

Labour Productivity in Ukraine: Wartime Challenges and Business Response

Prepared by:

Iryna Ippolitova, Senior Researcher, CES
Yuliia Aleksandrova, Junior Economist, CES
Olha Tsviliuk, Intern, CES

Date:

August 2026

CONTENTS

List of Abbreviations	4
Introduction.....	5
1 Key Findings	6
1.1 Conclusions.....	6
1.2 Recommendations.....	11
2 Economic Situation and Expectations of Enterprises	15
3 Demand for Workers.....	20
3.1 Worker Shortages	20
3.2 Skills Gaps in the Workforce	24
3.3 Expected Needs for Workers and Skills	25
4 Tools for Increasing Labour Productivity.....	32
4.1 Adoption of Measures That Increase Labour Productivity.....	32
5 Adoption of Automation and Digitalisation Measures.....	35
5.1 Adoption of Automation Measures.....	35
5.2 Adoption of Digitalisation Measures	37
5.3 Spending on Automation and Digitalisation Measures.....	39
5.4 The Impact of Automation and Digitalisation on Companies	40
5.5 Barriers and difficulties in adopting automation and digitalisation	43
5.6 Incentives for More Active Adoption of Automation and Digitalisation.....	49
6 Staff Training.....	51
6.1 Prevalence of Staff Training.....	51
6.2 Purpose of Training.....	53
6.3 Benefits Delivered by Employee Training.....	57
6.4 Barriers to Providing Training.....	59
6.5 Expected Changes in Employee Training	63
6.6 Approaches to Employee Training.....	65
6.6.1 Which Categories of Employees Are Trained.....	65
6.6.2 Who Initiates Training?.....	67
6.6.3 Who Pays for Training.....	69
6.7 Formats of Employee Training.....	70
6.8 Expectations of Training Programmes.....	73
6.9 The Need for Formal Education Certificates	75
7 Readiness to Take Part in Transforming the Vocational Education System	78
7.1 Readiness to Cooperate with Local Authorities on Vocational Education	78
8 The Role of Business Associations and Business Support Programmes.....	81
8.1 Participation in Business Associations and Business Support Programmes	81
8.2 Readiness to Cooperate with Business Associations to Improve Vocational Education	86
9 The Impact of EU Integration on Productivity and Skills.....	87
10 Annexes	89
10.1 Distribution of Oblasts by Macro-Region	89
10.2 Sample Description of the Qualitative Survey.....	89
10.3 Sample Description of the Quantitative Survey	90

The Centre for Economic Strategy (CES) is an independent public policy research centre. Its mission is to support reforms in Ukraine in order to achieve sustainable economic growth. The Centre contributes to the design of Ukraine's economic growth strategy, provides independent analysis of the most important aspects of public policy, and works to strengthen public support for reforms. It was founded in May 2015.

Our principles:

- Economic freedom (liberalisation, deregulation, privatisation)
- Free and fair competition
- A smaller role for the state alongside greater state effectiveness
- Transparency of information and freedom of speech
- The rule of law and protection of private property
- Sound and stable public finances
- A knowledge-based economy.

For further information and comments, please contact Communications Director Viacheslav Nozdrin — viacheslav.nozdrin@ces.org.ua. We also invite you to visit our [website](#).

LIST OF ABBREVIATIONS

Abbreviation	Full name / definition
AR Crimea	Autonomous Republic of Crimea
HEI	higher educational institution
SSSU	State Statistics Service of Ukraine
EU	European Union
IER	Institute for Economic Research and Policy Consulting
IT	information technology
SME	small and medium-sized enterprizes
NBU	National Bank of Ukraine
VET	vocational education and training
USA	United States of America
TCC	territorial recruitment and social support centre
FEU	Federation of Employers of Ukraine
CES	Centre for Economic Strategy
AI	artificial intelligence
AmCham	American Chamber of Commerce in Ukraine
CRM	customer relationship
EBA	European Business Association
HR	human resources
N	the number of observations (respondents) on which the indicator is based

INTRODUCTION

The full-scale war and the migration it has triggered have significantly changed the environment in which Ukrainian businesses operate.

Business surveys conducted since 2022 consistently point to labour shortages as one of the main constraints facing companies. According to the monthly survey by the Institute for Economic Research and Policy Consulting (IER), in June 2026, 71% of industrial enterprises identified labour shortages as an obstacle to their operations. In its quarterly Business Outlook Survey, the National Bank of Ukraine also identifies shortages of skilled workers as one of the key factors constraining business development. Large-scale employer surveys conducted annually by the State Employment Service together with Helvetas and the Federation of Employers of Ukraine likewise show that companies are facing increasing difficulties in recruiting workers.

The shrinking available labour force, driven by migration, mobilisation and demographic change, together with security risks and economic uncertainty is forcing companies to adapt how they organise work and plan further development. In these conditions, the question of how far business can grow without a proportional increase in headcount — through process optimisation, technological change and the development of staff skills — is becoming ever more important.

This study sets out to assess how Ukrainian small and medium-sized enterprises are adapting to the new conditions and which tools they use, or could use, to raise productivity, with a focus on three areas: automation, digitalisation and staff training.

The study combines a quantitative survey with in-depth interviews with representatives of Ukrainian small and medium-sized enterprises (SMEs) — legal entities with up to 250 employees, excluding individual entrepreneurs (sole proprietors).

Between 4 and 12 January 2026, 10 in-depth interviews with business representatives were conducted. The qualitative stage was primarily exploratory and was used to prepare the quantitative survey: it made it possible to better understand how companies adapt to the new conditions and how they make decisions on automation, digitalisation and staff training, and to identify the key themes and hypotheses to be tested at the quantitative stage. The findings of the in-depth interviews are used in this report mainly to explain and illustrate the results of the quantitative survey.

The main results presented in this report are based on a quantitative telephone survey conducted between 6 May and 15 June 2026 among 556 enterprises with up to 250 employees operating in Ukraine. The survey data are weighted by enterprise size, industry, and region in line with the structure of the general population according to the State Statistics Service of Ukraine. The general population of the study is 298,469 enterprises. Detailed information on the sample design and structure is provided in the Annex.

1 KEY FINDINGS

1.1 CONCLUSIONS

A shortage of people is felt more acutely than a shortage of skills

In the perception of business, the labour shortage remains one of the main constraints on development, and it is likely to intensify. 53% of enterprises expect their need for workers to grow over the next 2–3 years, and only 11% forecast a decline. At the same time, half of the companies believe that expanding the business without increasing headcount is hardly possible. **The traditional model of growth through additional hiring remains dominant, even as the availability of labour has declined.**

According to businesses, the greatest shortage is of skilled workers, equipment operators, and foremen. Employers also assess this same category as having the largest gap in the skills required. **However, business representatives perceive the shortage of skills as a less acute problem than the shortage of people.** Employers are often willing to train a candidate directly on the job, primarily through mentoring.

The worker shortage is linked not only to migration and mobilisation, but also to difficult working conditions, high employer requirements and recruitment difficulties in physically demanding occupations.

Not all companies require formal education and qualification certificates, and not for every position. They are most often required of professionals with higher education and of managers. In 38% of companies, education certificates are not mandatory for any category of employee. Employers frequently give preference to the actual ability to do the job and to practical skills, regardless of how those skills were acquired.

Businesses are investing in change despite the war and uncertainty.

Among specific ways to increase output or the volume of services without additional hiring, companies most often name the optimisation of internal processes (19%), digitalisation (15%) and automation (14%).

At the same time, measures that help raise labour productivity are already a common practice among SMEs. Over the past year, 58% of enterprises implemented automation, digitalisation or staff training, and 60% plan at least one of these measures in the coming year.

Employee training is the most widespread of the three: it was carried out by 33% of companies. Digitalisation is somewhat more common than automation: 30% of companies implemented digitalisation measures over the past 12 months, against 21% that implemented automation.

There is considerable inertia in adopting these measures: new measures are most often planned by companies that already have experience of such changes. By contrast, 61% of enterprises that implemented none of the measures studied over the past year do not plan to do so in the coming year

either. This creates a risk of a widening gap between companies that have already embarked on technological and organisational transformation and businesses that remain outside this process.

The main purpose of automation or digitalisation, as companies see it, is to increase output or profitability, while the main purpose of staff training is to improve the quality of goods and services. **From the companies' point of view, therefore, these measures are not primarily aimed at raising productivity or reducing the need for workers, even though they contribute to both.**

Automation, digitalisation and training are not interchangeable strategies – in practice they often complement one another. Automation and digitalisation often demand new skills from employees: 69% of companies felt a need for new staff skills after introducing automation, and 76% did so after introducing digitalisation.

Automation partly offsets the worker shortage by handing physically demanding or routine operations over to machines and somewhat reducing the need for skilled workers, equipment operators and support staff in particular. Companies, however, often point to limits on the extent to which workers can be replaced by equipment. Automation makes it possible to reduce the need for manual labour at individual stages, but it does not eliminate the need for workers overall – a substantial share of operations still requires human involvement.

At the same time, a need for new skills arises: operating new equipment, monitoring and maintaining it. The effect of automation therefore lies not only in reducing headcount, but also in changing the structure of employment and the relevant skills.

Digitalisation saves considerable time on document management, reporting, accounting and data analysis, reduces the amount of manual work and the number of errors, and creates new opportunities for managing the business. Managers gain faster access to data on sales, production, customers or routes and can use it for operational control and planning.

Successful digitalisation is an organisational process as much as a technological one. The in-depth interviews show that changing software and established processes can be met with resistance from employees.

Automation and digitalisation face significant investment barriers

Access to finance is one of the key constraints on further automation and digitalisation in SMEs. High cost is one of the most common reasons for not adopting such solutions, and companies that are already automating or digitalising mostly finance these investments out of their own profits or owners' funds. Companies name **easier access to finance as the single most important incentive for further adoption of automation and digitalisation.**

Automation is systematically more expensive than digitalisation, and finding funding is named among the difficulties of implementing it more often than in the case of digitalisation.

The most common reason for not adopting automation and digitalisation, however, is that companies see no need for such changes. This may reflect the limited applicability of the technologies

to particular business processes or industries, a level of automation or digitalisation that has already been reached, or insufficient awareness of the available solutions and how they could be used. Companies with no prior experience of technological change are less likely to plan it in the future, so one of the barriers to the technological transformation of SMEs may be the ability of businesses to see practical opportunities for automating and digitalising their own processes.

For companies that have already implemented automation or digitalisation, the main difficulties at the implementation stage were wartime risks and infrastructure instability: power, water or heating outages and other war-related risks.

Training remains largely an internal matter for companies

The skills that businesses will require from workers in future go beyond vocational preparation.

Companies also expect employees to have well-developed sales and customer service skills, the ability to work with software, digital systems and AI, communication, problem-solving and teamwork skills, and the capacity to learn and adapt.

Staff training in SMEs depends heavily on the stance of company management. In 78% of companies training is initiated by managers or owners, while employees themselves initiate it in 38%.

Employee training in SMEs most often takes place inside the company itself. The most common format is in-house training and mentoring, in which more experienced employees pass on knowledge to colleagues or train newcomers directly on the job. In addition, 28% of companies use training to pass on experience accumulated within the enterprise and to familiarise employees with internal rules and procedures. **Training is not only a way of acquiring skills from external sources, but also a mechanism for preserving and spreading internal expertise.**

The link between SMEs and education institutions on employee training remains weak. Only 12–13% of enterprises use training at vocational and higher education institutions. Among companies that provide no training, 17% are unaware of institutions or courses in their field, and 12% lack sufficient information about the training opportunities available. **This points less to a problem of the cost or quality of education programmes than to insufficient communication between education institutions and SMEs.**

SMEs see themselves primarily as partners of vocational education institutions in practical training and in hiring future employees, rather than as active participants in governing and reforming the system. This also means that practical formats – internships, dual education, direct work with students – may be the most natural entry point for deepening cooperation between business and education institutions.

Companies name the main barrier to staff training not as its price, but as the absence of any tangible need for it. 51% of companies that did not train their employees believe that their staff already have all the necessary knowledge. **This echoes the findings on automation and digitalisation, where the most common reason for non-adoption is likewise that companies see no need for the relevant**

changes. In both cases, one of the barriers may be not only access to resources or supply, but also the ability of businesses to see the practical value of such tools for their own processes and development.

As company size increases, so does the intensity of technological change and training

As enterprise size increases, technological transformation and staff development become more intensive and more systematic. Although the need for additional workers is almost equally high for companies of all sizes, larger companies show a greater capacity to offset staff shortages by raising productivity.

- **Micro-enterprises** (up to 10 employees, 82% of Ukraine's enterprises as of 2025) are the least active in adopting technological change and staff training, are more likely to consider automation and digitalisation irrelevant to them, and are more strongly constrained by finance. In managing staff, micro-enterprises rely more on practical skills and less formalised approaches: formal education certificates are required less often, and professional development is the main purpose of training. Demand for employee skills in micro-businesses is shifted more towards sales, communication and customer service skills than towards complex technical competencies, which is partly explained by the high share of trade and services firms among micro-enterprises.
- **Small enterprises** (10–49 employees, 13% of enterprises) occupy an intermediate position between micro and medium-sized businesses in the intensity of technological transformation. They use technology and train employees more actively than micro-businesses, but lag significantly behind medium-sized companies. For them, as for micro-enterprises, the cost of technological investment remains an important constraint. At the same time, small enterprises are particularly likely to believe that their employees already have sufficient skills. This may limit demand for further staff development even where a labour shortage exists.
- **Medium-sized enterprises** (50–249 employees, 5% of enterprises) make the most active use of automation, digitalisation and training as development tools. These enterprises are more likely to see a need for technical, digital and analytical skills, while staff qualifications and the availability of suitable solutions more often become practical preconditions for further automation and digitalisation. Training here is also more systematic: it more often covers different categories of staff and is used to master new technologies and to prepare specialists who are in short supply.

Sectoral differences: different routes to higher productivity

The need for workers, the potential for automation and digitalisation, and the content of future skills depend substantially on the nature of a company's activity.

- **Industry and energy** are the most automation-oriented. 39% of enterprises have already implemented relevant measures. It is here that skills in working with modern machinery, maintaining it, and configuring automated systems are particularly important. Industrial companies more often see training as a way to reduce production costs and improve product quality, and at the same time more often face practical constraints on training — a lack of time and of workers who can be taken away from the production process.

- **Agriculture** also has high automation potential. Here new machinery can directly offset the shortage of tractor drivers and other workers and reduce physical strain. At the same time, because of the high cost of equipment and security risks, access to finance and war-risk insurance are especially important for the sector. Agriculture is also among the sectors with the lowest prevalence of organised staff training.
- **Transport and logistics** lean more towards digitalisation and process optimisation. Digital tools make it possible to monitor routes, operational indicators and staff performance, and the availability of ready-made standardised solutions is an important condition for further change in the sector. Digital, communication and adaptive skills are particularly relevant for its future.
- **IT and telecommunications** is the most digitalised sector. 75% of companies implemented digital solutions over the past year. This sector is also the most optimistic about the possibility of growing without additional staff and has one of the strongest future demands for digital, analytical, managerial and adaptive skills. It also expects one of the largest increases in training activity.
- **Construction** has relatively limited automation potential: the in-depth interviews explain this by the large number of non-standard jobs that differ from site to site. 74% of construction companies consider growth without additional staff unlikely. At the same time, the sector has high expectations of increasing headcount, which makes the labour shortage a particularly important constraint on its further development.
- **Trade** currently shows the weakest economic dynamics among the main sectors: 41% of companies report a contraction in activity. At the same time, trade is relatively positive about the scope for growth without expanding headcount and relies more on digitalisation and changes in business strategy. Sales, customer service, communication and digital skills are especially important for its future. More often than in other industries, training is used to prepare workers who are hard to find on the market.

Regional¹ differences: the security situation and differences in business structure

Regional differences are shaped by the economic structure of each macro-region: the varying weight of agriculture, industry, trade and services largely determines demand for automation, digitalisation and training. The security situation creates additional differences.

- **The West and the Centre** show some of the most resilient current business dynamics. Both regions have a relatively high level of automation, partly linked to the larger presence of agriculture.
- In the **West**, businesses are especially likely to name access to finance as an incentive for technological investment. This is also where training at vocational education institutions is used most actively, and companies there have a high demand for flexible, practically oriented training programmes.
- **The Centre** stands out for high automation and relatively low digitalisation. Companies in the region have more restrained expectations of further increases in training activity.
- **Kyiv** is characterised by lower automation and high digitalisation, which is consistent with the greater role of services and of IT and telecommunications. Training here is more often seen as a way of retaining staff: companies more frequently note higher loyalty and lower turnover.

¹ The grouping of oblasts by macro-region is given in Table in Annex 1

- **The North** likewise combines relatively low automation with high digitalisation. Companies in the region stand out for making more active use of training at higher education institutions and of training provided by equipment manufacturers, and among the outcomes of training they often note higher productivity.
- **The East and the South** remain the most vulnerable because of the security situation: the share of companies contracting their activity here exceeds the share of those growing. For business in the East, profitability and war-risk insurance are more important incentives for technological investment, while in the South it is the availability of suppliers of ready-made solutions. Economic uncertainty here also constrains training more often.

1.2 RECOMMENDATIONS

Supporting productivity and the technological transformation of business

- **Shift the focus of some business support programmes from job creation to raising productivity.** Given the labour shortage that already exists, business development need not always mean a proportional increase in headcount. For programmes aimed at modernisation and technological upgrading, it would make sense to make the key performance indicators growth in output or services, labour productivity, value added or cost reduction, rather than the mandatory creation of new jobs.
- **Encourage employers to widen the pool of potential workers and, where possible, to adapt jobs and working conditions for groups that are currently less engaged in employment,** if job creation remains one of the criteria of business support programmes. Support for inclusive employment should work with employers and potential workers at the same time: helping companies adapt jobs and hiring practices, and helping people overcome barriers to employment through career guidance, retraining, and support for mobility, care and accessibility.
- **Continue developing war-risk insurance for investment in productive assets.** For agriculture and parts of industry, the risk of losing expensive equipment directly holds back investment. The mechanism already exists, and what matters now is further extending the coverage and accessibility of insurance schemes for SMEs.
- **Extend access to finance for technological transformation to business segments that are not currently covered.** Excessively narrow sectoral or regional criteria may leave projects with high productivity potential without support.
- **Create opportunities for technological diagnostics of enterprises.** Companies often see no need for automation and digitalisation, but this may reflect either genuinely limited applicability of the technologies or an insufficient understanding of the solutions available. SMEs need help answering very practical questions: what exactly can be automated or digitalised, what solutions exist, how much they will cost, and what economic effect they will have.
- **Sell not the equipment or software as such, but a clear business effect.** A large share of enterprises see no need for automation or digitalisation. To expand the market, suppliers therefore need to show through concrete examples which operations can be changed, how much working time or resources this saves, how output changes and what the payback period is. Sector-specific

solutions are especially needed: the automation needs of agriculture and industry differ substantially from those of trade, logistics or services.

- **Develop affordable standardised solutions for small and micro-businesses, together with the option to "try before you buy".** For small enterprises, a complex bespoke project will often be too expensive and too risky. Standard sectoral packages, pilot use, leasing or phased implementation may be appropriate.
- **Differentiate programmes and offers for different industries and enterprise sizes.** Agriculture and industry need automation, expensive equipment, long-term finance and risk insurance to a greater extent. Logistics, trade and services need digital solutions and process optimisation. Micro-businesses need simple standardised solutions and help in identifying whether transformation is possible at all. Medium-sized businesses need capital to scale up and more advanced technical and digital skills.
- **Make the development of worker skills an integral part of automation and digitalisation programmes.** In 69% of companies, a need for new skills arose after automation, and in 76% after digitalisation; in the case of digitalisation, training and retraining staff is already a practical barrier. The costs of training, retraining and managing organisational change should therefore be made an eligible component of grants and credit programmes for technological upgrading.
- **Evaluate support programmes by their actual impact on productivity.** Programme evaluation should take into account not only the number of companies that received a grant or the number of jobs created, but also the increase in output per employee, the reduction in the time needed to complete operations, wage growth and similar measures.

Informing and engaging business

- **Inform business about available labour resources and labour market prospects.** More than half of enterprises expect their need for workers to grow, even though the scope for significantly expanding labour supply is limited. Business needs accessible information on the regional supply of workers, occupations in short supply, demographic trends and the educational trajectories of young people. This will help companies assess earlier where further growth should rest not on additional hiring, but on automation, digitalisation or a change in how work is organised.
- **Inform businesses about the opportunities for automation and digitalisation, as well as about the support infrastructure available.** It is not enough for such instruments to exist. Companies must know about them and understand in which cases it is worth using them.
- **Engage companies that have not yet begun technological transformation.** There is a risk that grants and support programmes will mainly go to companies that are already active and well prepared, while enterprises with no prior experience of automation, digitalisation or training remain outside the process. One possible solution is low-threshold instruments that require no prior experience or expertise to take part – for example, free diagnostics, small vouchers, demonstrations of pilot solutions, consultations and the like.
- **Separate tracks to engage small and micro businesses.** Larger businesses are often more active and better prepared for further expansion, while small and micro firms are frequently excluded from these processes, even though they account for over 90% of businesses in Ukraine. They need

simpler participation procedures, group services and active outreach, rather than an expectation that they will find a programme and apply for it on their own.

Links with business and the institutional capacity of education institutions

- **Make vocational education institutions proactive in engaging with business.** Only 12–13% of companies that train employees use training at vocational or higher education institutions; at the same time, 17% of enterprises that provide no training are unaware of relevant institutions or courses. Each institution should have a clearly assigned function of working with employers: gathering information on their needs, offering suitable programmes, and organising internships and the employment of graduates. Engagement with local employers should become one of the performance indicators of the institution.
- **Strengthen the capacity of vocational education institutions to work with employers systematically.** Support should cover not only the modernisation of equipment, but also the development of skills among the staff responsible for cooperation with business: analysing the needs of the local labour market, attracting new employers and building long-term partnerships, jointly designing and updating programmes, organising internships and dual education, and developing short training and retraining programmes for company employees. This will turn cooperation with business into a systematic function of the institution rather than a collection of individual partnerships or projects.
- **Develop tripartite partnerships between vocational education institutions, employers and technology manufacturers/suppliers.** Legislation and regulations mostly emphasise the importance of interaction between education institutions and business. Technological upgrading, however, adds a third important participant – the manufacturer or supplier of solutions. Equipment manufacturers and suppliers are already an important source of employee training during technological upgrading, and involving them systematically in cooperation between education institutions and businesses can make that cooperation more effective.
- **Begin partnership with businesses at the easiest entry point for employers: student internships and employment.** Enterprises are most willing to take students on internships and subsequently to employ them; their readiness to engage in more complex questions of governing the vocational education system is lower. Long-term partnership should therefore logically be built step by step: from internships to participation in the design of programmes and standards and to membership of supervisory and regional boards.

Developing vocational training and adult learning programmes

- **Develop a system of short retraining and upskilling for adults in direct connection with employers.** Companies expect short, flexible and practically oriented programmes that can be tailored to a specific enterprise. Amid demographic decline and falling student numbers in vocational institutions, this could become a new line of work for these institutions.
- **Develop programmes to prepare in-house trainers and mentors for enterprises ("train the trainer").** Vocational education institutions can teach experienced company employees the methods of mentoring, transferring practical skills, adult learning and assessing learning outcomes. This would make it possible to reach far more workers by building on the in-house training practice

already widespread among SMEs, while at the same time improving its quality and consistency. This is especially important for industrial enterprises, which more often name a lack of time as a barrier to full-scale employee training at educational institutions.

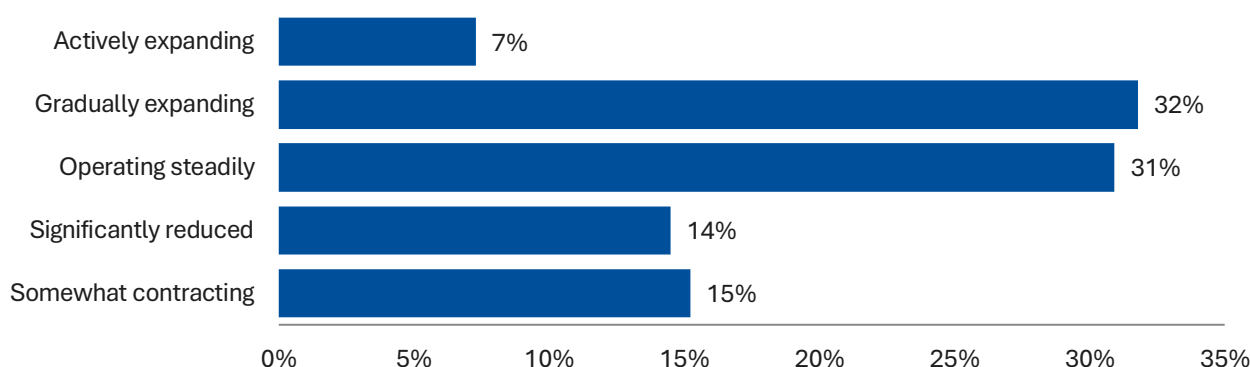
- **Broaden the content of vocational training beyond purely technical skills.** Future employer demand covers not only working with equipment, but also digital skills, the use of software and AI, the capacity to learn and adapt, communication, problem-solving, teamwork, sales and customer service. These competencies should therefore be integrated into vocational programmes and short adult learning courses.

2 ECONOMIC SITUATION AND EXPECTATIONS OF ENTERPRISES

Overall, almost 40% of the companies surveyed show a growth trend: 32% are gradually expanding their activity and 7% are doing so actively. About a third of businesses (31%) are operating steadily, with no substantial change in the volume of activity. A deterioration is reported by 29% of respondents: in 15% activity is contracting somewhat, and in a further 14% it is significantly reduced.

Figure 1. Current state of business, % of companies

More than a third of the companies surveyed show a growth trend.



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556.

The current optimism may partly reflect a survivorship effect: the number of registered enterprises has fallen by 20% since 2021.

The in-depth interviews show a gradual adaptation of business following the sharp fall in activity in 2022. Respondents most often recalled the first year of the full-scale war as the period of the deepest contraction or suspension of activity, while they described 2023–2025 as a period of adaptation and relative stabilisation. Opportunities for recovery nevertheless remain uneven: enterprises in the East, in particular, continue to suffer direct losses because of the occupation of territory and the loss of assets.

"In 2022 we did not understand how things would turn out. So we cut staff, and we cut the menu too. Looking at the middle of 2023, we decided we could expand a little further. As of today, we have had a surplus of profit, and quite a decent one... 25% for sure." (Small business, restaurant sector, Kyiv)

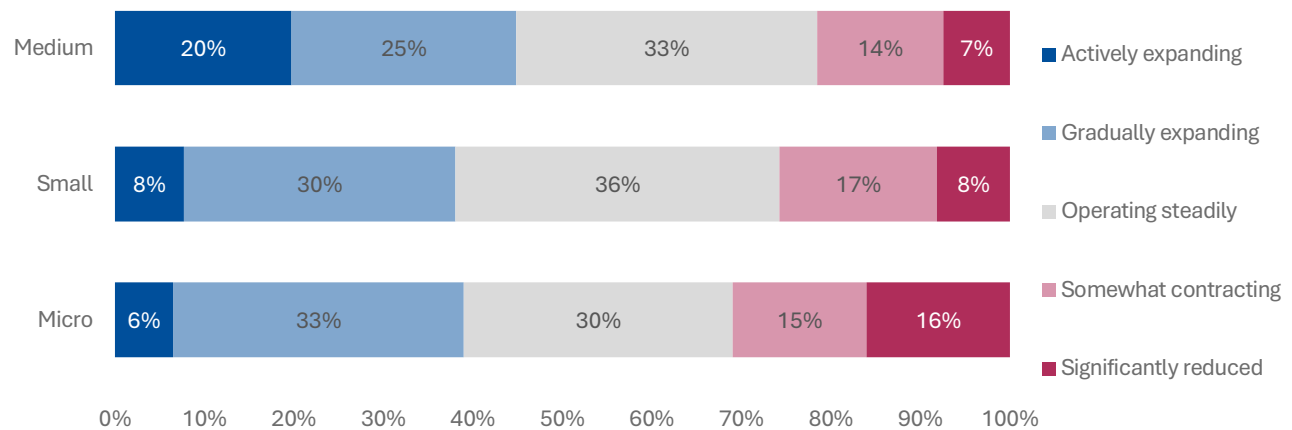
"After the invasion we had a very big slump in 2022, and then we all somehow pulled ourselves together, and 2023, 2024, 2025 have been steady, thank God... There is no growth." (Small business, IT and telecommunications, Kyiv)

"A decline, of course, because right now there are the fields we had under lease and our own fields that are currently under occupation. By 50%, twofold." (Medium-sized business, agriculture, East)

Medium-sized companies feel considerably more confident. Among medium-sized businesses, 20% are expanding actively — almost three times more often than the rest of the companies. At the same time, micro-enterprises report a significant decline in activity twice as often as medium-sized and small companies.

Figure 2. Current state of business by enterprise size, %

Medium-sized companies expand actively more often than micro and small businesses.

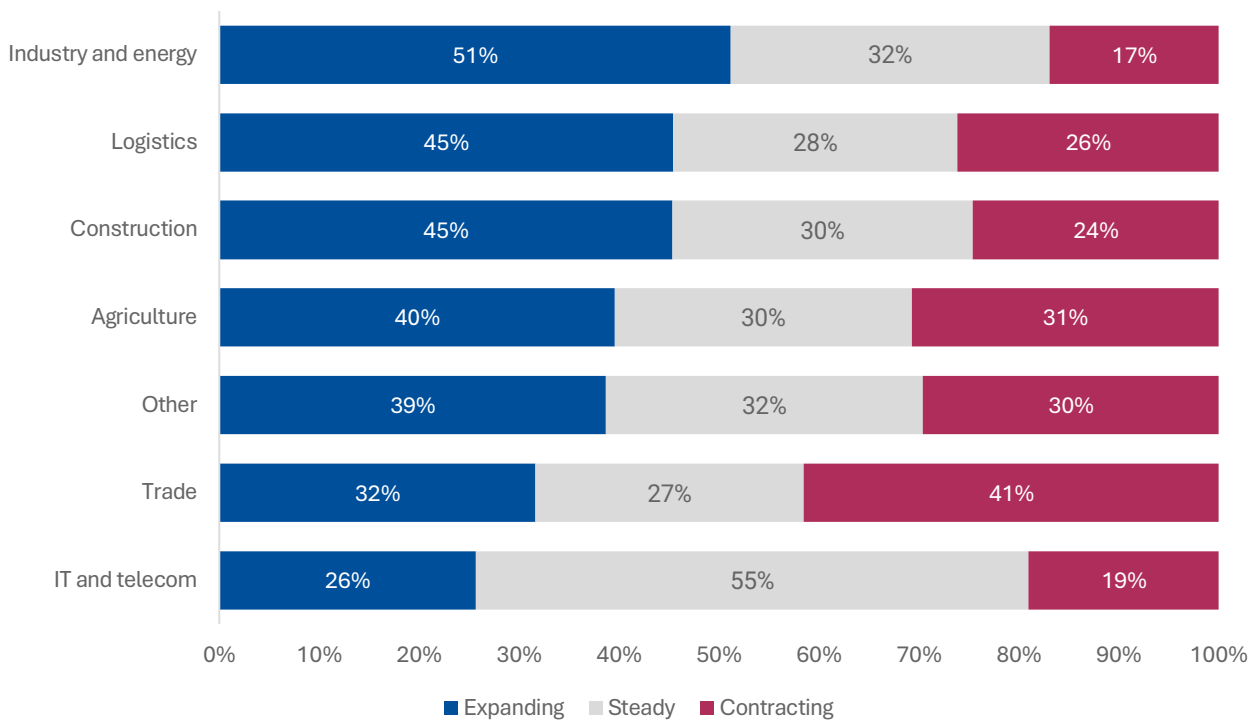


Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by size: Medium — 126, small — 228, micro — 202. Weighted percentages are shown.

The current state of business also varies widely by industry. The most crisis-hit industry is trade: 41% are contracting (significantly or partly) — the worst result among all sectors. At the opposite end is industry (51% growing against only 17% contracting).

Figure 3. Current state of business by industry, %

Growth predominates in industry, while trade shows a more pronounced contraction in activity.



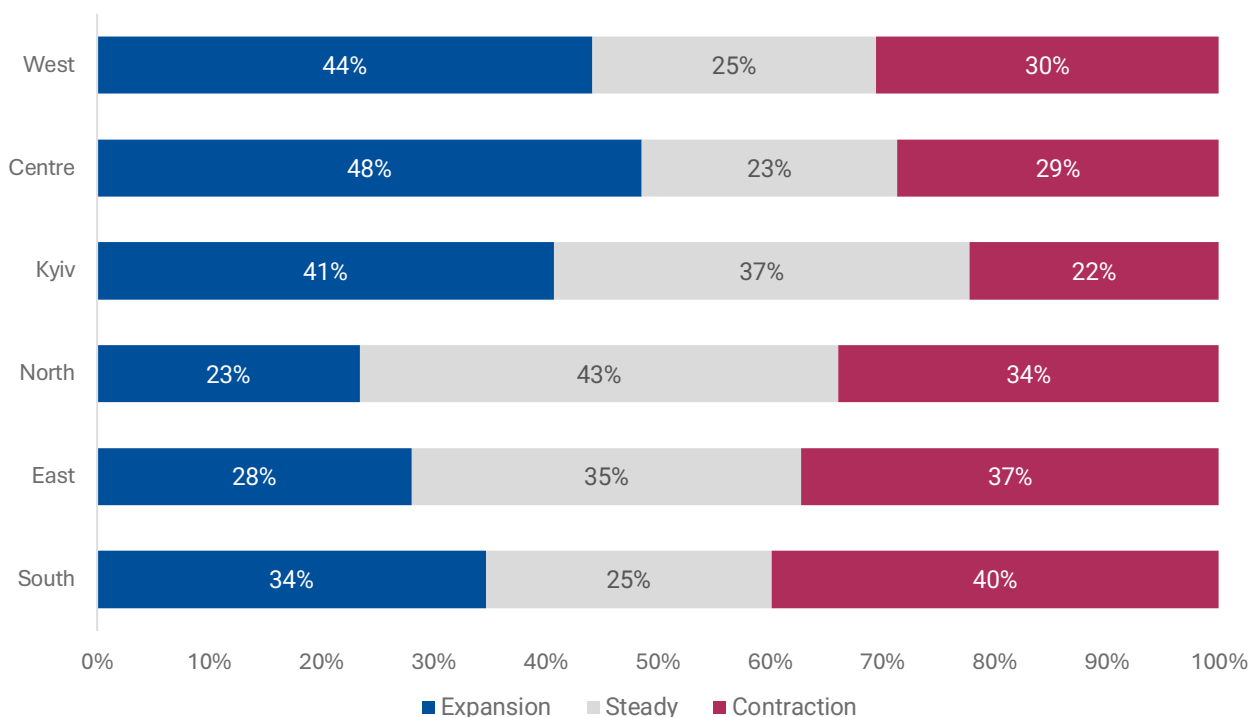
Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by industry: construction – 53, industry and energy – 144, agriculture – 62, trade – 120, logistics – 38, IT – 32, other – 107. Weighted percentages are shown.

By region, the most vulnerable are the East and the South – the macro-regions closest to the front line and to the border with Russia. In the South and the East, the share of companies contracting their activity exceeds the share of those growing.

By contrast, the city of Kyiv and the central and western oblasts show the most resilient development dynamics. In the North, enterprises most often reported operating without change (43%), but the share of those contracting is larger than the share of those expanding.

Figure 4. Current state of business by region, % of companies in the region

In the East, the South and the North, the share of contracting companies exceeds the share of growing ones.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base — all respondents (n = 556). Number of respondents by region: West — 118, Centre — 125, Kyiv — 116, North — 96, East — 40 and South — 61. Weighted percentages are shown. The answer option "Hard to say / no answer" is not shown because of the small number of observations.

Despite the difficulties, business expectations for the coming year are largely optimistic: 47% of companies plan to maintain their current level of activity, and 42% expect growth and expansion.

Only 9% of enterprises are preparing to scale back their activity, and 2% consider the situation impossible to forecast at all. The highest level of optimism is found among companies that are already growing actively — 99% believe the coming year will bring growth. Among those growing gradually, 67% see prospects for growth and a further 32% for stability.

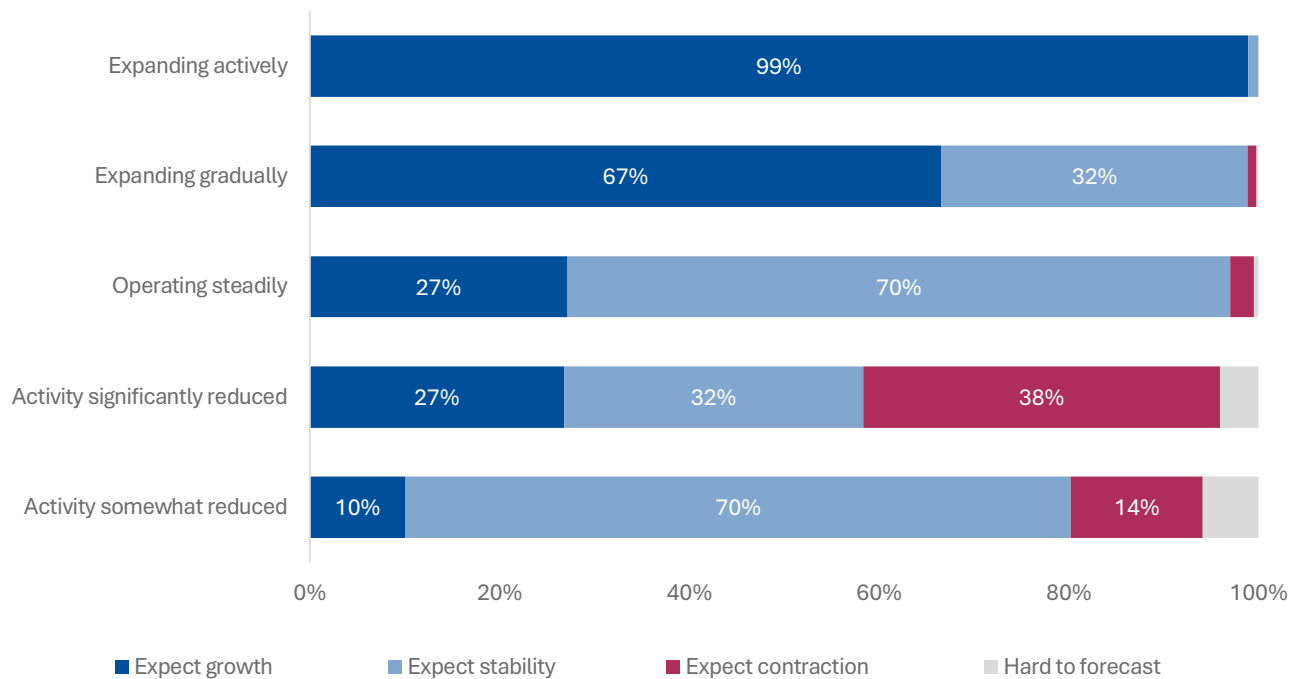
"Until this war ends we are not considering [new opportunities], because we need to hold on to what we have." (Small business, IT and telecommunications, Kyiv)

"No one ventures to forecast what will happen tomorrow. We live on short forecasts and short plans, within a quarter or half a year." (Medium-sized business, construction, West)

Enterprises whose activity is somewhat reduced this year mostly hope for stability (70%). The most pessimistic views are held by those whose volumes are already significantly reduced: 38% expect a further contraction, although many companies in this category hope for growth (27%).

