

# Skills Gaps Analysis Report

WP5 “Haskovo Labor Market and Economic Development Strategy”

Deliverable 5.1.2.

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## 1. INTRODUCTION

The current ***Skills Gaps Analysis Report*** is developed under the CARE-GET project and represents Deliverable (D) 5.1.2. from WP5 "Haskovo Labor Market and Economic Development Strategy".

In the CARE-GET project's context, D5.1.2 focuses more strongly on analysing the skills gaps of the local workforce in the healthcare sector.

The analysis presents the results of the study of the skills gaps of the workforce in the municipality of Haskovo, outlining the main challenges and opportunities for development. The aim of the analysis is to identify the mismatches between the available skills of the workforce and the requirements of local businesses, in order to support the formulation of effective policies and initiatives for human capital development.

The study is based on a combination of quantitative and qualitative methods, including surveys with employers and employees, an analysis of the professional skills of employees, as well as a review of current labour market trends, both in the country and in the developed economies of the European Union. This mixed-methods approach ensures a robust understanding of sector-specific skills imbalances and supports the territorial intelligence framework underpinning CARE-GET.

The main results show that there are significant gaps between the competencies sought by businesses and the skills available in the workforce, especially in terms of technical and digital skills, as well as teamwork skills and adaptability to new technologies. Employers express difficulties in finding qualified personnel, which limits the opportunities for growth and innovation in the local economy. These findings highlight the need for closer cooperation between businesses, educational institutions and local administration to improve the match between educational programs and the real needs of employers.

The analysis recommends initiatives for additional training, more active attraction of young people to technical and engineering specialties, as well as the creation of mechanisms for a sustainable connection between the labour market and education. This will support the development of a competitive and well-prepared workforce capable of meeting the modern requirements of the economy in the region.

The skills gap affects various sectors of the local economy, with healthcare being one of the most critical. The lack of qualified personnel, the need for specific technical and digital skills, and the dynamic development of medical technologies require special attention to this sector. The skills gap analysis highlights the need for targeted measures to retain and attract medical professionals, as well as to improve their qualifications, in order to ensure quality and affordable medical care.

The healthcare sector in Haskovo Municipality encompasses inpatient and outpatient medical facilities, pharmaceutical services, laboratory diagnostics, social care and related industries. The main hospital institution – Haskovo Hospital – provides a wide range of medical services, supported by the private Hospitals “Hygia”, “Hippocrates” Medical Center, “Chiron” Medical Center, “Aesculap” Medical Center and three Diagnostic and Consultative Centers. Pharmacies operating in the city, including chains such as “Mareshki”, “Galen”, “Sopharmacy”, provide constant access to medications, while laboratories such as “Ramus” and “Synevo ” perform modern diagnostic tests.

Rehabilitation is an important part of the health sector. The city operates rehabilitation centers offering physiotherapy, while hospice and nursing homes support patients with chronic illnesses. Mental health services are offered through counselling offices that provide help to patients with anxiety, depression and related conditions. Elderly care and home care services contribute to a better quality of life for those in need.

Public health is supported by various government and non-government programs for health awareness and disease prevention. Vaccination campaigns, screening programs, and healthy lifestyle initiatives are organized regularly, especially in schools and local health facilities. Social care includes activities to support vulnerable groups, including pensioners and people with disabilities.

The healthcare sector in the municipality is well developed, but faces gaps in the skills of its staff. The shortage of specialist doctors and nurses makes it difficult to provide quality patient care. The Haskovo branch of the Thracian University trains bachelors in the specialties of Nursing, Midwifery and Kinesitherapy. According to data from surveys regularly conducted by the educational institution among nursing and midwife graduates, in 2022 and 2023, 100% of them will work in their specialty in Bulgaria. In 2024, 86% of nurses working in their specialty will be nurses, and 30% will be midwives, and all of them will also be professionally realized in the country. Measures are needed to retain healthcare professionals who have graduated in Haskovo and stimulate their desire to practice their profession, as well as attract specialists from other regions.

The findings of this report will directly inform the development of Haskovo Supply and Demand Matching Strategy Report (D5.2.1) and Haskovo Workforce Framework and Development Plan (Roadmap for upskilling workforce) (D5.2.2), as well as the design of targeted training activities under WP6, support entrepreneurship schemes under WP7, and guide talent anchoring strategies within the MedTech Hub under WP8.

