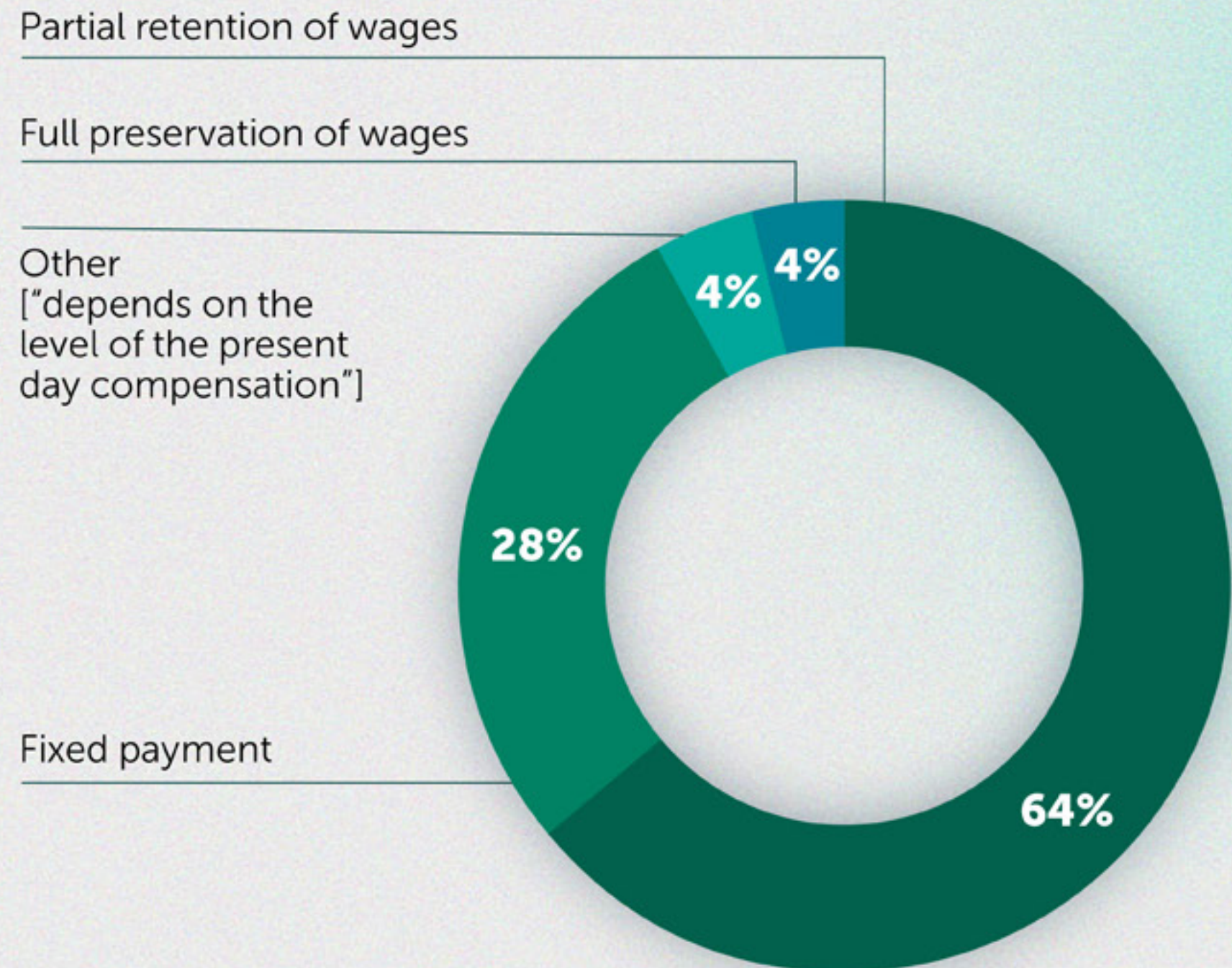
*Among those who declared changes in compensation policy

3. WARTIME ECONOMY

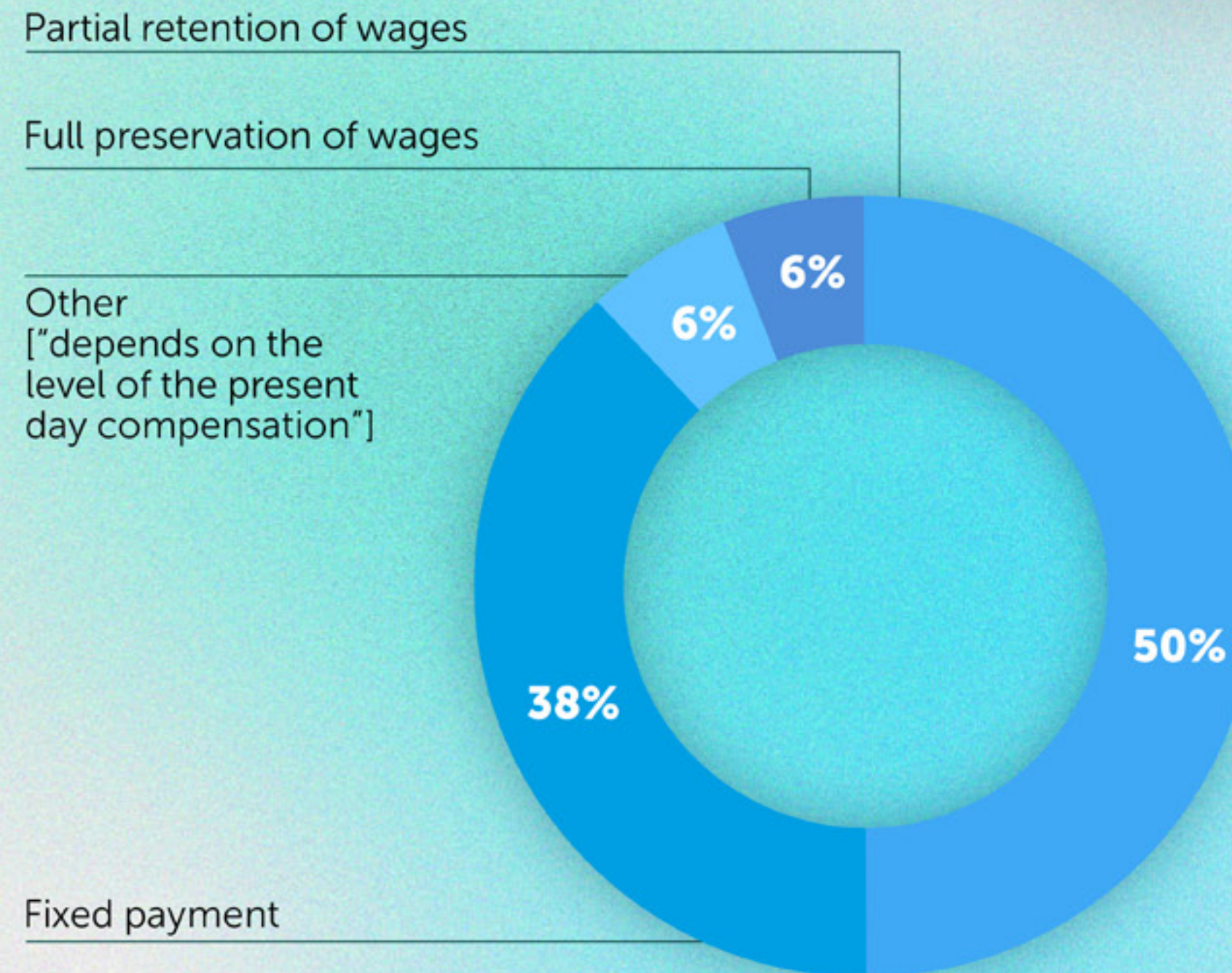
3.2. Mobilization and compensation policies

Specific features of the compensation policy of companies for some categories of employees*

Mobilized to the Armed Forces



Enlisted in the Territorial Defence Forces



Companies support employees mobilized to the Armed Forces and Territorial Defence - partly compensate their salary or pay a fixed sum.

*Among those who declared changes in compensation policy

3. WARTIME ECONOMY

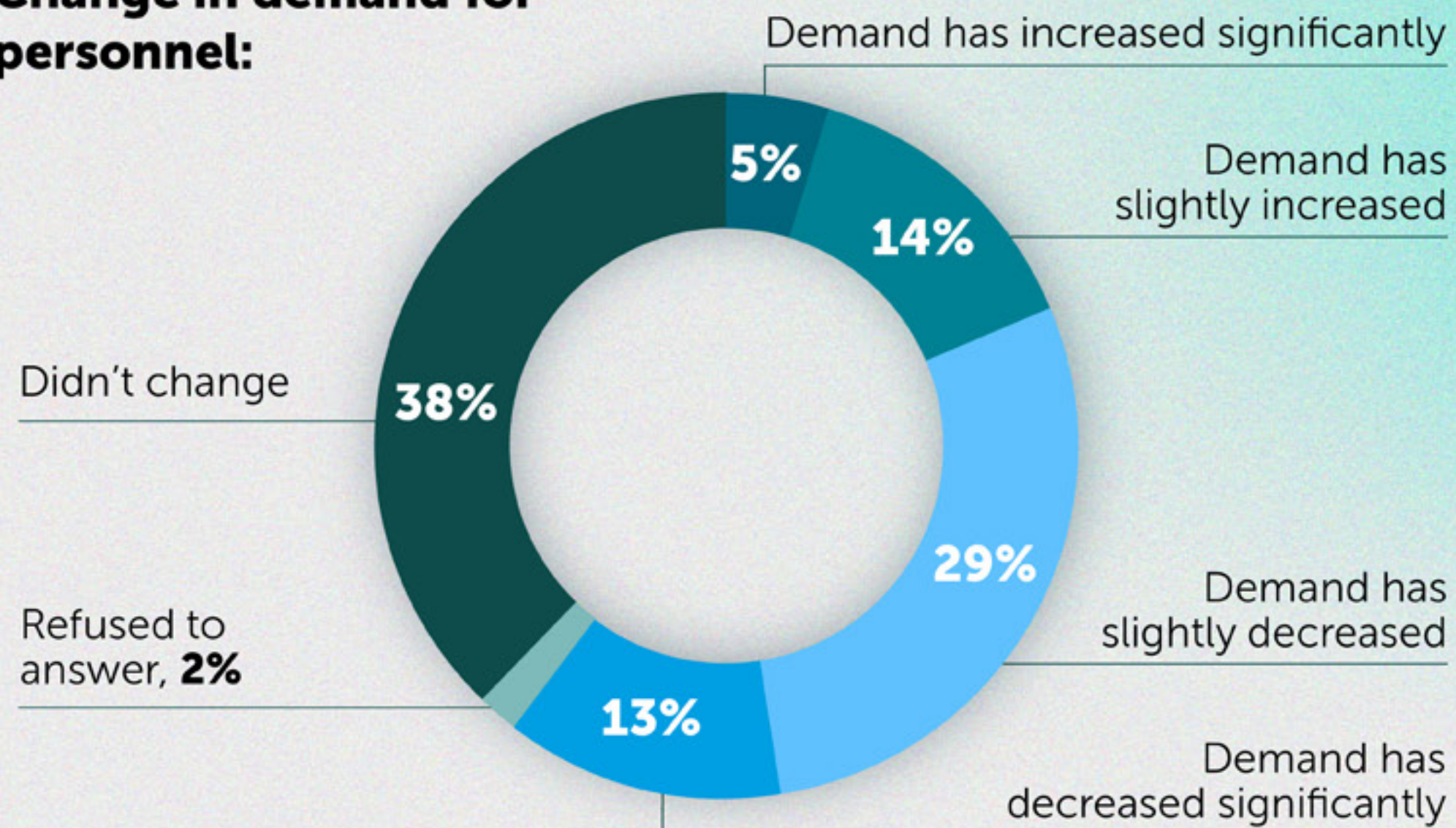
3.3. Employees and contractors: demand for personnel, recruitment, reserve

88%

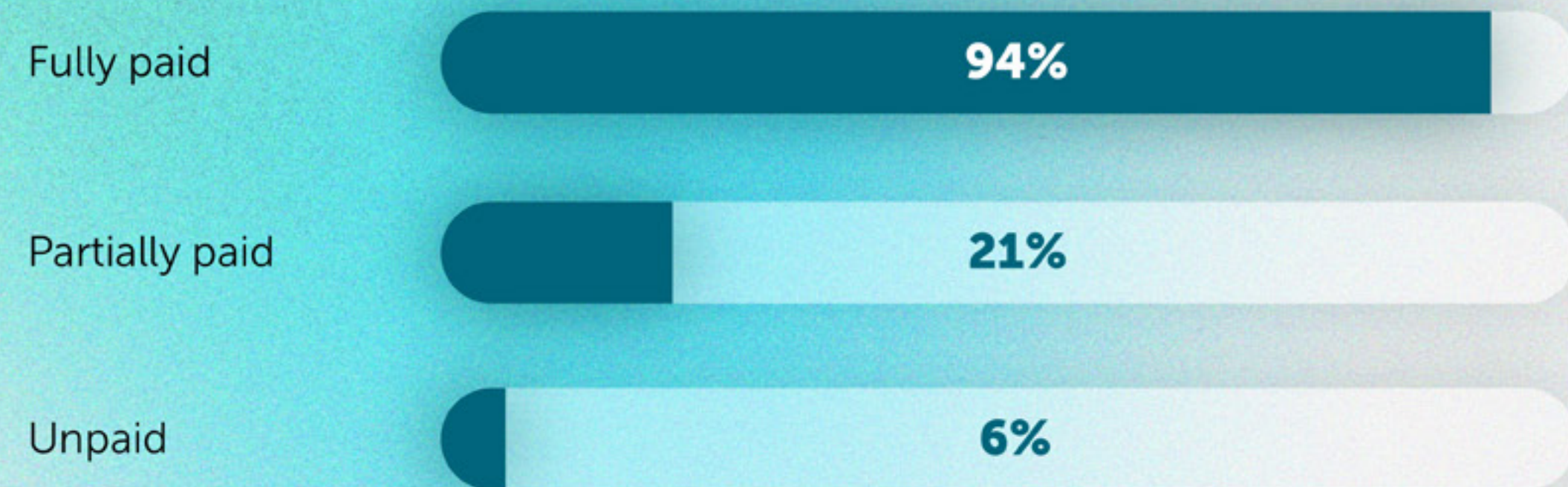
of IT companies note that, as of the survey, they were recruiting specialists for open vacancies.