Figure 5. Expectations for the coming year by current state of business, % of companies

Companies that expanded this year expect growth to continue.



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556.. Number of respondents by category: expanding actively – 53, expanding gradually – 171, operating steadily – 180, activity significantly reduced – 60, activity somewhat reduced – 88.

Expectations for the coming year do not depend on company size.

Differences between sectors, meanwhile, are linked to their current situation. About half of enterprises in industry, transport and logistics, and construction expect their activity to expand. In trade the figure is only 37%, while 13% expect a contraction.

3 DEMAND FOR WORKERS

3.1 WORKER SHORTAGES

In the in-depth interviews, business representatives pointed to the shortage of workers as one of the most acute problems.

"There are fewer workers, of course. The situation with tractor drivers is especially difficult. Sometimes even an engineer gets behind the wheel of a tractor. Because of this, we sometimes have to work around the clock." (Micro-business, agriculture, South)

"Right now there is a very [severe] shortage of staff in the restaurant sector. Accounting, management, administrators — there is demand for these too, because everyone is looking for a better job, but not the same demand as for service staff." (Small business, restaurant sector, Kyiv)

"It is difficult with people right now. We do not make enough profit to provide reservation from mobilisation, and that is also a bit hard. We need a lot of people." (Small business, agriculture, West)

"If you need to build something, you simply will not find anyone. Try finding construction workers. On site, the foremen take anyone who can do anything at all." (Medium-sized business, construction, East)

Among the reasons for the shortage, employers name migration — of young people above all — as well as the mobilisation of men or the reluctance of some men to go out to work because of the risk of mobilisation. In sectors with traditionally high male employment, the shortage of staff is felt particularly acutely in jobs requiring considerable physical effort.

"Almost all the young people have left, and we have been left without workers." (Small business, agriculture, South)

"And the middle-aged ones are afraid of being caught by the TCC somewhere, they do not want to show themselves." (Small business, agriculture, West)

Shortages may also arise because of companies' high requirements for candidates, or because of difficult or specific working conditions in some sectors.

"We are not very keen on taking on young specialists and spending time training them." (Medium-sized business, logistics, South)

"Staff turnover is very high. The work is hard, it is very hot next to the ovens and physically demanding. People come, they try, but they cannot take it. There is a specialised college in Poltava that trains bakers. We would gladly take them [on], but young people are not very keen to go and work in production. Physical labour puts them off." (Medium-sized business, manufacturing, Centre)

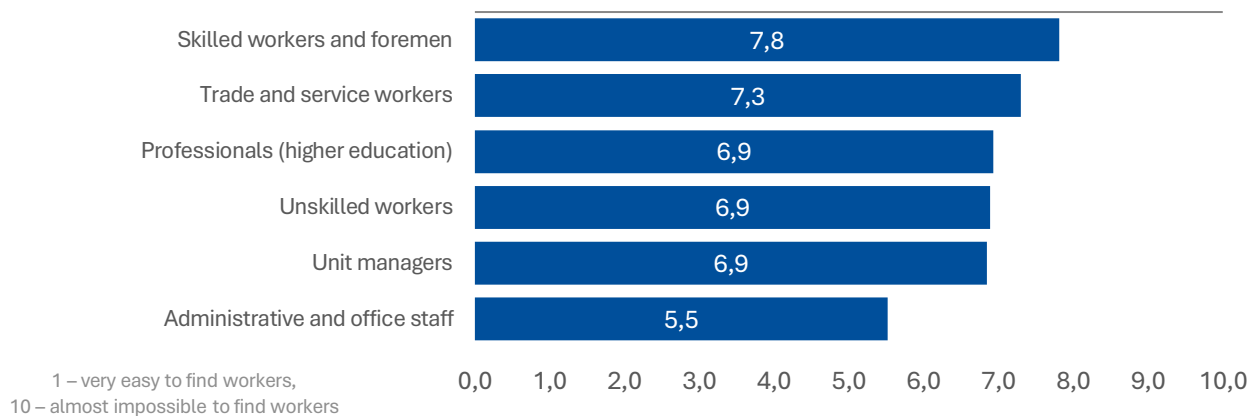
According to the quantitative survey, the most acute shortage in recruitment is felt in the category of skilled workers, equipment operators and foremen – the average score is 7.8 points, where 10 means that it is almost impossible to find workers. Second place in recruitment difficulty is taken by trade and service workers (7.3 points).

For micro-businesses, the problem is extremely acute (7.8 points), while small businesses (6.5 points) and medium-sized businesses (6.0 points) find such workers more easily.

The greatest shortage is of skilled workers. The difficulty of finding professionals with higher education is rated at 6.9 points on average. For micro and small enterprises, the score is about 7.0 points, and for medium-sized ones 6.3 points. The difficulty of finding unit managers is rated at 6.9 points, and finding auxiliary and unskilled workers receives a similar score. The smallest shortage is recorded among office staff – 5.5 points.

Figure 6. Labour shortage by category of worker, average score

The most acute shortage on the labour market is of skilled workers and equipment operators.



Source: Info Sapiens survey commissioned by CES, 2026. Note: For each category, the question was answered by enterprises that hire specialists of that category. Scored on a scale from 1 to 10, where a higher score means a more acute shortage.

Overall, recruitment is somewhat easier for medium-sized enterprises than for smaller ones, and harder for enterprises in Kyiv and in the Southern and Eastern regions than in the West, the Centre and the North.

Table 1. Labour shortage by category of worker, average score by size and industry

Skill category	Total	Micro	Small	Medium	Industry and energy	Trade
Unit managers	6.9	7.2	6.5	6.1	6.6	n/a
Professionals and specialists with higher education	6.9	n/a	7.0	6.3	6.8	7.9
Administrative and office staff, clerical employees	5.5	n/a	5.4	5.3	5.6	6.0
Skilled workers, equipment operators, foremen, team leaders	7.8	7.9	7.9	7.3	8.0	n/a
Trade and service workers	7.3	n/a	6.5	6.0	n/a	7.4
Auxiliary and unskilled workers	6.9	7.2	6.1	6.4	6.5	n/a

Source: Info Sapiens survey commissioned by CES, 2026. Note: For each category, the question was answered by enterprises that hire specialists of that category. Scored on a scale from 1 to 10, where a higher score means a more acute shortage. Only answers with a base of n > 30 are shown in the table.

Table 2. Labour shortage by category of worker, average score by region

Skill category	Total	West	Centre	Kyiv	North	East and South ²
Unit managers	6.9	5.6	6.2	7.5	5.9	8.1
Professionals and specialists with higher education	6.9	7.3	6.4	6.9	7.4	7.2
Administrative and office staff, clerical employees	5.5	5.9	6.1	5.6	5.2	4.9
Skilled workers, equipment operators, foremen, team leaders	7.8	8.0	7.8	7.8	7.5	8.0
Trade and service workers	7.3	n/a	n/a	n/a	n/a	n/a
Auxiliary and unskilled workers	6.9	6.4	6.8	7.7	6.2	7.1

Source: Info Sapiens survey commissioned by CES, 2026. Note: For each category, the question was answered by enterprises that hire specialists of that category. Scored on a scale from 1 to 10, where a higher score means a more acute shortage. Only answers with a base of n > 30 are shown in the table.

Companies take different approaches to addressing the worker shortage. Some have come to rely more on workers who were less present on the labour market but are available now (for example, older people and people with disabilities). This approach, however, does not always provide the staffing capacity needed for business development.

² Where the number of observations does not allow the situation in the East and the South to be analysed reliably on a separate basis, we combine these regions into a single group given their similar security situation.

"Our farm is staffed mainly by pensioners. Age takes its toll. Someone with a disability status also works there. We want to expand, but with this workforce we will not manage it." (Small business, agriculture, South)

Some employers see no scope for offsetting the shortage by attracting new categories of workers.

This applies above all to sectors with a traditionally high share of men. The main reasons are the physical demands of certain types of work and horizontal gender segregation, where the share of women in particular occupations is traditionally low.

"Older people, 60+, no longer have enough strength." (Small business, agriculture, West)

"We do still need physically strong people to do the work." (Medium-sized business, logistics, Kyiv)

"Unfortunately, girls do not want to go into this profession. In the whole oblast there were two women among 50 male agronomists. [Process engineers] are also only men. I have not met a single woman in my career." (Medium-sized business, agriculture and manufacturing, East)

Expanding women's participation in occupations where they are traditionally under-represented requires not only training, but also overcoming gender stereotypes and greater visibility of women in these fields.

"Tilers, electricians, plumbers – these are not women's occupations. In our construction trade it is mentally hard to adjust. To see even one female plumber at work." (Small business, construction, East)

In a situation of labour shortage, retaining existing employees becomes an important strategy. In the in-depth interviews, employers said that to this end they use regular pay rises, better working conditions, and investment in professional development and clear career prospects for employees.

"Over four years, probably by 50% [we raised wages]. That is about 10% a year." (Small business, agriculture, West)

"Because we love our people very much and take great care of them. Our company has a very good attitude towards families and children. We have no fines for being late. We do not force people to come to work if they feel unwell. If someone urgently needs leave, we let them go. It is built on a human, sensible approach. As for career growth, a person can move up." (Medium-sized business, logistics, South)

"We do not abandon our people, we always support them in every way. First, motivation through wages. Second, social provision. Third, help in difficult circumstances. There were people who arrived with nowhere to live. We rented housing for them." (Medium-sized business, agriculture and manufacturing, East)

3.2 SKILLS GAPS IN THE WORKFORCE

Companies try to overcome the shortage of skilled workers through on-the-job training. In other words, the problem of insufficient skills among workers is perceived by employers as less acute than the shortage of people.

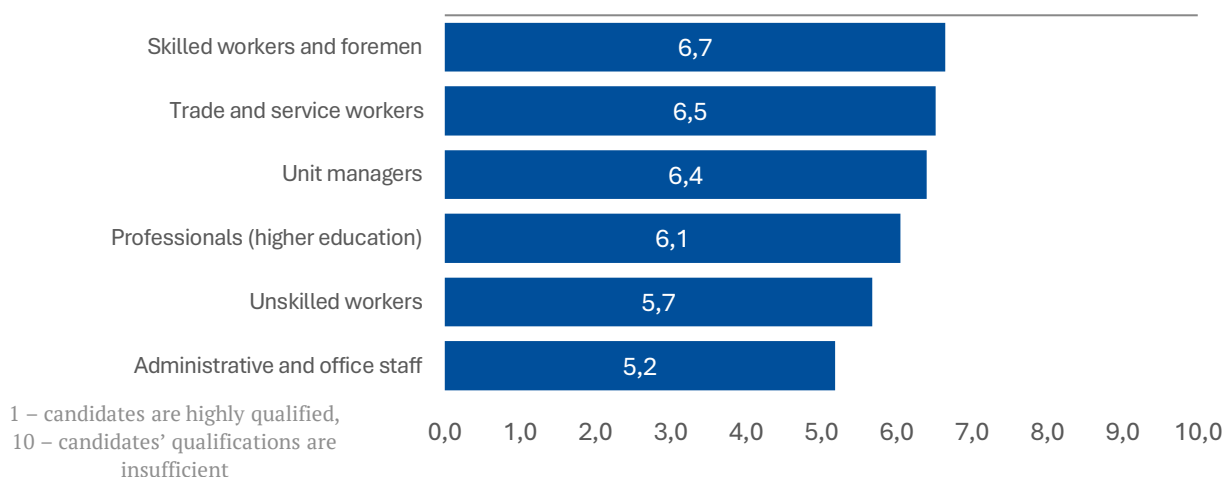
Employers often take the view that skills gaps can be closed directly at the workplace, in particular through a system of mentoring, or by having workers trained at educational institutions.

"We will teach them everything... They are assigned to the chief process engineer, and he introduces that person to a mentor who has more experience. And over the course of a month he trains people, shows them the equipment, shows them what to do." (Medium-sized business, agriculture and manufacturing, East)

"A more experienced worker does the teaching – the master trains the apprentice, the senior trains the newcomer. Whoever has the specialisation and the experience passes on the knowledge." (Medium-sized business, manufacturing, Centre)

Skilled workers and foremen are the category in shortest supply, both in terms of the number of candidates and in terms of the skills they possess. Companies rate the skills gap in this group at 6.7 out of 10 on average, and the figure remains high regardless of enterprise size. The qualifications of trade and service workers are also a problem (the skills gap is rated at 6.5 points). The skills gap among unit managers is rated at 6.4 points, and among professionals with higher education at 6.1 points (small businesses are the least satisfied here, giving 6.5 points).

Figure 7. Skills gap by category of worker, average score



Source: Info Sapiens survey commissioned by CES, 2026. Note: For each category, the question was answered by enterprises that hire specialists of that category. Scored on a scale from 1 to 10, where a higher score means a larger skills gap.

Table 3. Skills gap by category of worker, average score by size and industry

Skill category	Total	Micro	Small	Medium	Industry and energy	Trade
Unit managers	6.4	n/a	6.3	5.6	6.5	n/a
Professionals and specialists with higher education	6.1	6.0	6.5	5.5	6.3	7.2
Administrative and office staff, clerical employees	5.2	n/a	5.3	5.0	5.1	n/a
Skilled workers, equipment operators, foremen, team leaders	6.7	n/a	6.8	6.4	6.1	n/a
Trade and service workers	6.5	n/a	n/a	n/a	n/a	n/a
Auxiliary and unskilled workers	5.7	n/a	4.6	4.7	5.3	n/a

Source: Info Sapiens survey commissioned by CES, 2026. Note: For each category, the question was answered by enterprises that hire specialists of that category. Scored on a scale from 1 to 10, where a higher score means a more acute shortage. Only answers with a base of n > 30 are shown in the table.

Table 4. Skills gap by category of worker, average score by region

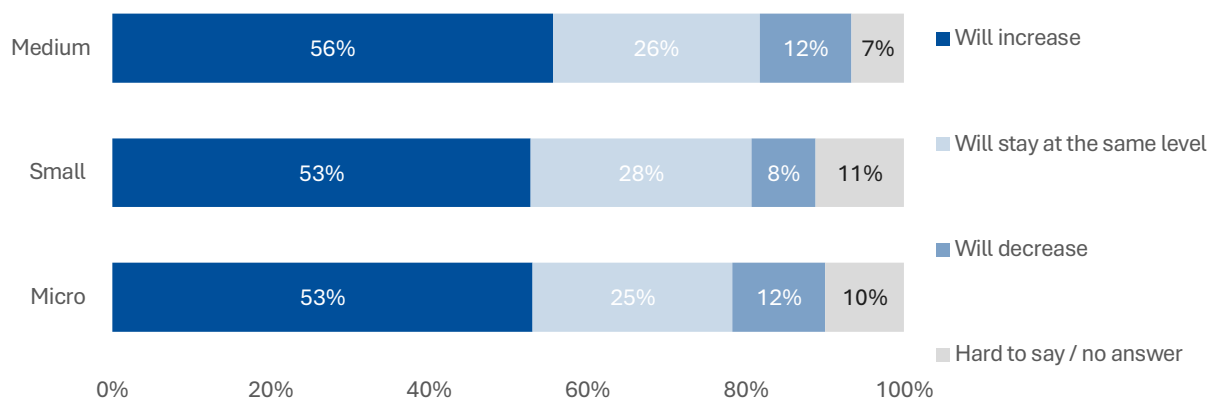
Skill category	Total	West	Centre	Kyiv	North	East and South
Unit managers	6.1	n/a	n/a	n/a	n/a	n/a
Professionals and specialists with higher education	6.1	6.0	5.6	6.3	6.2	6.5
Administrative and office staff, clerical employees	5.2	5.8	5.6	n/a	n/a	n/a
Skilled workers, equipment operators, foremen, team leaders	6.7	6.5	6.5	n/a	n/a	n/a
Trade and service workers	6.5	n/a	n/a	n/a	n/a	n/a
Auxiliary and unskilled workers	5.7	n/a	n/a	n/a	n/a	n/a

Source: Info Sapiens survey commissioned by CES, 2026. Note: For each category, the question was answered by enterprises that hire specialists of that category. Scored on a scale from 1 to 10, where a higher score means a more acute shortage. Only answers with a base of n > 30 are shown in the table.

3.3 EXPECTED NEEDS FOR WORKERS AND SKILLS

More than half of Ukrainian businesses (53%) expect their need for workers to grow. in the coming years. Companies that take this view are currently expanding, either actively or gradually. A further 26% believe demand for staff will remain at its current level, while only 11% forecast a reduction in head-count and another 10% were unable to answer. These expectations are stable across all size segments: a growing need for people is expected by 53% of micro-businesses, 53% of small enterprises and 56% of medium-sized and large companies – that is, demand for staff will rise across the whole market at once, not only in a particular business segment.

Figure 8. Expected changes in demand for workers over the next 2–3 years, by company size, %

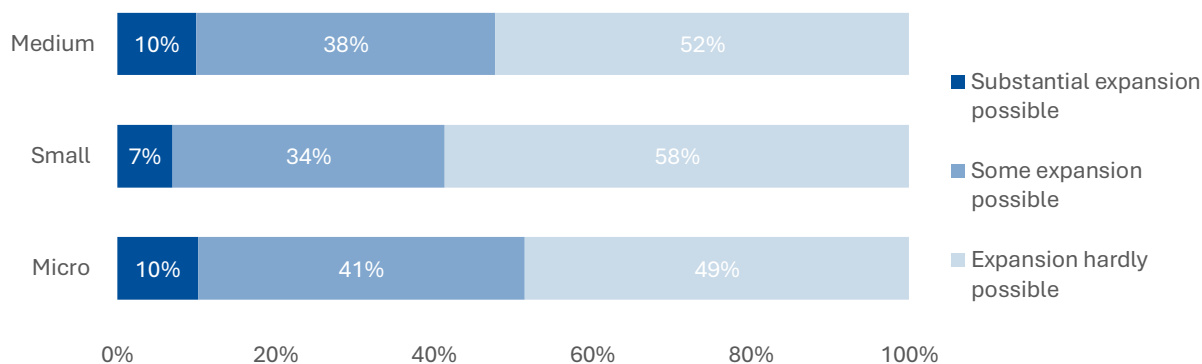


Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by size: Medium – 126, small – 228, micro – 202. Weighted percentages are shown.

An increase in headcount over the coming years is expected by 72% of the enterprises surveyed in IT and telecommunications, 66% in construction and 56% in industry. Agricultural and trade enterprises are more likely to believe that demand for workers will remain at the same level or decline. No substantial regional differences were found in enterprises' answers.

Half of businesses consider expansion without hiring new people hardly possible. The other half is more optimistic: 40% are confident that they could expand their activity to some degree with their current staff, and a further 10% that they could grow substantially. These assessments are almost independent of company size.

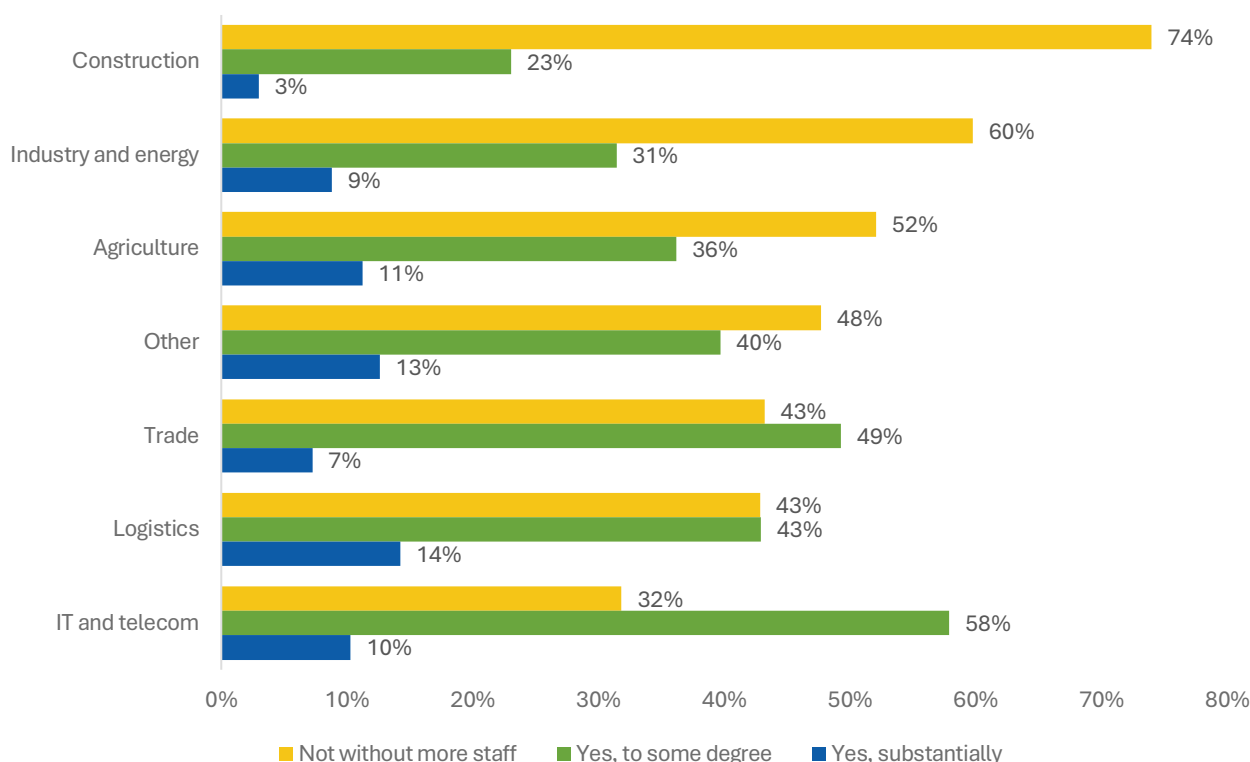
Figure 9. Scope for growth without increasing headcount, by company size, %



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by size: Medium – 126, small – 228, micro – 202. Weighted percentages are shown.

Views on increasing output without increasing headcount also depend on the industry. 74% of the construction enterprises surveyed consider this hardly possible. More than half of enterprises in industry and agriculture take the same view. In IT and telecoms, by contrast, 68% of respondents see either substantial or moderate scope for developing their activity without expanding headcount. Similar optimism is found in transport and logistics (57% see substantial or moderate scope), trade (57%) and other services (53%).

Figure 10. Scope for growth without increasing headcount, by company industry, %

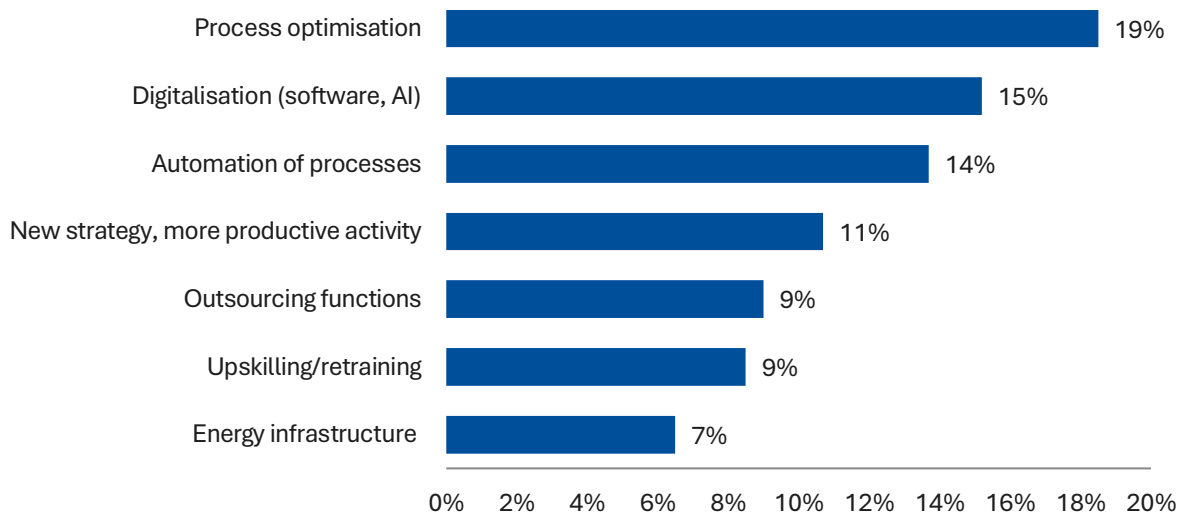


Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by industry: construction – 53, industry and energy – 144, agriculture – 62, trade – 120, logistics – 38, IT – 32, other – 107. Weighted percentages are shown.

Such growth would be helped most by optimising processes within the company itself (the view of 19% of the businesses surveyed), digitalisation (15%) and automation (14%). Medium-sized companies are somewhat more likely than micro and small ones to consider these measures effective for them (19% named optimisation and digitalisation, and 17% automation).

Figure 11. What would help increase the volume of goods or services without additional hiring, % of companies

A third of enterprises see potential in optimisation, digitalisation or automation.



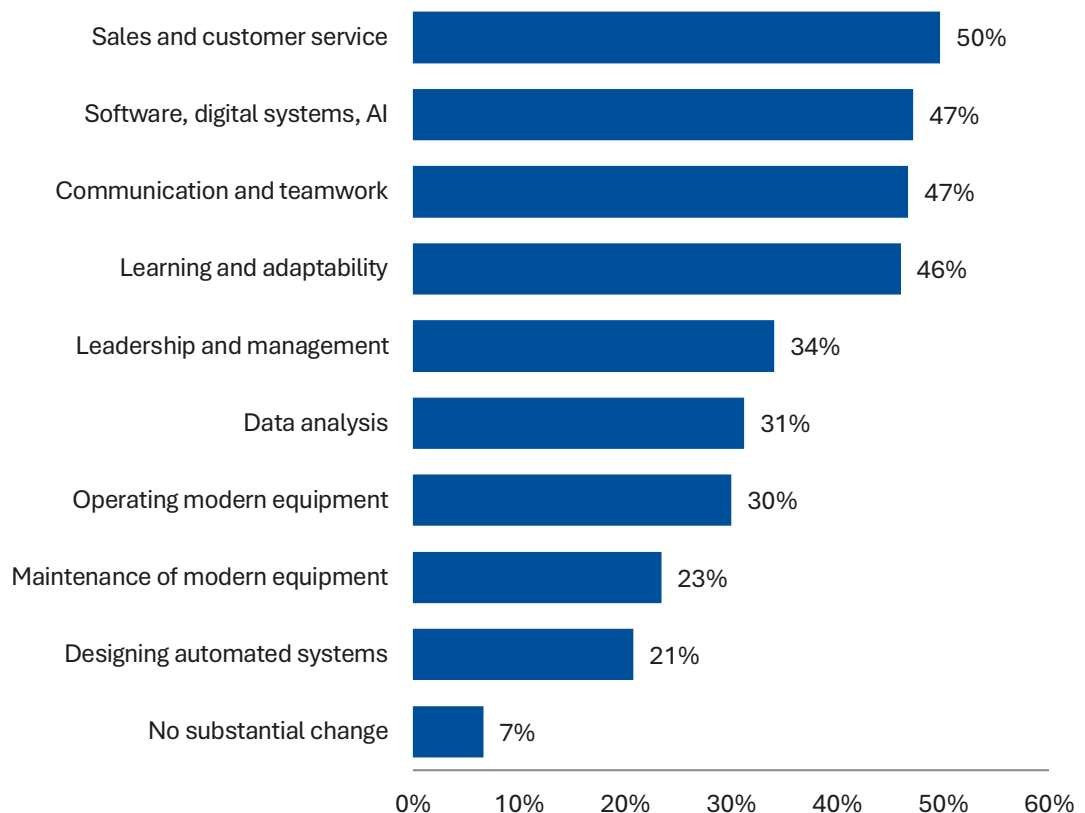
Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556.

The type of activity also matters. About a quarter of the agricultural and industrial enterprises surveyed believe automation would help them increase output without hiring new people. Trade and IT and telecommunications enterprises named digitalisation somewhat more often than others (25% and 17% respectively), while transport and logistics and IT and telecommunications firms named process optimisation and better internal efficiency (24% and 25% respectively). Trade enterprises are more likely than others to believe that changing business strategy and focusing on more productive activity could help (14%).

Digital and soft skills were named more often by companies as those that will become more important over the next 2–3 years. They include sales and customer service skills (50%), working with digital systems and artificial intelligence (47%), communication, problem-solving and teamwork skills (47%), and the capacity to learn and adapt (46%). Technical skills such as operating modern machinery and equipment (30%), maintaining modern machinery (23%) or designing and configuring automated systems (21%) rank lower.

Figure 12. Skills that will become more important over the next 2–3 years, % of companies

The importance of digital skills and soft skills will grow



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Among respondents, 4% answered that it was hard to say or chose "other".

In the in-depth interviews, employers also stressed that they expect employees to have not only professional knowledge and skills, but also well-developed personal and business competencies. These include initiative and interest in the work, communication skills, analytical and logical thinking, the ability to learn quickly, to find solutions independently, and to take responsibility.

"It is more about inner qualities. I need a lawyer who is a bit 'on fire' about corporate law and about certain specific areas as well." (Medium-sized business, construction, West)

"We are in services, and everything is built on communication." (Medium-sized business, logistics, South)

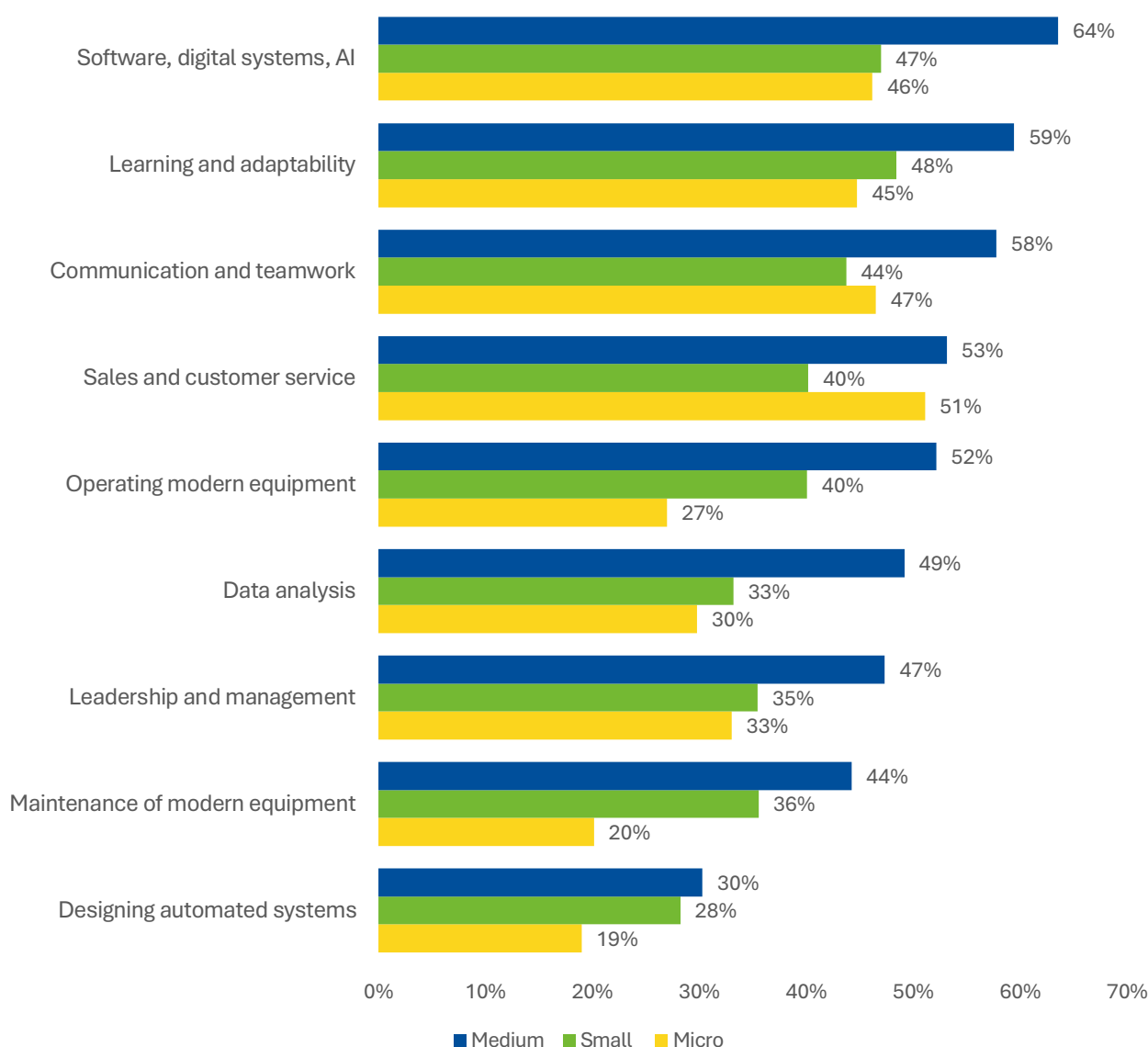
"Yes, sound logical and analytical thinking and the ability to build models and options for yourself. That is, to learn and to grasp what I can pass on. Someone you can simply rely on at a given moment and hand over your duties to, at least in part." (Medium-sized business, construction, West)

As company size increases, so do the skill requirements placed on employees. The largest gap between companies of different sizes is in the technical maintenance of modern machinery and in the skills of collecting, analysing and using data: 20% and 30% of micro-enterprises respectively consider them important, against 44% and 49% of medium-sized companies. A similar gap exists for working with computer programmes and AI (46% of micro-enterprises against 64% of medium-sized ones) and for operating modern equipment (27% against 52%).

The only categories in which micro-businesses are ahead of small businesses are communication, sales and customer service skills. Small and medium-sized companies include a higher share of industrial enterprises, which explains their greater need for advanced technical skills.

Figure 13. Skills that will become more important over the next 2–3 years, by enterprise size, %

The gap between micro-business and medium-sized companies is widest precisely for skills in working with equipment and data.



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by size: Medium — 126, small — 228, micro — 202. Weighted percentages are shown.

In agriculture and industry, operating, maintaining, and repairing modern machinery and equipment are the most important skills for the future. Skills for designing and configuring automated systems are most relevant for IT/telecoms (56%) and industry (44%). Analytical abilities and working with data will be more important in the IT sector (66%). Respondents from this industry also believe that the ability to work with new software, AI, and other digital systems (71%) and leadership skills (68%) will become higher priorities in the future. Skills in working with new software, AI and computer systems will also be needed in construction (40%), trade (46%) and transport and logistics (50%).

Table 5. Skills that will become more important over the next 2–3 years, by enterprise industry, %

Skills	Total	Agriculture	Industry and energy	Construction	Trade	Transport and logistics	IT and telecom	Other
Sales and customer service	50%	38%	37%	21%	70%	35%	61%	52%
Working with software, digital systems, AI	47%	24%	49%	40%	46%	50%	71%	54%
Communication, problem-solving, teamwork skills	47%	35%	42%	32%	53%	55%	60%	49%
Capacity to learn and adapt to new conditions	46%	37%	53%	45%	36%	52%	64%	51%
Leadership skills, managing people and processes	34%	20%	34%	25%	29%	42%	68%	41%
Collecting, analysing and using data	31%	25%	30%	25%	31%	35%	66%	31%
Operating machinery and equipment	30%	45%	60%	16%	22%	37%	51%	16%
Technical maintenance and repair of machinery or equipment	23%	46%	53%	12%	18%	25%	19%	8%
Designing and configuring systems and equipment	21%	24%	44%	25%	14%	16%	56%	9%

Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by industry: construction – 53, industry and energy – 144, agriculture – 62, trade – 120, logistics – 38, IT – 32, other – 107. Weighted percentages are shown.

4 TOOLS FOR INCREASING LABOUR PRODUCTIVITY

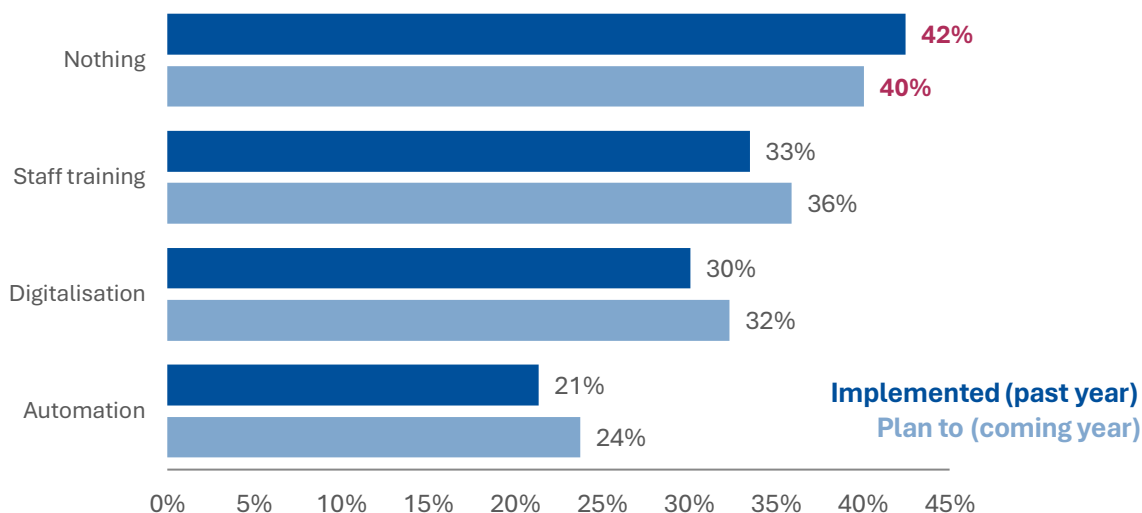
4.1 ADOPTION OF MEASURES THAT INCREASE LABOUR PRODUCTIVITY

As part of the quantitative survey of enterprises, we examined in detail three ways of raising labour productivity in companies – automation, digitalisation and staff training – and Ukrainian companies' experience of implementing them.

Small and medium-sized businesses use these tools quite actively, despite the active phase of the war. Over the past year, 58% of SMEs implemented automation, digitalisation or staff training measures, and 60% of respondents plan similar measures for the coming year.