## **2. METHODOLOGY**

The methodology for developing the current skills gaps analysis for Haskovo Municipality is based on a systematic and multi-layered approach that includes the collection, processing, and analysis of data from various sources, as well as consultations with key stakeholders. Initially, a study of the existing information on the

labour market and the economic condition of the municipality was conducted, utilizing statistical data and research at both national and local levels. Subsequently, the main employment trends, sectoral requirements, and challenges, as well as the legal framework regulating labour market development in the country, were analysed.

An important part of the methodology is the comparative analysis of labour and skills shortages in developed economies, including the European Union, aimed at identifying best practices and recommendations that can be adapted to the local context. Additionally, the impact of the changing economic environment, including key technologies of Industry 4.0, digital transformation, and green digitalization, on the labour market in Haskovo Municipality was examined.

To identify specific skills shortages and mismatches, an analysis of the local labour market was conducted, covering information on staff recruitment, education, and qualifications, working conditions, the regulatory framework, and employers' future plans. Within the framework of the analysis of gaps and skills in the municipality of Haskovo, a key role is played by a survey among employers, which is a basic tool for directly identifying the real needs of businesses for skills and competencies. 50 voluntarily participating employers, representatives of the processing industry, construction, trade, services, healthcare, mechanical engineering and other sectors, were surveyed through an online survey. The data from the employer opinion survey are presented in Section 5 of this report.

Special attention was given to the healthcare sector, where the current state, specific skills needs, training and development opportunities, workload, the presence of innovations and technologies in the sector, as well as recommendations from surveyed respondents, were studied. The data from the survey conducted among healthcare workers in Haskovo Municipality are presented in Section 6 of this report.

The number of employers and healthcare workers participating in the online surveys is statistically significant, but the samples are still small, which limits the possibility of conducting correlational analysis due to insufficient quantity of primary data and a potentially high risk of uncertainty of the estimates. The small number of observations can lead to unreliable or uninformative results when trying to establish relationships between variables. However, correlations were sought and whenever they existed, internal relationships were traced and analysed.

During the course of the study, efforts have been made to survey job seekers and representatives of local community organisations. At the time of conducting the study, it has not been possible to secure the participation of active job seekers as this is a very amorphous target group, difficult to identify and contact, with very little motivation to participate in such exercises. As regards local community organisations, there are very few active ones on the territory of Haskovo Municipality, which does not justify their involvement, as the information would not be statistically significant.

This report formulates general recommendations for addressing the identified gaps and mismatches in the local labour market, taking into account the results of the analysis and best practices at European level. Specific measures have been proposed, applicable to the different groups of stakeholders, along with a timeline for their implementation. Finally, the key findings and recommendations have been summarized, serving as a foundation for future actions and strategies for enhancement of the labour market in Haskovo Municipality.

### **3. CONCLUSIONS FROM THE BASELINE REPORT ON HASKOVO LABOUR MARKET AND ECONOMY**

The data from the report on the labour market and economic development of the municipality of Haskovo developed under D5.1.1<sup>1</sup> provides a clear basis for analysing the skills shortage.

The Comprehensive Baseline Report on Haskovo Labour Market and Economy contained a brief presentation of the municipality of Haskovo, including demographic data. The structure of enterprises in the municipality and the leading economic sectors were examined according to NSI data for the period 2021-2023. The connections and dependencies between the number of enterprises, their revenues and investments, on the one hand, and the number of their personnel, on the other, were studied.

Special attention was paid to the healthcare sector in the municipality, and data on the infrastructure and the number of employees in the sector were presented.

Schools were presented, including higher education institutions on the territory of the municipality, among which there is a branch of the Thracian University, which trains students in bachelor's degrees in the specialties of Nursing, Midwifery and Kinesitherapy.

The labour market in the municipality of Haskovo was analysed through the number of employees by economic sectors and labour productivity in these sectors. Data from the Regional Directorate of the Labour Bureau on the number of registered unemployed, the duration of my registration, as well as the most frequently advertised job positions at the moment were also presented. The services that the Labour Bureau provides to job seekers and employers were presented, as well as the national programs supporting the labour market. A comparison was made of the average gross annual salaries in the Haskovo municipality, Haskovo district and the country.

The identified employment trends, sectoral requirements and challenges of the labour market outline the key factors influencing its condition.

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<sup>1</sup> Comprehensive Baseline Report on Haskovo Labour Market and Economy



### Main employment trends in Haskovo Municipality

The main employment trends in Haskovo Municipality during the period 2021–2023 show a complex development picture, in which positive economic indicators coexist with demographic and structural challenges. Despite the increasing revenues of non-financial enterprises and the overall growth of labour productivity by over 17%, the number of employed persons in the municipality decreased by 2.84% over the same period. This could be an indicator of restructuring of economic activities, increasing efficiency through automation and implementation of new technologies, as well as the presence of difficulties in finding suitable labour.