Only **10%** of the surveyed CEOs noted that layoffs occurred in the company in connection with the invasion (initiated both by the company and the employees).

Change in demand for personnel:



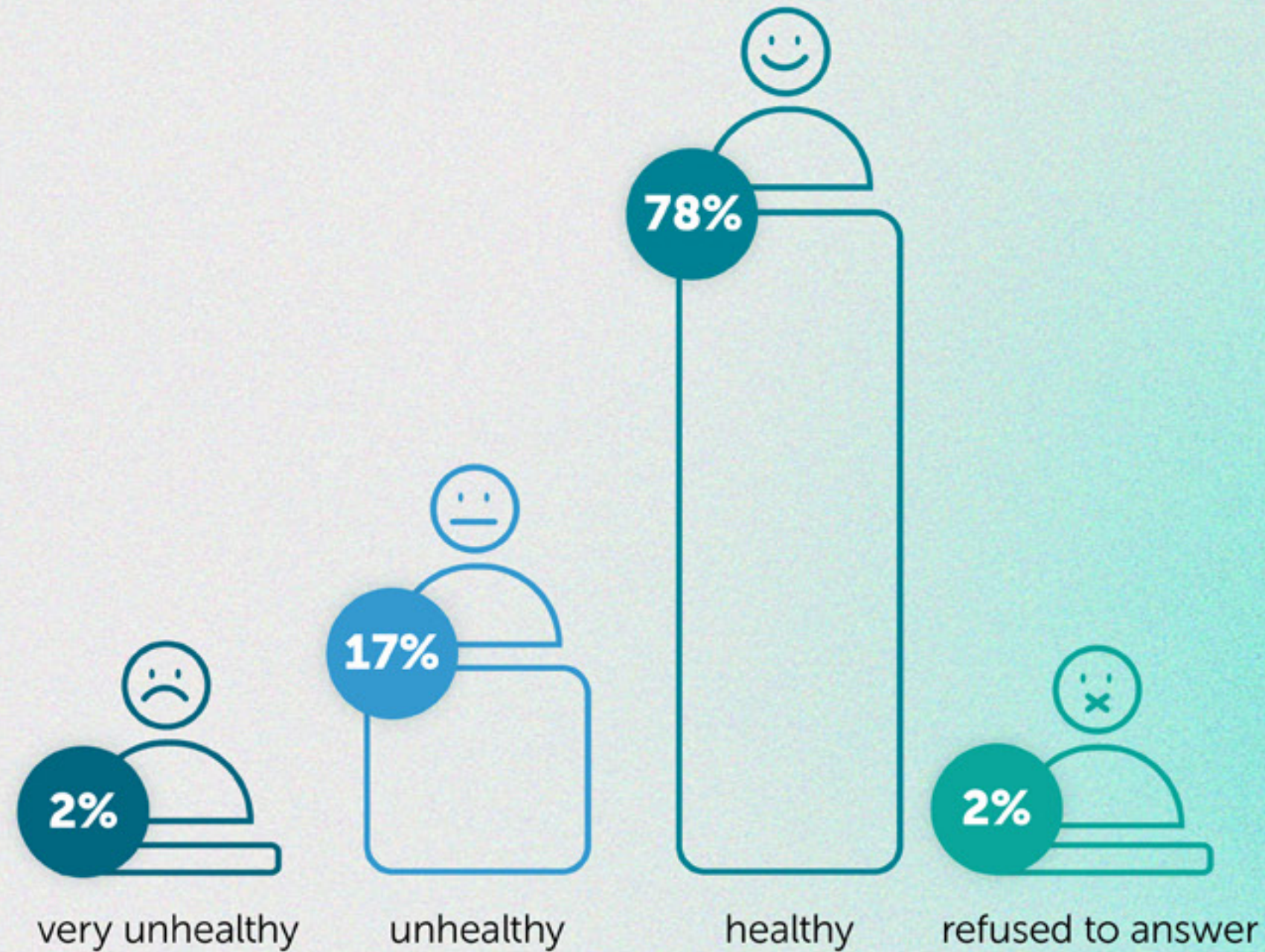
Compensation conditions for employees who are in reserve*:



* Among those who indicated that they have specialists in reserve

3. WARTIME ECONOMY

3.4. CEOs' assessment of the "company's health"



78% of companies assess the "company's health" as good

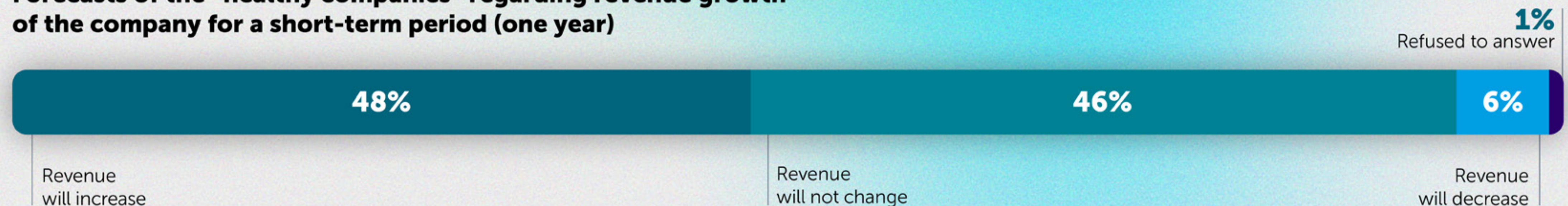
"Company's health"

a complex indicator that includes business activity, financial indicators, general well-being of the team, socially responsible activity, etc.

The category of "conditionally healthy and healthy" includes those who estimated health at 75% and above, "unhealthy" - below 75%.



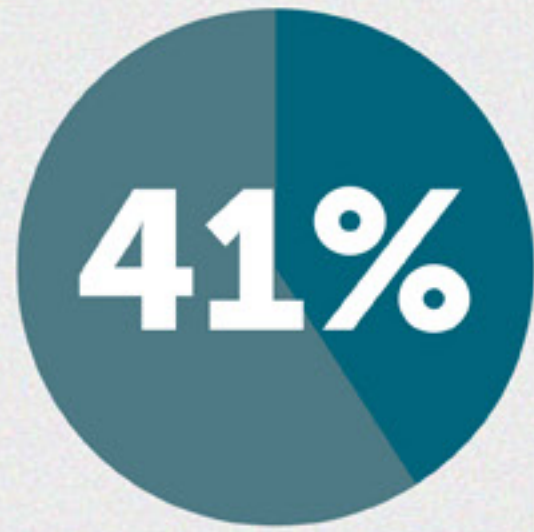
Forecasts of the "healthy companies" regarding revenue growth of the company for a short-term period (one year)



1%
Refused to answer

3. WARTIME ECONOMY

3.5. Plans to open new offices

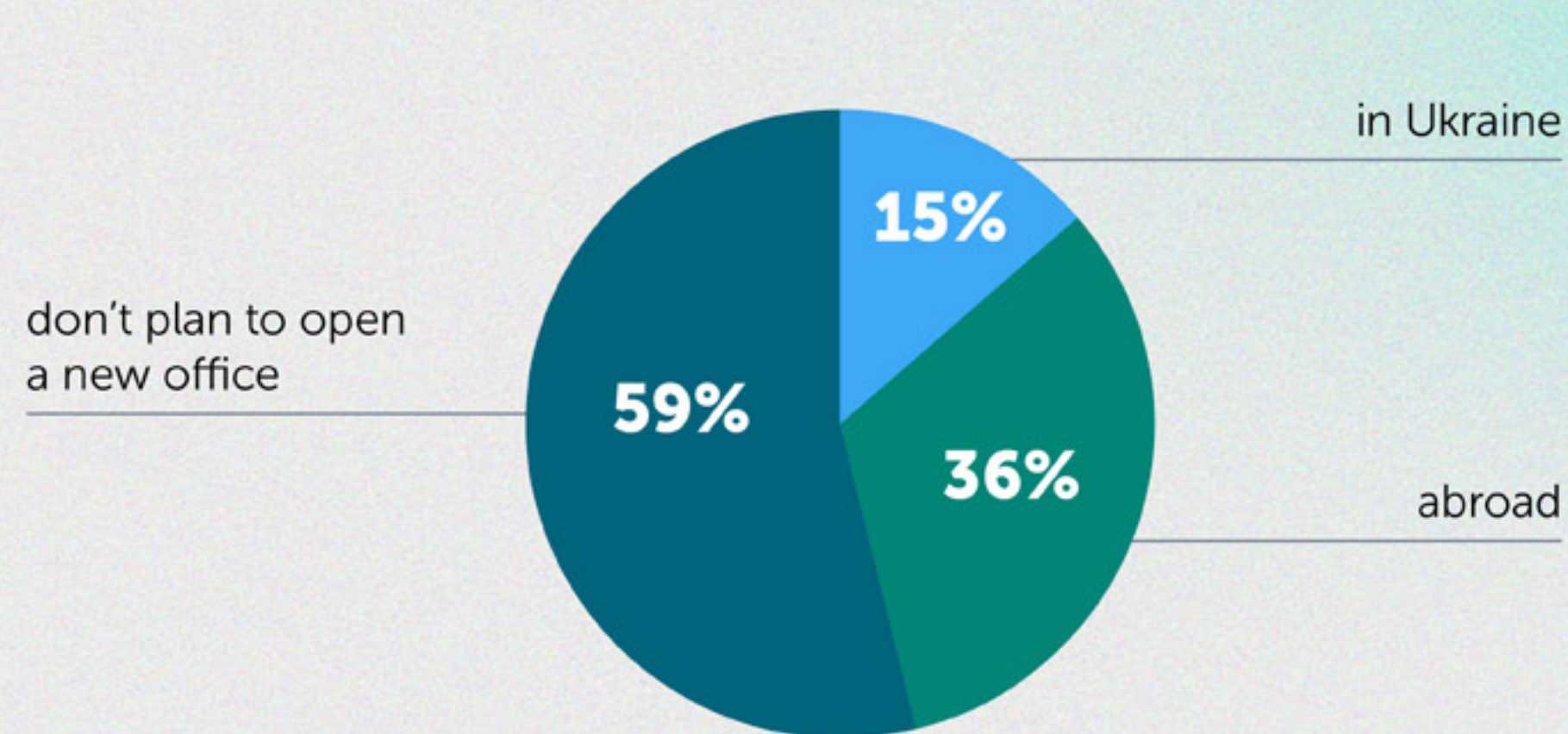


IT company CEOs plan to open new offices in the upcoming year. The most popular destination is Poland.

A low level of interest in opening regional offices in Ukraine can be observed.