Among the measures that increase labour productivity, enterprises give preference to staff training and digitalisation. The most popular area is staff training and upskilling (implemented by 33% of enterprises), followed by the introduction of digital systems and software (30%) and the automation or modernisation of production (21%). This may be explained both by the relatively simpler and less costly implementation of training and digitalisation and by the fact that automation is not relevant for every business sector.

Figure 14. Measures to raise labour productivity, % of companies



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Respondents could select several options.

The adoption of productivity measures depends on the company's current situation and on its expectations for the future. Enterprises that are growing actively implemented automation measures more often over the past year (33% against 21% for the sample as a whole), while those operating steadily or contracting did so less often. Companies that are contracting also introduced digitalisation measures less often. Companies' expectations about changes in their activity likewise affect the measures they expect to introduce. Such measures are planned above all by companies that are currently growing gradually, while those contracting their activity are less likely to plan any measures for the coming year.

Experience of measures already implemented also determines further plans for such measures.

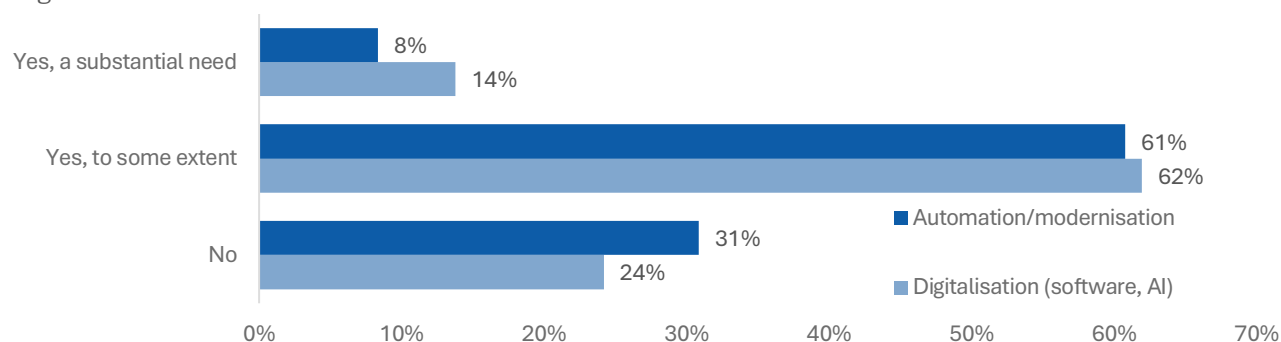
Among enterprises planning automation measures next year, 61% already carried them out this year, and 36% implemented digitalisation. A similar trend applies to digitalisation: 63% of those planning such measures also had them this year, and 29% have experience of automation as well. At the same time, 61% of companies that implemented none of the measures studied this year do not plan to do so next year either.

Automation, digitalisation and staff training are often interrelated processes. 40% of enterprises that implemented automation measures over the past year also implemented digitalisation measures and provided staff training. Digitalisation is more often accompanied by staff training: 50% of companies that implemented digitalisation measures also provided training.

Automation and, especially, digitalisation create a need for new staff skills. After introducing automation, 69% of enterprises report the emergence of a need for new staff skills (8% a substantial need, 61% to some extent); only 31% see no such need at all.

Figure 15. Need to change staff skills after introducing automation and digitalisation, % of companies

Digitalisation creates a substantial need for new staff skills more often than automation



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=273. Number of respondents by measure implemented: automation – 167, digitalisation – 177.

After introducing digitalisation, a need for new skills arises even more often – in 76% of companies (14% substantially, 62% to some extent), and the share of those who see no need is noticeably lower (24% against 31% for automation).

In the in-depth interviews, company representatives also noted that using new equipment, new software, or artificial intelligence often requires staff training.

"We took courses on artificial intelligence." (Small business, construction, East)

"We buy tractors costing 10 million, so we cannot put someone behind the wheel who will ruin it all. Repairs are also very expensive. A qualified specialist has to work here." (Small/micro business, agriculture, South)

"Workers have to be qualified. In the past a packer packed by hand – that was unskilled work. Now he works with a machine, and that is already more skilled work. You need to know how to switch it on, how to load the clipping tape, what to adjust and where." (Medium-sized business, manufacturing, Centre)

Equipment suppliers and manufacturers can at the same time serve as a source of vocational training for a company's employees. Training in how to work with new machinery is sometimes part of its supply and allows companies to upgrade technology and develop the necessary staff skills at the same time.

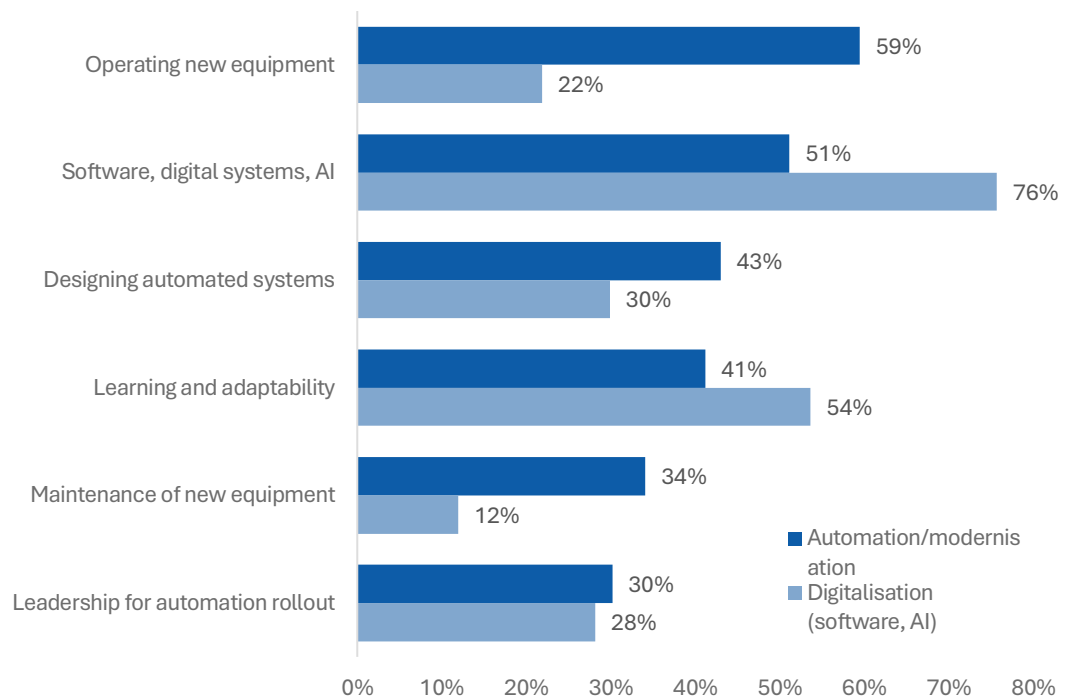
"The machinery came with training. That is, someone comes who helps with the training, explains everything, runs a session." (Medium-sized business, agriculture and manufacturing, East)

Introducing automation and digitalisation measures requires the acquisition of different skills. For companies that implemented automation measures, the most important are working with new equipment or machinery, as well as working with computer programmes, digital systems and AI.

After the introduction of digitalisation measures, the most relevant are new computer skills (needed by up to 76% of companies) and the capacity to learn and adapt — up to 54%.

Figure 16. Skills that became relevant after the introduction of automation and digitalisation, % of companies

Digitalisation and automation create a need for different skills.



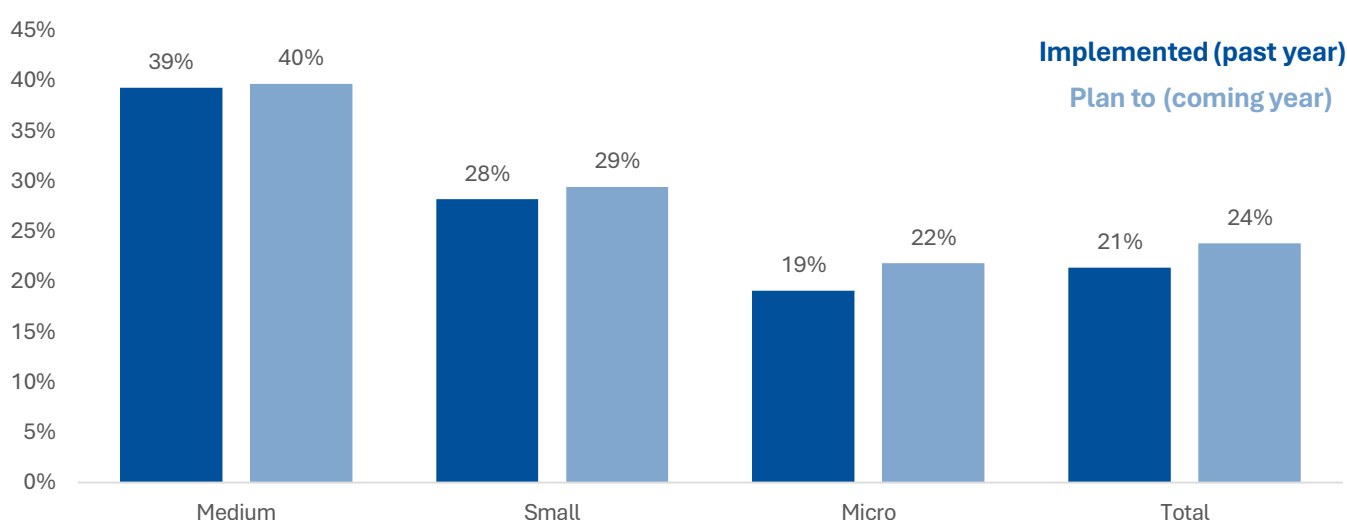
Source: Info Sapiens survey commissioned by CES, 2026. Note: n=273. Number of respondents by measure implemented: automation — 167, digitalisation — 177.

5 ADOPTION OF AUTOMATION AND DIGITALISATION MEASURES

5.1 ADOPTION OF AUTOMATION MEASURES

The need for automation of production grows with company size: such measures were implemented over the past year by 19% of micro-enterprises, 28% of small businesses and 39% of medium-sized companies. The same proportion holds in plans for the coming year (22%, 30% and 40% respectively).

Figure 17. Automation/modernisation of production – implementation and plans by enterprise size, % of companies



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by size: Medium – 126, small – 228, micro – 202. Weighted percentages are shown.

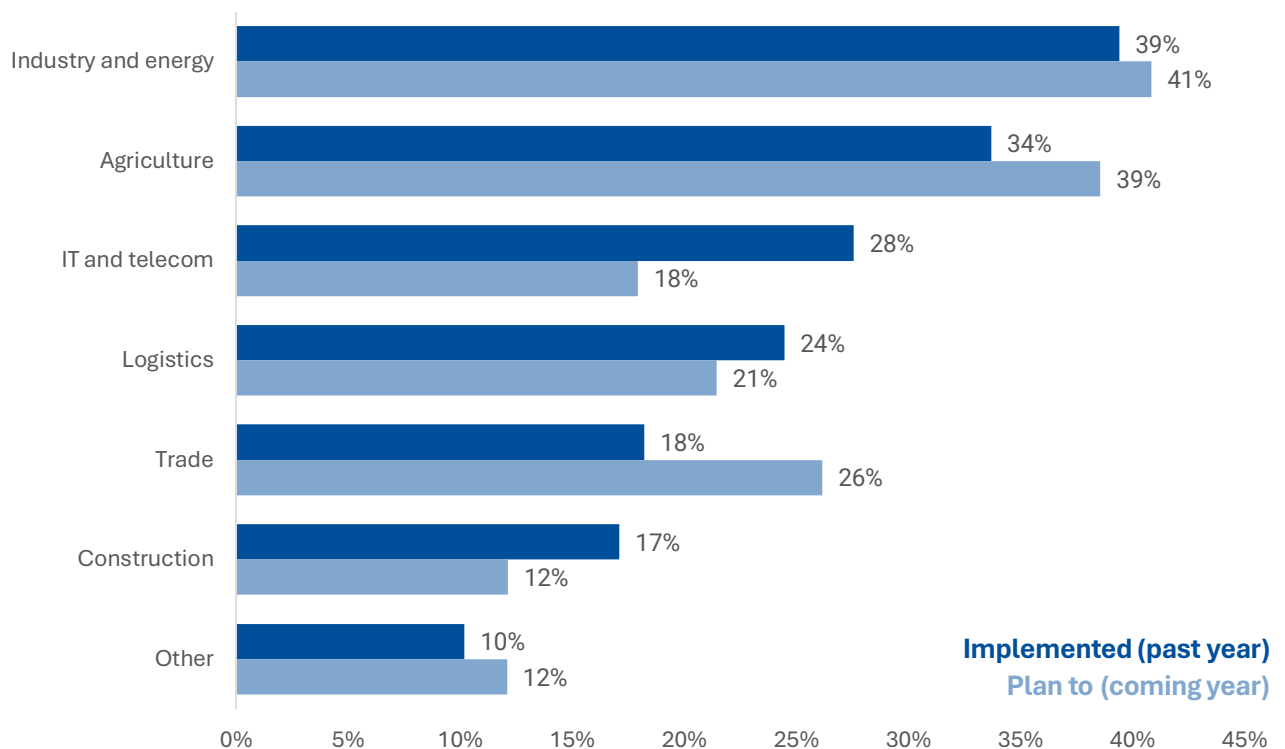
The greatest need for automation is found in industrial and agricultural enterprises. Companies in the construction industry mention such a need least often.

In the in-depth interviews, respondents working in construction explain this by the large share of non-standardised tasks that are difficult to automate, adding that the tools capable of raising productivity are, in their view, already in use.

"Raising productivity in construction is first and foremost about using tools. But that was invented long ago and is already in use. It rarely happens that something new is delivered and everyone says: 'Oh, great! Yes, this will let one person do the work of three.' That happens extremely rarely." (Medium-sized business, construction, East)

"So far I do not see how to introduce it in construction. Every site of ours is different from the others. In one place a roof has to be done, in another a floor, in another the wallpaper has to be redone. If I knew [about approaches to automation], I would be very interested." (Small business, construction, East)

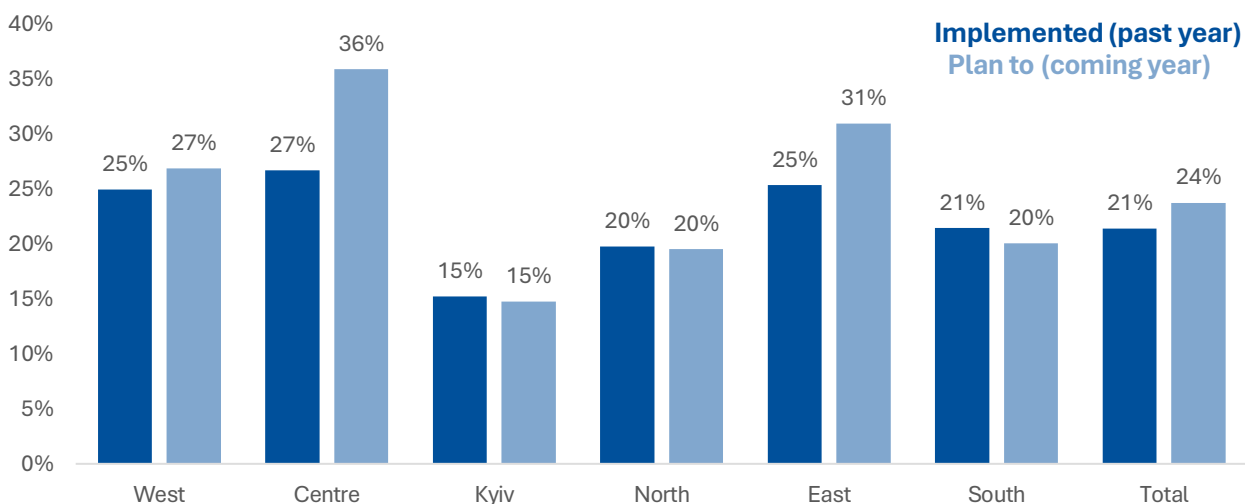
Figure 18. Automation/modernisation of production – implementation and plans by enterprise industry, % of companies



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by industry: construction – 53, industry and energy – 144, agriculture – 62, trade – 120, logistics – 38, IT – 32, other – 107. Weighted percentages are shown.

The Centre and the West show the highest level of adoption of automation measures among all regions (27% and 25% implemented such measures over the past year). Kyiv shows the lowest (15%). This may be explained by the structure of business in these regions. The Centre and the West have the highest share of agricultural enterprises, which have a high need for such measures, whereas Kyiv has a higher share of companies providing services or working in construction.

Figure 19. Automation/modernisation of production – implementation and plans by region, % of companies



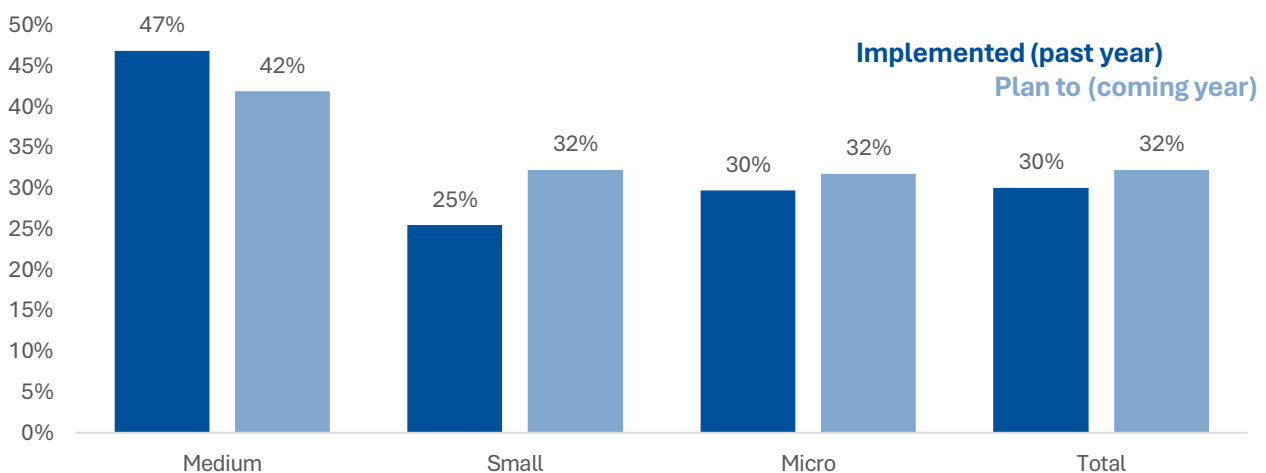
Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by measure implemented: automation – 167, digitalisation – 177. Number of respondents by region: West – 118, Centre – 125, Kyiv – 116, North – 96, East – 40 and South – 61. Weighted percentages are shown.

5.2 ADOPTION OF DIGITALISATION MEASURES

Medium-sized business also leads in the adoption of digitalisation measures. At the same time, the share of companies planning digitalisation measures (42%) is somewhat lower than the share of those that have already implemented them (47%), which may indicate that a certain level of saturation has been reached.

Small and micro-businesses show the opposite dynamic: starting from a lower current level, they plan to use these measures more actively over the coming year.

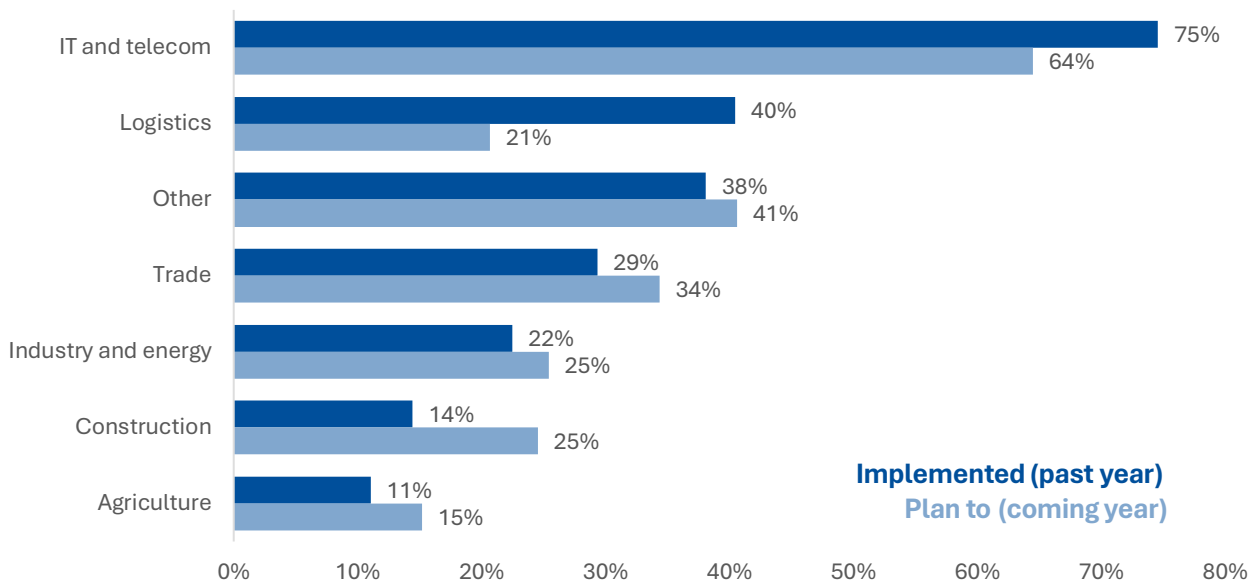
Figure 20. Digitalisation (digital systems, software, AI) – measures implemented and planned, by enterprise size, % of companies



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by size: Medium – 126, small – 228, micro – 202. Weighted percentages are shown.

IT and telecommunications lead in the adoption of digital solutions (75% implemented them over the past year, 65% plan to), followed by transport and logistics (41% implemented them). Agriculture and construction are the least interested in digitalisation solutions.

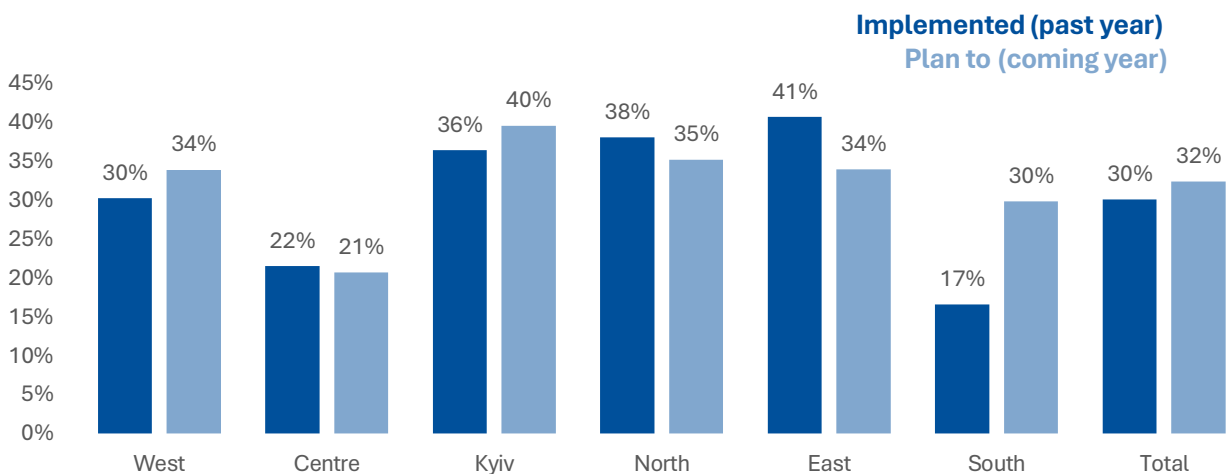
Figure 21. Digitalisation (digital systems, software, AI) – measures implemented and planned, by enterprise industry, % of companies



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by industry: construction – 53, industry and energy – 144, agriculture – 62, trade – 120, logistics – 38, IT – 32, other – 107. Weighted percentages are shown.

Kyiv and the North, which are among the regions with the lowest level of automation, by contrast, lead in the prevalence of digitalisation, while the Centre and the South implement such measures less actively.

Figure 22. Digitalisation (digital systems, software, AI) – measures implemented and planned, by region, % of companies

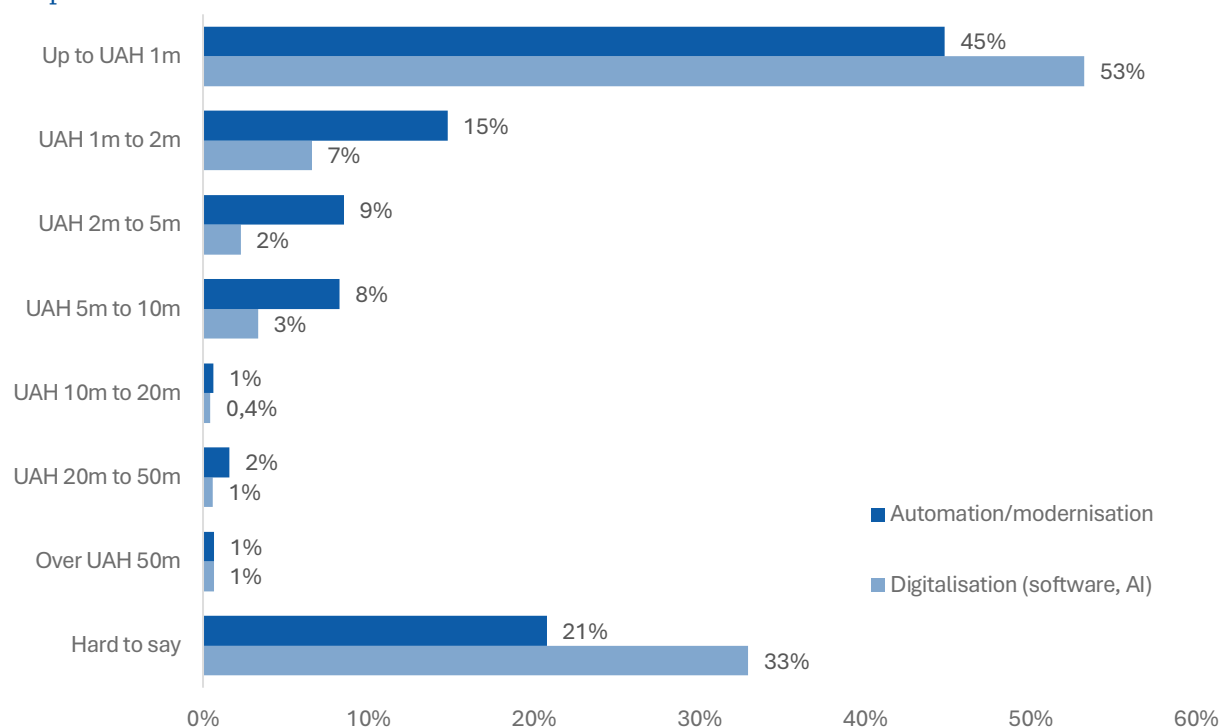


Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by region: West – 118, Centre – 125, Kyiv – 116, North – 96, East – 40 and South – 61. Weighted percentages are shown.

5.3 SPENDING ON AUTOMATION AND DIGITALISATION MEASURES

The physical modernisation of equipment is systematically a more expensive investment than the introduction of software or digital management systems. Most digitalisation projects cost up to UAH 1 million (53%), whereas for automation this share is 45%. Projects worth more than UAH 5 million are twice as likely to be automation as digitalisation.

Figure 23. Cost of automation and digitalisation projects, % of companies that implemented the respective measure



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=273. Number of respondents by measure implemented: automation – 167, digitalisation – 177.

On average, **micro-enterprises that implemented automation or digitalisation over the past year invested USD 8,107, small ones USD 23,087, and medium-sized ones USD 70,443.**

According to our calculations, which take into account the distribution of Ukrainian enterprises by size (based on SSSU data for 2025), **SME spending on automation and digitalisation in the second half of 2025 and the first half of 2026 can be estimated at almost UAH 80 billion (USD 1.9 billion).** This amounts to about **22% of capital investment in machinery, equipment and inventory and in the purchase of software in 2025**, which, according to SSSU data, totalled UAH 353 billion. This estimate is somewhat lower than the volume of capital investment by small and medium-sized enterprises alone, which account for about 60% of capital investment in these asset categories (according to the latest available SSSU data, for 2023).

On the one hand, **the survey sample does not include large enterprises, which have traditionally been the largest investors.** On the other hand, not all spending on machinery, equipment and inventory can be attributed to automation and digitalisation. During the war, a significant share of investment goes towards restoring destroyed production facilities and infrastructure, and it is difficult to separate this spending from total capital investment. **The potential for increasing investment in automation and digitalisation therefore remains considerable, especially if businesses need to devote less**

funding to repairing losses caused by the war. Another significant factor that will support higher investment in automation and digitalisation is wider access to finance.

5.4 THE IMPACT OF AUTOMATION AND DIGITALISATION ON COMPANIES

In the in-depth interviews, representatives of companies that had implemented automation or digitalisation measures assessed that experience very positively.

"We see significant changes that have improved the process." (Medium-sized business, agriculture and manufacturing, East)

Automation and digitalisation rarely led to staff cuts in companies that implemented such measures over the past year. In most cases, such measures increase the volume of goods or services produced (34% for digitalisation and 41% for automation) or increase the company's profitability (28% and 25%).

"It increases output." (Medium-sized business, agriculture and manufacturing, East)

"The new equipment works faster and produces more. Previously, a great deal was packed by hand, and now packing machines do the work, roughly 60% more efficiently." (Medium-sized business, manufacturing, Centre)

In addition, companies see a return on investment in new equipment through savings on costs and other production inputs. At the same time, modernisation helped some companies reduce the shortage of people in certain positions — 12% of businesses that implemented digitalisation and 10% that implemented automation. By contrast, a direct reduction in the number of people in certain positions occurs in only 6% of companies after digitalisation and 11% after automation.

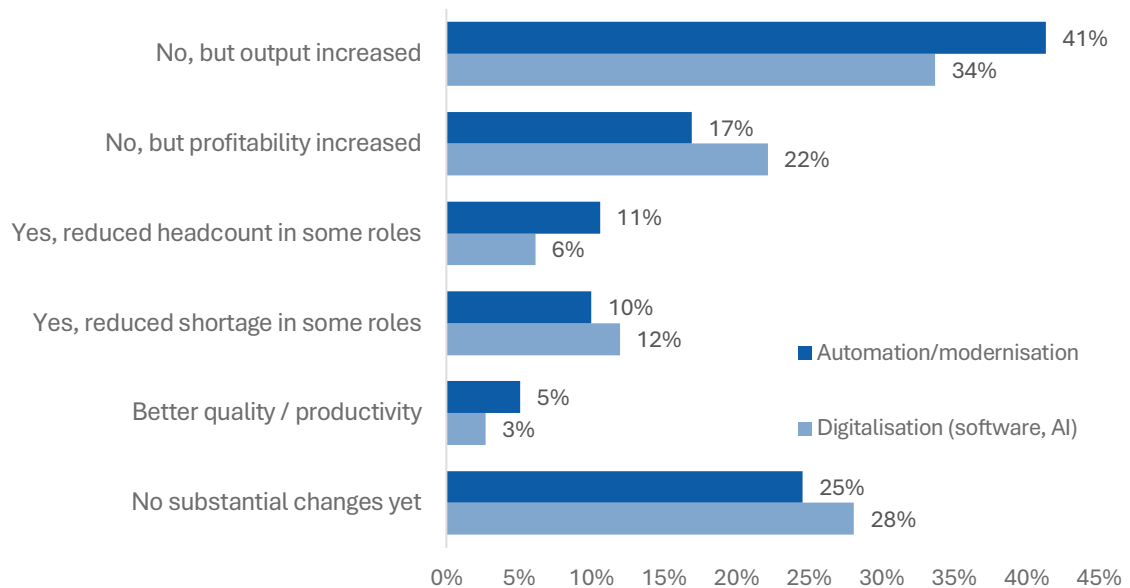
"We bought a new seed drill. Thanks to it we save on diesel fuel and, very substantially, on wages. This year the harvest also increased. We bought the drill for 7 million and the tractor for 9 million. I think these investments will pay for themselves in 3–4 years." (Small/micro business, agriculture, South)

"We have an automated system that identifies seed. It used to take 10 people. A computer programme, artificial intelligence, processes everything, does it all itself." (Medium-sized business, agriculture and manufacturing, East)

"If we buy the tractors with all the additional equipment, I will not need four tractor drivers, I will only need one." (Small business, agriculture, West)

Figure 24. Impact of automation and digitalisation on the need for staff, % of companies that implemented the respective measure

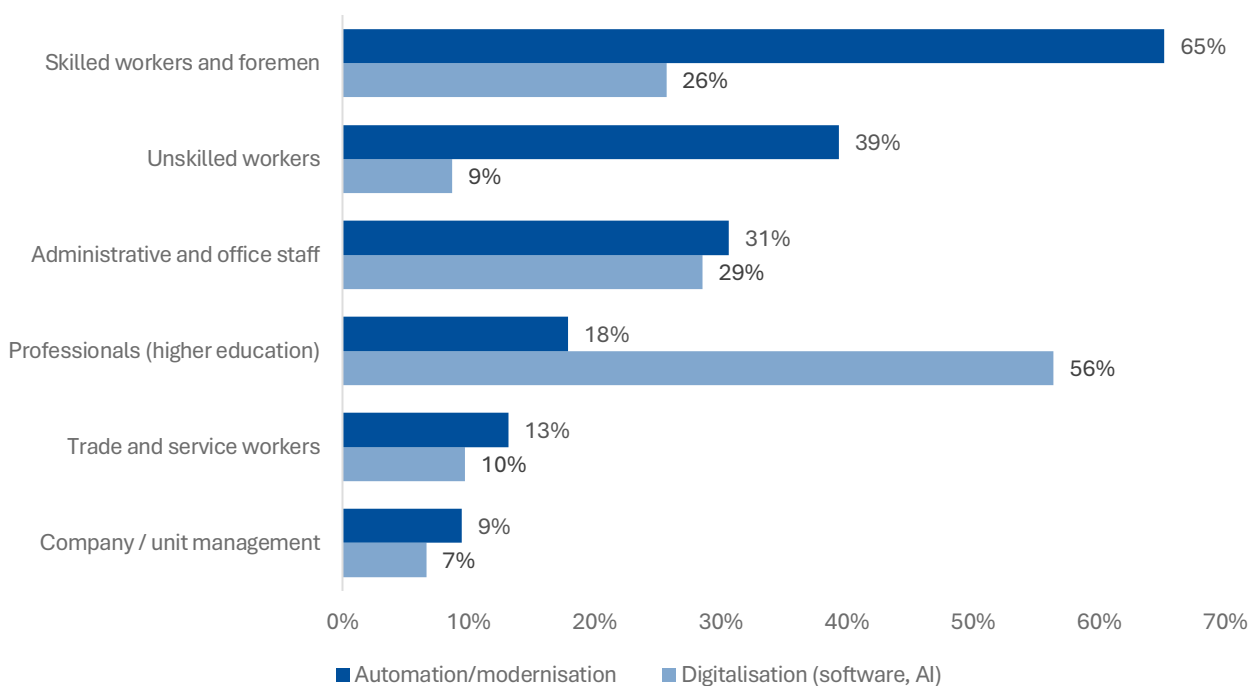
Automation and digitalisation rarely lead to direct staff cuts



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=273. Among respondents, 3% chose "hard to say" and a further 3% "other". Number of respondents by measure implemented: automation – 167, digitalisation – 177.

Automation somewhat reduces the shortage of equipment operators, foremen, and other skilled workers and auxiliary staff. Digitalisation, in turn, more often reduces the need for professionals and specialists with higher education and administrative staff.

Figure 25. Impact of automation and digitalisation on the reduced need for different categories of staff, % of companies that implemented the respective measure



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=55. Number of respondents by measure implemented: automation – 39, digitalisation – 36.

Automation and working with modern machinery can also motivate employees and help retain them in the company.

"More machinery, newer machinery, easier work — that motivates workers." (Small business, agriculture, West)

"The newer the equipment, the easier it is to work on." (Medium-sized business, manufacturing, Centre)

As examples of digitalisation, respondents most often cited the digitalisation of document management, accounting, reporting and data analysis, which previously required considerably more time or additional staff. Digitalisation can therefore raise productivity not only by reducing the need for staff, but also by freeing up employees' time for other tasks.

"There is a great deal of paperwork. There is Vchasno, there are other programmes. It is a big plus. It saves your time and your employees' time." (Small business, restaurant sector, Kyiv)

"[At another] production site I introduced a programme for automatic reporting of output and its sales to shops; all of this is automated now. I open the computer, and I see where the goods have gone. It replaced 4 people for me." (Small business, construction, East)

"For strategic planning before the start of the year, we simply sat down, opened the dashboards, looked at conversions, sales, and payback, and in literally a couple of hours built the numerical plans for the coming year. Previously, we spent several days preparing this." (Medium-sized business, logistics, South)

Besides saving employees' working time, digitalisation often gives the company better operational control and the ability to take decisions based on data and analytics, and reduces the number of errors.

"Control, analysis — you understand what is needed. All the information is there." (Small business, construction, East)

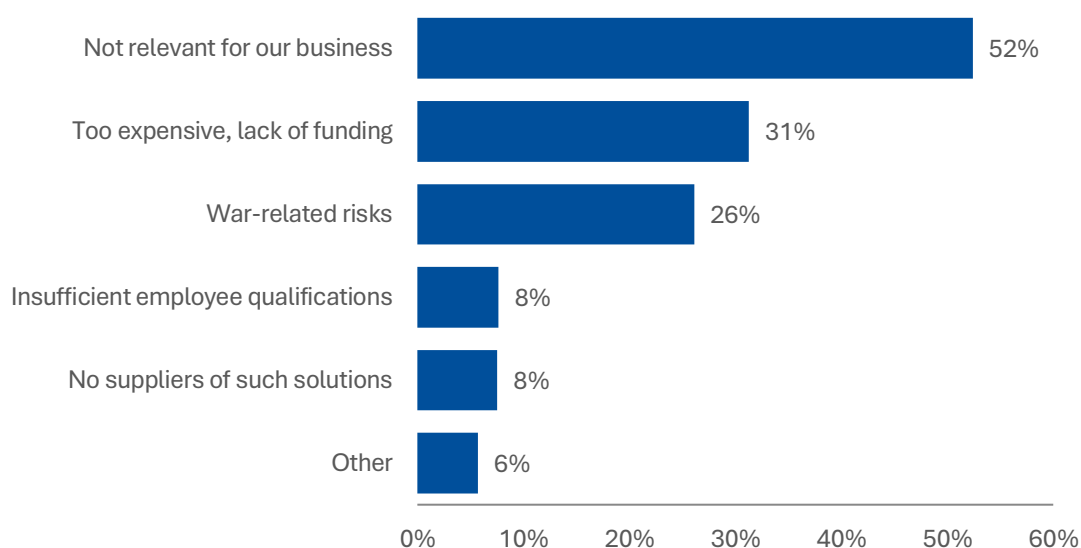
"We are introducing a CRM system. It simply brings order to the work, provides analytics, and that is the most important thing for managers. We know everything that is happening in the company: which services, which clients, what volumes. We know it, and we take decisions on that basis." (Medium-sized business, logistics, South)

"Everything is more visible. A person sees on the computer how much output there is, where it is, what has already been done. Trackers have appeared for the logistics staff who follow the routes. You can see where the drivers are, assess the efficiency of routes, and combine them. The manager can log in at any moment and take a look. Control is better." (Medium-sized business, manufacturing, Centre)

5.5 BARRIERS AND DIFFICULTIES IN ADOPTING AUTOMATION AND DIGITALISATION

The main reason for not adopting measures of automation and digitalisation — is a sense that they are not relevant. 52% of companies that did not implement these measures consider them irrelevant to their business.