An assessment of labour productivity on the territory of Haskovo Municipality by economic sectors was made by examining data on the leading economic sectors according to revenue from activity – in first place is sector G “Trade; repair of motor vehicles and motorcycles”, followed by sectors C “Manufacturing industry”, F “Construction”, H “Transport, storage and post” and A “Agriculture, forestry and fisheries”.

The decrease in the number of employees in the municipality is most pronounced in the processing industry and in administrative and support activities. A decline in employment in a key sector such as manufacturing, which is the leading employer in 2023, could lead to a decline in economic activity, reduce innovation and limit the region’s competitiveness. In addition, an aging workforce could increase pressure on social and health systems.

**The healthcare and social activities sector is among the leading sectors in terms of employed persons in the municipality and ranks fourth in 2023. For the period 2021–2023, the number of employees in the sector is stable.**

An interesting aspect of employment dynamics is that the growth of average wages does not lead to the retention of a sufficient number of qualified personnel. Although the average gross annual salary in the municipality in 2021–2023 is growing, it still remains below the national average, which is why many qualified workers prefer to seek better-paid opportunities in other regions or abroad. This is especially visible in more specialized sectors such as mechanical engineering, industrial production and transport, where there is a shortage of technically trained specialists.

Simultaneously with the decrease in employment in some areas, unemployment in the municipality is increasing, reaching 5.4% in 2023, compared to 4.7% in 2021. There may be several reasons for this:

- closure or restructuring of enterprises that cannot maintain their activities under the existing economic conditions;
- mismatch between employers’ needs and available workforce skills;



- demographic challenges that make the supply of personnel in some industries increasingly difficult.

Despite this increase in unemployment, a gradual decrease begins in early 2024, which may be a sign of improving economic activity in certain sectors and adaptation of the labour market to new conditions.

Along with these challenges, there is also a trend towards fragmentation of the economic structure – the number of small and medium-sized enterprises is increasing, but the average number of employees per enterprise is decreasing.

Employment trends in Haskovo are marked by a simultaneous decrease in the number of workers and an increase in productivity, which implies restructuring and modernization of some industries. However, there is a serious risk of deepening labour imbalances if active measures are not taken to overcome the mismatches between the skills of the workforce and the needs of businesses.

### Sectoral requirements and challenges

The economic structure of Haskovo Municipality is diverse and includes the processing industry, mechanical engineering, furniture and food production, wine production and the garment industry. In addition to these, trade, construction, transport and agriculture play an important role. However, within these sectors, the shortage of qualified labour is becoming increasingly noticeable, especially in healthcare and in industrial sectors requiring specialized skills.

One of the serious problems is in the medical sector, where the lack of specialist doctors, nurses and support staff creates significant challenges for the municipality's health system. The excessive workload of the available staff, combined with administrative difficulties and relatively lower salaries compared to larger cities, makes attracting and retaining staff a difficult task. Some of the staff in medical institutions work under high levels of stress, and the population's access to some specialized medical services is limited.

Insufficient investment in technological innovation and workforce also affects the development of these sectors. The costs of fixed assets in the municipality are lower than the national average, which makes modernization difficult in both business and healthcare. Foreign direct investment in the municipality, although maintaining a leading share in the region, remains far below the national average, which further limits the potential for the development of high-tech and innovative industries. If measures are not taken to promote qualification, attract young staff and improve working conditions, the shortage of specialists will deepen, creating even greater challenges for the local economy and healthcare sector.

In the long term, these challenges could slow the pace of economic growth if measures are not taken to stimulate investment, improve educational preparation and retain the workforce in the region. The lack of synchronization between business needs and the skills offered by workers is a serious risk for the future of the local economy, but also provides an opportunity for targeted policies for modernization, qualification and the creation of a more attractive business environment.

To reduce this shortage, it is essential to:

- Improving educational programs and adapting them to business requirements.
- Implementing targeted policies to attract new staff, including through migration and retention of young people.
- Investments in training and qualification with the active participation of employers.

These measures will help balance economic demands and labour supply, which is critical for the future development of Haskovo Municipality. Responsibility for such measures is shared between the government, ministries, municipalities and businesses.

At the national level, the government has a key role in developing strategic policies to reduce labour shortages. It sets priorities in the areas of education, migration, and economic development through national programs and strategies. For example, the government can create incentives to attract foreign talent or encourage investment in vocational training.