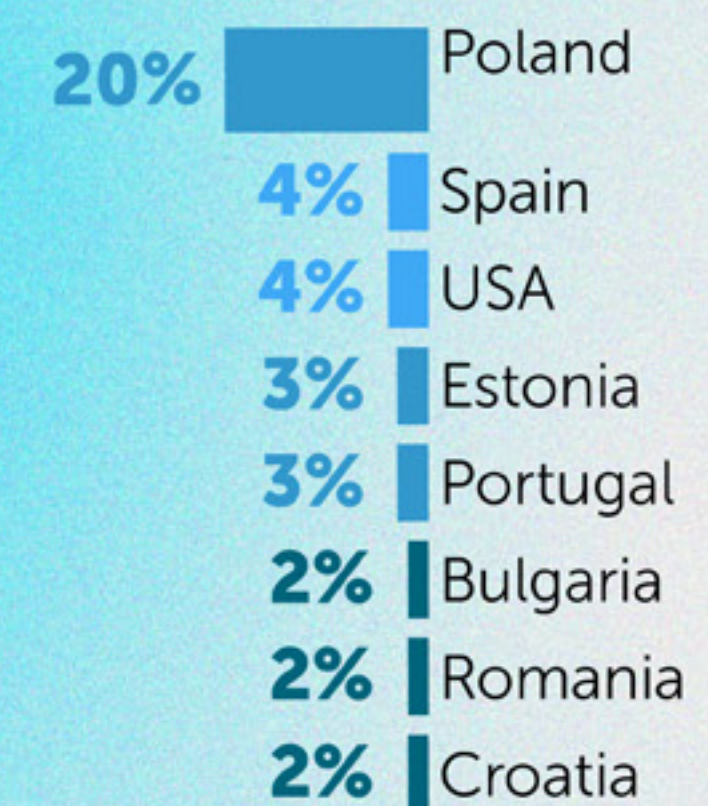
Short-term plans to open a new office:



In Ukraine



Abroad



MIGRATION ATTITUDES OF IT SPECIALISTS

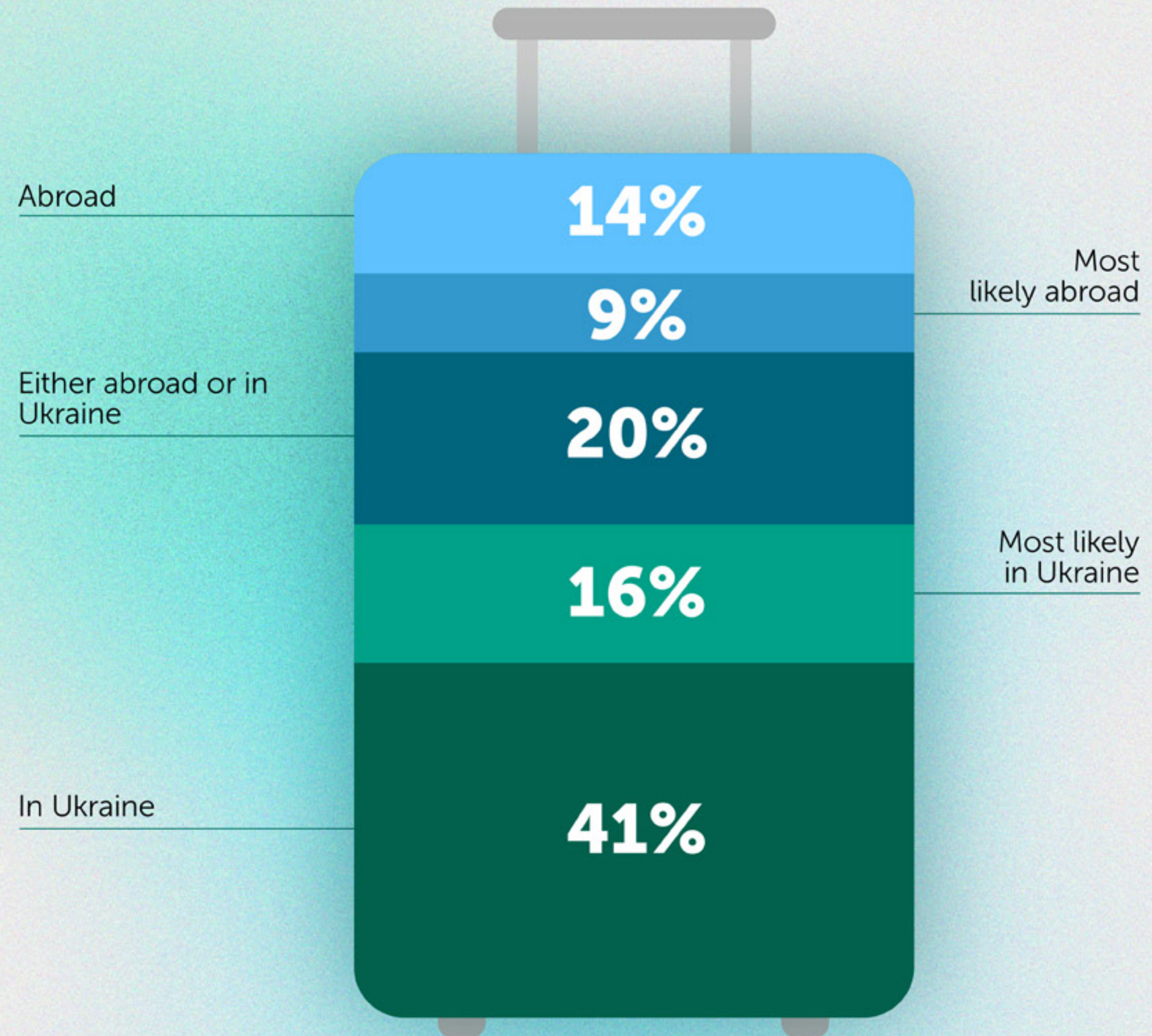


4. MIGRATION ATTITUDES OF IT SPECIALISTS

4.1. Overall migration attitudes

57% of IT specialists prefer to live in Ukraine

Where would you choose to live if you had no limitations?



4. MIGRATION ATTITUDES OF IT SPECIALISTS

4.2. Future scenarios

Tech industry continues working for the joint victory of Ukraine in the full-scale war.

Attitude on migration demonstrates reactions of the IT market to the possible scenarios of Ukraine's economic recovery after Ukraine's victory over Russia.

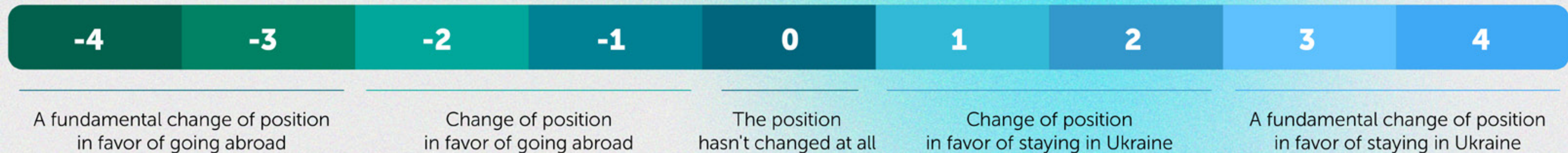
We've offered IT specialists three possible scenarios with the time interval of 1 year. Based on their assessment of each of these scenarios we indicated overall migration attitude and future scenarios.

Migration balancer

Migration balancer indicates the change of the overall migration attitudes depending on the suggested scenarios in favor of living in Ukraine or moving abroad. The indicator is calculated separately for each respondent but is given as an average group value for each scenario / factor.

The indicator varies from -4 to +4.

Scale of the migration balancer



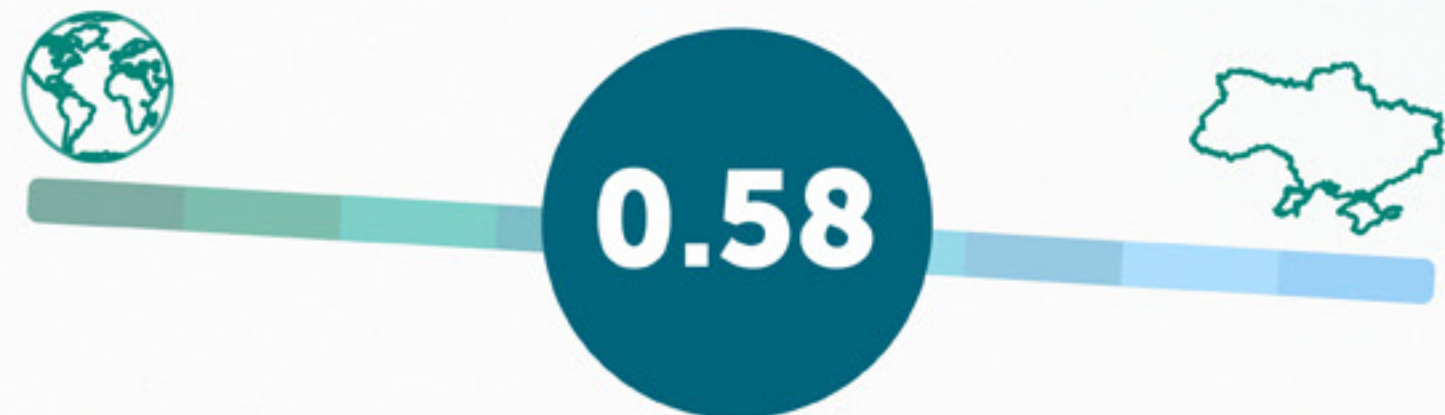
4. MIGRATION ATTITUDES OF IT SPECIALISTS

4.2. Future scenarios

Scenario "European integration and liberalization of the economy"

Ukraine's European integration, accompanied by the full support of the Western allies for the rapid restoration of infrastructure. The way to restore the economy – maximum deregulation, economic freedom, the state does not directly interfere in market mechanisms, only provides the necessary legal framework for the modernization of Ukraine.

Indicator of the "migration balancer"*



the condition basically doesn't change the individual overall migration attitude, but brings it closer to a change of position in favor of staying in Ukraine