Figure 26. Reasons for not adopting automation / digitalisation, % of companies that did not implement such measures



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=283. Among respondents, 1% answered "hard to say".

Some enterprises implemented automation or digital transformation earlier and currently see no need to introduce new solutions. Their priority is to maintain and make effective use of the systems already in place.

"For about ten years we were changing our accounting system. The main programmes were introduced before the war, and their operation was more or less established. Now the main thing is to keep everything working." (Medium-sized business, construction, East)

"Everything was already set up for us, everything was done. We had it all before the war." (Small business, IT and telecommunications, Kyiv)

The financial barrier (31%) and wartime risks (26%) are secondary but substantial barriers to adopting automation and digitalisation measures.

"To buy machinery that stacks the sacks itself and the pallet drives away — precise, excellent, fine, but expensive; we cannot afford it. There are better imported seed drills, but there is no money to buy them." (Small business, agriculture, West)

"There is one main difficulty — a lack of money. Everything is very expensive: both the equipment and the software." (Medium-sized business, manufacturing, Centre)

"A lot of our machinery is left in the occupied territories, and we cannot take it out. It is worth millions there. We are afraid to buy anything new now, because we do not know what will happen." (Medium-sized business, agriculture and manufacturing, East)

Companies that have already implemented automation or digitalisation measures also noted the high cost of these solutions and the long payback horizon.

"It is very expensive. It does pay off. With the equipment we have already had a year. It has already paid for itself. But the equipment we have in the fields has not yet paid for itself." (Medium-sized business, agriculture and manufacturing, East)

"The new equipment works faster and produces more. These are long-term investments. At least five years." (Medium-sized business, manufacturing, Centre)

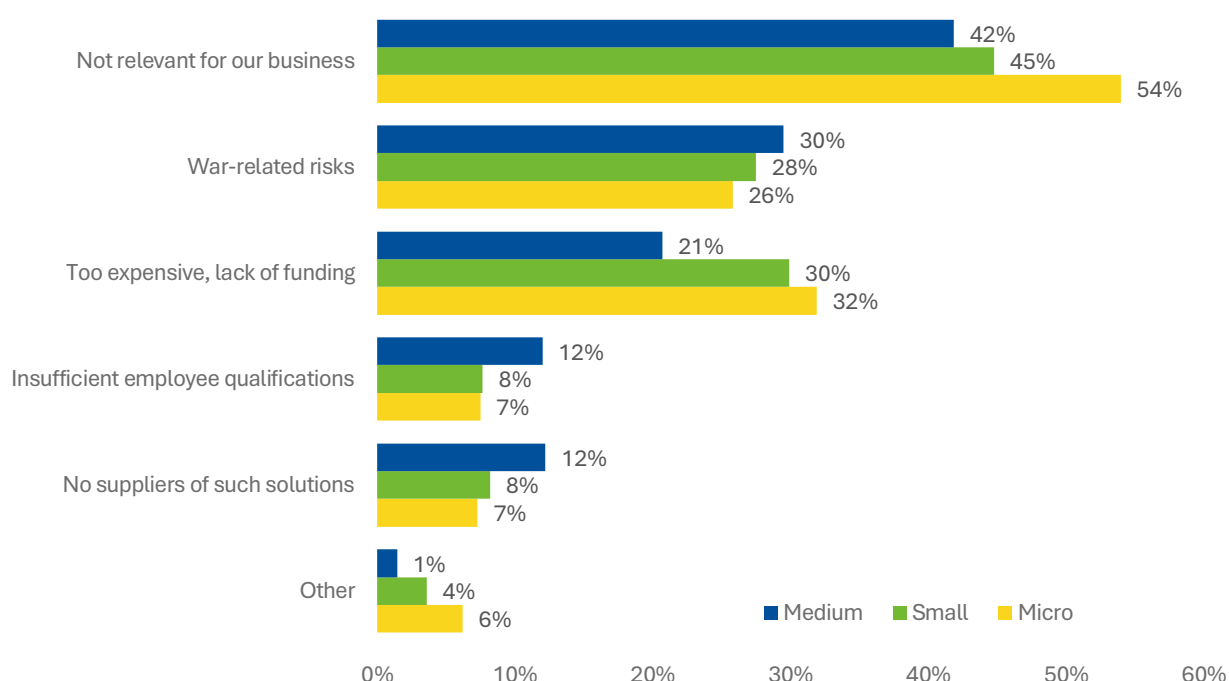
Only 8% of the companies surveyed named insufficient staff qualifications or the absence of solution providers among the barriers to implementing automation or digitalisation solutions.

The absence of need remains the dominant reason for not adopting automation and digitalisation among enterprises of all sizes, but its weight declines as company size increases — from 54% among micro-businesses to 45% among small and 42% among medium-sized ones.

For medium-sized enterprises, the qualifications of their own employees required for the changes and the availability of solution providers become more important barriers. Micro and small enterprises, in turn, named the cost of such improvements among the reasons more often.

Figure 27. Reasons for not adopting automation / digitalisation by size, %

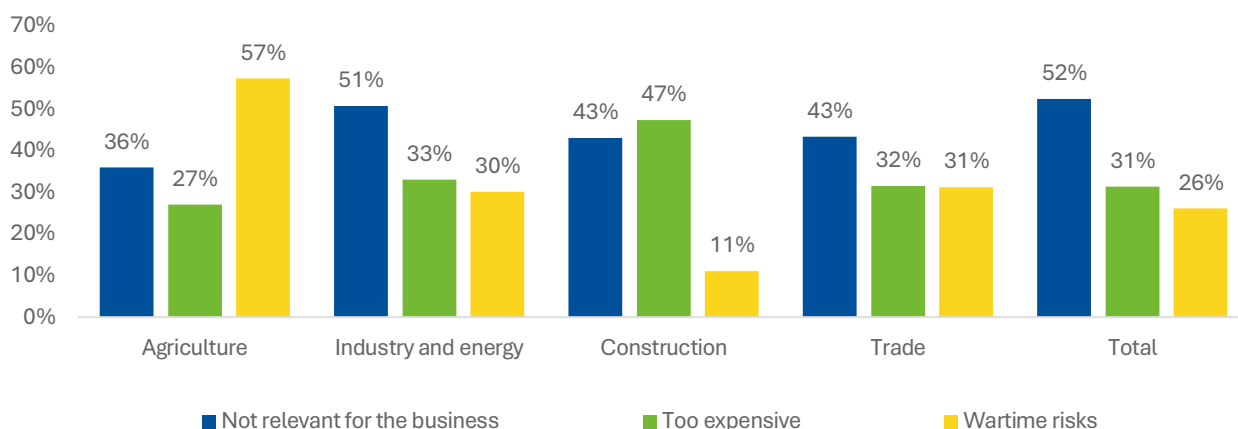
As a company grows, the cost barrier weakens while wartime risks and the lack of market supply grow in importance.



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=283. All shown groups have more than 30 observations.

For agricultural enterprises, wartime risks are more often a barrier to adopting automation and digitalisation measures (57%). Industrial enterprises most often feel no need for such measures (55%). The financial barrier, by contrast, is most acute in the construction sector (47%).

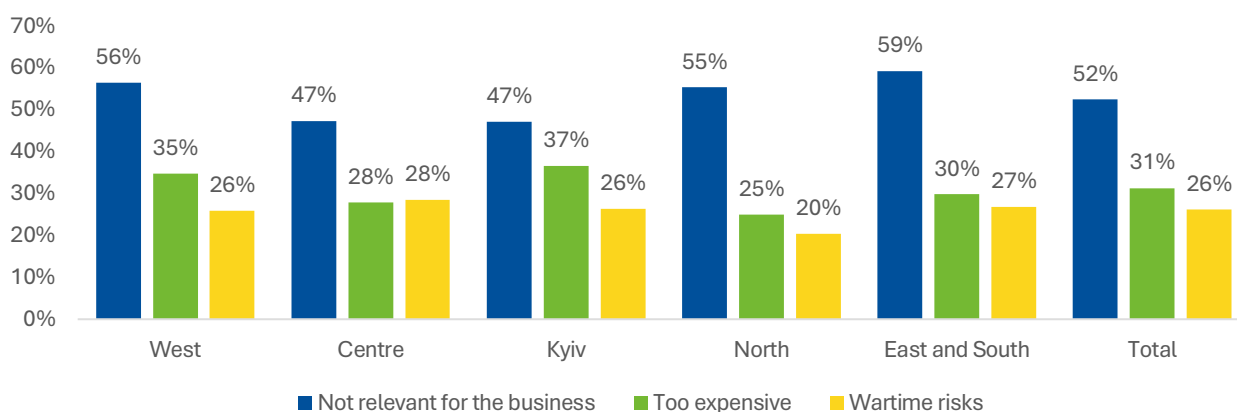
Figure 28. Top 3 reasons for not adopting automation / digitalisation by industry, %



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=283. All shown groups have more than 30 observations.

Overall, the reasons for not adopting new technologies do not depend on the company's location.

Figure 29. Top 3 reasons for not adopting automation / digitalisation by region, %



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=283.

Employee resistance can be a separate internal barrier to introducing technological change. In the in-depth interviews, respondents mentioned such difficulties primarily in the context of digitalisation – moving to new software and changing established operating processes. New solutions require employees to master new skills and change familiar ways of working, which is not always received positively.

"Older employees are always difficult to retrain. Of course there is always staff resistance: 'Why do we need this new programme, we manage as it is.' It is the human factor." (Medium-sized business, construction, East)

"There is resistance, of course, because it is not something familiar." (Medium-sized business, logistics, South)

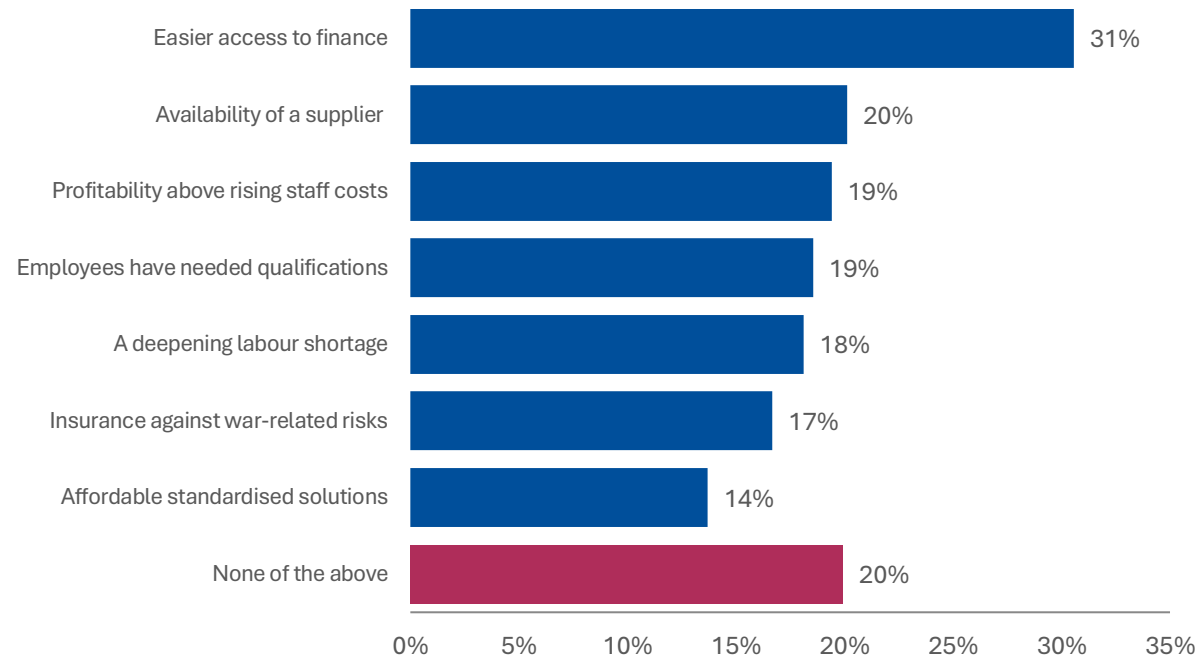
Although automation was mostly described positively in the in-depth interviews, as a way of making working conditions easier and handing physically demanding operations over to machines, the need to learn to work with new equipment can also become a barrier to its adoption.

"There are difficulties, of course. Because there are people who do not want to learn and take on responsibility. We mostly move such employees to easier work." (Medium-sized business, construction, East)

The availability of finance is the main incentive for small and medium-sized businesses to adopt automation and digitalisation measures more actively (named by 31% of enterprises). Next come the availability of a supplier of ready-made solutions (20%) and higher profitability compared with staff costs (19%).

20% of companies see none of the incentives as capable of changing their position — this group largely overlaps with enterprises that have not implemented automation or digitalisation.

Figure 30. What could encourage the adoption of automation or digitalisation, % of companies



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Among respondents, 3% answered "other" and a further 4% that it was hard to answer.

Companies' views on the availability of finance differ: some consider it difficult to obtain funding at present, while others see no difficulties. The reason may lie in different conditions for enterprises in different industries and regions, or in other requirements set by funding programmes.

"Large companies can take out a loan and we cannot; the conditions are unequal. They are trusted, they have large turnover. It is harder for us because our turnover is smaller." (Small business, agriculture, West)

"We bought [the seed drill and the tractor] on lease. Right now many vendor companies come forward with such offers themselves. For some reason the bank does not lend to us for livestock farming – there is no such programme. I have spoken to many banks – there is none. But building barns is financed." (Small business, agriculture, South)

"Grants are not given to the construction industry." (Small business, construction, East)

"Loans [for buying equipment] account for roughly 70–80%. But they are difficult to obtain." ((Medium-sized business, manufacturing, Centre)

Barriers can arise not only from the availability of loans, but also from their terms:

"There were grants for livestock farming – 250 thousand. What can we buy for 250 thousand? We need affordable loans, and not for one or two years. For example, 50 million with a ten-year term. Five at the very least." (Small/micro business, agriculture, South)

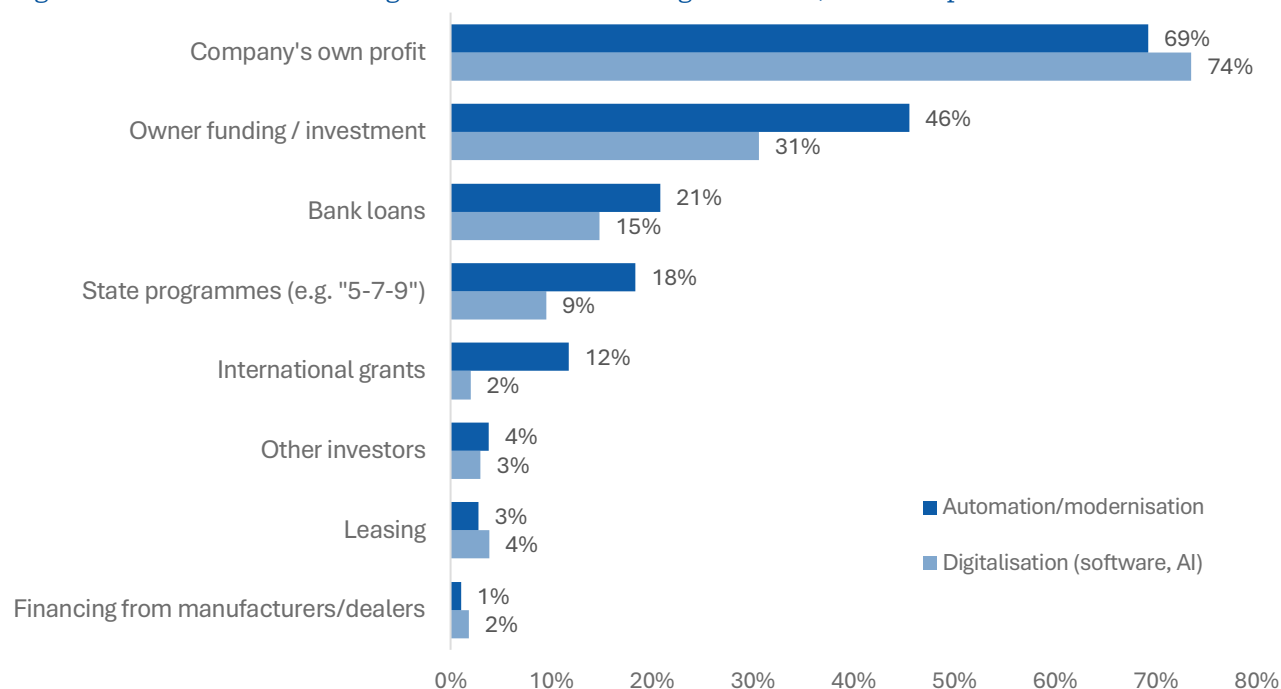
Previous experience of implementing automation or digitalisation measures shapes how companies perceive incentives. Those who have already **implemented automation measures**, like those planning to do so, name easier access to finance among the important incentives more often than other companies.

For companies that have already implemented or plan to implement **digitalisation measures**, access to finance is almost as important as the expected return on such investment compared with hiring new employees, as well as the availability of solution providers and of knowledge and skills among staff.

Companies with no experience of implementing automation or digitalisation solutions name access to finance among the main incentives. Unlike companies that have already implemented such measures, they are less likely to point to the availability of solutions and their providers, or to relevant staff skills, as incentives. This may indicate a lower level of awareness of the practical preconditions for automation or digitalisation.

Companies that implemented automation or digitalisation solutions over the past year most often financed them from their own resources. These are, first and foremost, the company's own profit (69% for automation, 74% for digitalisation) or additional funding from owners (46% and 31% respectively), which indicates a low level of external capital involvement in the transformation of Ukrainian business. Automation, however, is somewhat more often financed through bank loans (21% against 15% for digitalisation), state programmes (18% against 9%) and especially through grants from international organisations (12% against only 2%).

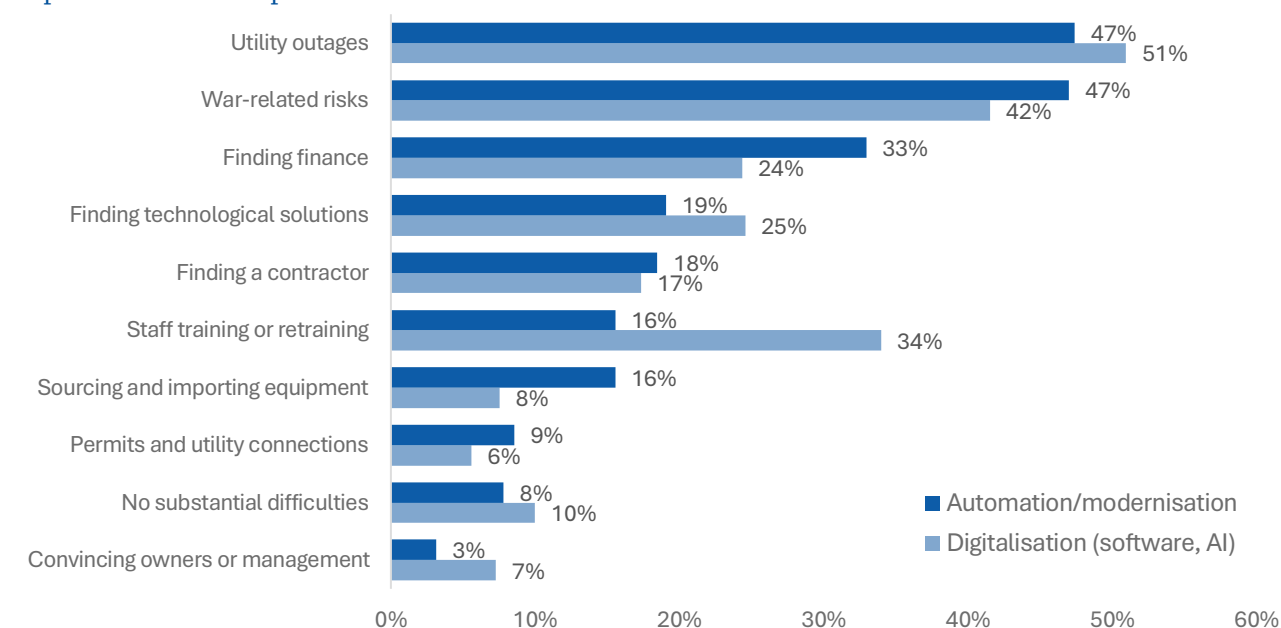
Figure 31. Sources of financing for automation and digitalisation, % of companies



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=273. Among respondents, 3% chose "other" and a further 2% "hard to say". Number of respondents by measure implemented: automation – 167, digitalisation – 177.

Among the practical problems of implementing such projects, finding finance ranks only third among the difficulties these companies encountered. The main difficulties were infrastructure problems: outages of electricity, heating and water supply (47% for automation, 51% for digitalisation), as well as other war-related risks (47% and 42% respectively). Difficulties in finding finance were encountered by 33% of enterprises implementing automation and 24% of those implementing digitalisation. Difficulties with training and retraining staff were mentioned twice as often by enterprises implementing digitalisation (34% against 16% for automation).

Figure 32. Difficulties in implementing automation and digitalisation, % of companies that implemented the respective measure

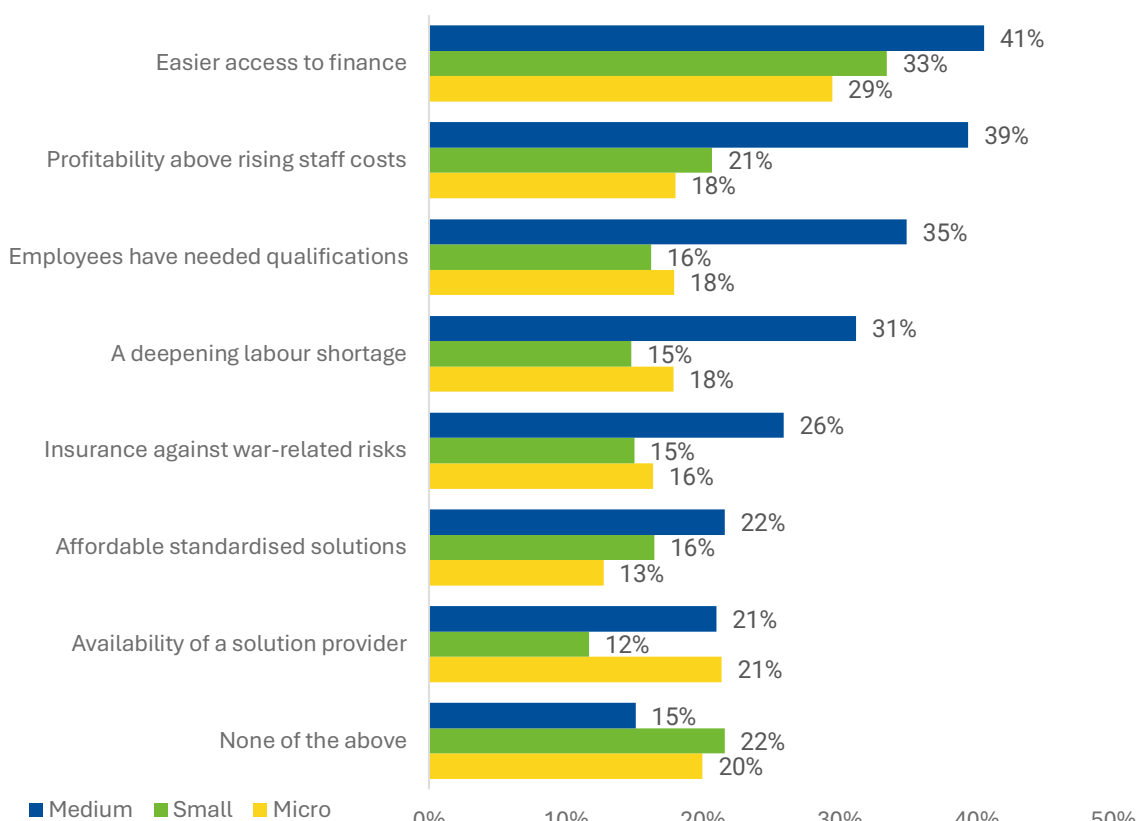


Source: Info Sapiens survey commissioned by CES, 2026. Note: n=273. Number of respondents by measure implemented: automation – 167, digitalisation – 177.

5.6 INCENTIVES FOR MORE ACTIVE ADOPTION OF AUTOMATION AND DIGITALISATION

Easier access to finance is the incentive companies most often name for adopting automation (from 29% among micro to 41% among medium-sized firms). For micro-businesses, second place goes to the availability of a solution provider (21%), and for small and medium-sized firms to higher profitability (21% and 39% respectively). For medium-sized businesses, incentives for digital transformation also include the availability of qualified employees (35%), as well as a deepening labour shortage (31%) and war-risk insurance (26%).

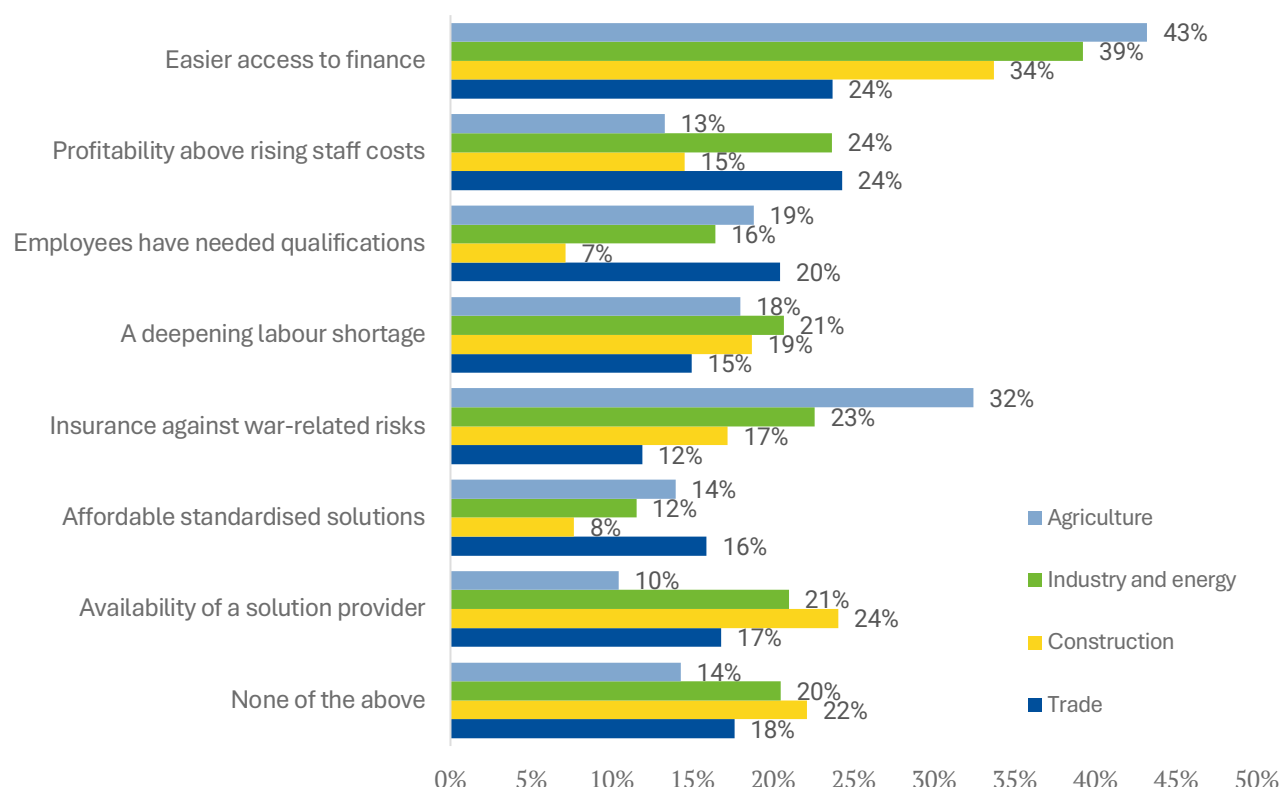
Figure 33. Incentives for adopting automation/digitalisation by size, %



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by size: Medium — 126, small — 228, micro — 202. Weighted percentages are shown.

For most industries, easier access to finance is likewise the main incentive for adopting digitalisation or automation. In agriculture, war-risk insurance is also important (32%). For industrial enterprises, another incentive would be higher profitability compared with hiring additional people, on top of finance and insurance. Construction would be encouraged more than other industries by a deeper labour shortage (19%), while trade would be encouraged by higher profitability (24%) and staff qualifications (20%).

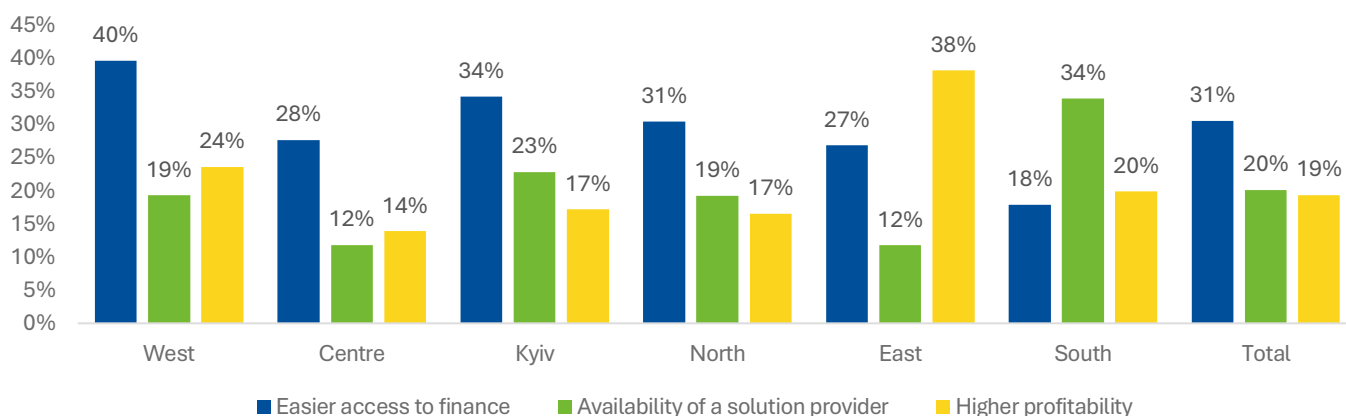
Figure 34. Incentives for adopting automation/digitalisation by industry, %



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by industry: construction — 53, industry and energy — 144, agriculture — 62, trade — 120. Weighted percentages are shown.

By region, enterprises in the West more often mentioned easier access to finance as an incentive for adopting digitalisation and automation (40%, 9 pp above the national average) and the availability of solutions (21% against 14% on average). In the East, an additional incentive could be higher profitability compared with hiring additional staff (38% against 19%) and war-risk insurance (25% against 17%). In the North, enterprises also mentioned war-risk insurance more often (23%), whereas in Kyiv it was mentioned less often (11%). In the South, greater automation and digitalisation could be encouraged by the availability of solution suppliers (34% against 20% on average across all regions), while easier access to finance is mentioned less often (18% against 31%). In the Centre, enterprises named most of the proposed incentives less often.

Figure 35. Top 3 incentives for adopting automation/digitalisation by region, %



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by region: West – 118, Centre – 125, Kyiv – 116, North – 96, East – 40 and South – 61. Weighted percentages are shown.

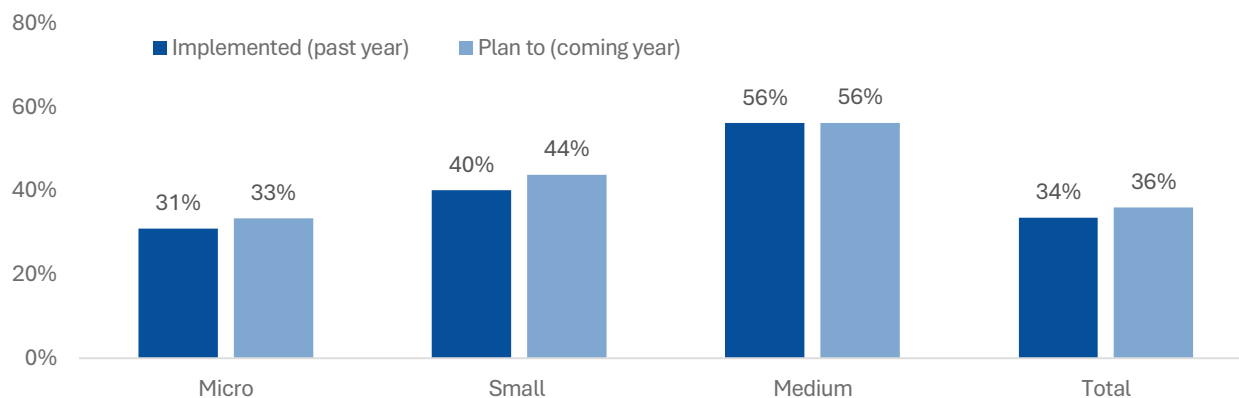
6 STAFF TRAINING

6.1 PREVALENCE OF STAFF TRAINING

A third of companies provided staff training over the past year, and 36% plan such measures for the coming year. Here and below, training includes the training, retraining or upskilling of staff.

Figure 36. Shares of companies that implemented and that plan to implement training, by company size and in total

Medium-sized companies invest in training more often.



Source: Info Sapiens survey commissioned by CES, 2026. Base of respondents – all companies surveyed (n = 556). Number of respondents by company size: micro – 202, small – 228, medium – 126. Weighted percentages are shown.

As with automation and digitalisation, there is a high degree of continuity. Between training actually provided and plans for the future: 67% of companies that provided training over the past year plan to continue it in the next 12 months. At the same time, among companies that plan to provide training in future, 62% already had such experience in the previous year, while 38% plan to start such practices for the first time. This indicates that for a substantial share of companies, staff training is not a one-off activity but an established practice of staff development.

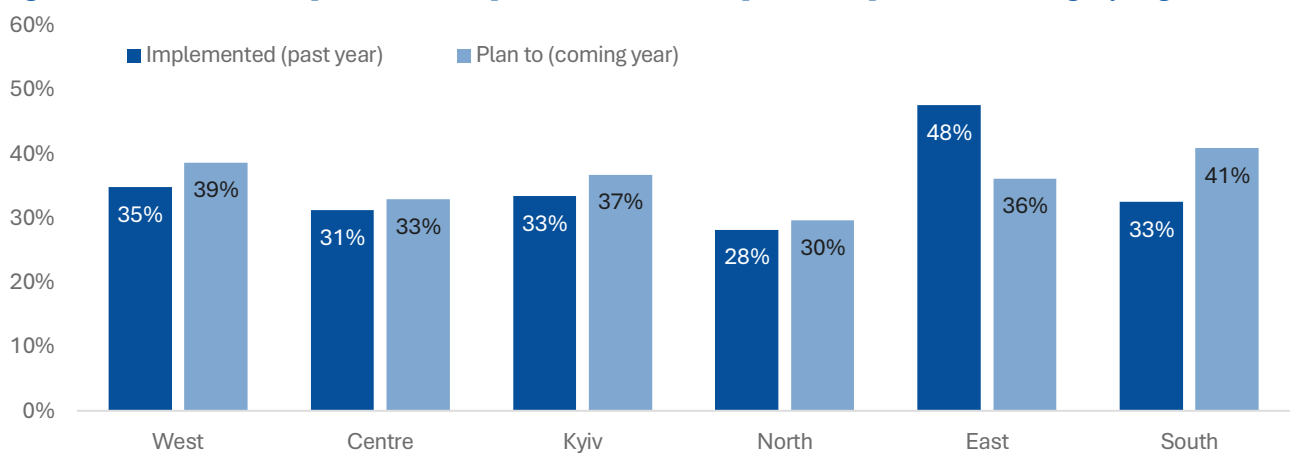
The in-depth interviews also showed that some companies are oriented towards continuous learning and the professional development of their employees. In such companies, training is a regular practice encouraged by management and owners.

"We love training. Almost the entire top management has studied at a business school, and more than once. Most often we bring in corporate training. For example, when the whole team or a particular department is trained. But we very much support it when a person shows initiative themselves."
(Medium-sized business, logistics, South)

Among companies that provided no training over the past year, the overwhelming majority (80%) also do not plan to do so in the coming year, while 20% intend to introduce training.

Among medium-sized companies, more than half provided staff training over the past year (56%). Among micro-enterprises this share is only about a third (31%), and among small enterprises about 40%.

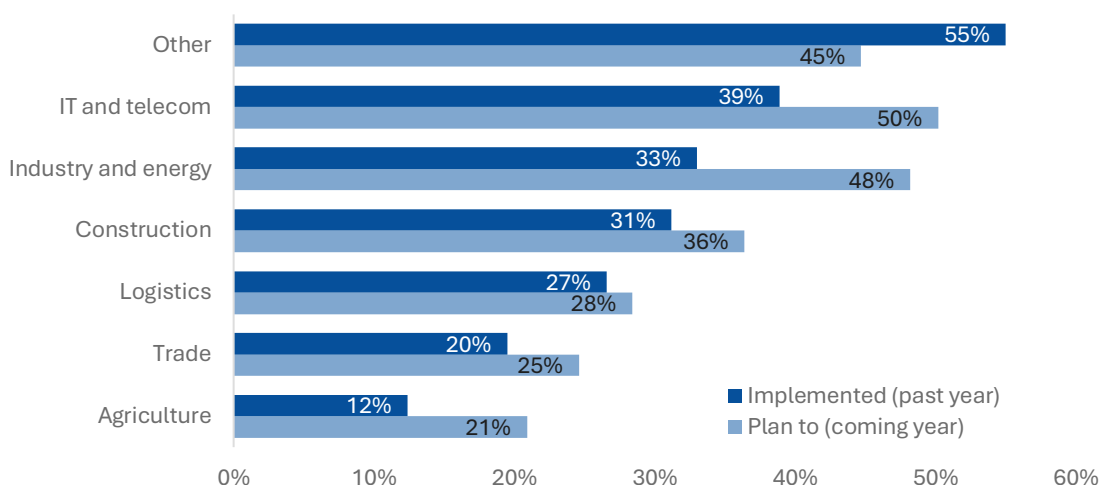
Figure 37. Shares of companies that implemented and that plan to implement training, by region



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base — all respondents (n = 556). Number of respondents by region: West — 118, Centre — 125, Kyiv — 116, North — 96, East — 40, South — 61. Weighted percentages are shown.