The Ministry of Labour and Social Policy is the main body responsible for policies related to the labour market, qualifications and employment. It develops programs for training, retraining and employment promotion, as well as initiatives to retain young people in the country. In addition, the Ministry coordinates activities related to labour migration.

The Ministry of Education and Science is responsible for adapting educational programs to the needs of business. It works to modernize curricula, promote dual training, and promote cooperation between schools, universities, and employers.

At the local level, municipalities play an important role in implementing these policies. They can develop local initiatives to attract and retain talent, collaborate with businesses to organize training, and create conditions for the development of the local economy. Municipalities can also work to improve the quality of life, which is a key factor in retaining young people.

Although not state institutions, employers have an important role to play in investing in training and qualification of personnel. They can partner with educational institutions and actively participate in the development of programs that meet their needs.

Effective cooperation between these institutions is crucial to addressing the labour shortage and for the sustainable development of the region.

### **National legal framework for labour market development**

The national legal framework is of key importance for the development of the labour market in Bulgaria, as it defines the rules, mechanisms and policies that regulate labour relations, employment, vocational education and social protection. Legislation guarantees the rights and obligations of both workers and employers, creating a stable environment for economic development and social security. The main normative acts create conditions for the regulation of labour relations, facilitate access to employment and determine measures for active labour market policy. These laws introduce minimum labour standards, rules for occupational safety, protection against discrimination and collective bargaining mechanisms, which contribute to a more stable and predictable working environment.

The regional directorates of the Employment Agency play a key role in implementing national employment policies at the local level. They are the main intermediary between the state, employers, and job seekers, providing services and support aimed at improving the labour market in the respective region. The directorates organize meetings, job fairs, and initiatives to connect employers with suitable candidates, while also assisting employers in finding qualified personnel by publishing job advertisements and providing information about available labour market resources.

They offer consultations and guidance to job seekers, helping them find suitable positions, and organize training, retraining, and qualification programs tailored to the needs of local businesses. Additionally, they support unemployed individuals through subsidized employment programs, internships, and other initiatives that facilitate their integration into the labour market. The regional directorates are responsible for implementing national and European programs, such as initiatives to promote employment, training, and qualification, as well as measures to support vulnerable groups like young people, individuals with disabilities, and the long-term unemployed.

They collect information about the state of the labour market in the region, including unemployment levels, labour demand, and supply, and use this data to develop policies and programs that address the specific needs of the region. The regional directorates provide employers with information about opportunities for subsidizing jobs, including programs for hiring young people, individuals with disabilities, or the long-term unemployed. They also advise employers on labour legislation and assist them in the process of applying for funding under various programs.

The directorates work closely with municipalities, educational institutions, and businesses to develop initiatives that stimulate employment and economic development in the region. They participate in regional development councils where strategies for improving the labour market are discussed. The regional directorates

play an important role in integrating vulnerable groups into the labour market by offering specialized programs for individuals with disabilities, young people without experience, the long-term unemployed, and others. They are a key tool for implementing state employment policies at the local level, ensuring the connection between national strategies and the specific needs of the regional labour market, while working to reduce unemployment, improve qualifications, and stimulate economic development.

The national legal framework for the development of the labour market in Bulgaria is defined by several key laws, by-laws and strategic documents, which apply to all economic sectors. Among them, the most important are:

#### **Basic laws:**

1. **Labour Code** – regulates labour relations between employers and workers/employees, employment contracts, working hours, leaves, remuneration and the protection of workers' rights.
2. **Employment Promotion Act** – regulates policies for promoting employment, qualification and retraining of the workforce, as well as the conditions for state support for unemployed persons.
3. **Law on Labour Migration and Labour Mobility** - defines the rules for the employment of foreigners in Bulgaria, as well as the rights of Bulgarian citizens to work in other EU countries and beyond.
4. **Vocational Education and Training Act** – regulates the qualification, training and retraining of the workforce.
5. **Occupational Health and Safety Act** – sets out standards for workplace safety and the protection of workers' health.
6. **Law on People with Disabilities** – includes measures to encourage employers to hire people with disabilities and for the social integration of these people in the labour market.

#### **Subsidiary regulations and strategies:**

- **National Employment Action Plan** – an annual document that sets out specific policies and measures to improve employment.
- **National Strategy for Active Living of Older People** – regulates initiatives for extending working lives and integrating older workers.
- **Regulations and ordinances on the organization and activities of the Employment Agency** – The Agency administers the national and European employment and labour mobility programs.

#### **Main institutions:**

1. **The Ministry of Labour and Social Policy** – develops and coordinates state employment policy.