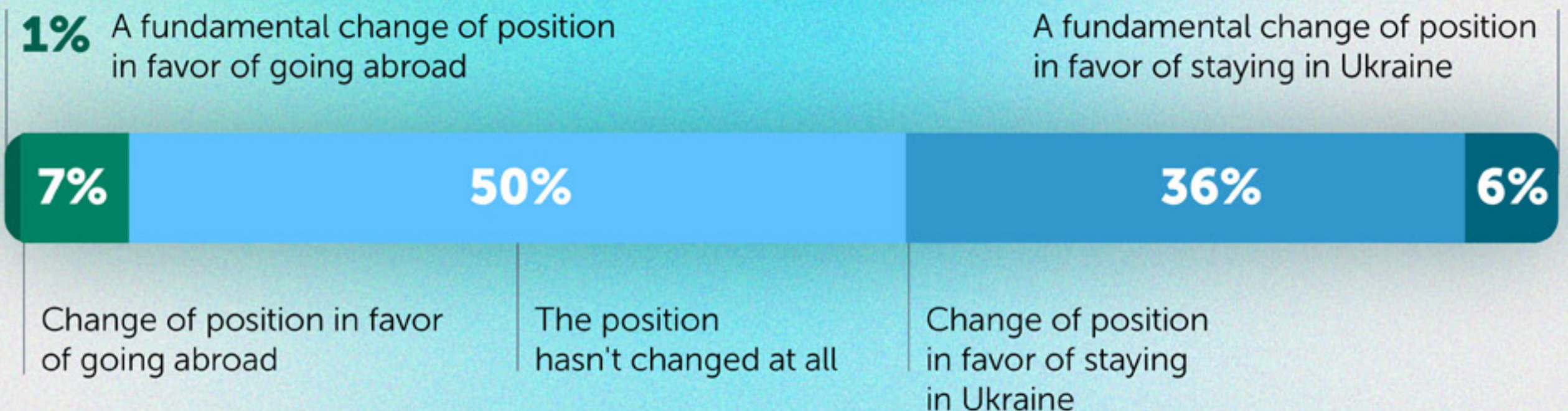
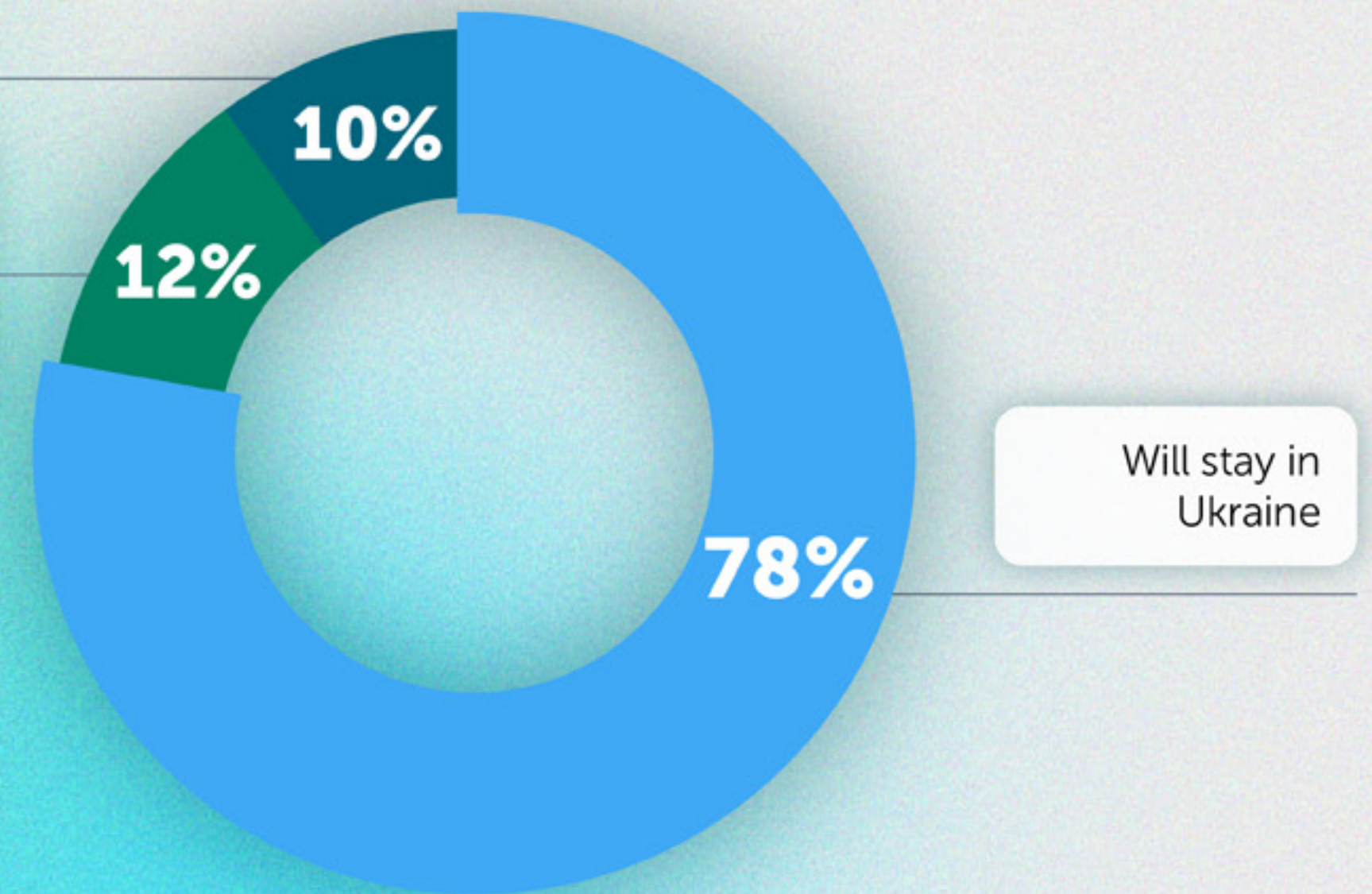
* As of May 2022

Even according to the most optimistic scenario there is a threat to lose human capital

Haven't decided

Will try to go abroad

27K



4. MIGRATION ATTITUDES OF IT SPECIALISTS

4.2. Future scenarios

Scenario "European integration and government regulation"

Ukraine's European integration, accompanied by the full support of the Western allies for the rapid restoration of infrastructure. The recovery and functioning of the economy is fully regulated by the state (as an option, the military economy, increasing the tax burden, in particular on the IT sector).

Indicator of the "migration balancer"*



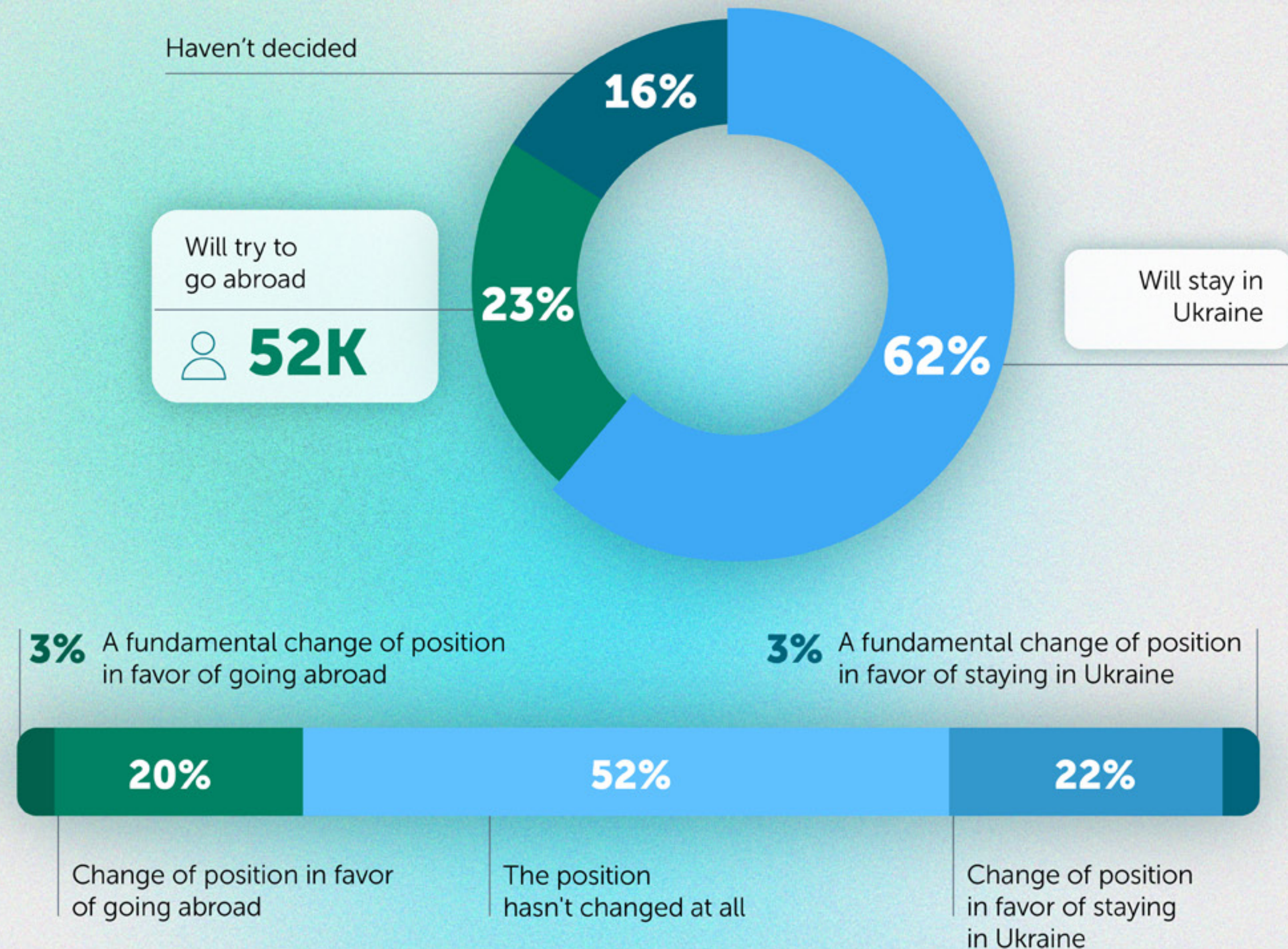
0.04



the condition basically doesn't change the individual overall migration attitude

* As of May 2022

Under the condition of government regulation of the economy, the Ukrainian IT industry may lose 1/4 of specialists



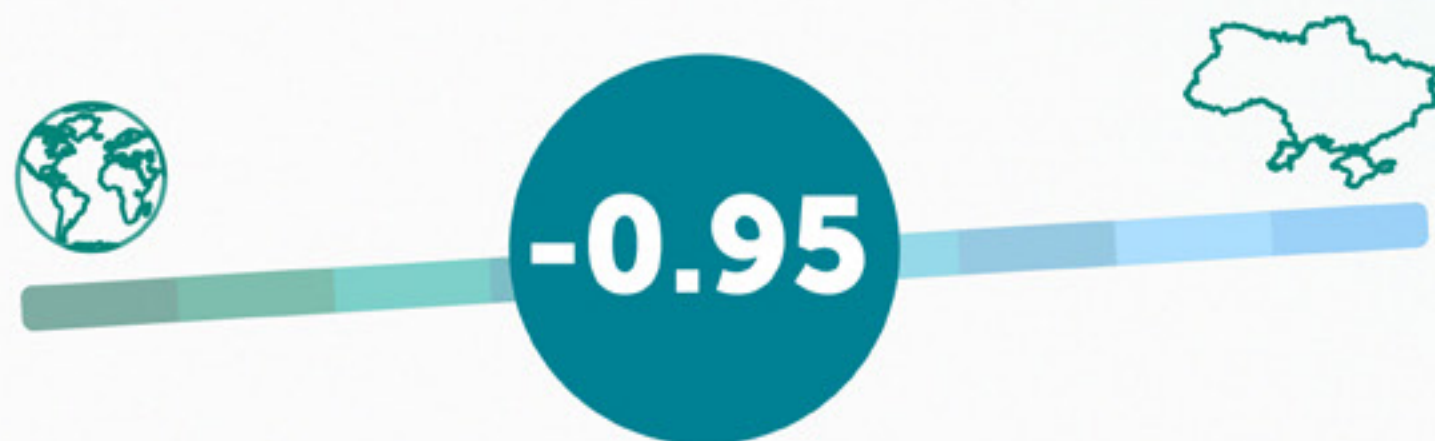
4. MIGRATION ATTITUDES OF IT SPECIALISTS

4.2. Future scenarios

Scenario "European integration on halt and government regulation"

There is no full support of the allies and the West, European integration processes have been stopped. The recovery and functioning of the economy is fully regulated by the state (as an option, the military economy, increasing the tax burden, in particular on the IT sector).