The highest share of companies that provided training over the past year is found in the East (48%), and the lowest in the North (28%).

Figure 38. Shares of companies that implemented and that plan to implement training, by industry, %
Staff training is least widespread in agriculture.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base — all respondents (n = 556). Number of respondents by industry: industry and energy — 144, wholesale and retail trade — 120, agriculture — 62, construction — 53, logistics — 38, information and telecommunications — 32, other — 105. Weighted percentages are shown.

Over the past year, employee training was most often provided by companies in IT and telecommunications and in the services sector ("Other" in the chart).

Industry and energy show a substantial increase in the share of companies planning to introduce staff training: from 33% of companies that provided training over the past year to 48% that plan to do so next year. At the same time, agriculture and trade remain among the industries with the lowest figures: training was provided by 12% and 20% of companies respectively, and is planned by 21% and 25%.

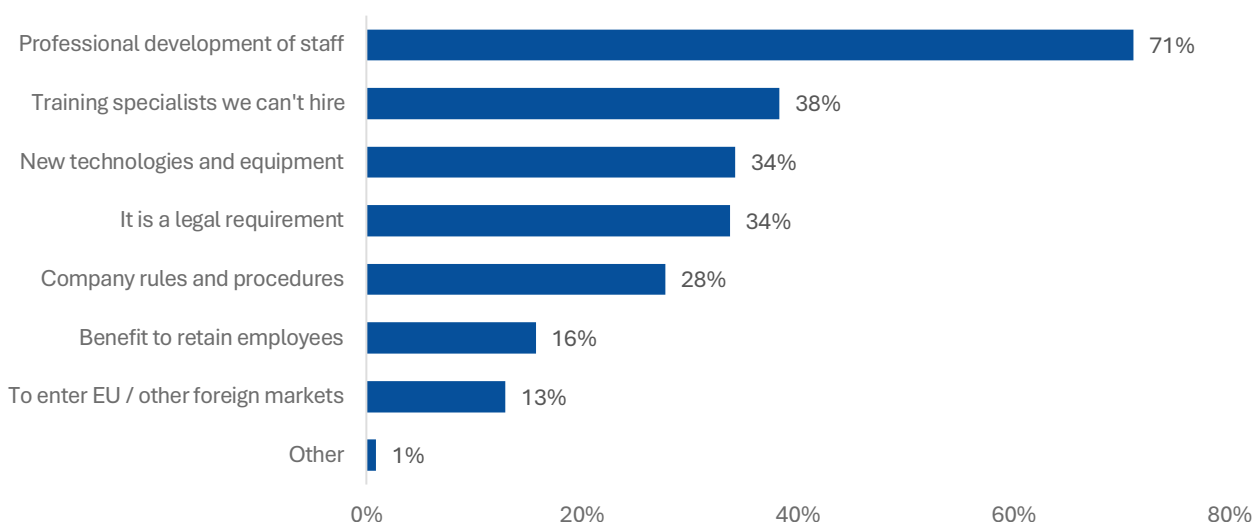
6.2 PURPOSE OF TRAINING

Training at enterprises is becoming an important element of the operational resilience of business. It serves not only to develop staff, but also plays a role in adapting to technological change, closing staffing gaps and retaining employees.

Staff training is often part of companies' automation and digitalisation processes. Among the companies surveyed, 15% provided staff training only over the past 12 months, while 19% combined it with the implementation of automation or digitalisation measures.

The quantitative survey results allow two key functions of training to be distinguished — upskilling and retraining. In the first case, it is used to adapt employees to new technologies, equipment and working standards, and in the second, to close staffing gaps by changing professional roles within the company.

Figure 39. Purposes of staff training, retraining and upskilling, % of companies that provided training
The professional development of employees is the main purpose of staff training, with needs related to staff shortages in second place.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided training (n = 217). Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

The professional development of employees and their acquisition of new knowledge and skills are not linked solely to automation and digitalisation within the company. In a number of occupations, regular training is necessary to keep knowledge up to date and to adapt to changes in technologies, materials, professional standards and regulatory requirements.

"I travelled to the Netherlands and looked at how they work with cabbage and potatoes. We adopt international experience and then pass it on to our workers here. We cannot compete with them like that, but we can adopt some of their experience." (Small business, agriculture, West)

"Before the war I trained people, sent them on courses, sent them to various master classes. Different firms ran them, on plumbing, on finishing. Ceresit ran them constantly. They showed new materials, showed new tools." (Small business, construction, East)

"There are always new training sessions and some programmes for accountants. Because every six months there are some innovations. We have the same for agronomists." (Medium-sized business, agriculture and manufacturing, East)

"Because the pesticides and other chemicals change every year. That is why we go to these classes." (Small/micro business, agriculture, South)

Amid worker shortages, retraining also becomes a tool for offsetting staffing gaps. Some companies are compelled to build more versatile teams in which employees can perform several functions or move between roles. This makes it possible to keep business processes running in the event of sudden staff losses, illness, or mobilisation.

Changes of role within the enterprise are also supported as a way of encouraging employees to stay.

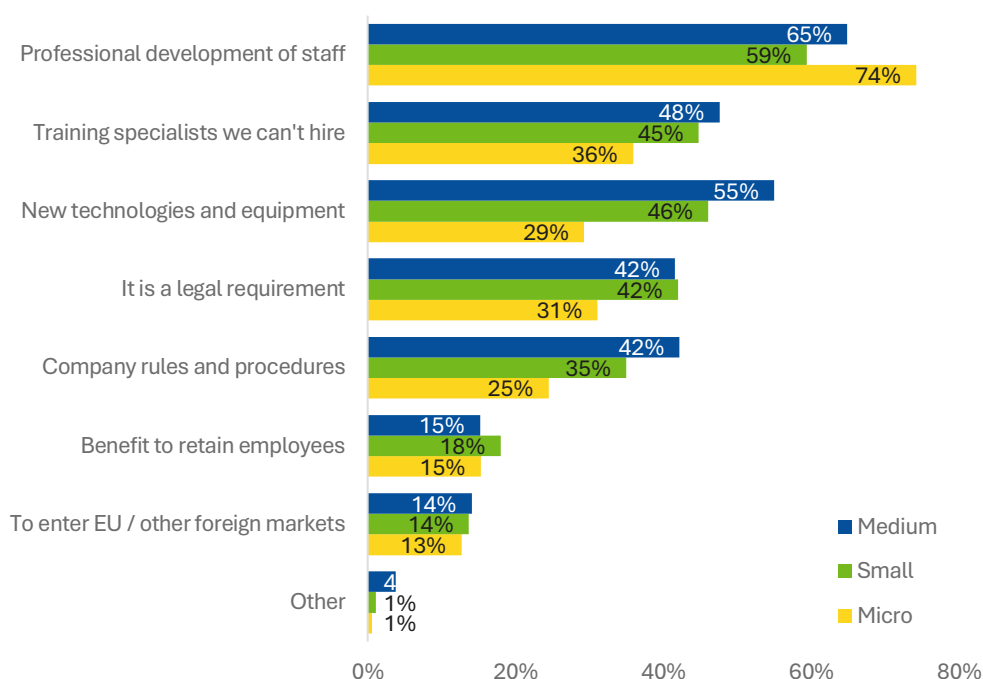
"Usually it is force majeure. If someone leaves — for example, our workshop manager left. And then it begins: whoever can, picks it up. It is out of necessity. When the workshop manager left, at first even my accountants went into the workshop." (Small business, manufacturing, Centre)

"We also consider that if someone worked in the kitchen, they can easily move to working as a bartender... You retrain, you learn, if you want to change your line of work." (Small business, restaurant sector, Kyiv)

Micro-enterprises are more likely than larger companies to regard training as a tool for the professional development of employees and the acquisition of new knowledge and skills. This may be because in small teams one employee performs a variety of functions and needs a broader set of competencies, whereas larger enterprises have more scope for specialisation.

Figure 40. Purposes of staff training, retraining and upskilling, by company size, % of companies that provided training

For micro-enterprises, the professional development of employees is the most important purpose.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided training (n = 217). Number of respondents by size: micro — 57, small — 88, medium — 73. Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

Medium-sized enterprises are more likely than smaller companies to list familiarising employees with new technologies, equipment and practices among the purposes of training, which is linked to their more active adoption of new technological solutions.

As company size increases, so does the importance of training as a way of obtaining specialists who cannot be hired on the market. In addition, medium-sized companies more often than small and micro ones have in-house training to transfer knowledge and experience between employees and to familiarise them with company rules and procedures.

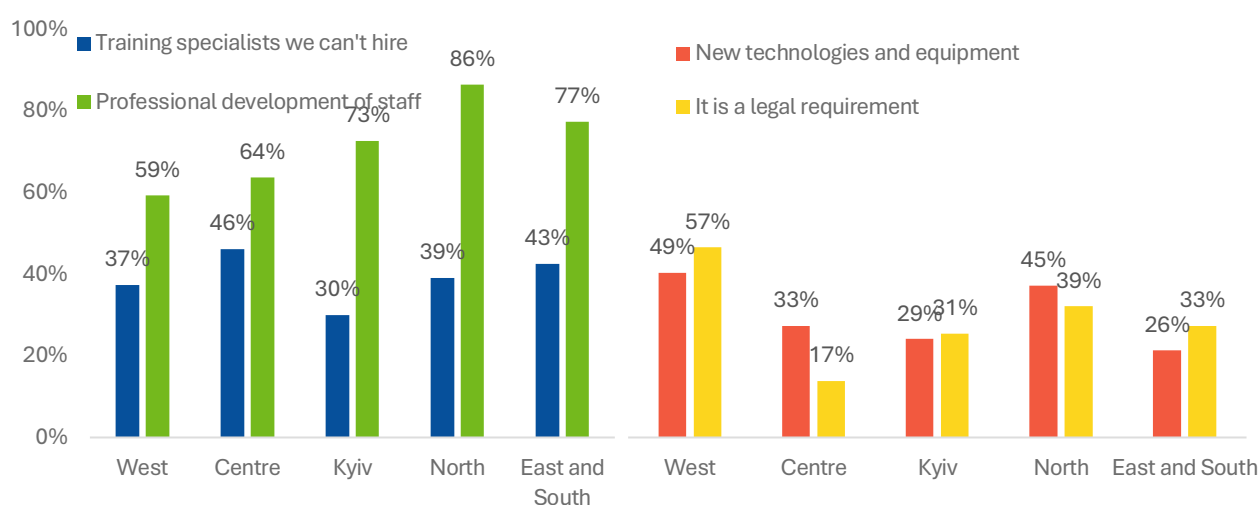
"We also have a practice whereby when a person comes back from training, they always give a presentation to the team and share what they learned and understood. It does not matter which

department. If one person has gone on a course about something, I come back and pass it on."
(Medium-sized business, logistics, South)

Small and medium-sized companies named training as a legal requirement more often than micro-enterprises. One possible explanation is the sectoral structure of these segments: they include more industrial and transport companies, for which legislation sets stricter requirements for the preparation and training of employees.

Figure 41. Purposes of staff training, retraining and upskilling, by company region, % of companies that provided training

The purpose of "training those we cannot hire" is evenly represented across all regions.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided training (n = 217). Number of respondents by region: West — 49, Centre — 42, Kyiv — 47, North — 39, East and South — 41. Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

In the West, companies more often name legal requirements as a reason for training staff (57% against 34% overall), mastering new technologies (49% against 34%) and entering EU markets (25% against 13%). In the North, a focus on the professional development of staff dominates (86% of companies name this purpose against 71% overall). Entering EU markets is also named here more often (21% against 13%).

In the East and the South, only 7% of companies use training to transfer corporate knowledge and procedures, against 28% overall, and only 3% name entry to EU or other foreign markets, against 13%. In the Centre, the fewest companies link training to legal requirements — 17%.

At the same time, the need to prepare specialists who are hard to hire on the market and the use of training as a retention tool show no substantial regional specificity. This indicates that staff shortages and the need to retain employees are more universal motives for training, whereas its strategic purposes depend substantially on the regional context.

Trade sector trains staff because of market shortages somewhat more often (59% against 38% across all companies and against 39% in industry). No other significant sectoral differences in the purposes of training were found.

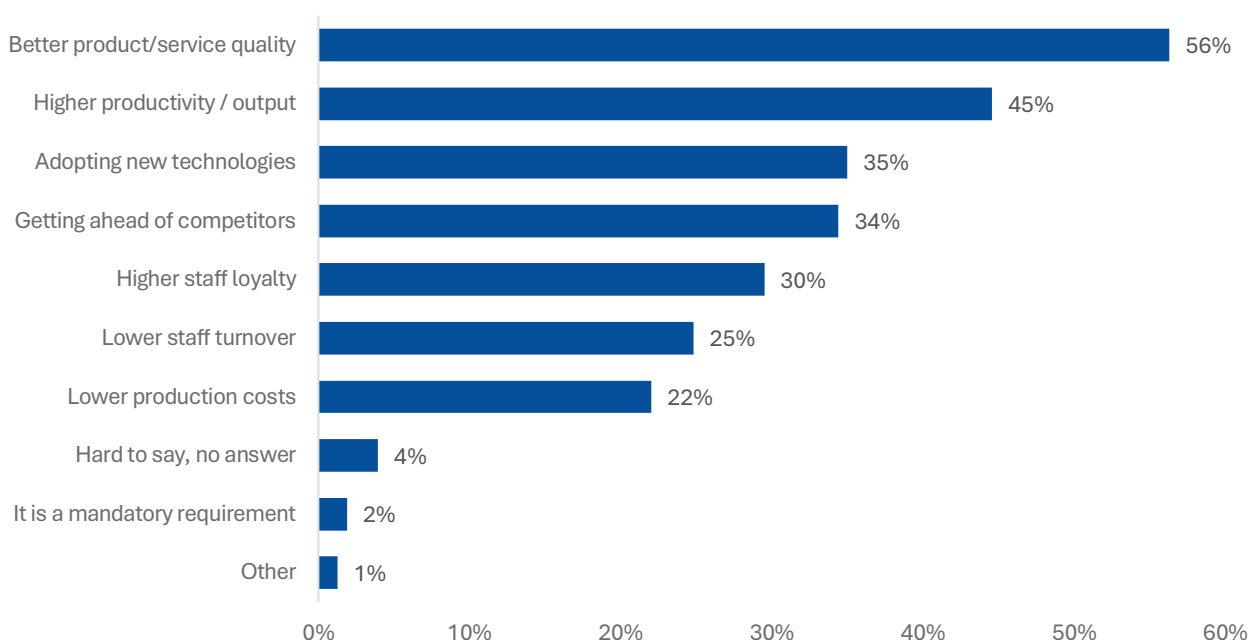
6.3 BENEFITS DELIVERED BY EMPLOYEE TRAINING

While automation and digitalisation primarily help increase the volume of goods and services produced, companies name improved quality of products and services as the main outcome of staff training. This effect was noted by 56% of enterprises that trained employees over the past year.

Higher labour productivity and output take second place among the outcomes of training. This effect was noted by 45% of companies that trained employees over the past year. Almost half of enterprises therefore link the development of employee skills directly to higher productivity.

About a third of companies also see an impact of training on their ability to adopt new technologies and approaches (35%) and on stronger competitive advantages (34%).

Figure 42. Effects of employee training for business, % of companies that provided training
Improved product quality is seen as the main benefit of training.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided training (n = 218). Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

Training is therefore first and foremost a business development tool for companies, but it can at the same time play a noticeable role in retaining employees. Almost a third of enterprises see the result of training in greater employee loyalty (30%), and a quarter in lower staff turnover (25%).

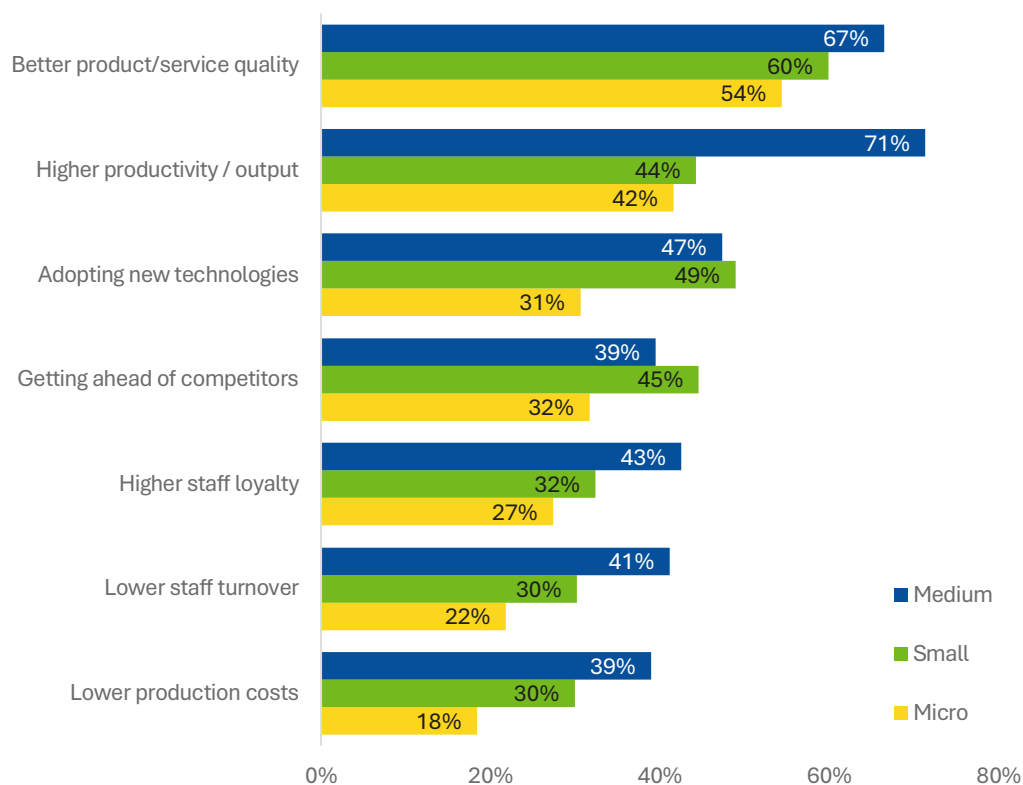
"The firm pays for [the training] in full. So this keeps our workers here as well. Because they see that they can develop here." (Small business, IT and telecommunications, Kyiv)

Companies of different sizes assess the main effect of employee training differently. Medium-sized companies generally note more positive results than smaller ones. This is most evident in higher labour

productivity (71% of medium-sized companies against 45% overall), as well as in lower staff turnover and production costs. Small and micro-companies, by contrast, primarily note improvements in the quality of goods and services.

Figure 43. Effects of employee training for business by company size, % of companies that provided training

Medium-sized companies more often experience higher labour productivity as a result of training.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided training (n = 217). Number of respondents by size: micro — 57, small — 88, medium — 73. Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

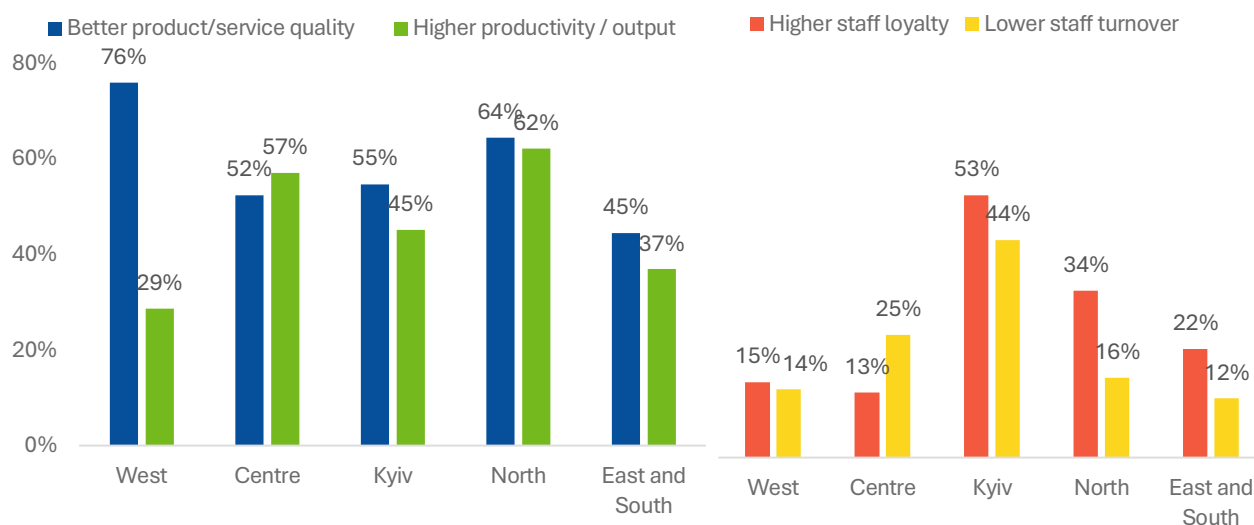
Companies are aware of the risk that an employee may be trained and then leave. Respondents in the in-depth interviews noted that companies cannot prevent this in any way, so they place their bets on building employee loyalty, both through training and by other means:

*"And if it turns out that a person has been trained and wants to change jobs — well, that is how it goes."
(Medium-sized business, logistics, Kyiv)*

*"There is no way to protect yourself from this except by motivating the employee and creating interesting and pleasant conditions in the team. That is, if there is a decent bonus system, a decent system of pay increases and, above all, a decent atmosphere in the team, then no one will go anywhere."
(Medium-sized business, property development, West)*

Figure 44. Effects of employee training for business by company region, % of companies that provided training

Higher productivity is most noticeable in the West, while the effect on loyalty and staff turnover is strongest in Kyiv.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents – companies that provided training (n = 217). Number of respondents by region: West – 49, Centre – 42, Kyiv – 47, North – 39, East and South – 41. Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

Enterprises in Kyiv note lower staff turnover (44% against 25% overall) and higher staff loyalty (53% against 30% overall) among the results of training more often than other regions.

The West associates training primarily with improved product quality, and less with labour productivity. Enterprises in the North and the Centre, by contrast, link staff training to higher productivity more often than other regions.

The East and the South show the smallest number of noted training effects. This may be further confirmation of the region's generally weaker orientation towards staff training.

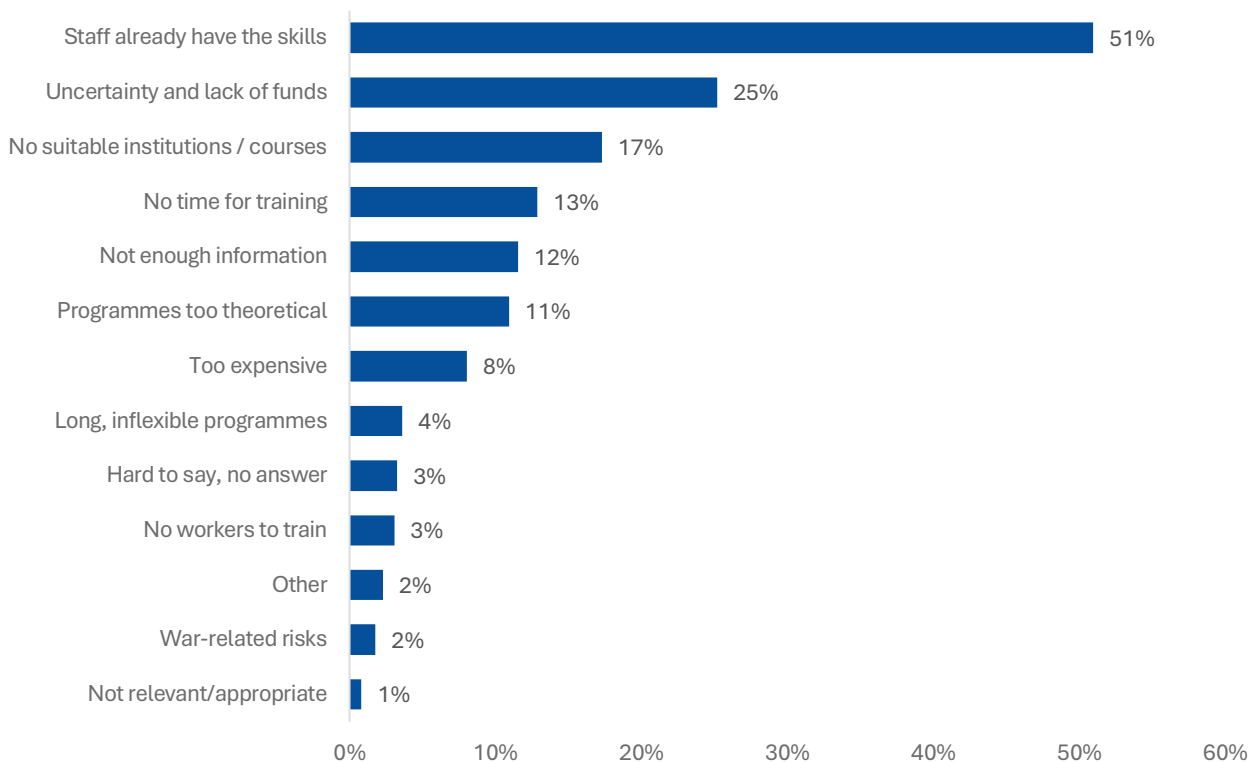
By industry, lower production costs are noted more often by industrial enterprises (42% against 22% on average). Industry also notes improved quality of goods and services somewhat more often (66% against 56%).

6.4 BARRIERS TO PROVIDING TRAINING

The main reason why companies do not train their staff is the conviction that staff already have all the necessary knowledge (51%). This is far ahead even of economic uncertainty (25%) – the second most frequent reason.

A lack of information about the training programmes available is a more substantial barrier 'to employee training than the features of the programmes or their cost. 17% of companies are unaware of education institutions or courses in their field, and 12% do not have enough information about training opportunities for their employees. Only 11%, by contrast, consider training programmes too theoretical, and 8% too expensive.

Figure 45. Reasons for not providing training, % of companies that provided no training
More than half of companies believe their employees have all the knowledge they need.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided no training (n = 338). Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

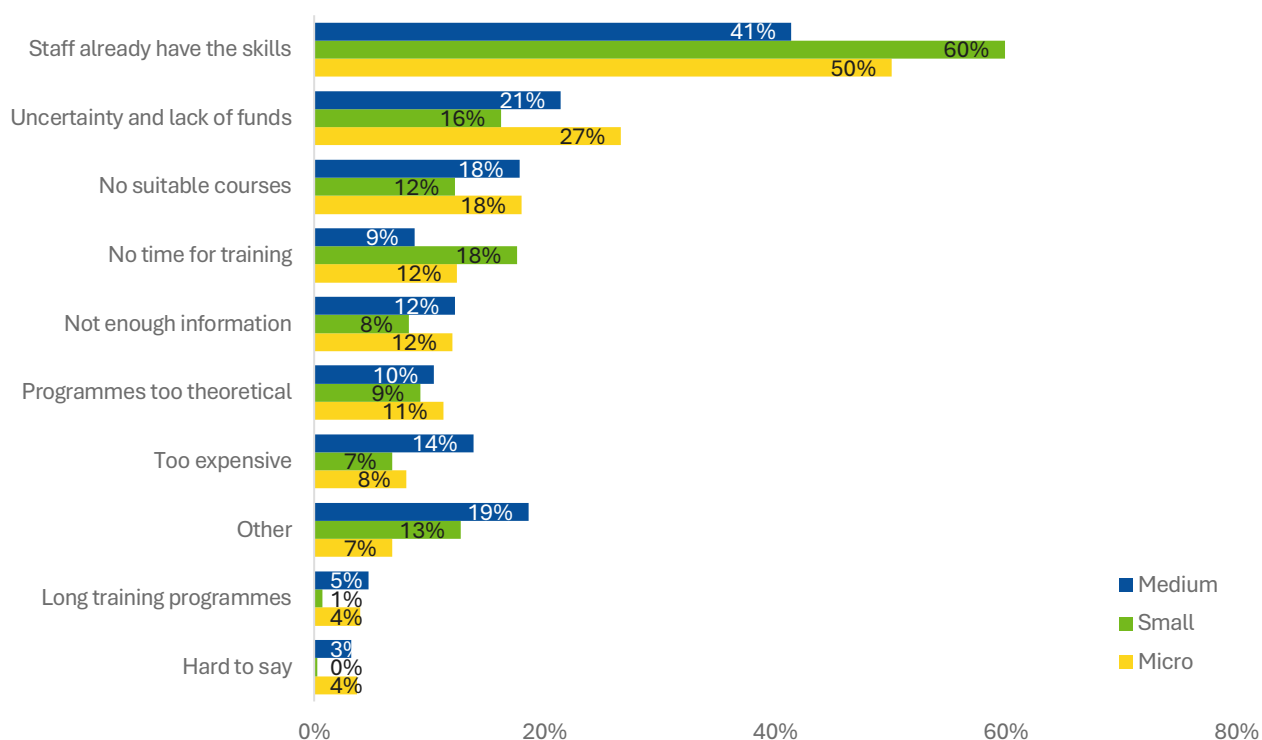
This may indicate insufficient interaction between business and education institutions and limited awareness among companies of the educational offer available. One possible reason may be the transformation and optimisation of the network of vocational education institutions, which may have weakened established links between local employers and the institutions that traditionally trained workers for them.

"We had vocational schools that trained tractor drivers; they are gone. They were closed." (Small business, agriculture, South)

By size, small companies stand out most: they are the most likely to be confident that their staff are sufficiently qualified (60% against 41% among medium-sized companies). At the same time, they name economic uncertainty as an obstacle less often than micro-companies (16% against 27%).

Figure 46. Reasons for not providing training by company size, % of companies that provided no training

Medium-sized companies are less likely to believe that their employees have all the skills they need.

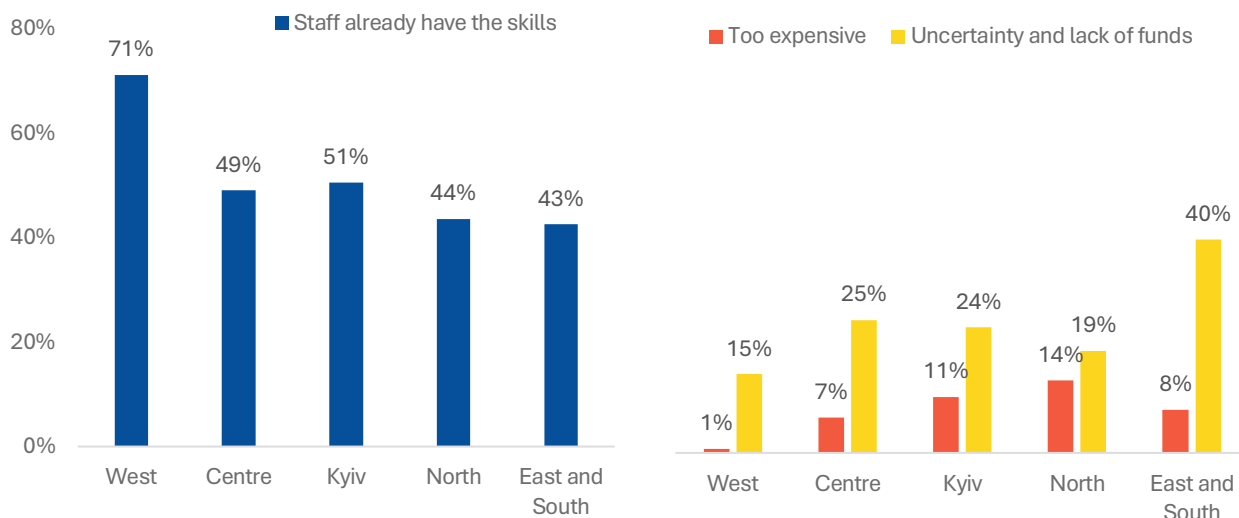


Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided no training (n = 338). Number of respondents by size: micro — 145, small — 140, medium — 53. Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

Companies in the West of the country are the most confident in the qualifications of their staff.

Among companies in the West that provided no training, 71% believe their staff already have all the knowledge they need, against 51% of companies overall. At the same time, companies in the West are the least likely to consider training too expensive (1% against 7–14% in other regions) and to say that there are no suitable education institutions (8% against 20–24% in the East and South and in the Centre). In other words, in the West training is not provided as a deliberate choice rather than because of constraints.

Figure 47. Reasons for not providing training by region, % of companies that provided no training
The West is the most confident that staff knowledge is sufficient, while economic uncertainty is felt most strongly in the East and the South.

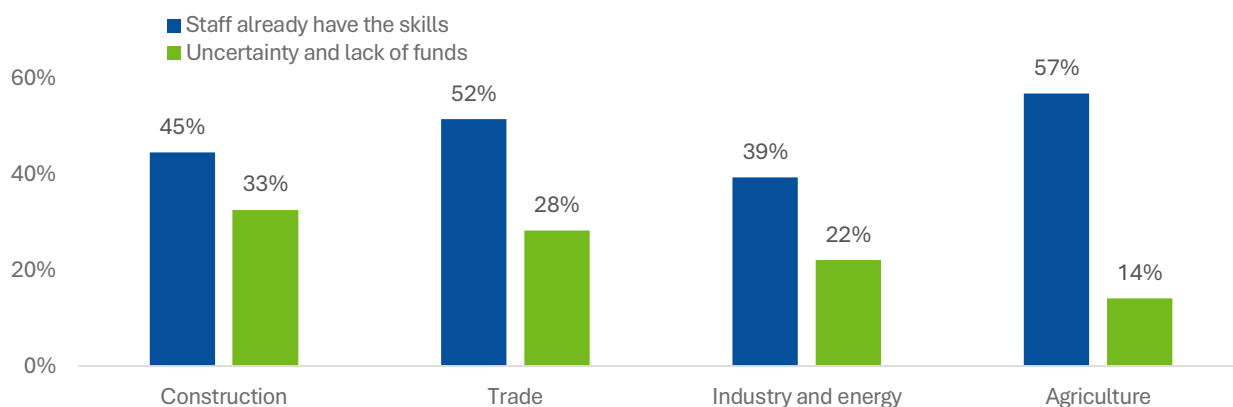


Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided no training (n = 338). Number of respondents by region: West — 69, Centre — 83, Kyiv — 69, North — 57, East and South — 60. Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

In the East and the South, meanwhile, economic uncertainty is felt markedly more strongly. 40% against 15–24% in the West, Kyiv and the North. Here the barriers are of a more involuntary nature.

Among industries, agriculture has the highest share of companies confident that their staff are sufficiently qualified (57%, above industry at 39%). At the same time, this industry has the lowest share of other reasons — including a lack of staff who could be trained (4% against 15% in industry).

Figure 48. Reasons for not providing training by industry, % of companies that provided no training
Agriculture is the most convinced that existing skills are sufficient.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided no training (n = 338). Number of respondents by industry: industry and energy — 84, wholesale and retail trade — 85, agriculture — 50, construction — 34. Weighted percentages are shown. Several answer options could be selected, so the percentages may sum to more than 100%.

Industry, by contrast, most often faces practical constraints — a lack of time for training (22% against 3% in construction) and a lack of workers who could be trained (12% against 3% in trade and 1% in agriculture).

Construction feels the shortage of time less, but more often points to the inflexibility of training programmes (9% against 0% in industry and agriculture). Trade, in turn, names the cost of training among the barriers more often (10% against 0% in construction).

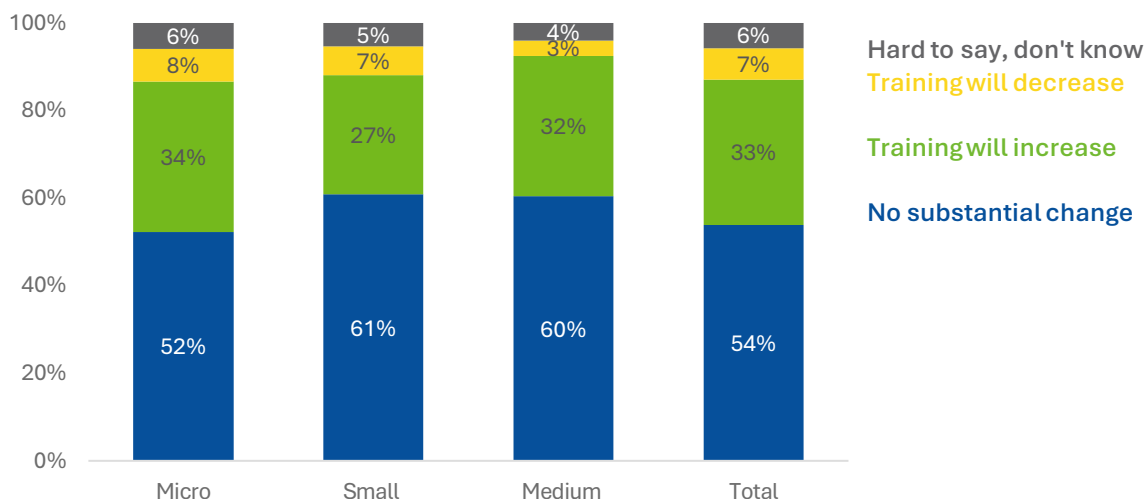
6.5 EXPECTED CHANGES IN EMPLOYEE TRAINING

Most companies do not expect substantial changes in their approach to employee training over the next 2–3 years (54%). At the same time, about a third of companies forecast an increase in the amount or intensity of training (33%), while only 7% expect training activity to decline.

Micro-enterprises are ready to expand training somewhat more often than small ones (34% against 27%), but there are practically no substantial differences by company size.

Figure 49. Expectations regarding employee training over the next 2–3 years, by company size and in total, % of companies

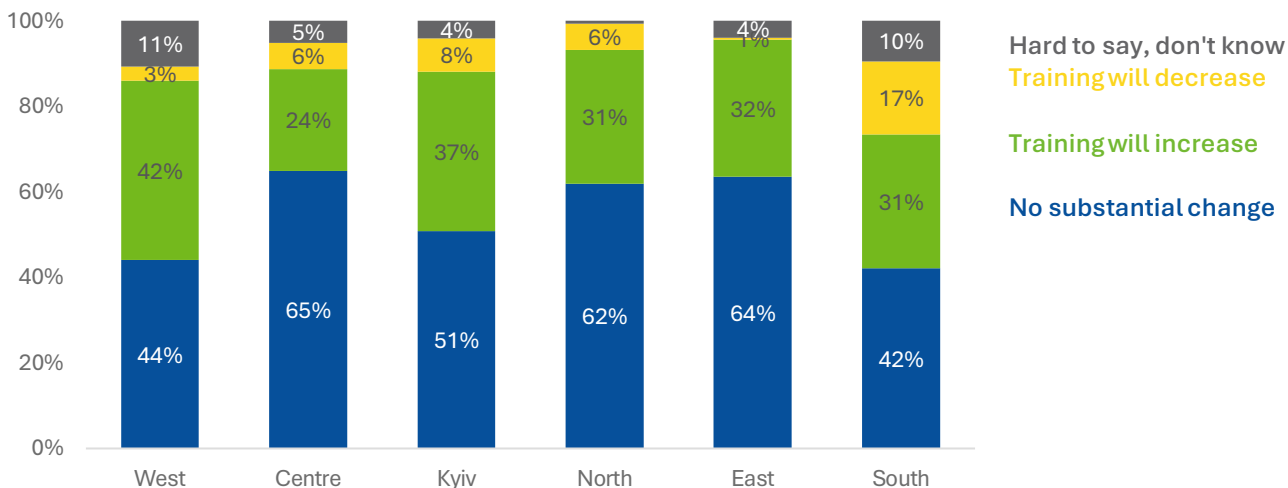
More than half of companies do not anticipate substantial changes in employee training.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base — all respondents (n = 556). Number of respondents by company size: micro — 202, small — 228, medium — 126. Weighted percentages are shown.