2. **Employment Agency** – implements specific programs to promote employment and retraining.
3. **The National Social Security Institute** – manages the insurance rights of workers.
4. **Labour Inspectorate** – controls the legality of labour relations.

As a member state of the European Union, Bulgaria implements policies in line with the European Pillar of Social Rights, co-finances employment measures through the European Social Fund Plus (ESF+), and follows regulations and directives on the free movement of workers, minimum working conditions, social security, etc.

The national legal framework sets the guidelines for interaction between employers, educational institutions and state institutions, with the aim of creating sustainable mechanisms for training, retraining and integration into the labour market. In addition, national legislation plays a role in attracting investment and improving the business environment by regulating the dynamics of labour law and harmonizing national regulations with European and international labour standards. This supports the development of a modern and flexible economy, in which the labour market is well regulated, but also sufficiently adaptable to global changes and technological innovations.

#### 4. LABOUR AND SKILLS SHORTAGE IN DEVELOPED ECONOMIES

The shortage of labour and specific skills has become a growing challenge in Europe and the world, especially in recent years. These problems arise as a result of demographic changes, digitalization, environmental transition and the increased need for specific competencies that are not always provided by the traditional education system. In some countries, this shortage is strongly felt in healthcare, where there is a shortage of medical personnel, including doctors and nurses. The construction, logistics and manufacturing industries are also experiencing difficulties in finding qualified workers, as younger generations are increasingly choosing these professions. Companies and governments in developed economies are looking for various solutions to this problem, including increasing investment in education and vocational training, encouraging the retraining of workers and facilitating the migration of specialists. Despite these efforts, the need to adapt the workforce to rapidly developing technologies and demographic changes remains one of the main challenges to sustainable economic growth.

These Europe-wide challenges are also reflected in Haskovo Municipality. The region is experiencing similar issues, including an ageing and shrinking population, limited enrolment in vocational and technical education, and difficulties in attracting young professionals to key sectors such as healthcare and manufacturing. Furthermore, the digital and green transitions pose additional pressures on a workforce that is often underprepared for emerging demands. As in many other regions, the traditional education system in Haskovo has struggled to keep pace with rapidly changing labour

market requirements, reinforcing the need for coordinated efforts in upskilling and reskilling.

The shortage of labour and the mismatch between the skills needed and offered have an impact on the policies of the European Union. In response to these problems, the European institutions and the Member States have implemented various strategies aimed at stimulating employment, adapting education systems and facilitating the migration of qualified labour. One of the main policies affected by these dynamics is the policy on skills and education. The European Commission places a strong emphasis on the development of digital and technical competences. Through them, the EU encourages Member States to invest in training, retraining and improving the match between education and labour market needs.

The shortage of workers in healthcare, IT, engineering and construction is also leading to the adaptation of immigration policy. The European Union is increasingly considering the possibility of attracting skilled workers from third countries as a tool to fill shortages in critical sectors. The introduction of policies such as the EU **Blue Card** facilitates the access of highly educated specialists to the European labour market.

In addition, EU social policies focus on creating flexible forms of employment and improving working conditions to retain workers in key sectors and increase the participation of women and older workers in the economy. The EU also works to reduce disparities between regions through structural funds, which help less developed regions to increase their competitiveness and invest in their workforce. In the long term, the European Union aims to create a more sustainable and adaptable labour market that responds to structural changes in the economy. The introduction of policies for digitalization, green transformation and innovation is key to reducing imbalances in the labour market and maintaining Europe's competitiveness on a global scale.

### Labour and skills shortages in the EU: an action plan

**"Labour and skills shortages in the EU: an action plan"** is a strategic document that outlines concrete measures to address the challenges related to the lack of qualified personnel in different sectors of the European economy. The plan is based on the growing need for the labour market to adapt to demographic changes, technological progress and the green and digital transformation. It highlights that the number of industries threatened by shortages is increasing, with an impact on economic growth, competitiveness and social cohesion. The document takes into account the different dimensions of labour and skills shortages, focusing on five main areas for action at EU, national, regional and social partner levels:



## 1. Supporting the activation of underrepresented individuals in the labour market

***Increasing labour market participation is crucial to addressing labour shortages.*** The EU employment rate is steadily improving, but significant untapped potential remains outside the labour market. 21% of today's population aged 20-64 remains inactive. Labour market participation can be increased by targeting those groups of the population that are currently underrepresented – women, low-skilled workers (i.e. those with lower secondary education or less), older workers, young people, people with a migrant or minority racial or ethnic background, and people with disabilities. The untapped potential is highest for the first three of these groups.