Indicator of the "migration balancer"*

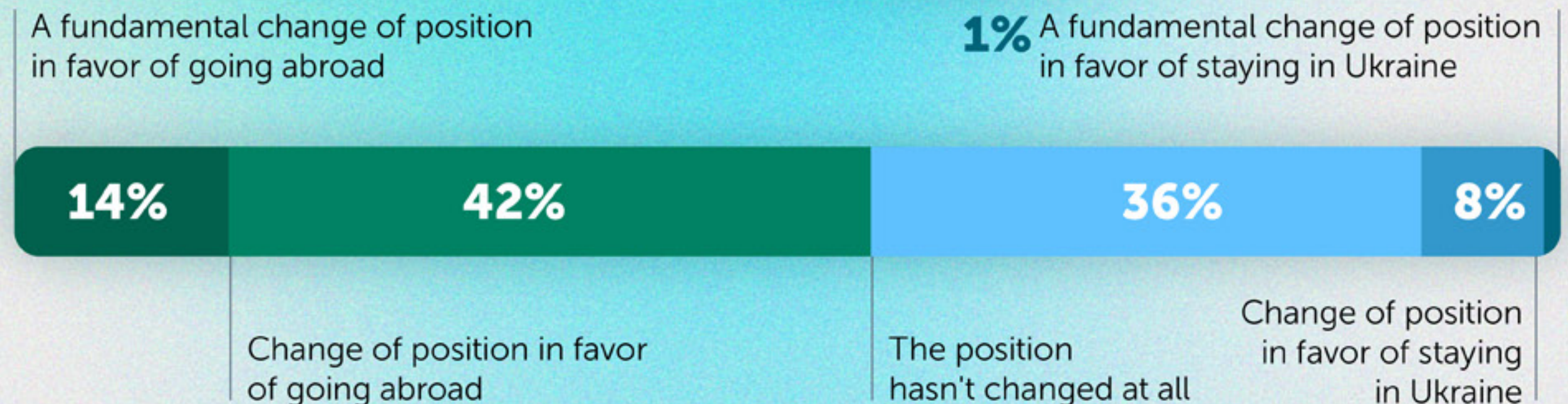
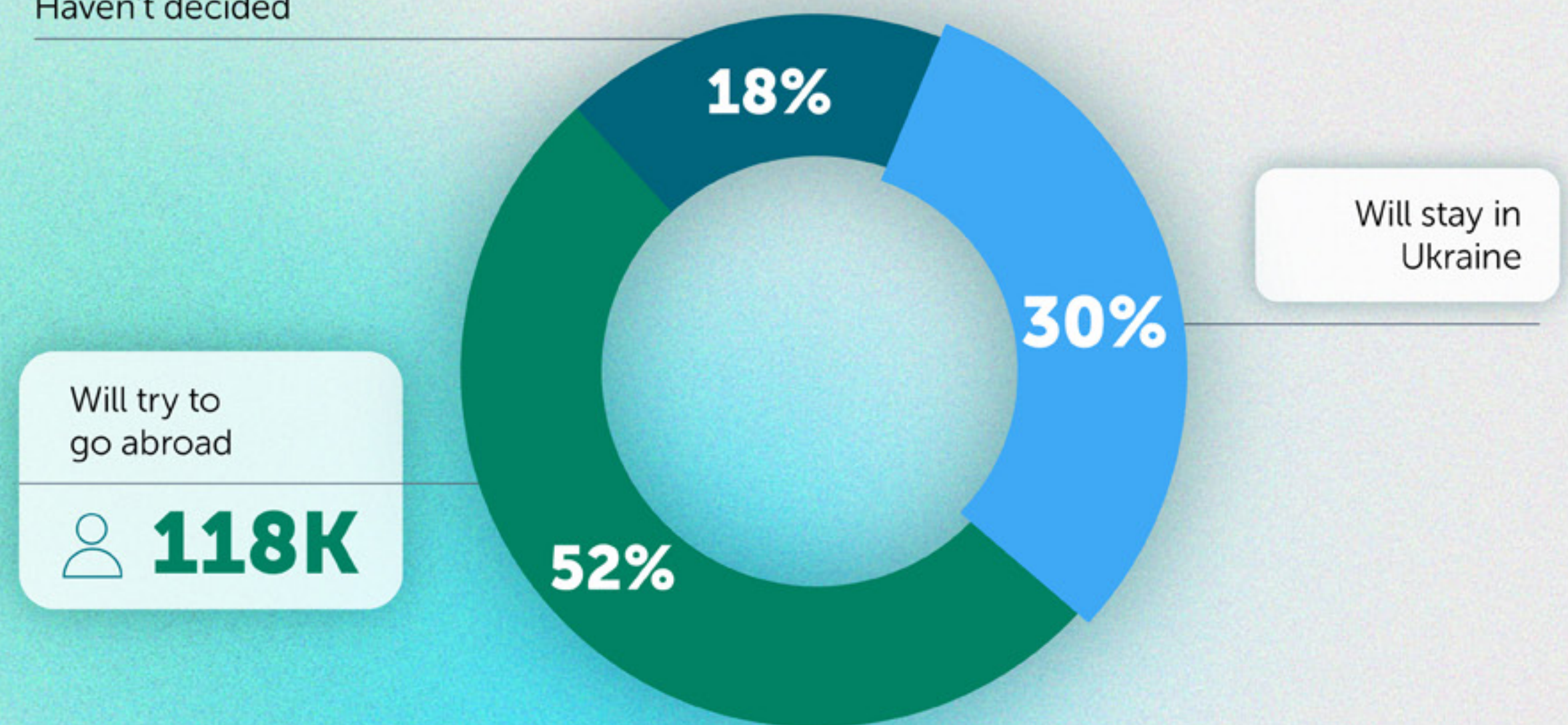


the condition still basically doesn't change the individual overall migration attitude, but brings it closer to a change of position in favor of going abroad.

* As of May 2022.

If the European integration stops and taxes increase, almost half of IT specialists might consider moving abroad

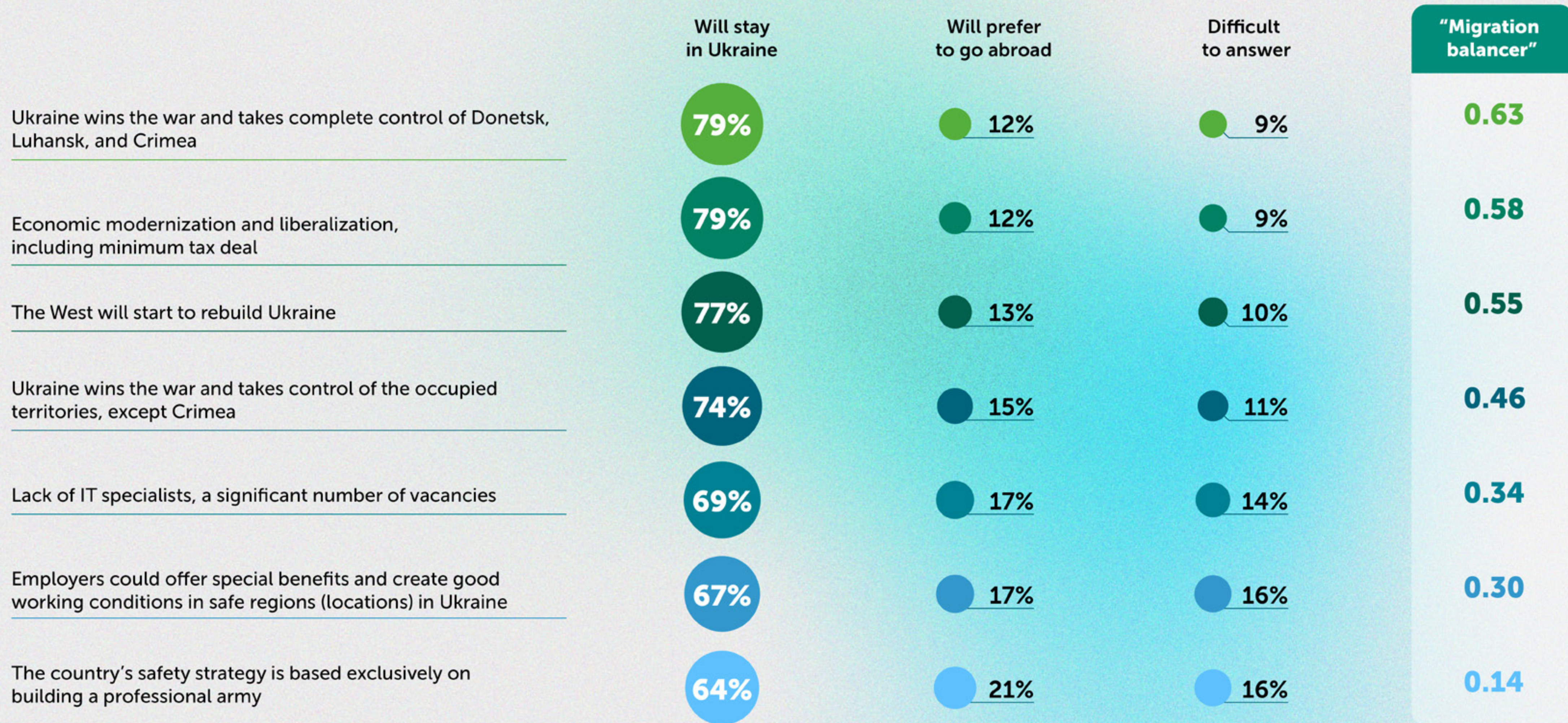
Haven't decided



4. MIGRATION ATTITUDES OF IT SPECIALISTS

4.3. Migration decision changing factors

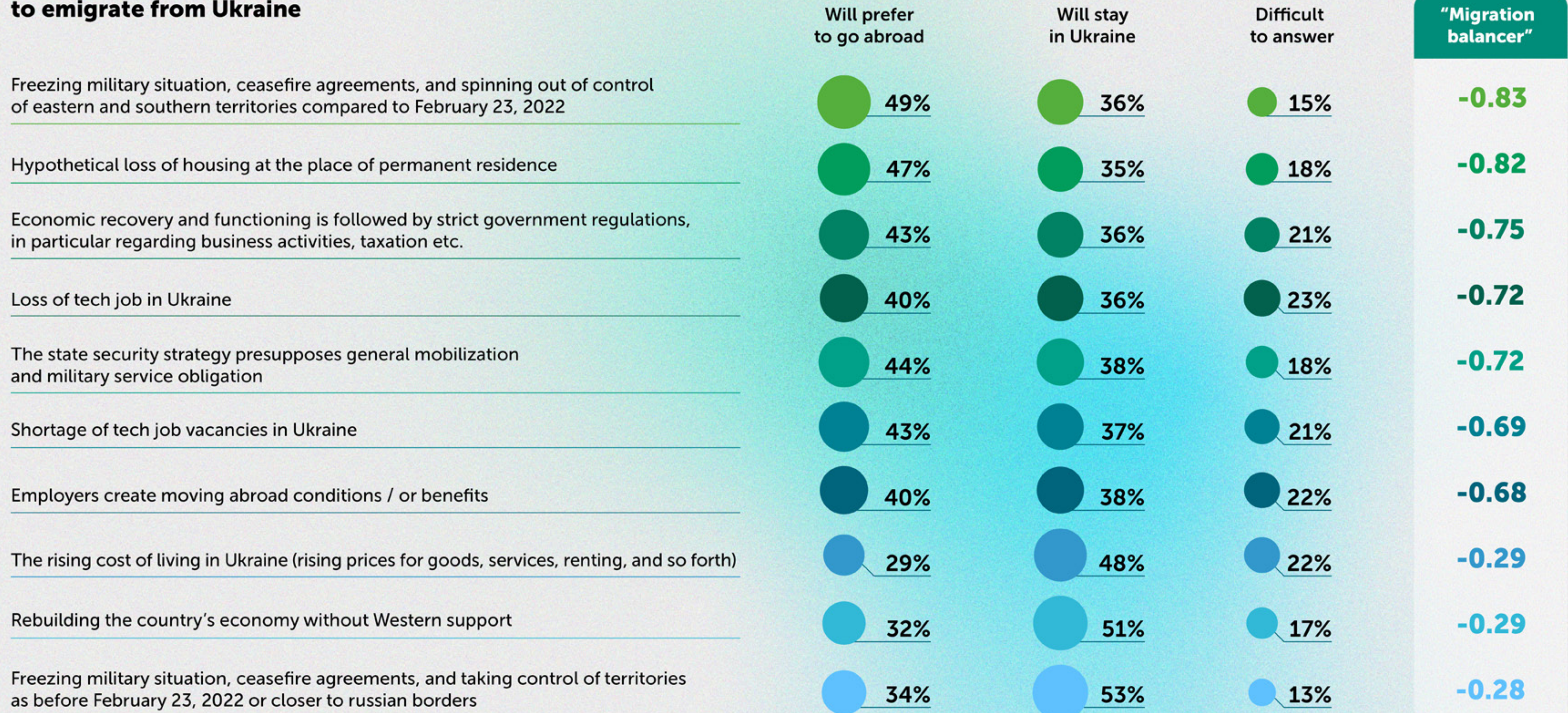
Factors relating to individual choices to stay in Ukraine