Figure 50. Expectations regarding employee training over the next 2–3 years by region, % of companies

Companies in Kyiv and the West are the most inclined to expand training.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base — all respondents (n = 556). Number of respondents by region: West — 118, Centre — 125, Kyiv — 116, North — 96, East and South — 101. Weighted percentages are shown.

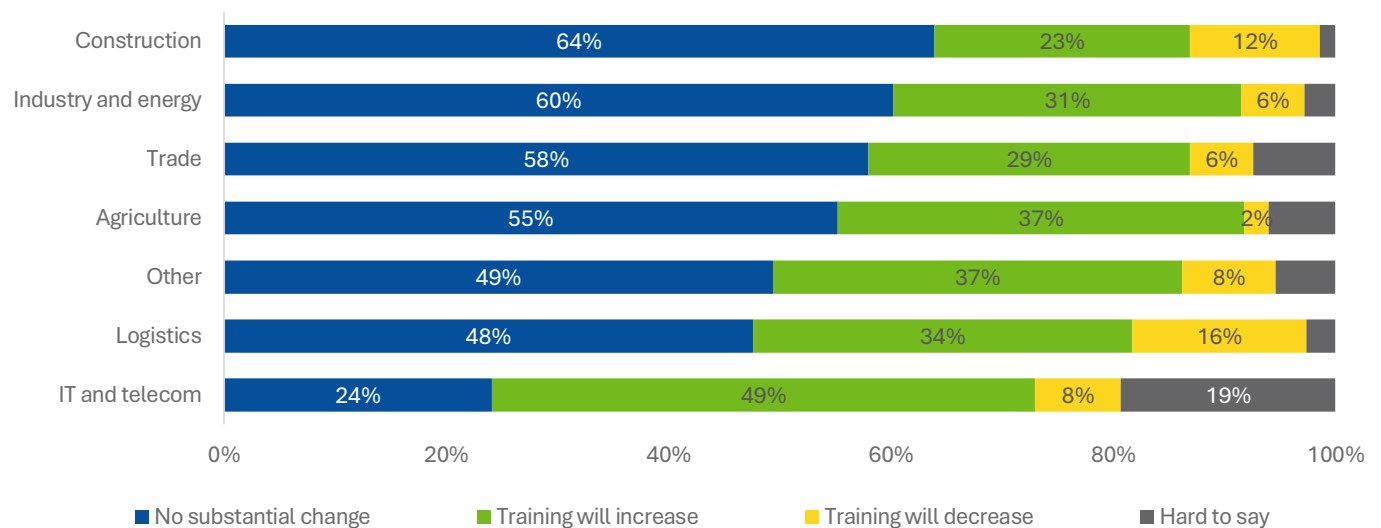
The West stands out for the greatest optimism: 42% of companies expect training activity to increase over the next 2–3 years, compared with only 24% in the Centre. Kyiv also shows higher growth expectations than the Centre (37%).

In the Centre, 65% of companies do not expect substantial changes in the amount of staff training. This is the highest figure among all regions.

The South is the region with the greatest pessimism about training: 17% of companies expect it to decline. This is significantly more than in any other region (from 1% in the East to 6% in the Centre). The East, by contrast, has almost no companies expecting a decline (1% – the lowest figure in the sample).

Figure 51. Expectations regarding employee training over the next 2–3 years by industry, % of companies

Information and telecommunications will increase the amount of training most actively.



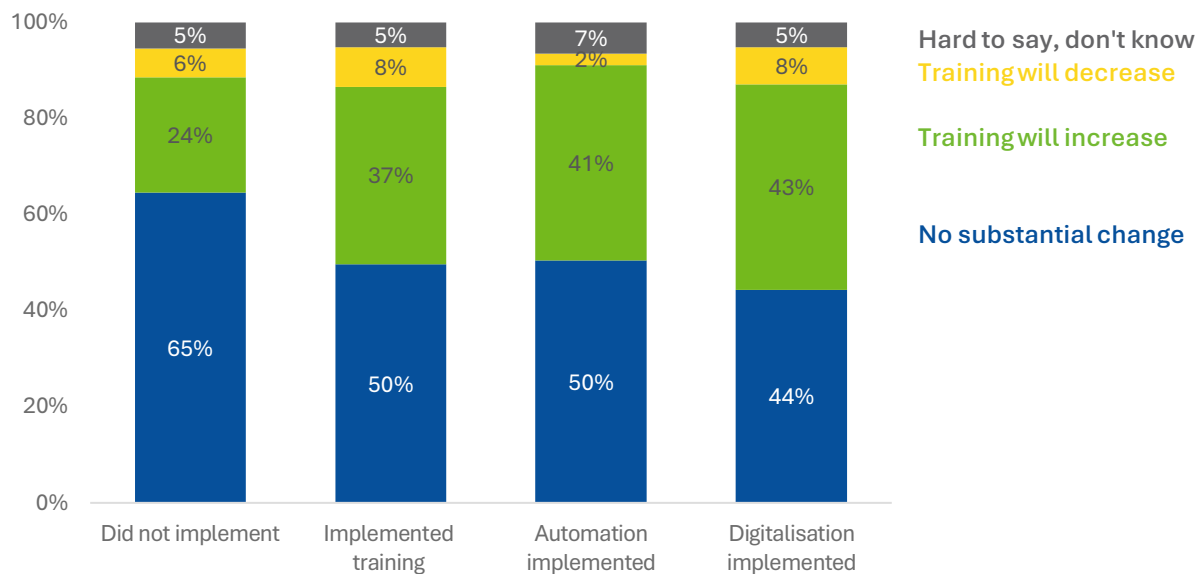
Source: Info Sapiens survey commissioned by CES, 2026. Note: Base – all respondents (n = 556). Number of respondents by industry: industry and energy – 144, wholesale and retail trade – 120, agriculture – 62, construction – 53, logistics – 38, information and telecommunications – 32, other – 105. Weighted percentages are shown.

Almost half of companies in IT and telecommunications (49%) expect training activity to grow. This is more than in construction (23%) and trade (29%). At the same time, IT and telecommunications has the highest share of companies unable to make a forecast (19%), which points to a combination of high expectations and considerable uncertainty about future training needs.

The highest share of companies expecting a decline in training is in transport and logistics (16%). This is more than in agriculture (2%), trade (6%) and industry and energy (6%). Construction also has a relatively high share of such expectations – 12%.

Figure 52. Expectations regarding employee training over the next 2–3 years among companies with different experience of implementing productivity measures, % of companies

Companies that implemented automation or digital solutions more often expect employee training to expand.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base — all respondents (n = 556). Number of respondents by experience of implementation: "No, did not implement" — 205, "Training / retraining / upskilling of staff" — 218, "Automation or modernisation of production/equipment" — 167, "Introduction of digital systems, new software or artificial intelligence" — 177. Weighted percentages are shown.

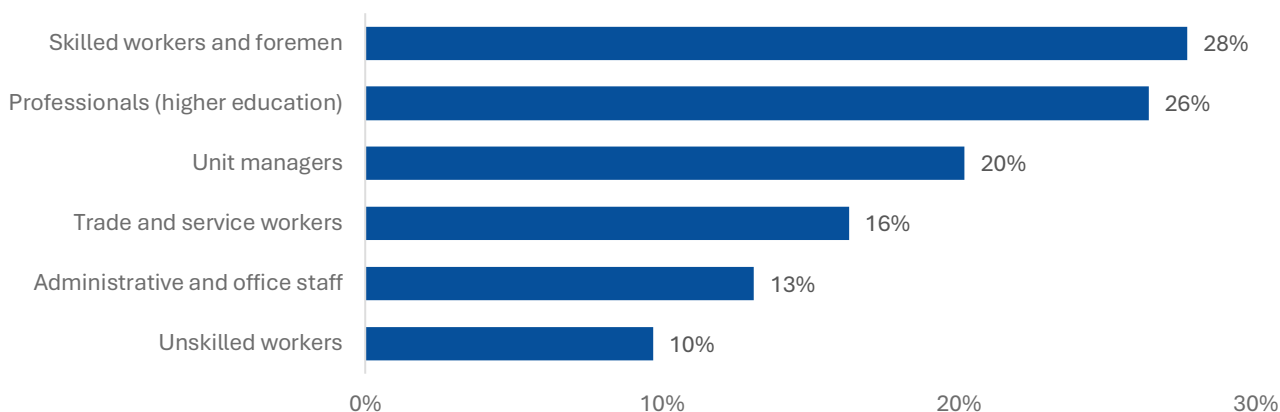
Companies that have already implemented automation or digital solutions expect the intensity of staff training to increase more often than those that have not. Specifically, 41% against 31% for automation and 43% against 29% for digitalisation. Thus, technological transformation often encourages the expansion of employee training programmes.

6.6 APPROACHES TO EMPLOYEE TRAINING

6.6.1 WHICH CATEGORIES OF EMPLOYEES ARE TRAINED

Training was most often provided for skilled workers, equipment operators, foremen and team leaders (28% of companies where this category of employee is present) and for professionals and specialists with higher education (26%). Training was organised somewhat less often for unit managers (20%), trade and service workers (16%), and administrative and office staff (13%). Companies trained auxiliary and unskilled workers least often (10%).

Figure 53. Share of companies in which employees of the respective category received training
Skilled workers received training most often.

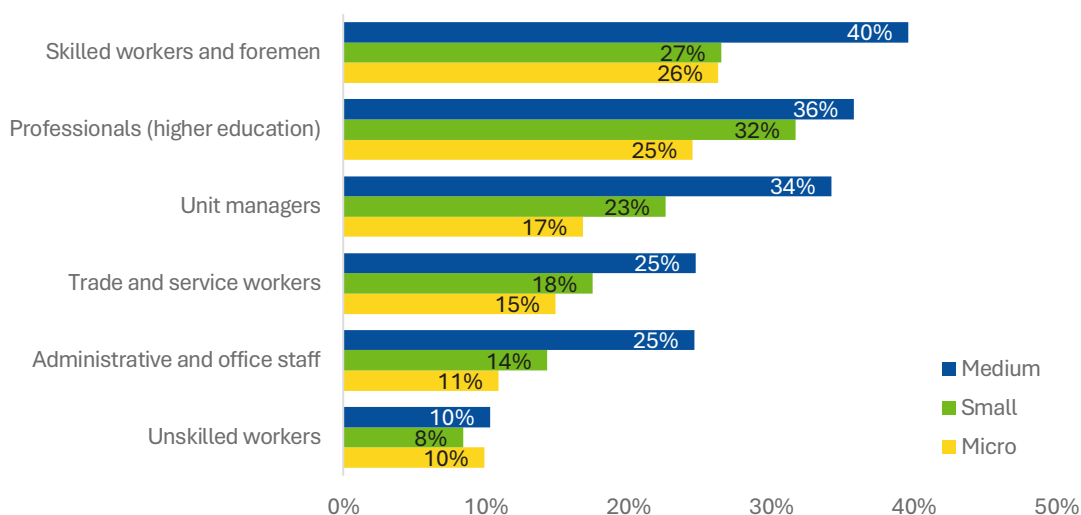


Source: Info Sapiens survey commissioned by CES, 2026. Note: The base for each category of employee is companies that employ the respective category of staff: unit managers (n = 251), professionals and specialists with higher education (n = 376), administrative and office staff, clerical employees (n = 297), skilled workers, equipment operators, foremen, team leaders (n = 304), trade and service workers (n = 138), auxiliary and unskilled workers (n = 244). Weighted percentages are shown. The chart shows the share of companies that trained the respective category of employee among companies where this category is present.

Medium-sized enterprises provided training for a number of worker categories more often than smaller companies. This applies in particular to unit managers (34% against 20%), administrative and office staff (25% against 13%), professionals and specialists with higher education (36% against 26%) and skilled workers (40% against 28%). At the same time, the training of trade and service workers and of auxiliary staff does not depend on company size — no significant differences were found here.

Figure 54. Share of companies in which employees of the respective category received training, by company size

Medium-sized businesses provided training for most categories more often.



Source: Info Sapiens survey commissioned by CES, 2026. Note: The base for each category of employee is companies that employ the respective category of staff. Number of respondents by category and company size: unit managers — 251 (micro — 52, small — 102, medium — 97); professionals and specialists with higher education — 376 (111, 159, 106); administrative and office staff — 297 (63, 130, 104); skilled workers — 304 (68, 141, 95); trade and service workers — 138 (38, 54, 46); auxiliary and unskilled workers — 244 (59, 100, 85). Weighted percentages are shown. The chart shows the share of companies that trained the respective category of employee among companies where this category is present.

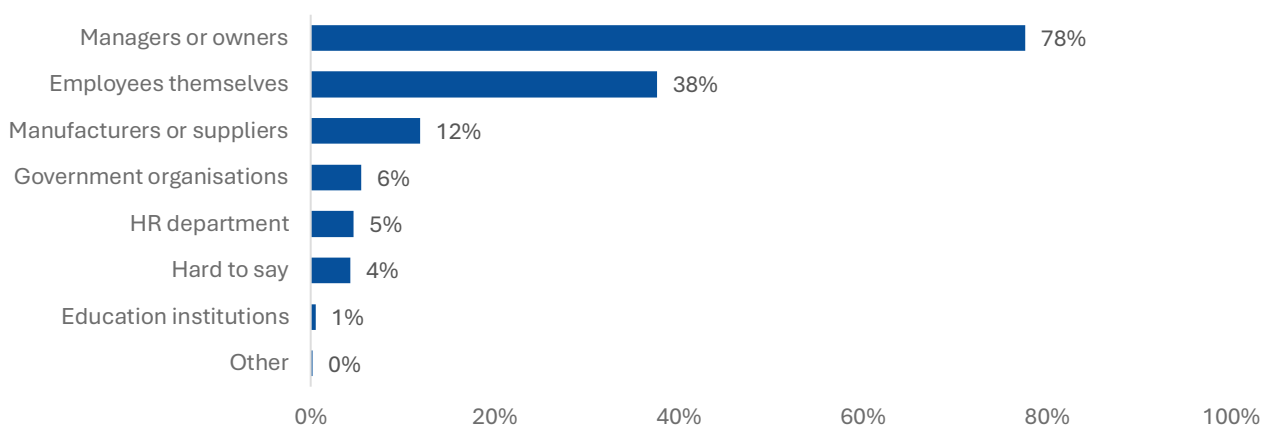
The regional breakdown shows noticeable differentiation in the training of different categories of staff. Kyiv stands out for the highest share of companies training unit managers (28% against 20%). The West has the highest figures for trade and service workers (31% against 16%) and auxiliary staff (16%). The Centre, by contrast, has the lowest share of companies training administrative and office staff (5% against 13% overall). The East and the South stand out for a stronger orientation towards training skilled workers and operators (39% against 28% overall).

6.6.2 WHO INITIATES TRAINING?

In most SMEs, training is initiated or organised by company managers or owners (78%). Employees themselves do so far less often (38%). Equipment manufacturers, suppliers and business partners (12%) and HR departments (5%) play a smaller role.

Figure 55. Who usually initiates employee training, % of companies

Training remains largely the responsibility of company managers and owners.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided training (n = 218). Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%. The answer options "Government organisations", "Education institutions", "It is a mandatory requirement", "Other" and "Hard to say, no answer" are not shown because of the small number of observations.

The in-depth interviews show that it is company management that plays an important role in shaping a learning culture within the company and encourages employees to look for professional development opportunities themselves.

"Management organised all of it." (Small business, restaurant sector, Kyiv)

"At the start of the war, one of our owners gave a speech at a company party precisely about learning and development, but it was more along these lines: find yourself some courses, even if it is a sewing course." (Medium-sized business, logistics, South)

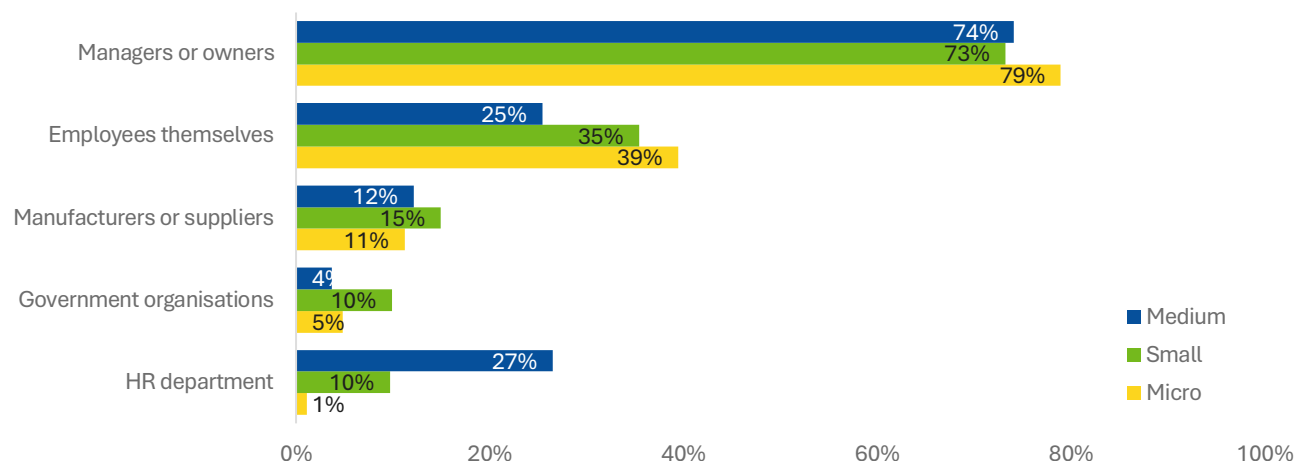
By company size, the most pronounced difference concerns the role of HR departments. As a company grows, their involvement in initiating training increases substantially — from 1% in micro-enterprises to 10% in small and 27% in medium-sized companies.

The role of employees themselves shows the opposite trend: it decreases with company size. Their share as initiators falls from 40% in micro-enterprises to 25% in medium-sized companies. As a company grows, therefore, the organisation of training becomes more formalised: the initiative more

often passes from employees to a specialised HR function. The role of management, meanwhile, remains consistently dominant at all levels.

Figure 56. Answers to the question «Who usually initiates employee training in your company?», by company size, % of companies

The role of the HR department grows with company size.

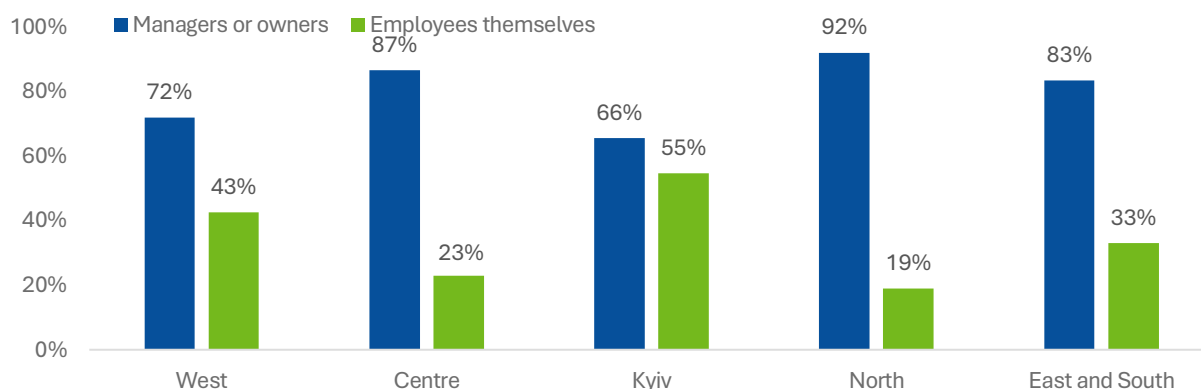


Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided training (n = 217). Number of respondents by size: micro — 57, small — 88, medium — 73. Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

The North stands out for the most centralised model. In 92% of companies, managers or owners initiate training, while only 19% of employees do so. Kyiv, by contrast, shows the greatest employee involvement — 55% — while the share of companies where managers or owners are the initiators is the lowest here, at 66%.

Figure 57. Answers to the question «Who usually initiates employee training in your company?», by region, % of companies

The role of the HR department grows with company size.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided training (n = 217). Number of respondents by region: West — 49, Centre — 42, Kyiv — 47, North — 39, East and South — 41. Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

The West stands out for more active involvement of external stakeholders: 27% of companies name manufacturers, suppliers, or business partners among the initiators of training.

Management-level initiative plays a large role in industry (92%).

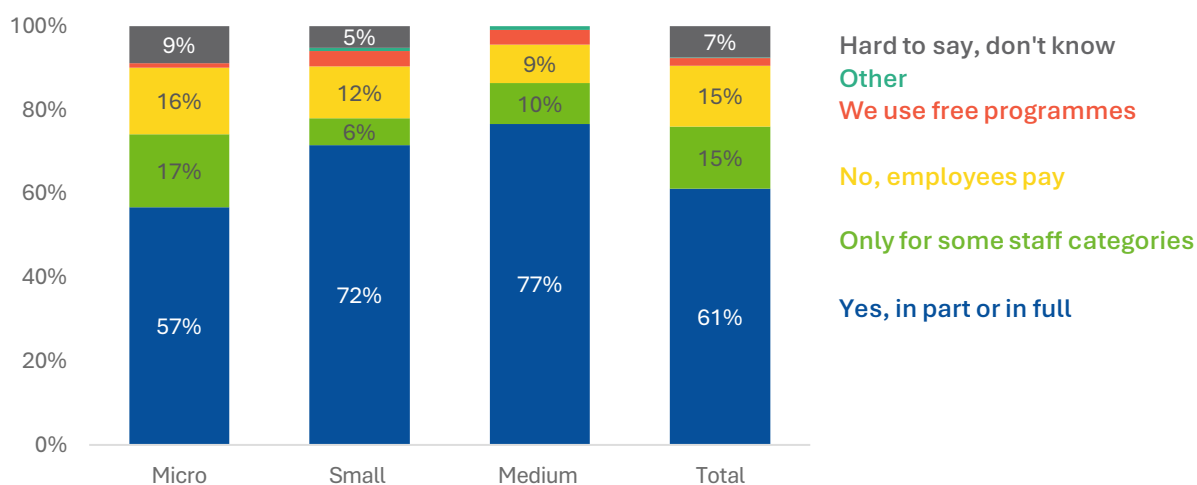
6.6.3 WHO PAYS FOR TRAINING

Most companies that sent employees for training at educational institutions cover the cost of that training in full or in part (61%). At the same time, willingness to invest in training is higher among small (72%) and medium-sized enterprises (77%).

Micro-enterprises more often than small ones finance training only for particular categories of employees (17% against 6%) and more often leave the cost to the employees themselves (16%). This probably reflects limited financial capacity for systematic support of training.

Figure 58. Share of companies that fully or partly cover employees' costs of training at education institutions, by company size and in total, % of companies

More than half of companies are willing to finance employee training in full or in part.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided training (n = 176). Number of respondents by company size: micro — 43, small — 42, medium — 60. Weighted percentages are shown.

Only 2% of the enterprises that ran training programmes last year said they rely on free training programmes. The in-depth interviews show that some employers are aware of the opportunities for free training at vocational and vocational-technical education institutions. They do not always know where such opportunities are available, however, particularly after institutions in their region have been closed or reorganised.

The approach to paying for employees' training courses depends, among other things, on their cost and on how mandatory they are. Full funding is more often applied to mandatory or critically necessary courses, or to courses whose cost is affordable for the company.

"If these are expensive programmes, we split the payment: half me, half the company. If they are small courses, the company pays in full." (Medium-sized business, logistics, South)

"He went on week-long courses. We paid for all the courses he needed." (Small/micro business, agriculture, South)

Training is not limited to short programmes. **Some companies are willing to pay for long-term study by employees, for example at a higher education institution, if they see benefit or prospects in it for themselves.**

"We will pay. We support this, we pay for everything we can at the institute for a person in whom we see prospects." (Medium-sized business, agriculture and manufacturing, East)

Support for employee training can be financial as well as organisational. Employers may adjust the work schedule, grant paid leave, or release an employee from some duties for the duration of the training. Such support may either complement payment for the training or serve as an alternative to it.

"We do not pay for the courses, but we adjust the work schedule around them. He pays himself." (Medium-sized business, logistics, Kyiv)

"He simply takes leave, and it is paid." (Medium-sized business, agriculture, East)

At the same time, training is not always integrated into working hours and can create an additional burden on employees. Employees sometimes combine study with their usual duties, shifting part of their work to the evening or outside working hours.

"They can study during the day... and work in the evening, get the job done. In IT people really do know how to work at night." (Small business, IT and telecommunications, Kyiv)

Industrial companies show greater involvement in financing employee training. The share of those covering the cost of training at education institutions in full or in part is 84%, against 61% overall and against 34% in trade. In trade, by contrast, employees mostly pay for training themselves (47% against 2% in industry).

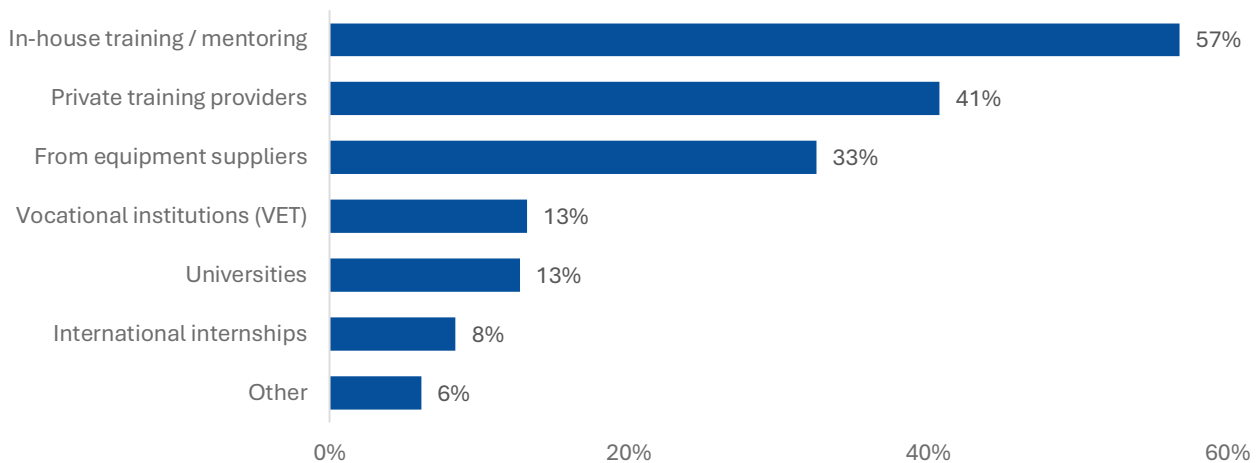
Among the regions, companies in Kyiv most often cover the costs in full (75%). The West, despite its general activity in involving external partners in training, has the highest share of companies that pass the cost on to employees themselves (28%).

6.7 FORMATS OF EMPLOYEE TRAINING

The most common training format is in-house training and mentoring: used by 57% of companies that trained employees over the past 12 months. Next in popularity come training at training companies (41%) and training from equipment or technology manufacturers or suppliers (33%). Training at education institutions (13%) remains uncommon, as do international internships (8%).

Figure 59. Staff training formats used by companies over the past year, % of companies

In-house training is the most common format of staff training.

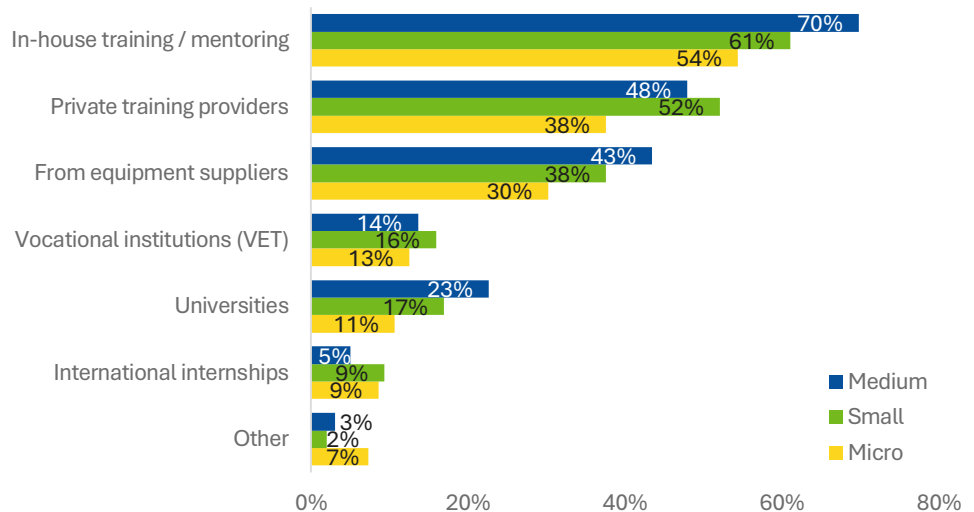


Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided training (n = 218). Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

As company size increases, the range of training formats used widens. Medium-sized companies use three formats more often at once: in-house training (70% against 57% overall), training at higher education institutions (23% against 13%), and training from equipment manufacturers (44% against 33%). Medium-sized and small companies turn to training companies more often than micro-businesses (48% and 52% against 38%).

Figure 60. Staff training formats used by companies over the past year, by company size, % of companies

Larger companies make more active use of both formal education and external technology providers.

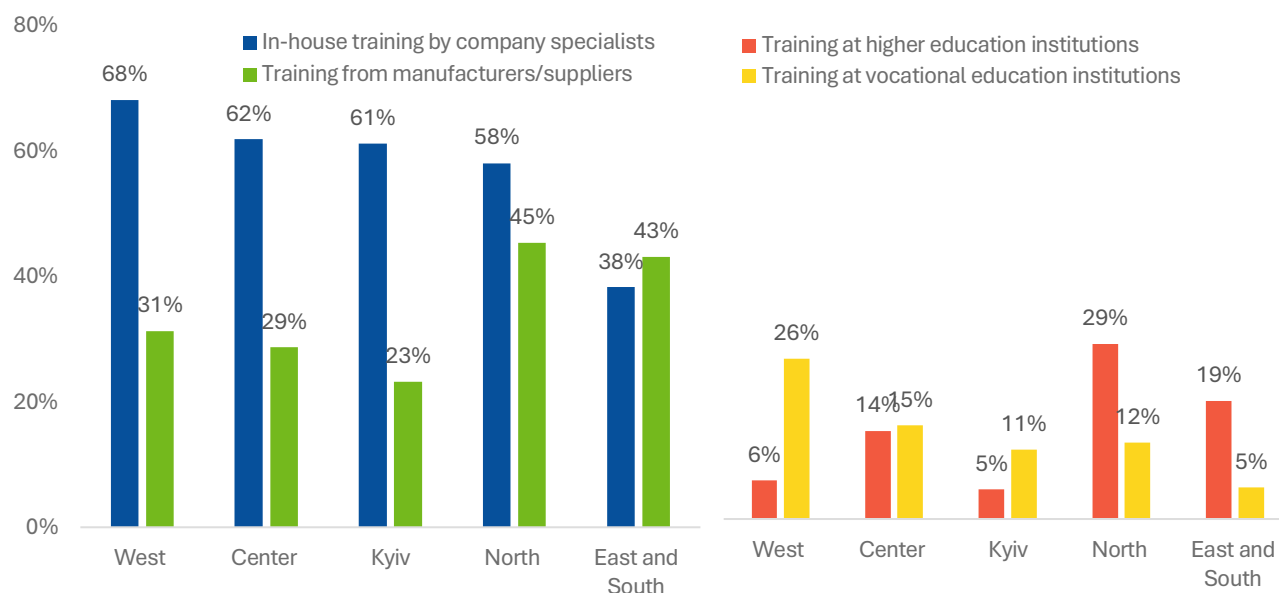


Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided training (n = 217). Number of respondents by size: micro — 57, small — 88, medium — 73. Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

The West leads in training at vocational education institutions (26% — higher than Kyiv, the East and the South). **The North leads in training at higher education institutions** (29% — above the overall figure, and two to four times higher than the West and Kyiv respectively), and also in training from

equipment manufacturers (45% — above Kyiv). **The East and the South have the lowest share for in-house training** (38%, significantly lower than overall and than the West, Kyiv and the Centre).

Figure 61. Staff training formats used by companies over the past year, by region, % of companies
Larger companies cooperate more actively with various education institutions



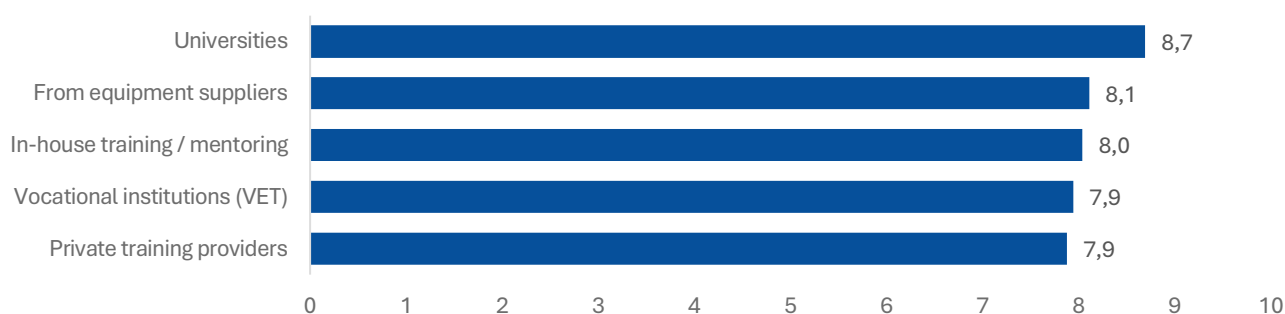
Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided training (n = 217). Number of respondents by region: West — 49, Centre — 42, Kyiv — 47, North — 39, East and South — 41. Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

Among industries, trade relies more on in-house training (82% against 55% in industry), while industry makes more active use of external providers.

Companies are largely satisfied with the training formats they use. The highest scores went to training at higher education institutions — 8.7 out of 10. Scores for the other formats show no substantial differences and stand at around 8 points.

Figure 62. Average satisfaction score for training formats among companies that used them (scale from 1 to 10)

Training at higher education institutions receives the highest score among those who used it.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — number of respondents by the company's experience of using each format: at higher education institutions — 36, from equipment manufacturers or suppliers — 87, in-house by company specialists — 134, at vocational education institutions — 31, at training companies / private providers — 98. Weighted average scores are shown on the scale: 1 — not at all satisfied, 10 — completely satisfied. The score for the option "International internships" is not shown because of the small number of observations.

6.8 EXPECTATIONS OF TRAINING PROGRAMMES

Small and medium-sized businesses expect flexibility and adaptation to their own needs from training programmes above all. Almost half of companies noted the importance of flexible training formats (49%) and of individual programmes tailored to the company's needs (48%).

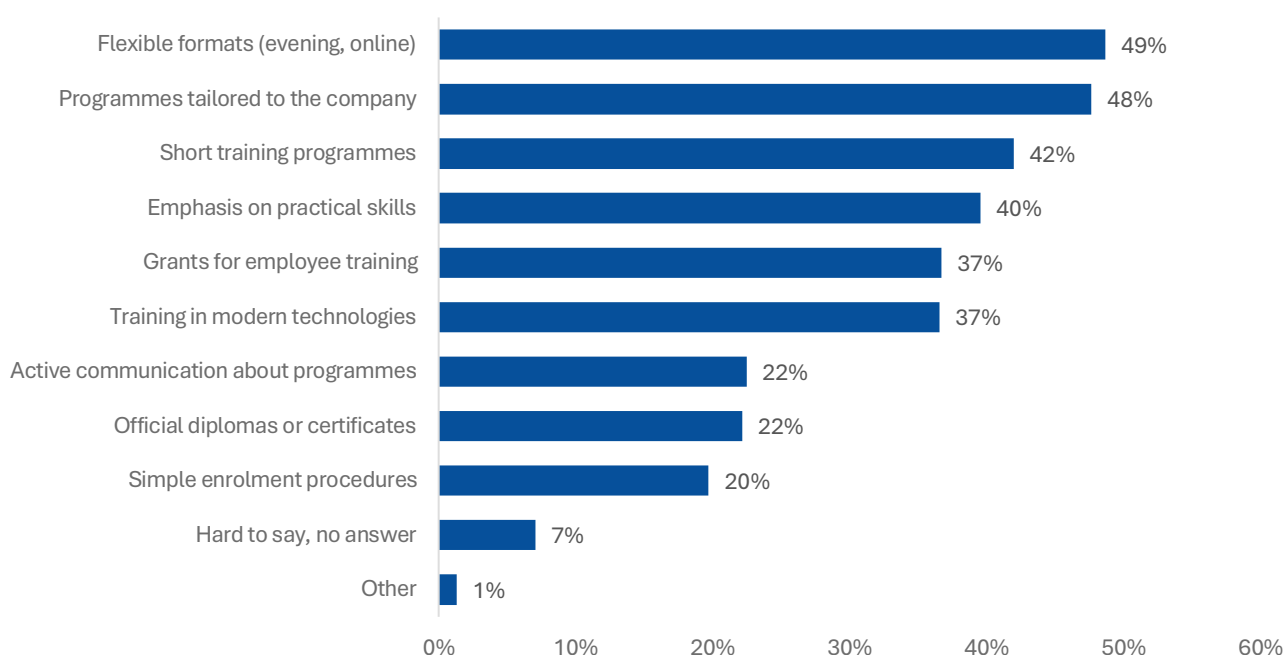
In programmes they value an emphasis on practical skills (40%) and short duration (42%), as well as training in modern technologies (37%).

More than a third of the companies surveyed would like to be able to receive grants to pay for training (37% each).

Less important are the provision of official documents and certificates of completion (22%), active communication about programmes (22%) and simplified enrolment procedures (20%).

Figure 63. Preferred formats of employee training programmes, % of companies

The most sought-after features of programmes are flexibility and an individual approach.