Women often work part-time due to the unequal distribution of home and family care, as well as the lack of accessible childcare and long-term care services. People with secondary education or less face difficulties due to limited access to quality education and increasing qualification requirements. Older workers are affected by rapid changes in job requirements and lower participation in training, while young people are exposed to precarious contracts and temporary employment. People with disabilities face a lack of adapted jobs, and migrants and ethnic minorities face language barriers, discrimination and difficult access to the labour market.

***The EU aims to have at least 78% of the working-age population in employment by 2030.*** To achieve this, the European Commission plans to fund projects through the ESF+ to reduce long-term unemployment and support young people not in employment, education or training. Initiatives for the labour integration of migrants are also planned through the Asylum, Migration and Integration Fund.

The European Commission will analyse the factors leading to involuntary part-time work, with a particular focus on women, and assess national sick leave policies to identify best practices for workers and businesses. Options for flexible retirement and combining income from salary and pension will also be examined to encourage longer participation of older workers in the labour market.

The Action Plan calls on EU Member States to fully implement existing initiatives to activate under-represented groups. It encourages better coordination between ministries and employment services, as well as tax and social reforms to reduce economic inactivity and boost employment. The Commission appreciates the commitment of social partners to create inclusive and accessible jobs, promote the employment of older workers and strengthen cooperation between public and private employment services. They are invited to support entrepreneurship, especially among women and migrants, to promote equality and non-discrimination policies and to implement sectoral measures to address imbalances.



## 2. Providing support for skills, training and education

***Skills shortages are reported by companies of all sizes and in all sectors of the EU economy, and are a particular challenge for small and medium-sized enterprises (SMEs).*** In a Eurobarometer survey on "Skills shortages and recruitment and retention strategies in SMEs" (2023), almost four out of five SMEs report that they have difficulty finding workers with the right skills, and more than half find it difficult to retain qualified workers.

The EU's skills shortage is expected to increase due to the green and digital transitions, as well as the need to build strategic autonomy. 3.5 million new jobs will be created in renewable energy by 2030, while the circular and blue economy sectors will also require new qualifications. Skills shortages could slow the growth of high-tech industries such as clean energy technologies, defence and cybersecurity. The demand for information and communication technology (ICT) specialists will more than double by 2030, but 63% of companies are already struggling to find such staff.

Another serious problem is the declining level of basic skills among young people, especially in literacy, mathematics and science, which can limit their employability. The EU is promoting more flexible education systems and a strong link between education and the labour market. Lifelong learning is also a key priority. This will help the workforce adapt to changing economic and technological demands.

The EU is already implementing various initiatives to address skills shortages, but their implementation needs to be strengthened through a sectoral approach. ***The European Skills Agenda*** includes 12 upskilling and reskilling measures that are already being implemented. ***The Pact for Skills*** engages 20 sector partnerships to train over 10 million people. Several EU skills academies have been set up in areas such as cybersecurity, construction and renewable energy. Improving data collection on skills shortages through statistical surveys and improving the availability and coverage of data, including on demographic changes, remains an important priority.

Member States receive significant financial support from the EU – over €65 billion – targeting vocational education, training, lifelong learning and career transitions. The European Social Fund Plus (ESF+) and the Recovery and Resilience Facility (RRF) support reforms for better management and skills development, including recognition of qualifications and support for adult learning.

***The EU's target for 60% of adults to participate in training each year by 2030 is to do so.*** The Commission plans to expand the Skills Pact, support new training academies in key sectors such as cybersecurity and net-zero emissions technologies, and fund over 100 centres of excellence in vocational education by 2027. Data collection on skills shortages will also be improved with the help of European agencies.

Member States are called upon to implement the European Skills Agenda, develop individual training schemes, update curricula to labour market needs and support skills partnerships with sufficient funding. Social partners commit to supporting retraining through social dialogue, helping to update vocational education, supporting individual training, mentoring, peer learning and entrepreneurial skills and promoting the development of future-oriented green and digital skills.

### 3. Improving working conditions

***Fair working conditions can help to address labour shortages in certain sectors or occupations.*** This is particularly important for some occupations that require more manual skills and lower levels of education, or for occupations with higher health and safety risks, characterised by high workplace stress and/or low wages.

Adequate wages, including minimum wages, healthy working conditions, adapted workplaces, provision of training and career development opportunities, access to adequate social protection, an appropriate work-life balance, including the right to take time off from work and the adoption of flexible working arrangements, are key factors in reducing labour shortages. In some sectors, such as health, social care, agriculture and transport, shortages are due to high work stress, precarious working conditions and low attractiveness of occupations. Low attractiveness of living conditions and limited access to services in rural areas make these shortages even more acute.