4. MIGRATION ATTITUDES OF IT SPECIALISTS

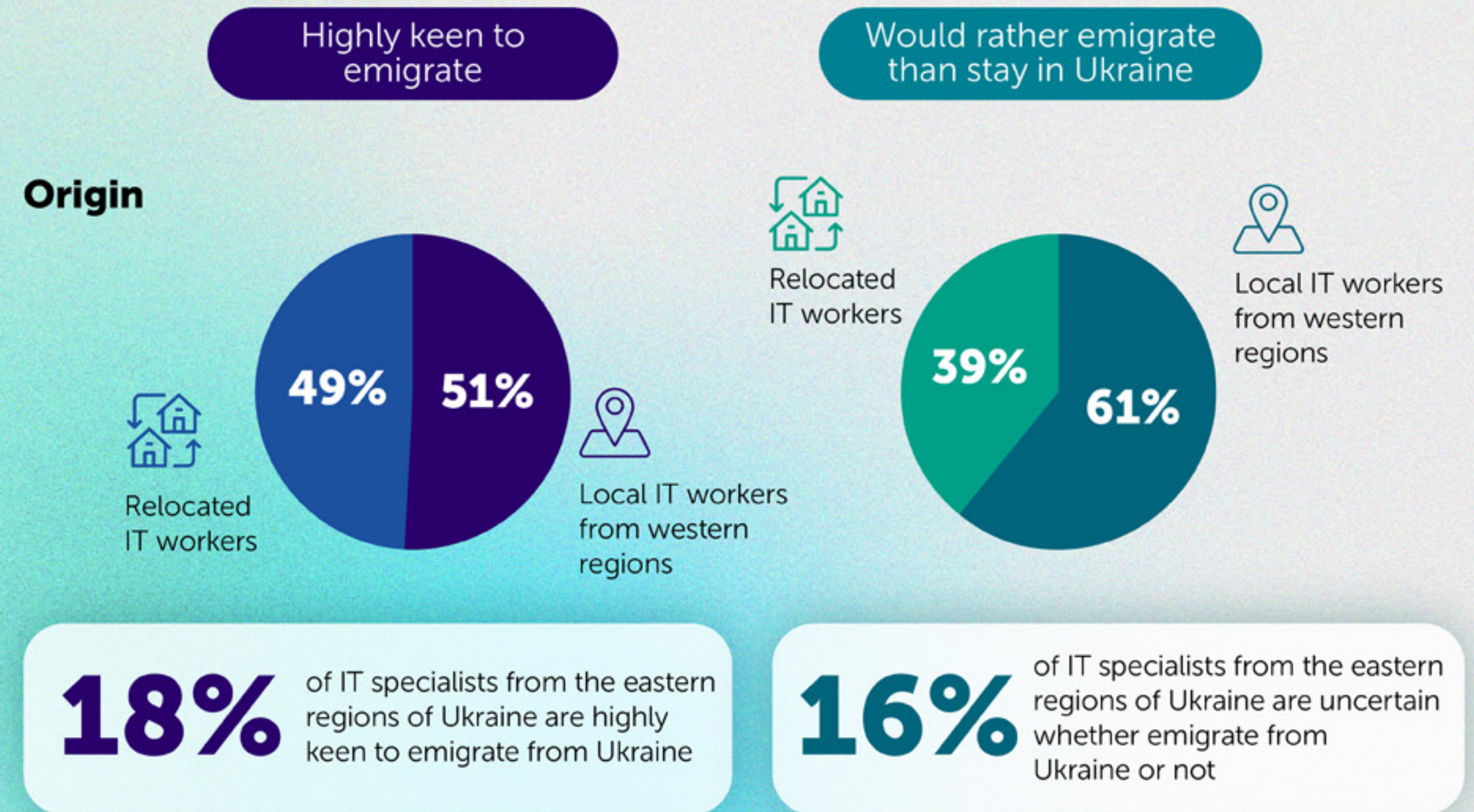
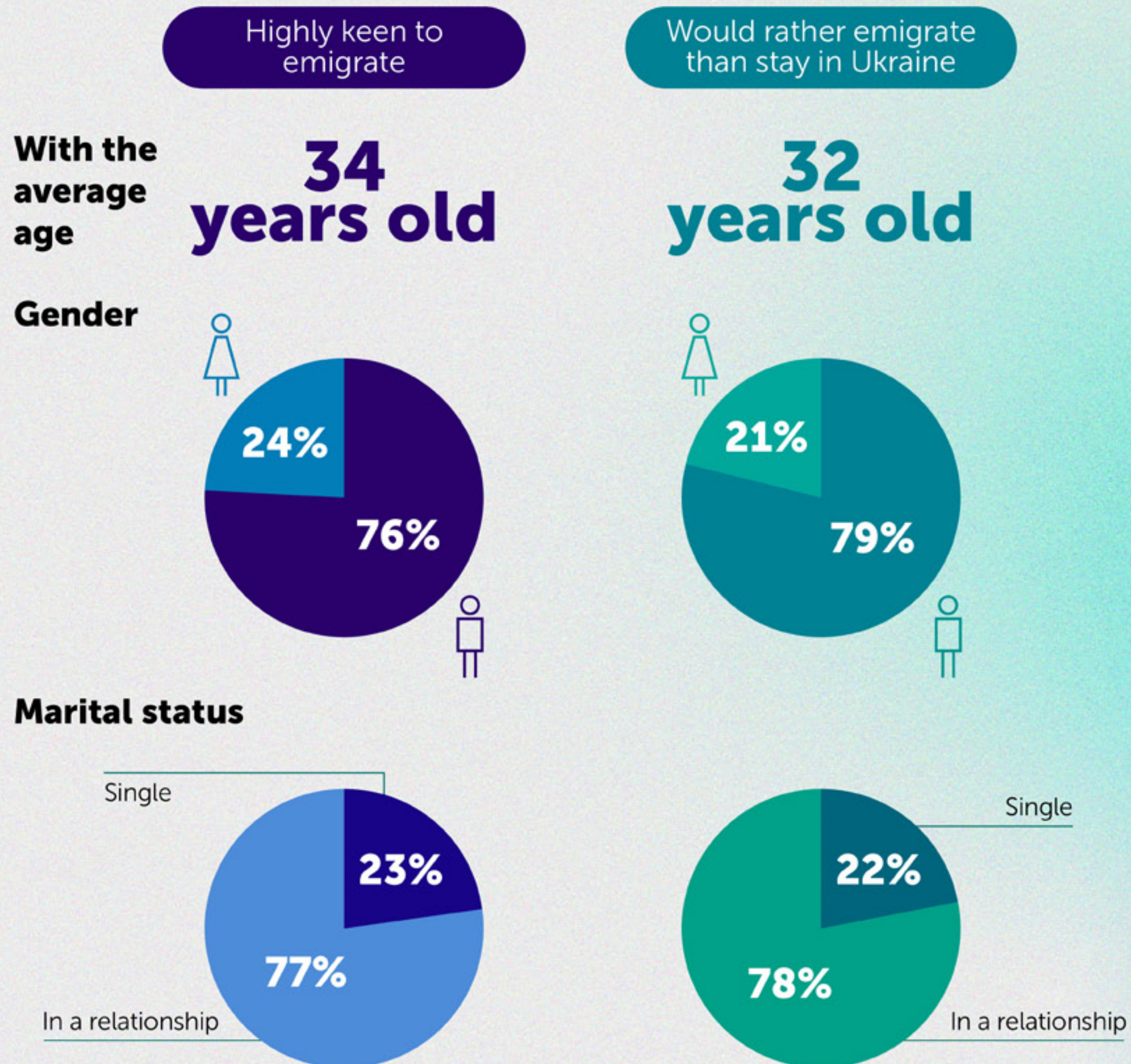
4.3. Migration decision changing factors

Factors relating to individual choices to emigrate from Ukraine



4. MIGRATION ATTITUDES OF IT SPECIALISTS

4.4. Profile of potential IT emigrants

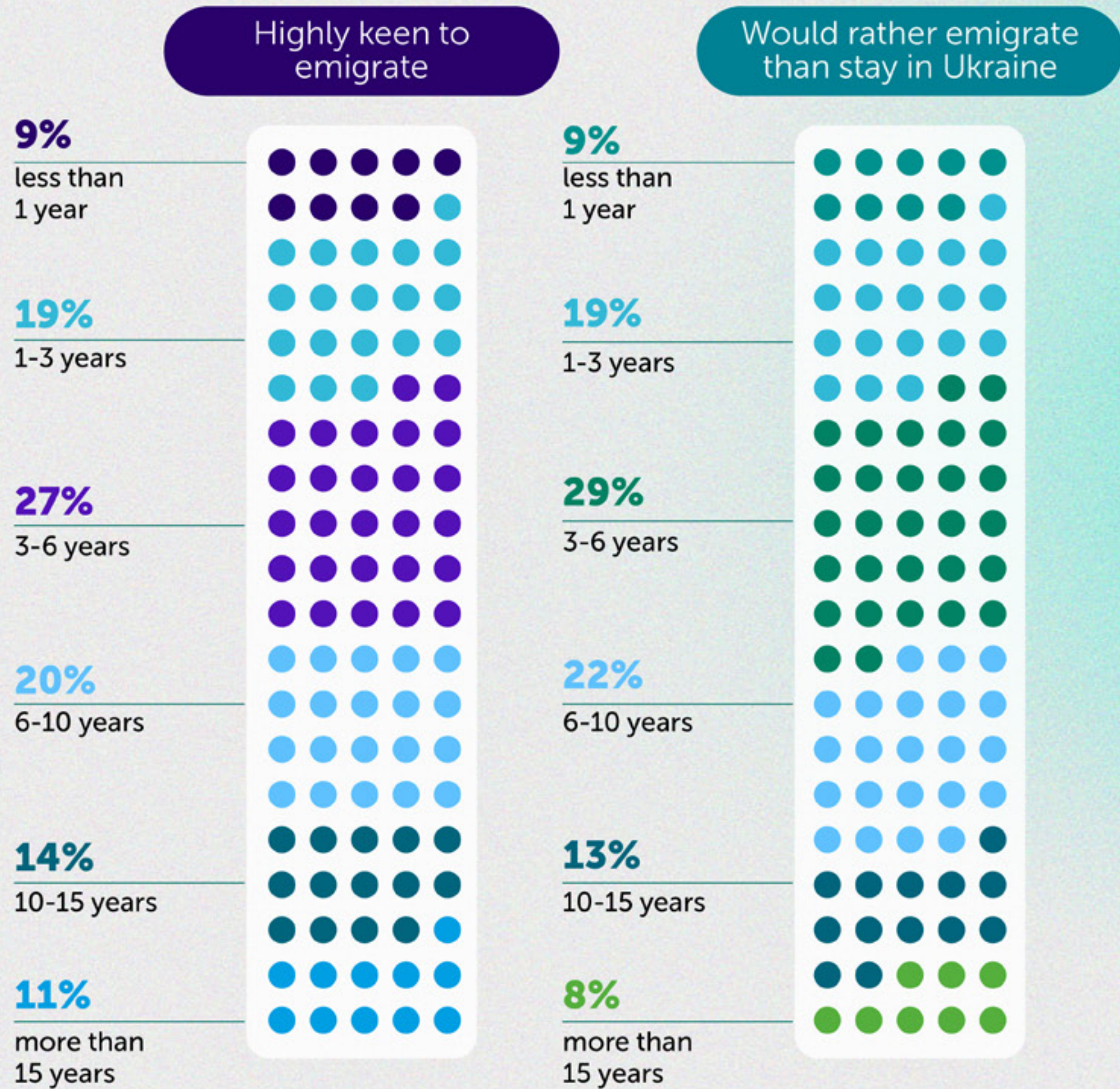


Comparing the profiles of potential IT emigrants with those who declare their intention to stay in Ukraine, there is a trend of slightly higher average age, slightly higher percentages of men, and employees of large companies.