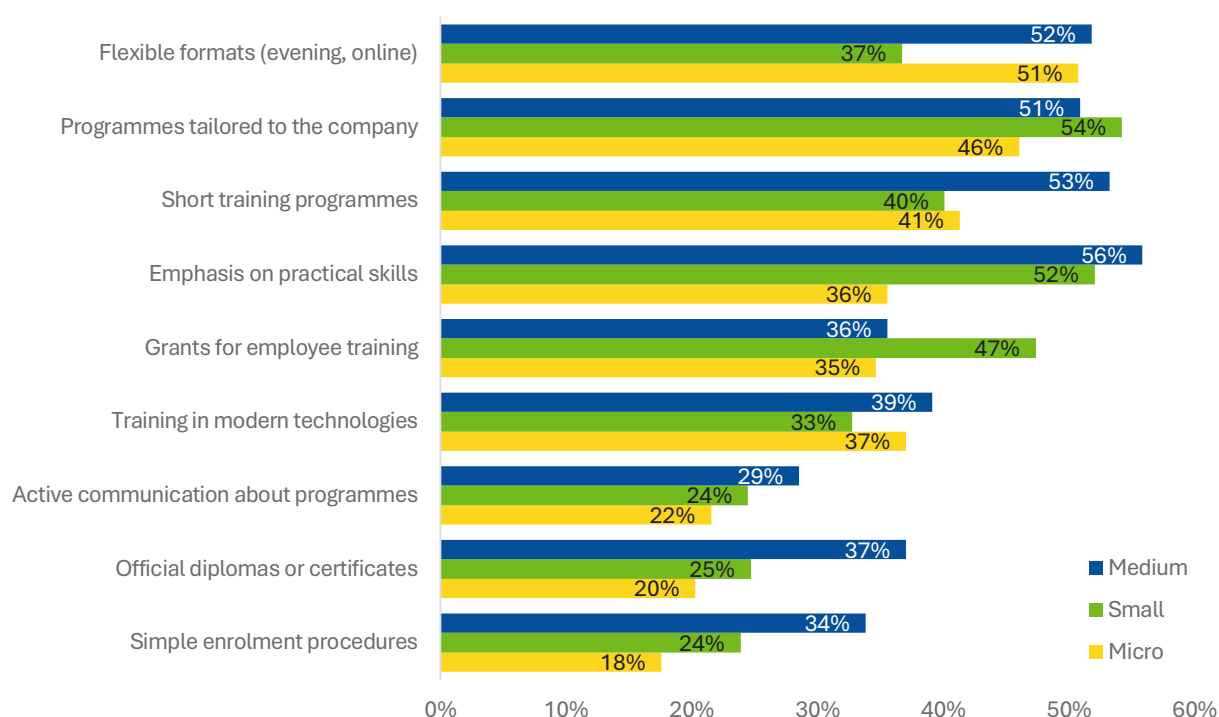
Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that provided or plan to provide training (n = 295). Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%. The answer options "Other" and "Hard to say, no answer" are not shown because of the small number of observations. Only options with at least 30 observations are included.

Medium-sized companies most often focus on short-duration training (53% against 42% overall), practical skills (56% against 40% overall), formalised learning outcomes (37% against 20% among micro-enterprises) and simple enrolment procedures (34% against 18% among micro-enterprises). Small and medium-sized companies are more oriented towards the practical component of training (52–56%) than micro-enterprises (36%).

Small companies show the lowest demand for flexibility relative to micro and medium-sized companies (37% against 51% and 52% respectively), but more often expect an emphasis on the availability of grants to pay for employee training (47% against 37% overall).

Figure 64. Preferred formats of employee training programmes, by company size, % of companies

Medium-sized companies have the greatest demand for practical, short and formalised training.

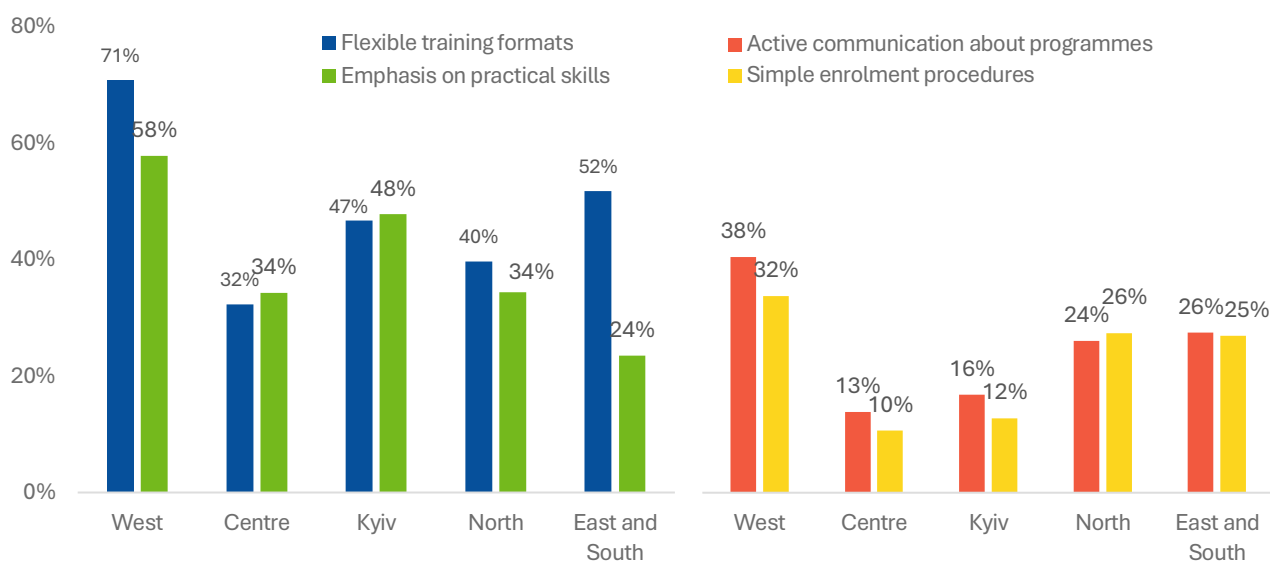


Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents – companies that provided training over the past year or plan to provide it next year (n = 295). Number of respondents by size: micro – 89, small – 122, medium – 84. Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

Regional differences in what is expected of training are most pronounced between the West and the Centre. In the West, companies more often expect flexible formats (71%), a practical orientation (58%), active communication (38%), simple enrolment procedures (32%) and grants to pay for training (53%). The Centre, by contrast, shows the lowest demand for a number of these features – flexible formats are noted by 32% of companies, grants by 22% and simple procedures by 10%.

Figure 65. Preferred formats of employee training programmes, by company size, % of companies

Medium-sized companies have the greatest demand for practical, short and formalised training.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents – companies that provided training over the past year or plan to provide it next year (n = 295). Number of respondents by region: West – 65, Centre – 59, Kyiv – 60, North – 53, East and South – 58. Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

Industry is also consistently more demanding than trade. For industry, noticeably more important are flexible formats (42% against 22% in trade), an emphasis on practical skills (56% against 38%), official diplomas or certificates (28% against 14%), and especially grants to pay for training – 48% against 18%.

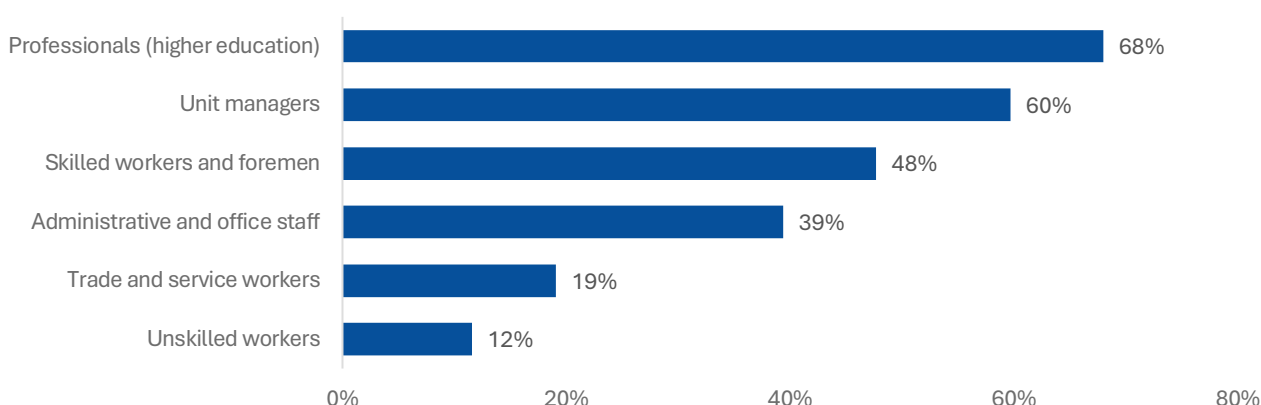
6.9 THE NEED FOR FORMAL EDUCATION CERTIFICATES

For many SMEs, formal confirmation of employees' education and skills is not mandatory. The requirement for education certificates is most widespread for unit managers and for professionals and specialists with higher education. More than half of companies where these categories of employees are present consider them mandatory – 60% and 68% respectively.

Almost half of companies also require the relevant certificates for skilled workers, equipment operators, foremen and team leaders (48%), while for administrative and office staff this requirement is somewhat less common (39%). Education certificates are least often mandatory for trade and service workers (19%) and for auxiliary and unskilled workers (12%).

Figure 66. Share of companies that require education certificates for different categories of employee, % of companies employing the respective category

Formal education requirements more often apply to positions requiring higher qualifications.



Source: Info Sapiens survey commissioned by CES, 2026. Note: The base for each category of employee is companies that employ the respective category of staff: unit managers (n = 251), professionals and specialists with higher education (n = 376), administrative and office staff, clerical employees (n = 297), skilled workers, equipment operators, foremen, team leaders (n = 304), trade and service workers (n = 138), auxiliary and unskilled workers (n = 244). Weighted percentages are shown.

For companies, practical skills and the ability to do the job can matter more than formal education or documented proof of qualifications. Employers are willing to hire workers without relevant formal education if they have the necessary practical skills or can demonstrate them directly on the job or during an internship.

"Education need not be compulsory. The main thing is that the person is qualified in practice. They have to know the machinery and be able to operate it." (Small business, agriculture, West)

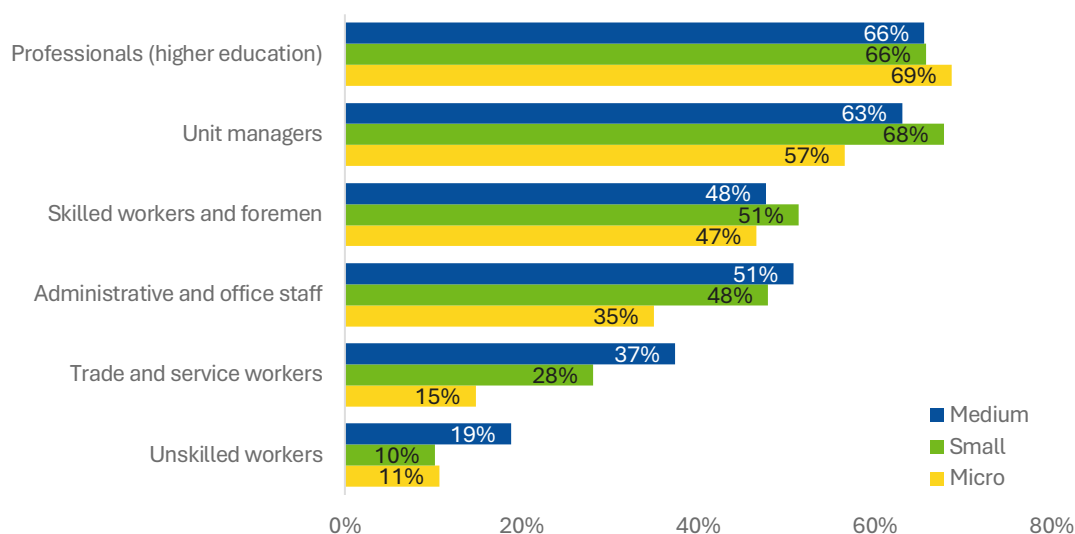
"There are self-taught cooks with no formal training. They came, did a trial period, they like it — they work, and education is not compulsory." (Small business, restaurant sector, Kyiv)

"A 'piece of paper' does not matter much these days. Because, unfortunately, over the past 25–30 years these pieces of paper have been bought and sold left and right. The main thing is that the person is decent and delivers quality work." (Small business, construction, East)

As company size increases, formal education requirements for certain categories of employee become stricter. Medium-sized companies more often require education certificates from administrative and office staff (51% against 35% in micro-enterprises) and from trade and service workers (37% against 15%). For skilled workers there are no statistically significant differences by company size.

Figure 67. Share of companies that require education certificates for different categories of employee, by size, % of companies employing the respective category

Formal education requirements are more common in medium-sized companies.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents – companies where the respective category of employee is present. Number of respondents by category and company size: unit managers – micro 52, small 102, medium 97; professionals and specialists with higher education – micro 111, small 159, medium 106; administrative and office staff – micro 63, small 130, medium 104; skilled workers, equipment operators – micro 68, small 141, medium 95; trade and service workers – micro 38, small 54, medium 46; auxiliary and unskilled workers – micro 59, small 100, medium 85. Weighted percentages are shown.

The Centre shows lower formal education requirements than most regions. Education certificates are required here by only 39% of companies for unit managers, 56% for professionals with higher education, 5% for trade and service workers and 4% for auxiliary and unskilled workers. The North, by contrast, stands out for more formalised requirements.

No significant differences in requirements for education certificates were found across industries.

At the same time, in 38% of companies education certificates are not mandatory for any category of employee. Formal education requirements are least widespread among micro-enterprises – in 40% of them education certificates are not mandatory for any category of employee. Among small enterprises the figure is only 28%.

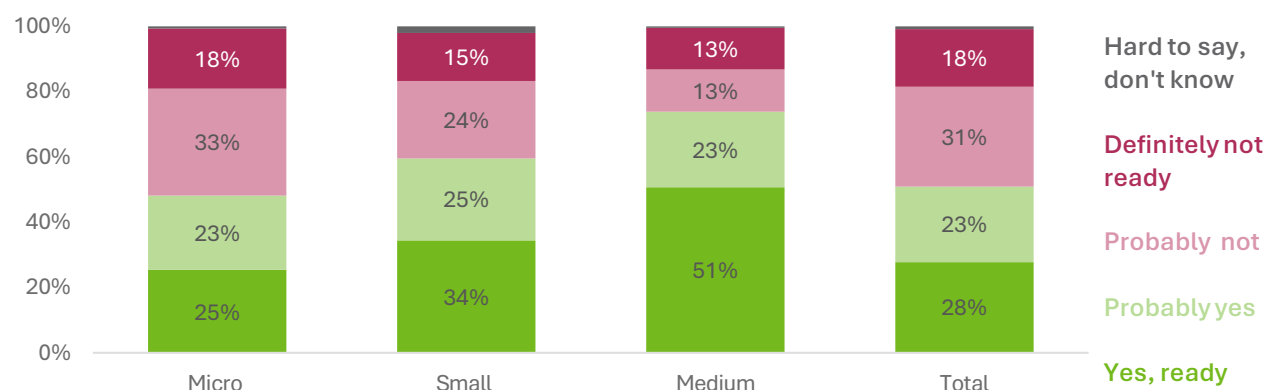
7 READINESS TO TAKE PART IN TRANSFORMING THE VOCATIONAL EDUCATION SYSTEM

7.1 READINESS TO COOPERATE WITH LOCAL AUTHORITIES ON VOCATIONAL EDUCATION

About half of the companies surveyed (51%) view the idea of cooperating with education institutions and local authorities to improve the quality of vocational education positively. Of these, 28% are unequivocally ready for such cooperation, and a further 23% are somewhat ready. At the same time, almost half of companies (49%) are not ready to cooperate: 31% answered "probably not" and 18% "definitely not ready".

Figure 68. Companies' readiness to cooperate with educational institutions and local authorities to improve the quality of vocational education in their region, by enterprise size and in total, % of companies

About half of companies are ready or somewhat ready to cooperate with local authorities and educational institutions.



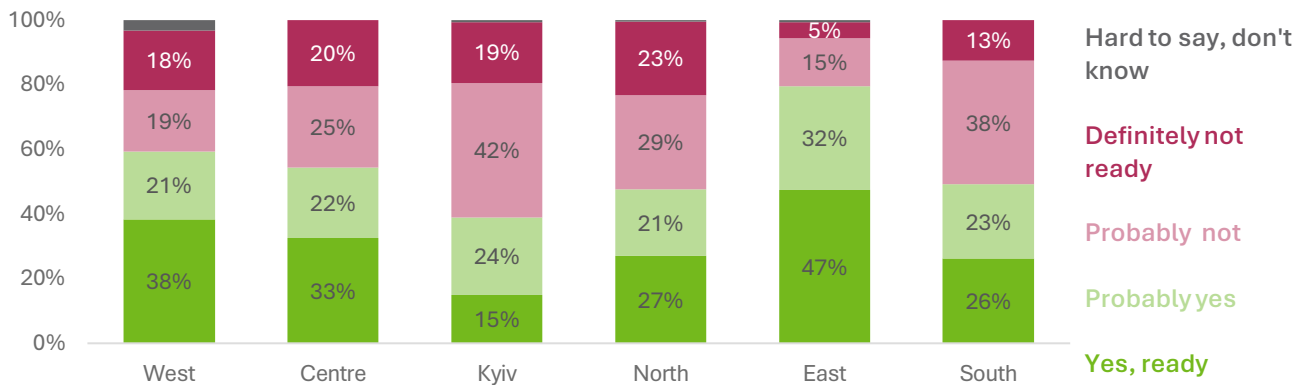
Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — all companies surveyed (n = 556). Number of respondents by company size: micro — 202, small — 228, medium — 126. Weighted percentages are shown.

Readiness for such engagement increases with company size. 51% of medium-sized companies are unequivocally ready to cooperate against 25% of micro-enterprises.

Companies registered in the East most often declare full readiness to cooperate with education institutions and local authorities to improve the quality of vocational education (47%), ahead of the West (38%). In Kyiv, by contrast, firm readiness to cooperate with the authorities is the lowest (15%), and 60% of companies there are probably or definitely not ready to cooperate.

Figure 69. Companies' readiness to cooperate with education institutions and local authorities to improve the quality of vocational education in their region, by region, % of companies

Companies in the East are the most open to cooperation, and those in Kyiv the least.

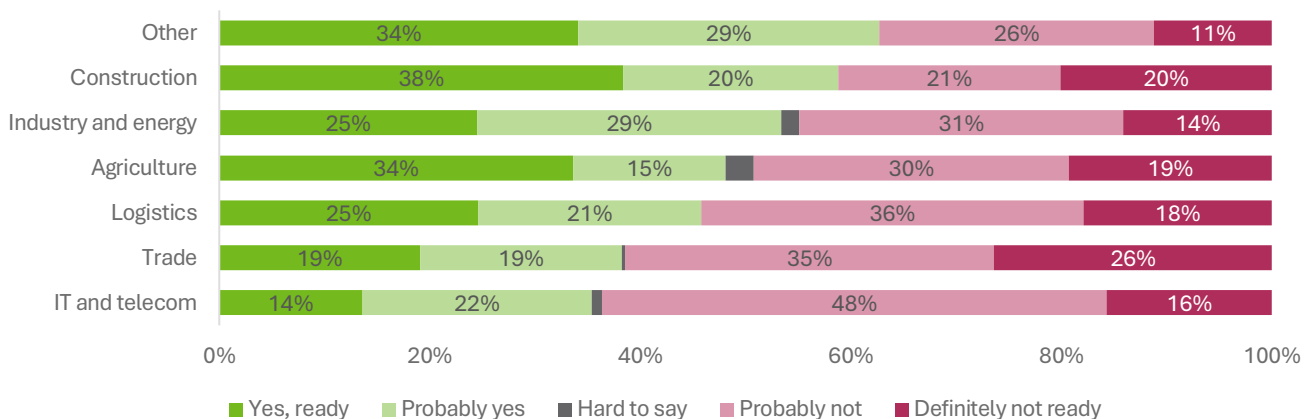


Source: Info Sapiens survey commissioned by CES, 2026. Note: Base — all respondents (n = 556). Number of respondents by region: West — 118, Centre — 125, Kyiv — 116, North — 96, East — 40, South — 61. Weighted percentages are shown.

The most willing to cooperate are enterprises in services, construction, industry and energy, and agriculture. Enterprises in trade and in IT and telecommunications, by contrast, are less often ready for such cooperation.

Figure 70. Companies' readiness to cooperate with education institutions and local authorities to improve the quality of vocational education in their region, by industry, % of companies

Enterprises in trade and in IT and telecommunications are less often ready to cooperate.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base — all respondents (n = 556). Number of respondents by industry: industry and energy — 144, wholesale and retail trade — 120, agriculture — 62, construction — 53, logistics — 38, information and telecommunications — 32, other — 105. Weighted percentages are shown.

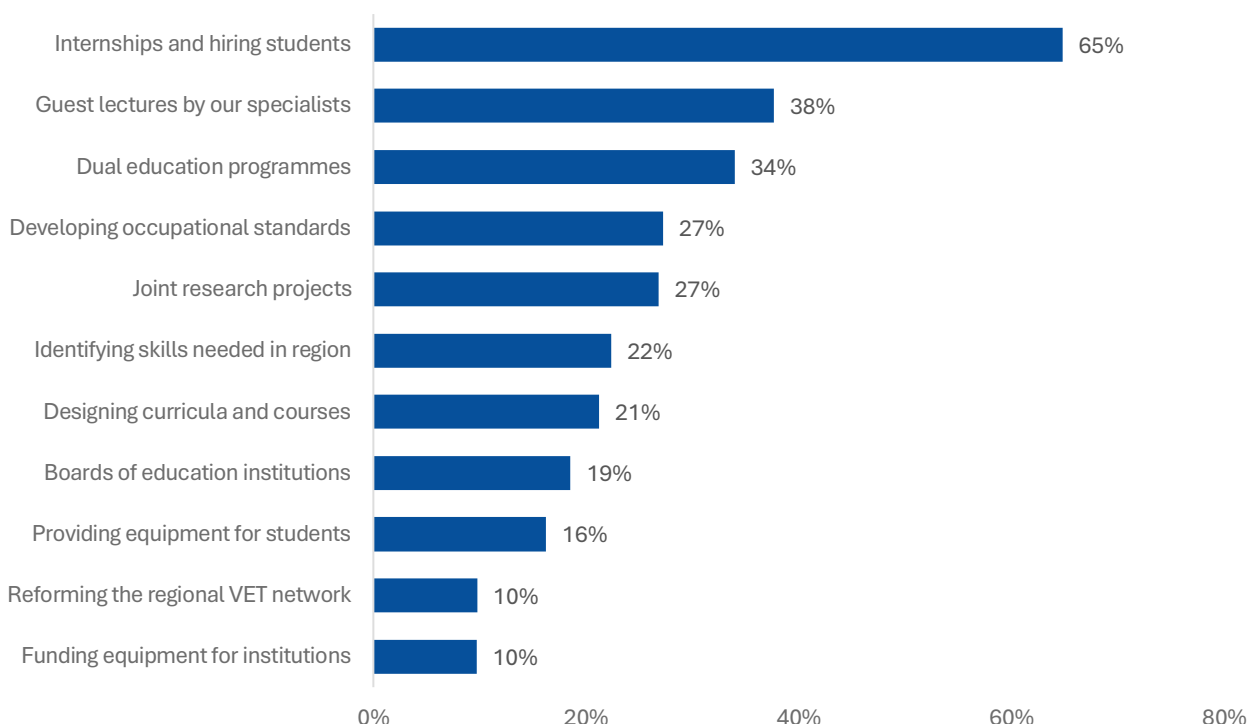
Other important factors are the presence of skilled workers among the company's employees and experience of training employees at vocational educational institutions: such companies more often express readiness to cooperate.

Companies are most often ready to cooperate with vocational educational institutions on training and employing students (65%). More than a third of companies are also ready to take part in guest lectures (38%) and dual education programmes (34%).

Readiness to take part in reforming the vocational education system is noticeably lower. About a quarter of companies are ready to take part in developing occupational standards (27%), in research projects (27%), in identifying the occupations and skills needed in their region (22%) and in designing curricula (21%). Companies are least often ready to provide financial support for purchasing equipment (10%) or to take part in reforming the regional vocational education network (10%).

Figure 71. Areas of cooperation in which companies are ready to take part in order to improve the quality of vocational education, % of companies

Companies are most often ready to train and employ students.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — companies that are ready or somewhat ready to cooperate with education institutions and local authorities to improve the quality of vocational education in their region (n = 329). Weighted percentages are shown. Several answer options could be selected, so the percentages sum to more than 100%.

Small and medium-sized companies are more ready than micro-businesses to take part in improving the quality of vocational education in their region. Medium-sized companies are more ready than micro-enterprises to engage in the following formats: internships (79% against 63%), providing company equipment (29% against 13%), identifying skills needs in their region (35% against 20%) and developing occupational standards (36% against 26%). Small companies are also more active than micro-businesses in designing curricula, sitting on supervisory boards and reforming the VET network.

The East, despite the highest overall readiness to cooperate, shows the lowest figures for certain practical formats. Only 3% of companies are ready to take part in designing curricula, 6% in dual education and 5% in identifying skills needs.

Kyiv stands out for a focus on expert involvement — guest lectures (57%) and the development of occupational standards (41%). The North has the highest readiness for dual education (46%), while the West leads in participation in supervisory and advisory boards (28%).

The South combines the lowest readiness to finance equipment for education institutions (2%) with relatively high readiness to join research projects (40%). The Centre has the lowest readiness to provide its own equipment for training students (9%).

Industry is the most active in systemic, research-oriented formats. In particular, the sector is more interested in research projects (42%, the highest among industries) and in reforming the VET network (17%).

Construction is oriented towards practical results. The industry shows the highest readiness for dual education (50%) and internships (80%), but at the same time the lowest for designing curricula (4%, the lowest of all industries).

Trade shows consistently the lowest engagement. The industry is less active across all formats, including the lowest readiness to identify skills needs (5% against 22–30% in other industries).

Agriculture stands out for its readiness to finance equipment for educational institutions (21%, above industry and the "other" industries, which are predominantly services).

8 THE ROLE OF BUSINESS ASSOCIATIONS AND BUSINESS SUPPORT PROGRAMMES

8.1 PARTICIPATION IN BUSINESS ASSOCIATIONS AND BUSINESS SUPPORT PROGRAMMES

We examined the role of external support in the development of small and medium-sized businesses — in particular, how far membership of business associations and participation in business support programmes can help companies grow.

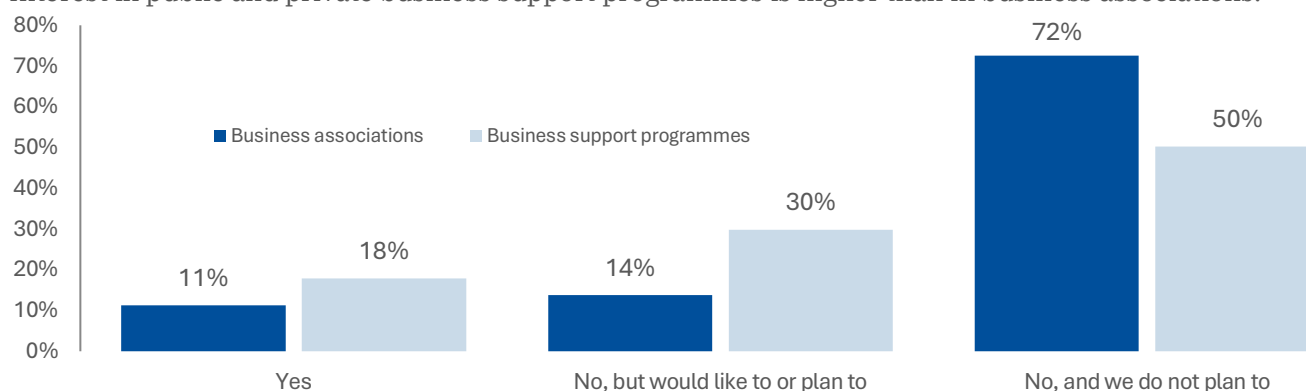
The overwhelming majority of Ukrainian businesses remain outside formal associations: 72% of companies do not take part in them and do not plan to. Only 11% are actual members of associations, and a further 14% would like to join or plan to. The vast majority of companies operate outside networks of collective interest representation.

Interest in business support programmes (grant, training, advisory) is substantially higher than in associations. Half of companies have not taken part in such programmes and do not plan to. At the same time, 18% have actual experience of participation and a further 30% plan to join — the combined potential and actual interest is almost twice as high as the equivalent figure for business associations.

Among companies that have taken part in business support programmes, 13% are members of business associations and a further 18% plan to join, while 65% do not plan to. Among those planning to take part in support programmes, 18% are already members and 24% plan to join.

Figure 72. Participation in business associations and business support programmes, % of companies

Interest in public and private business support programmes is higher than in business associations.

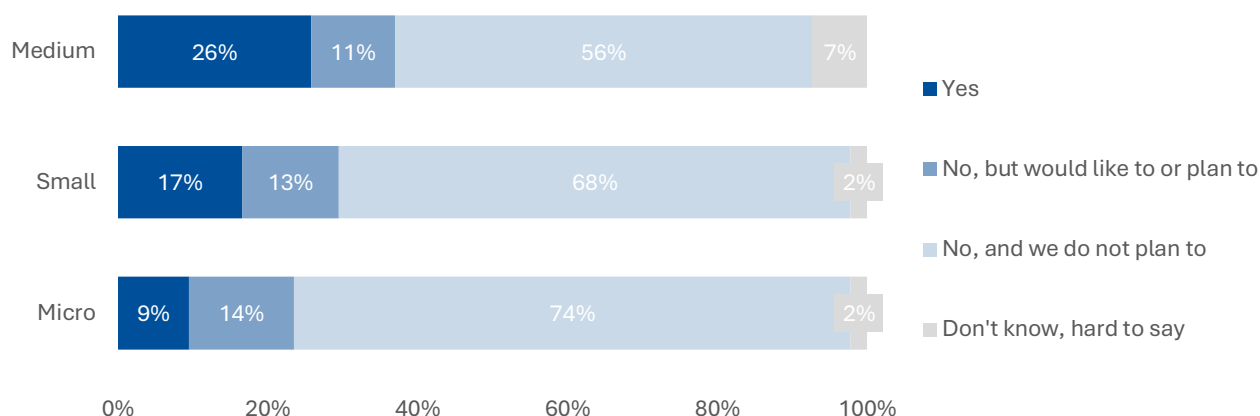


Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. 2.5% of respondents chose "hard to say".

The larger the company, the more actively it is engaged in networking. While among micro-enterprises only 9% are members of associations (and 74% categorically do not plan to be), among small businesses the share of members rises to 17%, and among medium-sized companies it reaches 26%.

Figure 73. Participation in business associations by enterprise size, %

The larger the company, the more actively it is engaged in networking.



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by size: Medium – 126, small – 228, micro – 202. Weighted percentages are shown.

By industry, the highest participation is shown by transport and logistics companies (21% of the industry). Industry and wholesale trade, by contrast, show participation below 9%, while the share of "No, and we do not plan to" answers in these industries reaches 75–89%. The highest interest in joining associations is in construction (30%).

The largest share of companies that are members of business associations is in Kyiv (20%), and the smallest in the central regions (6%). Participation in support programmes does not depend on a company's regional location.

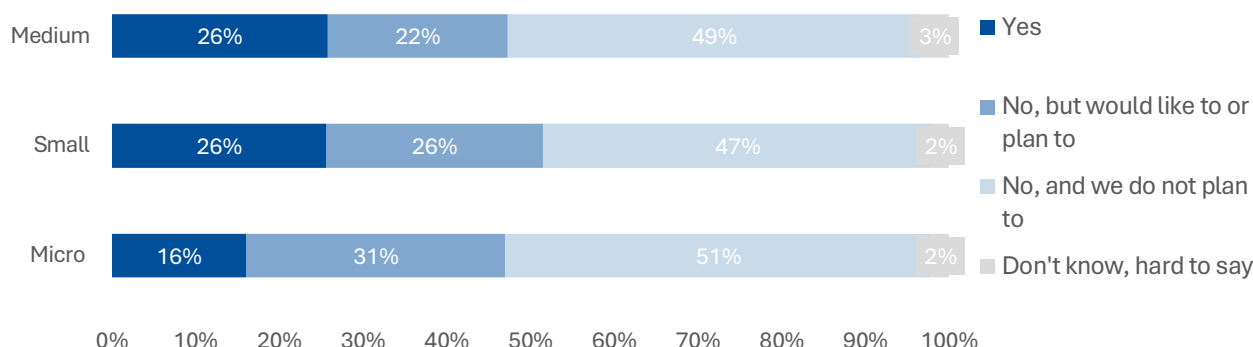
Actual participation in support programmes increases with company size – just as membership of business associations does, although the gap here is smaller. Among micro-enterprises, only 16% of companies have actual experience of participation, while among small and medium-sized businesses

this figure rises to 26%. The main jump occurs precisely between micro and small business, while the difference between small and medium-sized business is minimal.

At the same time, it is micro-business that shows the highest level of "pent-up demand": 31% of micro-enterprises would like to join or plan to join support programmes — the highest figure among all three groups (against 26% for small business and 22% for medium-sized).

Figure 74. Participation in support programmes by enterprise size, %

Medium-sized and small businesses take part in support programmes more often.



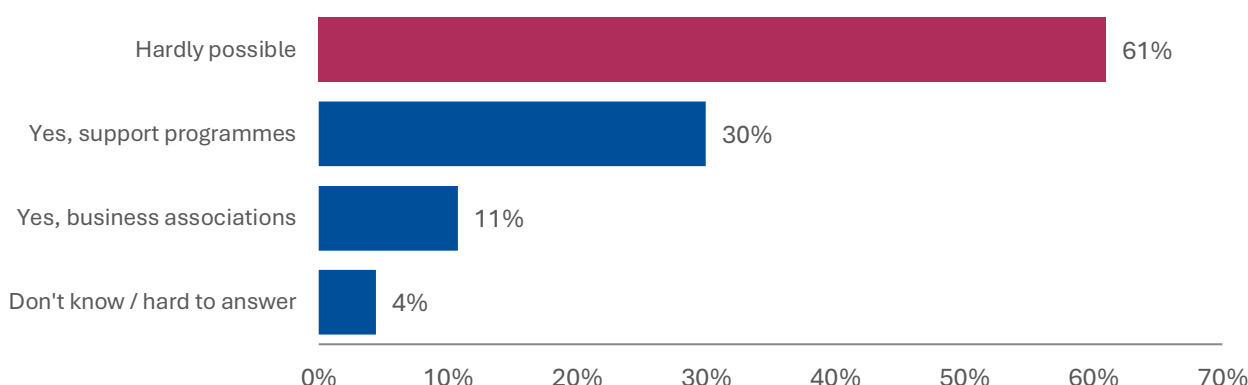
Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by size: Medium — 126, small — 228, micro — 202. Weighted percentages are shown.

Participation in support programmes does not depend on where companies are located.

Respondents most often believe that neither associations nor support programmes will help their company grow without hiring new employees (this option was chosen by 61% of those surveyed).

Figure 75. Which instruments help business grow without hiring, % of respondents

Targeted support programmes are considered more useful than association membership.



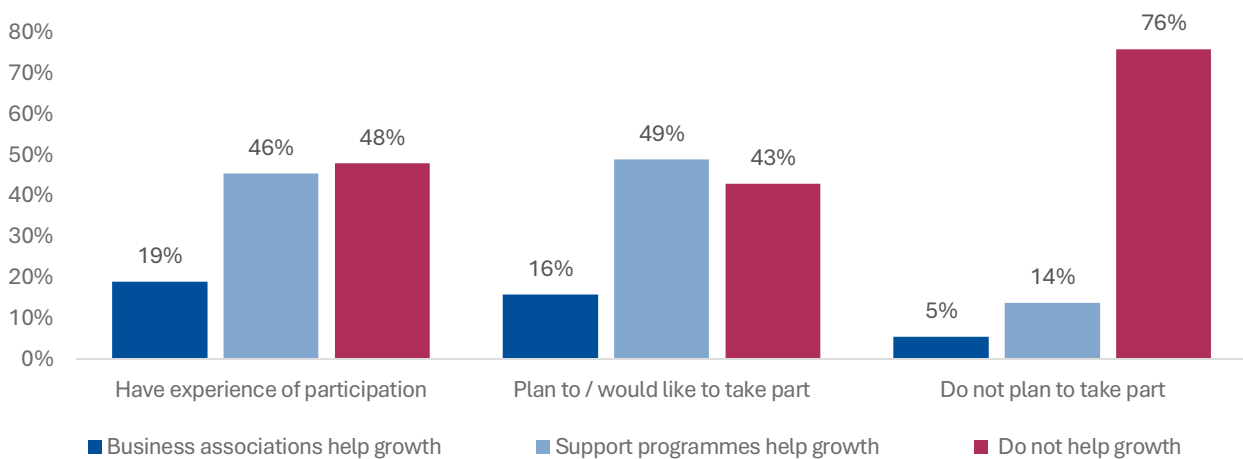
Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556.

Companies rate the potential of targeted support programmes far higher than membership of business associations: 30% of respondents consider support programmes an effective instrument for growing the business without increasing headcount, while only 11% say the same of membership of business associations.

Companies that already have experience of taking part in business associations or support programmes are considerably more likely to see in them an opportunity for growth without increasing headcount. This may be linked to positive practical experience of such participation. Wider involvement of companies in business networks and support programmes may therefore be one of the instruments for raising their productivity and capacity to grow amid a labour shortage.

Figure 76. Perceived usefulness of business associations and support programmes, by experience of participation in support programmes, %

Businesses that already have experience of such programmes are more inclined to consider them useful



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by experience of participation: have experience – 122, plan to take part – 151, do not plan to – 271.

Perceptions of the usefulness of associations and support programmes also differ by industry. The greatest belief in the usefulness of business associations is shown by companies in IT and telecommunications (22%), and the most sceptical attitude by enterprises in trade (3%).