Social dialogue and collective bargaining play an important role in improving working conditions. In response to these challenges, the EU has adopted a number of initiatives, including ***the Minimum Wages Directive, the Transparent and Predictable Working Conditions Directive, the Strategic Framework for Health and Safety at Work (2021-2027)***, etc. These measures aim to ensure decent wages and working conditions that motivate workers and reduce staff shortages in critical sectors.

The EU plans further action to improve working conditions and compliance with labour law through strengthening collective bargaining and new regulatory measures, an improved framework for quality traineeships to support the integration of young people into the labour market, and consultations with social partners on teleworking and the right to take time off from work to improve work-life balance.

A new amendment to the Carcinogens, Mutagens and Reprotoxic Directive is proposed to increase workers' health protection. The EU will analyse the impact of digitalization and artificial intelligence on the labour market and the possible need to regulate algorithms in employment, and will also conduct a study on mental health among healthcare workers with guidelines for improving conditions in the sector. Planned initiatives include further analysis of psychosocial risks at work, improving the social conditions of artists and cultural workers, and a recommendation for more attractive careers in higher education.

The European Commission is calling on Member States to fully implement EU initiatives to improve working conditions, including the transposition of the Minimum Wage Directive and health and safety at work provisions. Countries should facilitate labour inspections, strengthen sanctions against abuses and minimize administrative barriers for small and medium-sized enterprises. It also encourages the development of policies for attractive working conditions in green sectors and better retention of nurses through mentoring and improvements in working conditions. Social partners are called on to improve working conditions through collective bargaining in sectors such as health, transport, construction, agriculture and education. Guidelines on tackling violence and harassment at work, especially in the health sector, will be updated. More competitive wages, a better work-life balance and investment in professional development are needed in education.

#### **4. Improving fair mobility within the EU for workers and learners**

***Fair labour mobility can help address shortages that are particularly acute in some countries or regions.*** In 2023, nearly 10.7 million EU citizens aged 15-64 lived in an EU Member State other than their country of origin. More than 7.5 million people were active in the labour market, corresponding to around 3.6% of the total EU workforce.

The European Labour Authority (ELA) ensures the effective application of EU law on the free movement of workers and manages the EURES network to facilitate cross-border employment, but there are challenges related to reduced user activity. The coordination of social security systems in the EU aims to facilitate the mobility of workers and trainees through digitalisation, including through the creation of the Electronic Exchange of Social Security Data (EESSI) and the European Social Security Passport initiative (ESSPASS), which improve the verification of social security rights.

Cross-border access to regulated professions is governed by an EU directive supporting the mutual recognition of professional qualifications by Member States. The mechanism for mutual recognition of professional qualifications needs to be improved to speed up procedures and support mobility.

Learning mobility is key to reducing skills shortages by developing language and 'transferable' competences. The 'Europe on the Move' Recommendation sets targets for learning mobility by 2030. These targets include the share of graduates participating in learning mobility during higher education (25%) or vocational education (15%). The proposal also contains a quota for the participation of disadvantaged students (20%) and specific principles to support the mobility of apprentices who face specific obstacles. Measures such as simplification of administrative procedures, automatic recognition of qualifications and more financial support are planned to this end.

To improve access to employment and education opportunities in the EU, reduce skills shortages and enhance the free movement of workers, the European Commission calls

on Member States to speed up the adoption and implementation of the Europe on the Move Recommendation, to strengthen cooperation with the European Labour Authority (ELA) through more joint inspections and to complete the digitalisation of social security systems (EESSI and ESSPASS). It also encourages the integration of the European Academic Degree into national qualifications frameworks and the removal of obstacles to the automatic recognition of diplomas and periods of study. Social partners will facilitate labour mobility by identifying priority regulated professions with the most serious labour shortages, promoting transnational mobility of apprentices and young professionals and removing administrative obstacles to qualified workers, such as mobility restrictions in employment contracts. There is a need to promote learning mobility in traditional school systems.

## 5. Attracting talent from non-EU countries

***Complementing efforts to make the best use of talent within the Union, organised mobility from third countries also plays an important role in addressing labour and skills shortages.*** The EU is not fully exploiting its potential as an attractive destination for talent from all over the world. Facilitating the matching of job demand and supply and ensuring equal and fair working conditions for third-country nationals can help attract talent from outside the EU.

***The EU Talent Pool*** is a new initiative that will facilitate the recruitment of third-country workers for professions with shortages in the EU. It is the first pan-European online platform where third-country nationals can apply for jobs and EU employers can post vacancies. It will complement existing labour migration mechanisms and ensure the protection of migrants' rights.