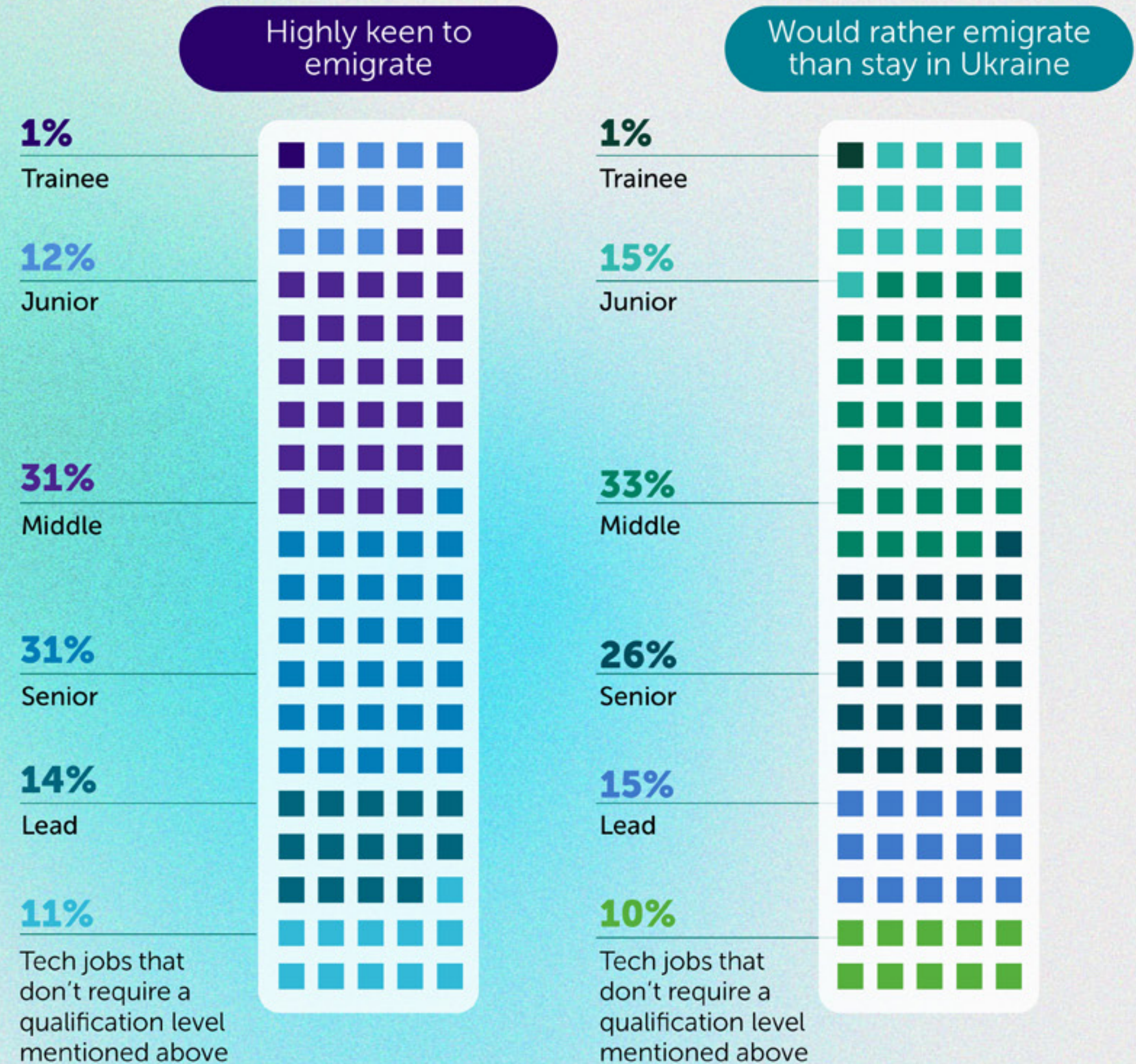
4. MIGRATION ATTITUDES OF IT SPECIALISTS

4.4. Profile of potential IT emigrants

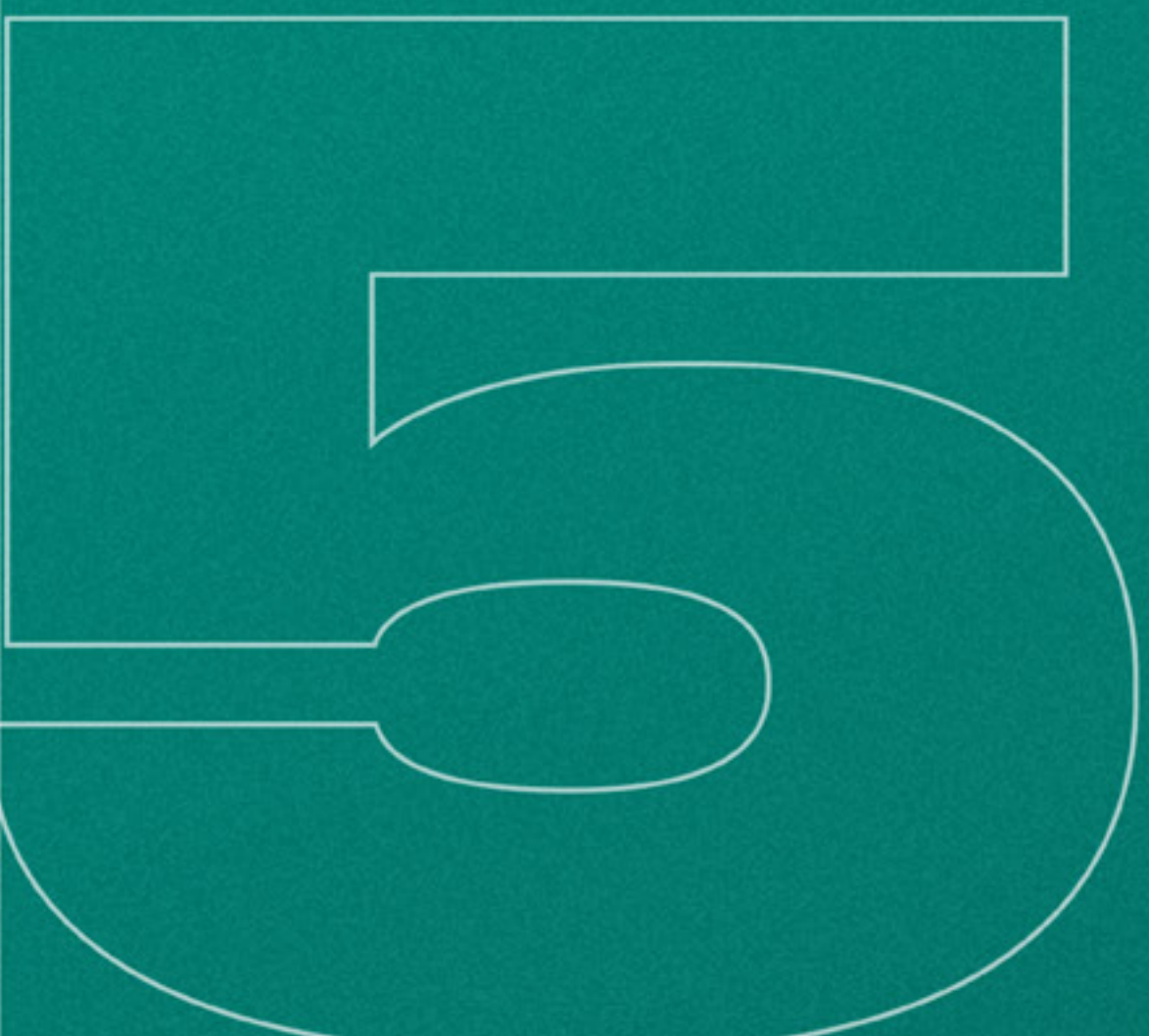
Working experience in tech



Qualification level



IT INDUSTRY OUTLOOK AND FORECASTS



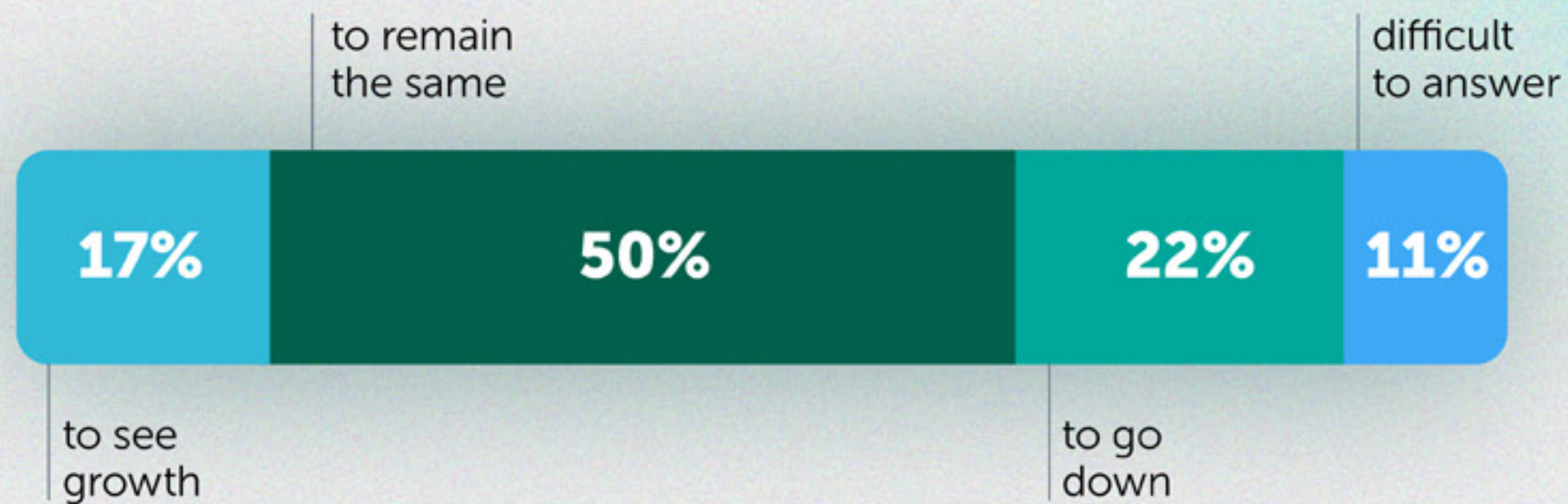
5. IT INDUSTRY OUTLOOK AND FORECASTS

5.1. IT specialists outlook

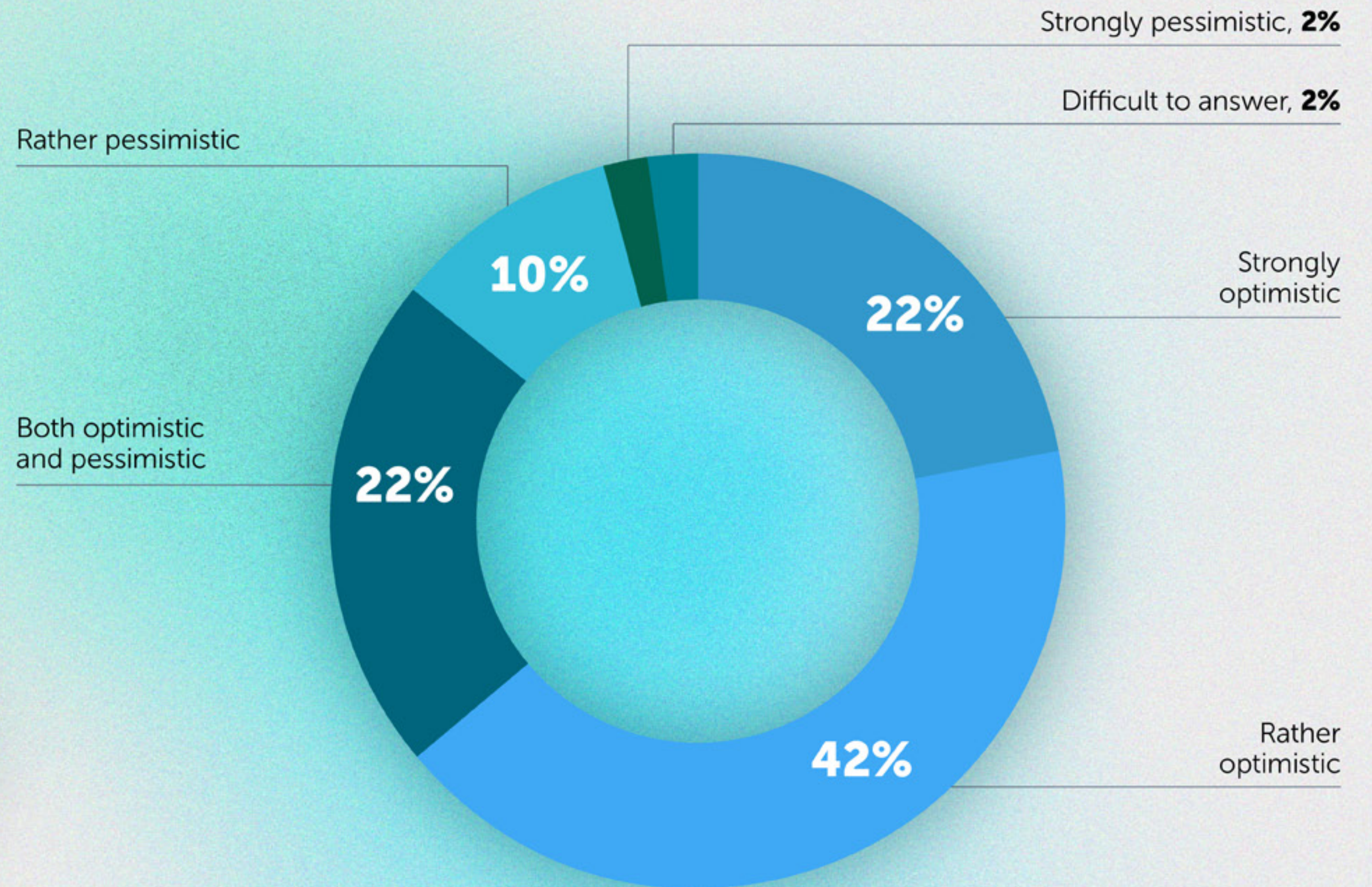
64%

IT specialists remain optimistic about Ukraine's tech industry economic future.

Over the next 12 months, IT specialists expect a median salary...