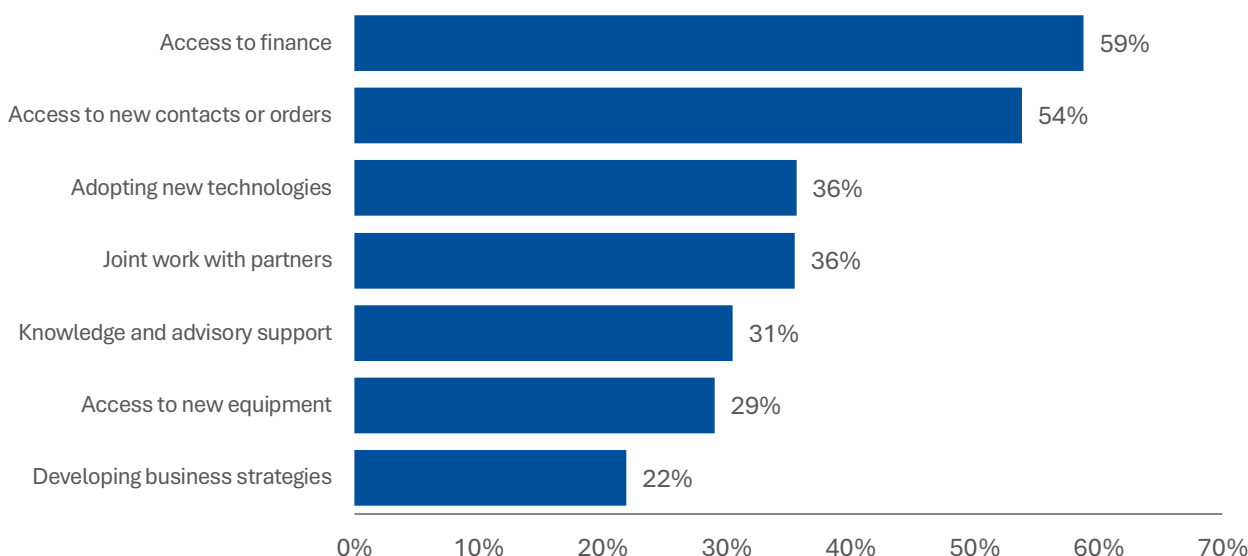
Companies that see benefit in taking part in such initiatives name access to direct financing and investment (59%) and to new contacts, clients or orders (54%) as the main drivers of their growth.

The second most significant group of mechanisms is support for technological transformation, although it lags behind the material channels by almost half: support in adopting new technologies is noted by 36% of companies, as is specialisation and joint work with partners.

The least sought-after mechanisms are strategic ones: only 22% of companies value the development or implementation of business strategies with the help of associations or programmes.

Figure 77. Mechanisms through which participation in business associations or support programmes can help growth without hiring, % of companies

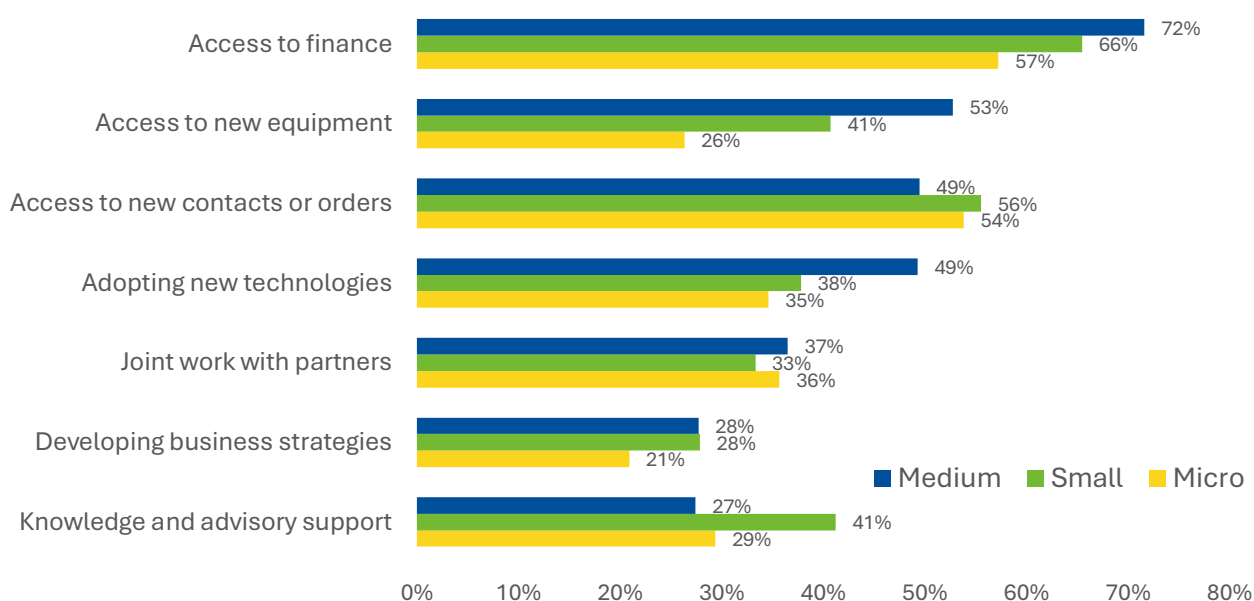
Business values material support most — access to finance and to new contacts.



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=176.

Access to finance and to new orders and partnerships is important for companies of all sizes. At the same time, the value of access to new equipment increases with company size: demand for this benefit is 26% among micro-enterprises and 53% among medium-sized companies. Support in adopting new technologies is also one of the most important factors for medium-sized businesses (49%), while access to knowledge and advisory support is of greatest interest to small business (41%).

Figure 78. Mechanisms through which participation in business associations or support programmes can help growth without hiring, by company size, %



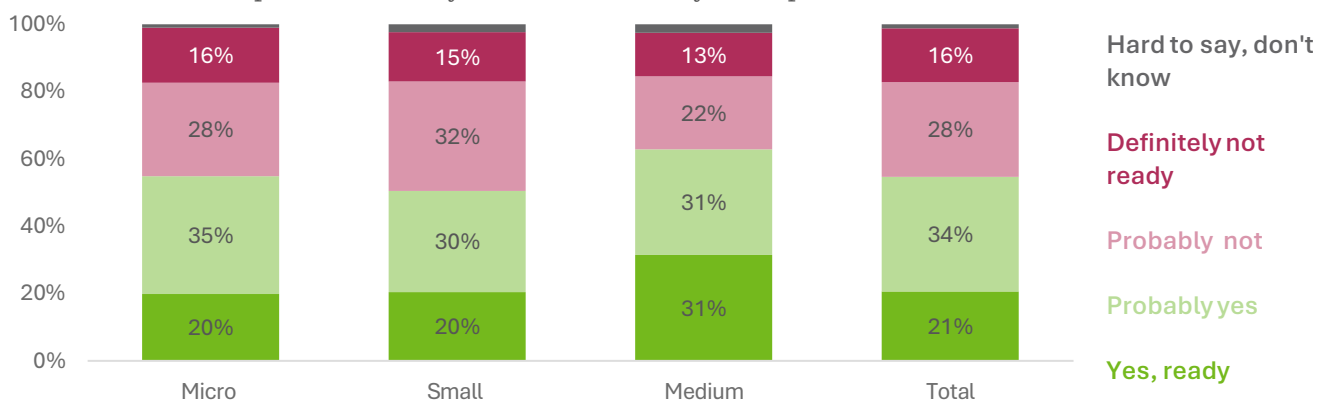
Source: Info Sapiens survey commissioned by CES, 2026. Note: n=176. Number of respondents by size: Medium — 41, small — 61, micro — 74. Weighted percentages are shown.

8.2 READINESS TO COOPERATE WITH BUSINESS ASSOCIATIONS TO IMPROVE VOCATIONAL EDUCATION

More than half of companies are ready to cooperate with business associations to improve the quality of vocational education: 21% are definitely ready and a further 34% are somewhat ready. At the same time, 16% of companies are not ready for such cooperation at all.

Figure 79. Companies' readiness to cooperate with business associations and business groupings to improve the quality of vocational education, by enterprise size and in total, % of companies

More than half of companies are ready or somewhat ready to cooperate with business associations.



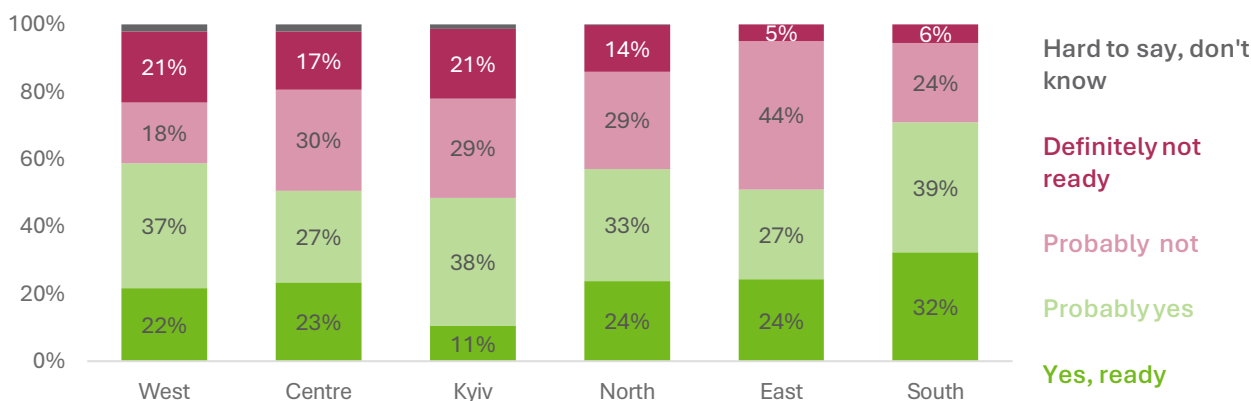
Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents — all companies surveyed (n = 556). Number of respondents by company size: micro — 202, small — 228, medium — 126. Weighted percentages are shown.

Readiness to cooperate with business associations increases with company size. 31% of medium-sized companies are ready for such cooperation, against 20% of micro and 20% of small firms.

The South shows the highest readiness — 32% of companies answered "yes" — while the East has the highest share of sceptical answers: 44% said "probably not". Kyiv stands out for the lowest readiness — only 11% of companies are already ready to cooperate with business associations on improving vocational education.

Figure 80. Companies' readiness to cooperate with business associations and business groupings to improve the quality of vocational education, by region, % of companies

Companies in the South are the most open to cooperation, and those in Kyiv the least.

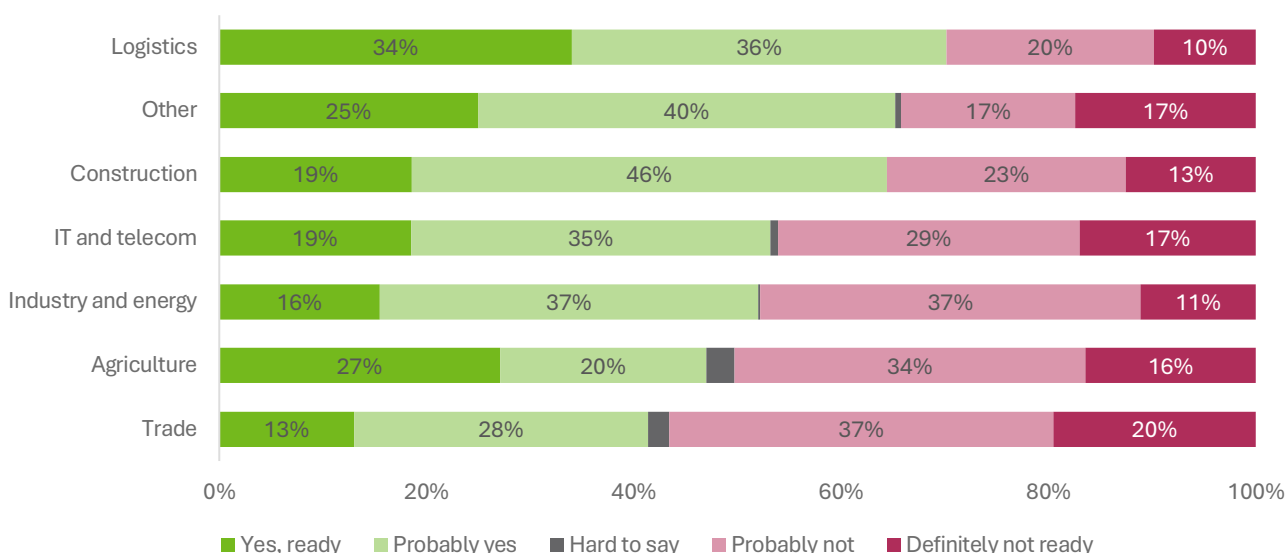


Source: Info Sapiens survey commissioned by CES, 2026. Note: Base — all respondents (n = 556). Number of respondents by region: West — 118, Centre — 125, Kyiv — 116, North — 96, East — 40, South — 61. Weighted percentages are shown.

The most willing to cooperate with business associations are enterprises in logistics, services and construction. More than 64% of companies there are ready for such cooperation. Enterprises in trade, agriculture and industry, by contrast, are less often ready for such cooperation.

Figure 81. Companies' readiness to cooperate with business associations and business groupings to improve the quality of vocational education, by industry, % of companies

Logistics leads in readiness to cooperate with business associations.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base — all respondents (n = 556). Number of respondents by industry: industry and energy — 144, wholesale and retail trade — 120, agriculture — 62, construction — 53, logistics — 38, information and telecommunications — 32, other — 105. Weighted percentages are shown.

Companies that are already members of business associations are somewhat more likely to show readiness to cooperate with business groupings to improve the quality of vocational education. The share of those answering "yes, ready" is 31% against 21% among companies overall.

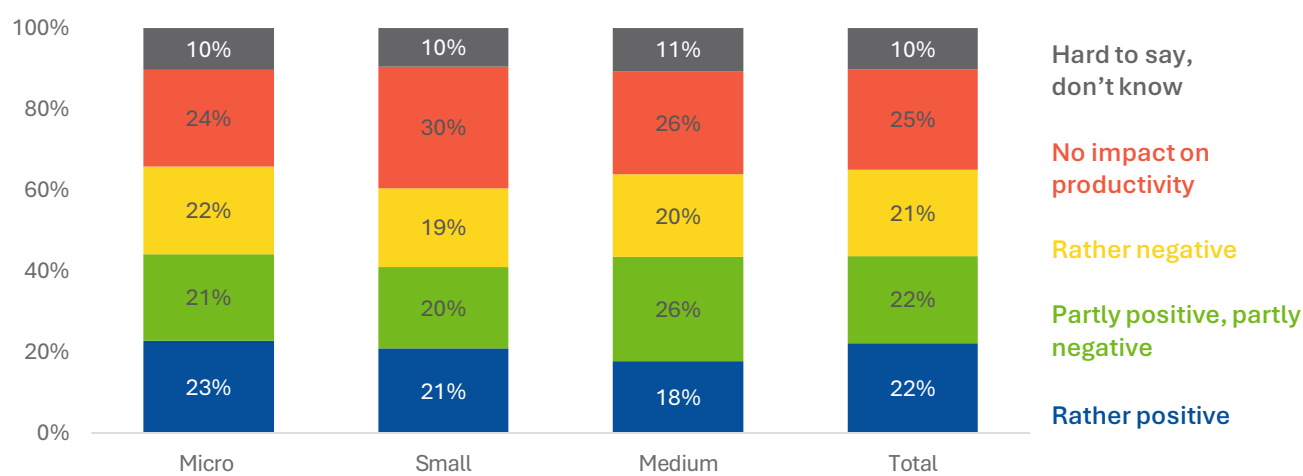
9 THE IMPACT OF EU INTEGRATION ON PRODUCTIVITY AND SKILLS

Most of the companies surveyed (65%) believe that the harmonisation of Ukrainian legislation with EU legislation has an impact on their productivity. Almost a quarter of respondents (25%), by contrast, are convinced that there is no such impact, and 10% were unable to assess it.

Perceptions of the impact of harmonising Ukrainian legislation with EU legislation on company productivity are mixed. Almost equal shares of respondents assess this impact as rather positive (22%), partly positive and partly negative (22%), or rather negative (21%). No significant differences are observed in the answers of companies of different sizes.

Figure 82. Assessment of the impact of harmonising Ukrainian legislation with EU legislation, % of companies

Most companies believe that harmonisation with EU legislation affects productivity.



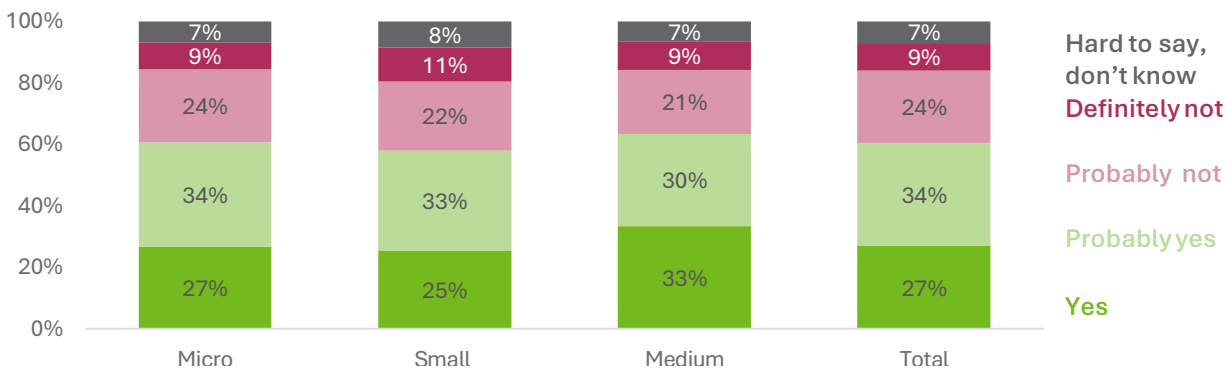
Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents – all companies surveyed (n = 556). Number of respondents by company size: micro – 202, small – 228, medium – 126.

Companies in the East are less likely to see such an impact (51% see none), as are companies operating in the Centre (35%) and agricultural enterprises (35%).

Most companies believe that the process of harmonising Ukrainian legislation with EU legislation creates a need for new employee skills – 60% answer in the affirmative. At the same time, almost a third of respondents disagree with this statement, and 7% were unable to decide. No significant differences were found between micro, small and medium-sized enterprises.

Figure 83. Need for new employee skills as a result of implementing EU legislation in Ukraine, % of companies

More than half of companies believe that harmonisation with EU legislation creates a need for new knowledge.



Source: Info Sapiens survey commissioned by CES, 2026. Note: Base of respondents – all companies surveyed (n = 556). Number of respondents by company size: micro – 202, small – 228, medium – 126.

Adapting to European requirements also creates a need for employee training, as some respondents noted during the in-depth interviews.

"There are European requirements under which we cannot work with certain products. That is precisely why we attend this training." (Small/micro business, agriculture, South)

The need for new skills arises most often in agricultural enterprises (71%) and in companies located in the West (71%). It arises least often in industrial and energy enterprises (54%), trade enterprises (49%) and companies operating in the North (51%).

10 ANNEXES

10.1 DISTRIBUTION OF OBLASTS BY MACRO-REGION

To analyse regional differences, Ukraine's oblasts were combined into larger regions.

The number of enterprises surveyed in individual oblasts is insufficient for a reliable comparison of results at oblast level. Combining oblasts into regions makes it possible to obtain more robust estimates of regional differences. At the same time, the results of such analysis should be interpreted as characteristics of the regions as a whole, not of the individual oblasts within them.

Macro-region	Oblasts
West	Volyn, Zakarpattia, Ivano-Frankivsk, Lviv, Rivne, Ternopil, Chernivtsi
Centre	Vinnytsia, Dnipropetrovsk, Kirovohrad, Poltava, Khmelnytskyi, Cherkasy
Kyiv	City of Kyiv
North	Zhytomyr, Kyiv, Sumy, Chernihiv
East	Donetsk, Luhansk, Kharkiv
South	Zaporizhzhia, Mykolaiv, Odesa, Kherson

10.2 SAMPLE DESCRIPTION OF THE QUALITATIVE SURVEY

As part of the qualitative component of the study, were conducted 11 in-depth interview's with representatives of 6 small and micro-enterprises (up to 49 employees) and 5 medium-sized enterprises (50-250 employees). The sample included companies from four sectors of the economy: agriculture (3 companies), manufacturing and construction (3 companies), transport and logistics (2 companies), and services and trade (3 companies). To ensure a diversity of experience, at least two companies were selected from the city of Kyiv and from the East, West and South macro-regions, and one company each from the Centre and the North.

	Agri-culture	Manufacturing / Construction	Transport / Logistics	Services / Trade	Total by size
Small	2	2	0	2	6
Medium	1	1	2	1	5
Total by industry	3	3	2	3	

The sample was formed purposively, taking into account companies' approaches to automation and raising productivity. In particular, the study included businesses that: (1) had already implemented the relevant tools over the past three years; (2) are considering this possibility; (3) do not plan to implement them. This made it possible to cover a wider spectrum of positions and experience, from active innovators to more conservative companies.

The results of the qualitative study are not statistically representative, since the sample is small and was formed purposively. They are used to identify the main approaches, barriers and motivations of business and to demonstrate the range of views present in the Ukrainian business environment. The conclusions drawn and the hypotheses formulated in the qualitative study were used as the basis for the quantitative stage of the analysis.

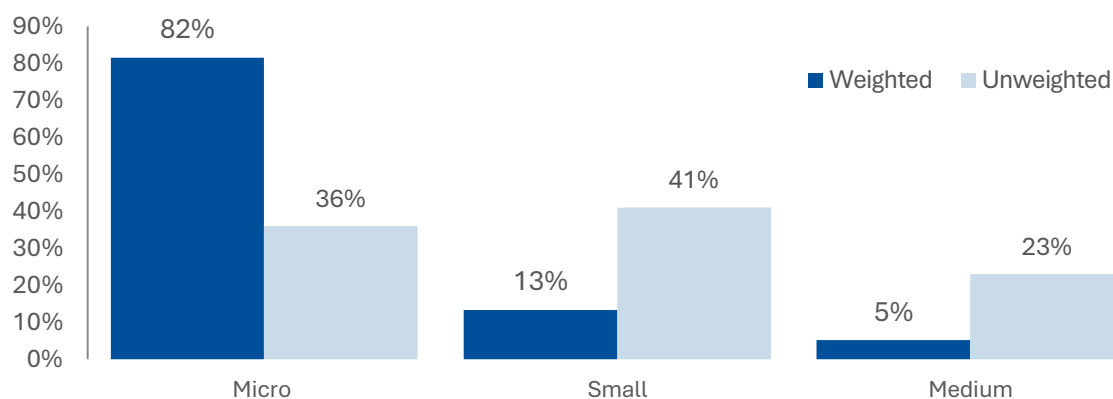
10.3 SAMPLE DESCRIPTION OF THE QUANTITATIVE SURVEY

The structure of the companies actually surveyed differs substantially from the real structure of enterprises in Ukraine according to State Statistics Service data. The sample was deliberately made disproportionate, with additional interviews among small and medium-sized enterprises to ensure a sufficient analytical base for them. Among the 556 companies actually surveyed, micro-businesses accounted for 36%, small enterprises for 41% and medium-sized businesses for 23%.

For a correct analysis of the situation, the sample was weighted — that is, adjusted to the structure of small and medium-sized enterprises in Ukraine according to State Statistics Service data, using statistical weighting coefficients. After weighting, the predominant share of business in the dataset consists of micro-enterprises with up to 10 employees (82%). Small enterprises (10–49 employees) account for 13%, and medium-sized businesses (50 employees and more) for only 5%. According to State Statistics Service data, in 2025 Ukraine had 244,935 micro-enterprises, 283,941 small enterprises and 14,528 medium-sized ones.

All percentage figures in the report are calculated with statistical weights applied. After weighting, the structure of the sample corresponds to the structure of small and medium-sized enterprises in Ukraine as of 2025 by enterprise size (number of employees), industry and region. The number of respondents (N) is given as the actual, unweighted number.

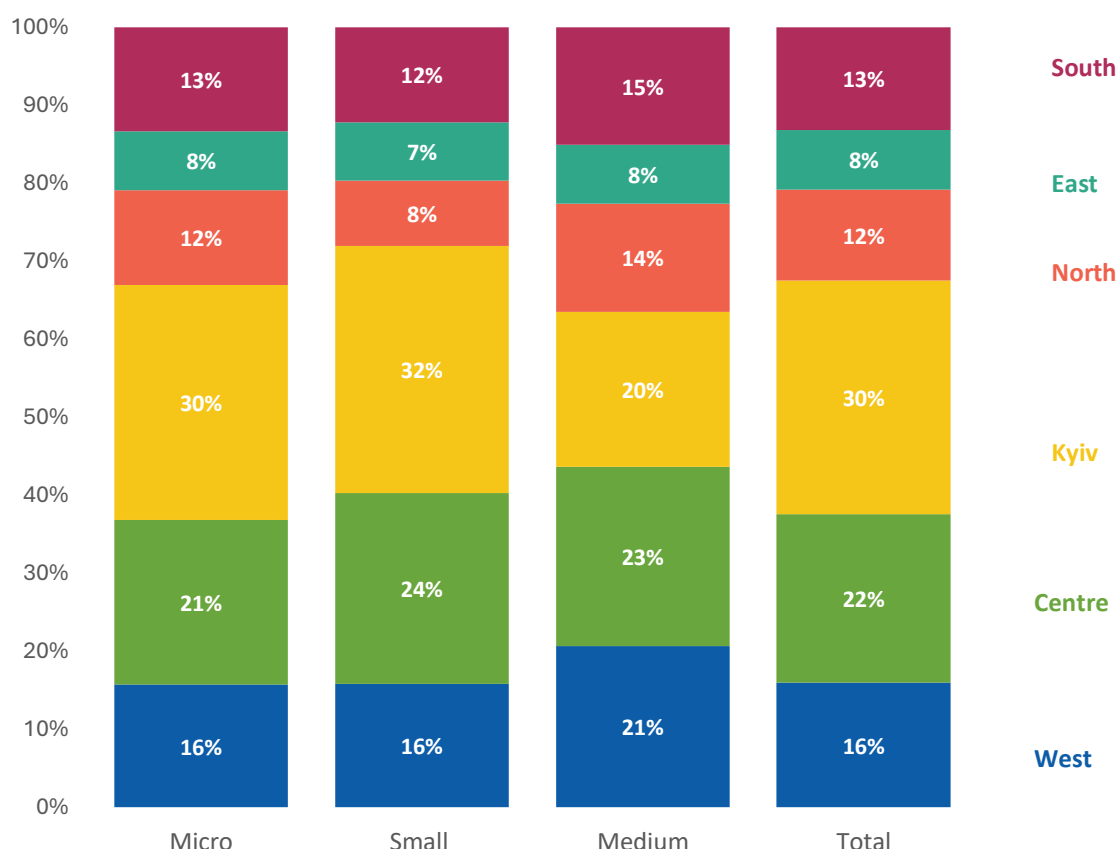
Figure 84. Enterprise size, % of respondents



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by size: Medium — 126, small — 228, micro — 202.

A third of the companies surveyed are concentrated in the city of Kyiv (30%). Next come Odesa (8%), Kyiv (8%), Kharkiv (7%), Dnipropetrovsk (6%), Lviv (6%) and Khmelnytskyi (6%) oblasts. Among the least represented are enterprises from Ternopil (1%), Mykolaiv (1%), Chernihiv (1%) and Chernivtsi (0.4%) oblasts. Sumy, Kherson and Donetsk oblasts are practically unrepresented in the sample. This is a direct consequence of active hostilities or, respectively, the temporary occupation of a significant part of these territories. AR Crimea and Luhansk oblast are also not represented in the sample.

Figure 85. Regional distribution of companies by enterprise size, % of companies



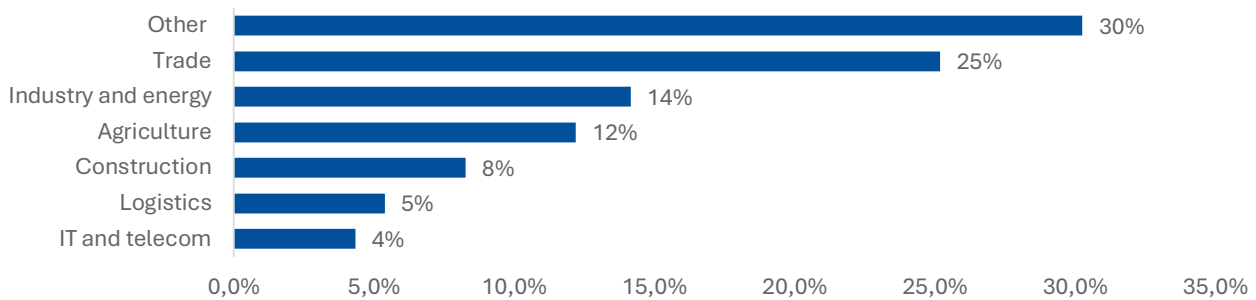
Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by size: Medium – 126, small – 228, micro – 202. Number of respondents by region: West – 118, Centre – 125, Kyiv – 116, North – 96, East – 40 and South – 61.

The largest share of the sample consists of enterprises operating in wholesale and retail trade (25%). Next come manufacturing, mining and the supply of electricity, gas and water (14%), agriculture (12%), construction (8%), transport and logistics (5%) and IT and telecommunications (4%).

Because of the small number of observations, some industries, mostly in services, were combined into the category "Other". It includes: professional and scientific activities; accommodation and food service; healthcare and social assistance; real estate; financial and insurance activities; education; administrative and support services; arts, sport, entertainment and recreation; and other services.

Figure 86. Enterprise industry, % of respondents

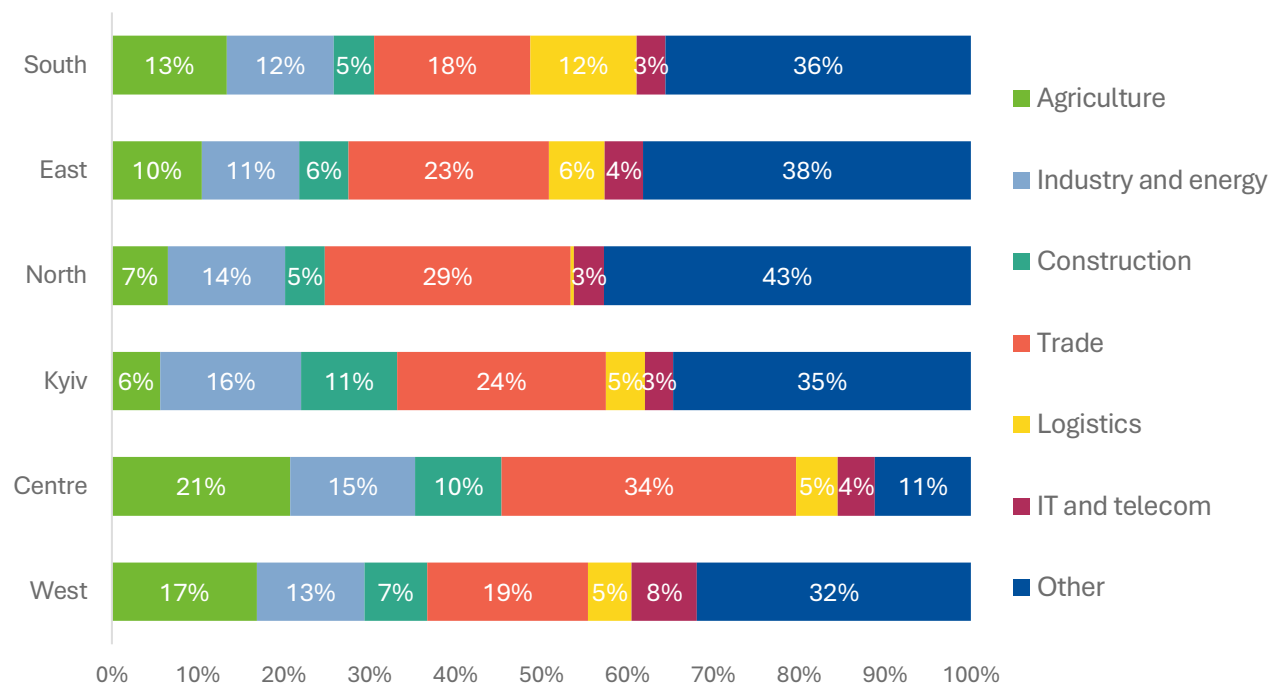
The economy is more concentrated in the manufacturing and trade sector.



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. 0.2% chose "Hard to answer".

Regions have pronounced features in their industry structure. The Centre and the West have higher shares of agricultural enterprises, and the Centre also has the highest share of trade enterprises of any region. Kyiv has the highest share of industry and energy enterprises of any region, as well as of construction companies. The South has more transport enterprises in its structure, the North more trade and other industries (mostly services), and the East more services.

Figure 87. Enterprise industry by region, % of respondents

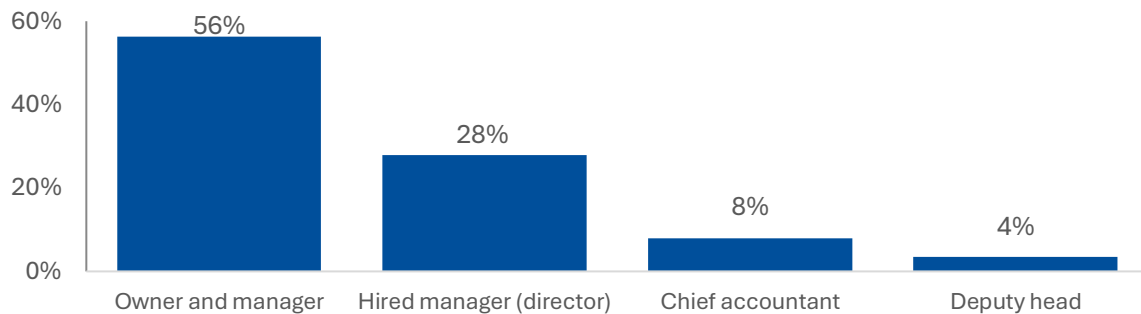


Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. 0.2% chose "Hard to answer". Number of respondents by region: West – 118, Centre – 125, Kyiv – 116, North – 96, East – 40 and South – 61. Number of respondents by industry: construction – 53, industry and energy – 144, agriculture – 62, trade – 120, logistics – 38, IT – 32, other – 107.

Respondents were most often owners who manage their enterprises (56%) and hired directors (28%). Together these two categories account for 84% of the sample. Chief accountants make up 8% of the sample and deputy heads 4%.

Figure 88. Respondent's position, % of respondents

More than 80% of respondents are owners, managers or hired directors.

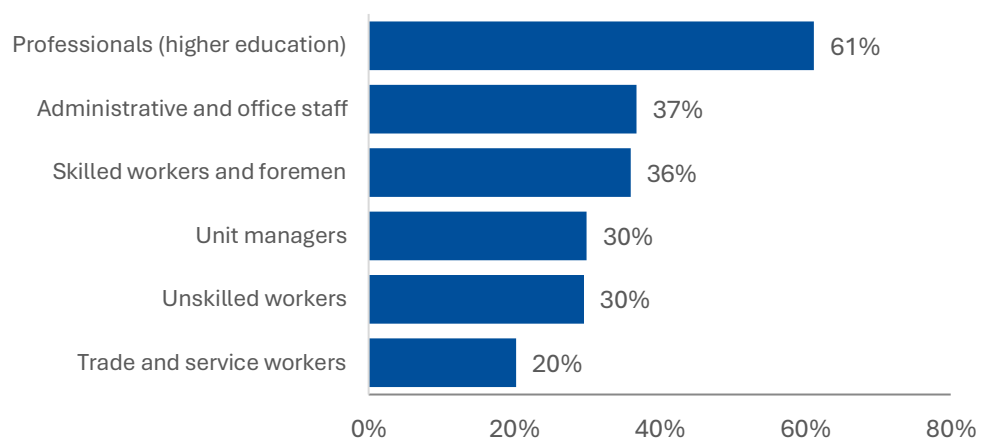


Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. 2% answered "Other".

The most common category of staff in the companies surveyed is professionals and specialists with higher education: they work in 61% of the companies surveyed. In second place are — administrative and office staff (37% of companies have them) and skilled workers, equipment operators and foremen (36%). 30% of companies have unit managers. The same share employs auxiliary and unskilled workers. Trade and service workers are employed at 20% of enterprises.

Figure 89. Categories of employees working at the enterprise, % of companies

The most common category of staff is professionals and specialists with higher education.



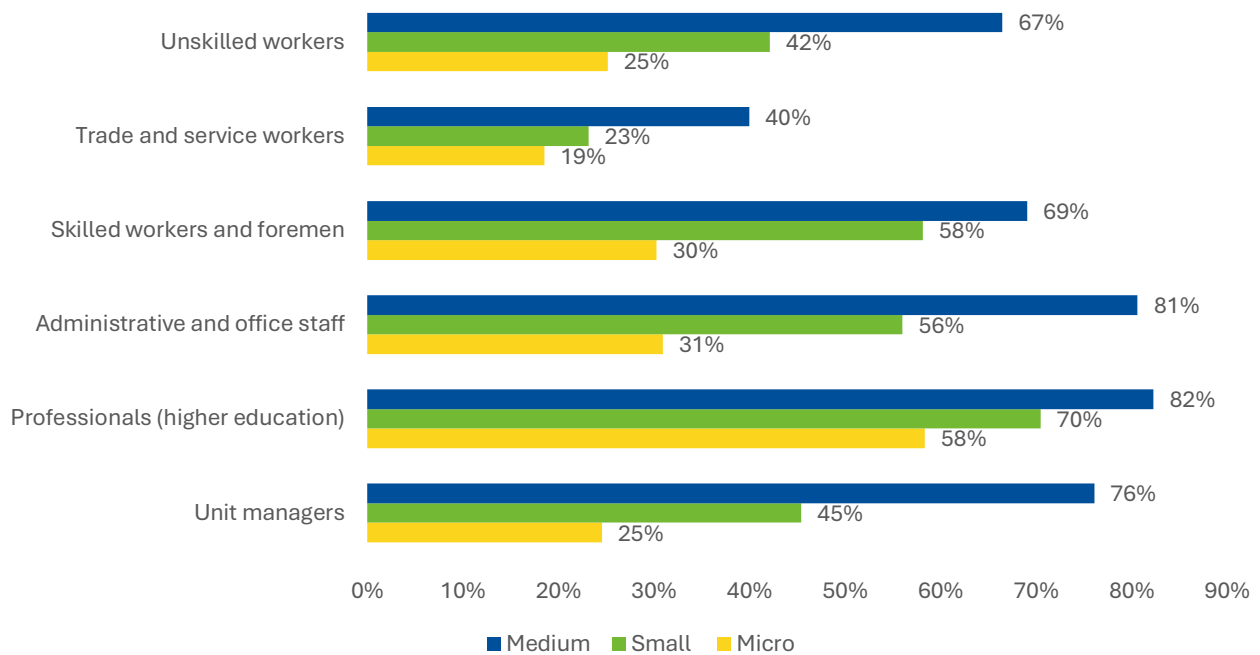
Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. 1% answered "Other".

Enterprise size directly determines the complexity of its staffing structure. The presence of unit managers rises sharply with company size — from 25% among micro-enterprises to 45% among small and 76% among medium-sized ones.

This relationship is not confined to management positions: the share of companies with professionals holding higher education rises from 58% (micro) to 82% (medium), and the share with auxiliary and unskilled workers from 25% to 67%. Larger enterprises therefore have a structurally broader workforce across all categories at once, rather than merely adding a management layer.

Figure 90. Categories of employees by enterprise size, % of companies of the respective size

The larger the enterprise, the wider the range of employee categories involved



Source: Info Sapiens survey commissioned by CES, 2026. Note: n=556. Number of respondents by size: Medium — 126, small — 228, micro — 202. Weighted percentages are shown.