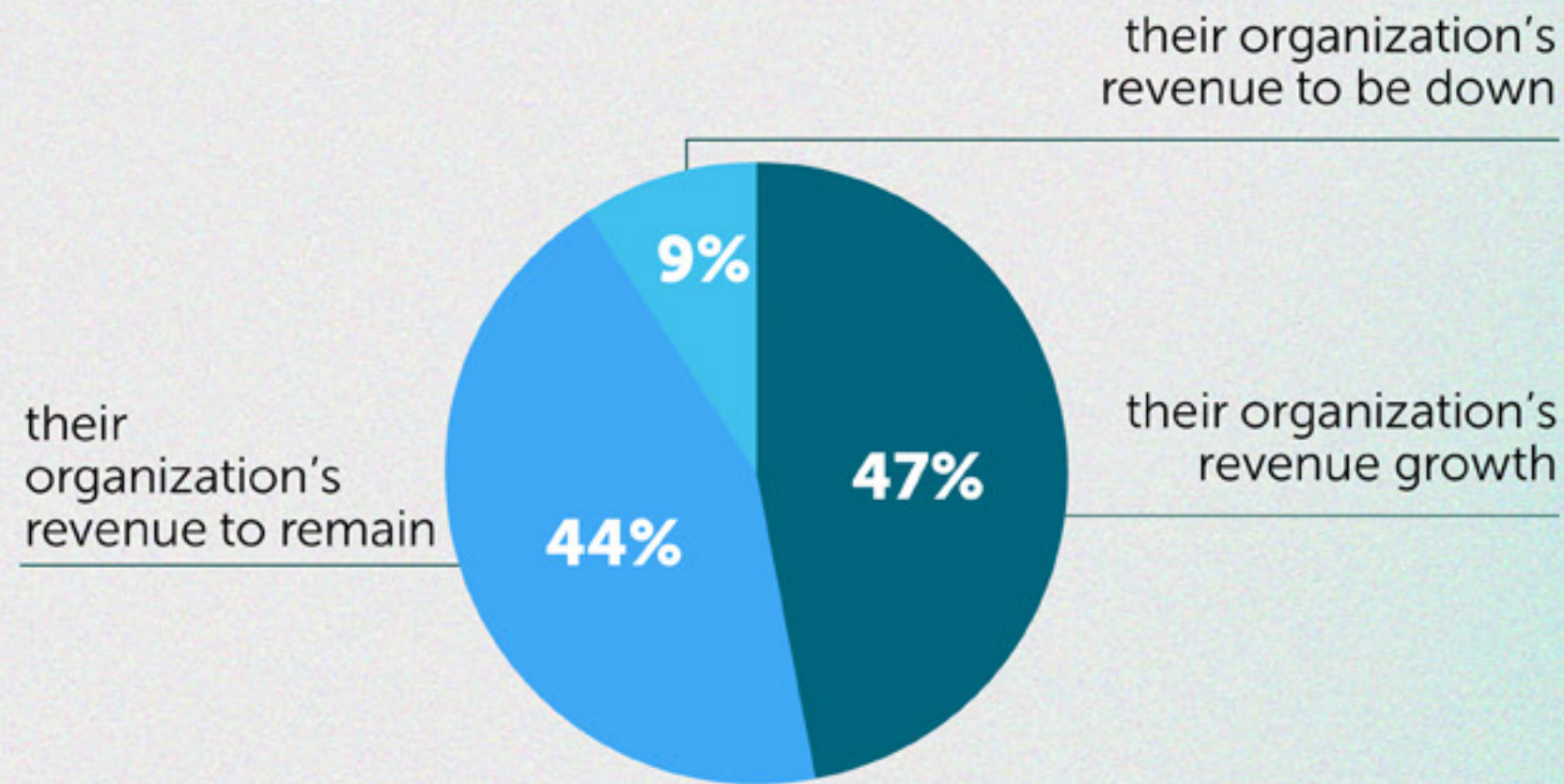
IT specialists' estimate on IT industry short-term outlook



5. IT INDUSTRY OUTLOOK AND FORECASTS

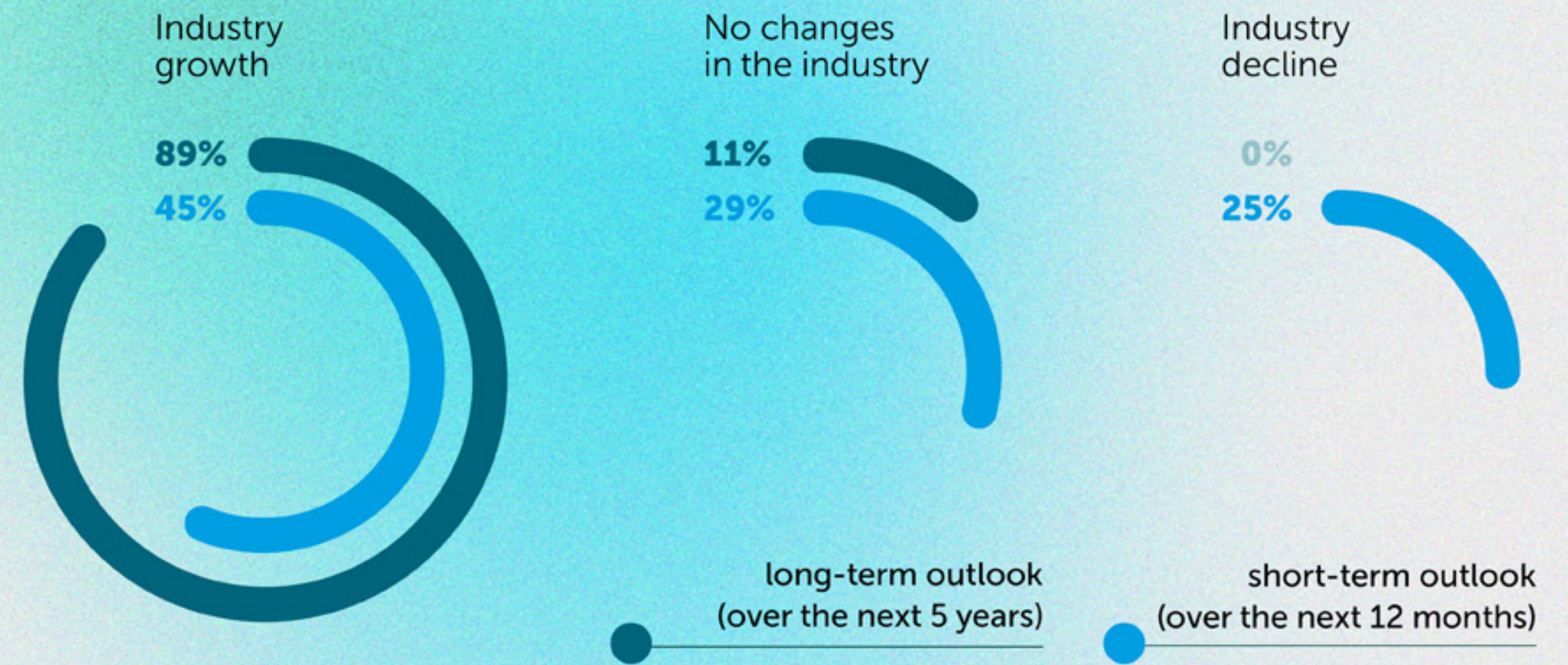
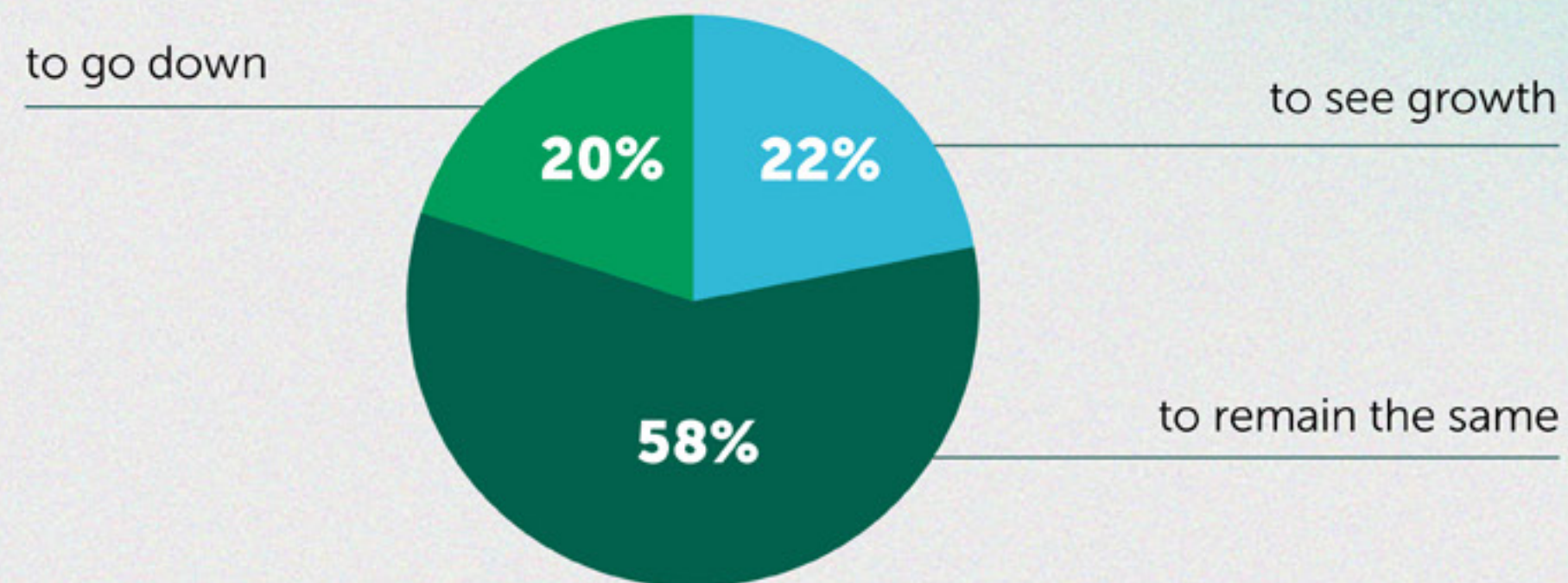
5.2. CEOs outlook

Over the next 12 months, CEOs expect



IT company CEOs' short-term forecasts are moderately optimistic, and the long-term – are strongly optimistic

Over the next 12 months, CEOs expect an IT worker median salary



5. IT INDUSTRY OUTLOOK AND FORECASTS

5.3. Estimate on industry export revenue 2022

In January-May 2022, the IT sector showed signs of growth compared with the same period last year, according to the National Bank of Ukraine.

In the first 3 months:

\$2 billion

In the first 5 months:

\$3.2 billion

By the end of 2022, tech sector's export revenue is expected to reach:

\$8.5 billion

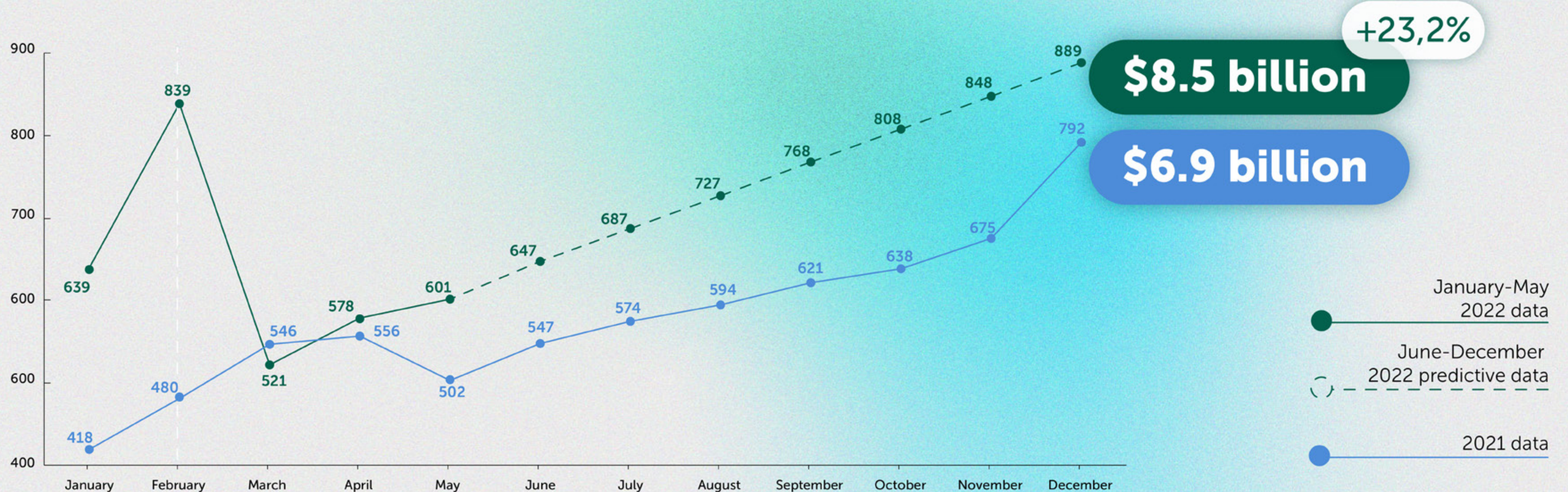
if current trend continues

\$8.1 billion

taking industry participants' expectations into account

\$7.2–7.5 billion

if the IT specialists who emigrated lose tax residency in Ukraine





The project IT Research Resilience was implemented in partnership with the Ministry of Digital Transformation, the USAID Program "Competitive Economy of Ukraine", supporting small and midsize businesses and startups, and the Western NIS Enterprise Fund, which supports initiatives to promote reforms in Ukraine and transformative projects.



Ministry of Digital Transformation of Ukraine