While the EU Talent Pool represents a valuable step toward systematizing the attraction of third-country nationals, its effectiveness will depend not only on digital infrastructure and matching tools, but also on the local capacity to absorb and retain talent. In the context of shrinking regions like Haskovo, as targeted by the CARE-GET project, the issue is not merely attracting external specialists – it is creating the conditions that make them stay. This means ensuring that adequate medical, educational, and lifestyle infrastructure is in place, that social inclusion policies are effective, and that local economies offer real long-term prospects. Without these, platforms like the EU Talent Pool risk becoming pipelines of temporary labour rather than mechanisms for sustainable talent integration. In this sense, CARE-GET's focus on improving healthcare delivery, supporting upskilling, and fostering local innovation ecosystems can be seen as complementary to – and even foundational for – the success of such EU-level talent mobility schemes at the local level.

***Talent partnerships*** can create legal pathways for migration and skills development, while helping to manage migration flows. Such partnerships have so far been established with Morocco, Tunisia, Egypt, Pakistan and Bangladesh. They provide funding and a policy framework for mobility and training, as part of the EU's broader Global Gateway strategy to develop vocational education and skills in partner countries.

While these partnerships aim to be mutually beneficial, they must be carefully designed to avoid talent drain from partner countries already facing shortages.

***Recognition of qualifications and validation of skills*** is key to the effective integration of third-country workers. Slow and complex procedures can make access to jobs more difficult and limit opportunities for employers. As part of the Skills and Talent Mobility Package, the Commission recommends speeding up and simplifying procedures for the recognition of qualifications to facilitate access to regulated professions, training programmes and work and residence permits.

The European Commission is calling on Member States to expand partnerships to support talent through new legal migration programmes supported by EU funding. They should ensure the effective integration of migrants and their families, providing access to education, healthcare, employment and housing. Countries should swiftly transpose the EU Blue Card Directive and simplify immigration procedures, making full use of the additional flexibility provided in the revised Single Permit Directive. They should also strictly enforce legislation protecting migrants' labour rights, preventing exploitation and discrimination. The intention of the social partners to contribute to the creation of an EU talent pool, to ensure that migrants have equal and decent working conditions and to work on a harmonised framework for the recognition of professional qualifications of drivers and other workers from third countries is welcomed.

**"Labour and skills shortages in the EU: an action plan"** offers an integrated approach to address the different aspects of the labour and skills shortage problem. By combining national and European policies, investing in human capital and strengthening social dialogue, it aims to ensure a sustainable and competitive European labour market that can successfully respond to future economic and technological challenges.

Reducing the shortages will improve the EU's attractiveness for investment, strengthen its industrial base and ensure social cohesion. Progress on implementation will be monitored in the framework of the European Semester, and the Employment and Social Protection Committees will organise a tripartite dialogue with the social partners. The Commission will continue to promote collective efforts to address labour and skills shortages in the EU.

#### **Draft Council conclusions on labour and skills shortages in the EU**

The European Commission's Action Plan outlines strategic priorities and key measures to address skills shortages in different sectors. In response to these challenges, **the "Draft Council Conclusions on labour and skills shortages in the EU"** build on the initiatives presented by formulating concrete recommendations to Member States and social partners.



The document underlines the need for concerted action at national and European level, focusing on financing instruments, improving education systems and adapting labour markets to economic and technological change. In this context, the Council conclusions contain recommendations for future action, providing a framework for the effective implementation and monitoring of the measures proposed by the European Commission.

The Council of the EU calls on Member States to develop and implement ***employment and social support policies*** that facilitate access to the labour market and promote up-skilling and re-skilling in the context of demographic and economic change. A special focus should be placed on young people, older workers, women and people with disabilities, through employment support, gender equality, access to care and flexible working arrangements.

Member States should make full use of EU funding, including the European Social Fund Plus (ESF+), to support and finance measures aimed at ***increasing labour market participation***. Skills monitoring and forecasting tools should be further developed to anticipate future skills needs in the labour market, as well as lifelong guidance strategies and services.

Additional priorities include ***improving health and safety at work***, with a focus on mental health, as well as ensuring fair working conditions and promoting social dialogue and collective bargaining as a means of addressing labour and skills shortages.

The Council of the EU calls on the Member States and the European Commission to ensure better coordination of policies to address labour and skills shortages at national and European level. They should improve ***labour force forecasting***, data collection and analysis, working in cooperation with EU agencies and, where appropriate, making these data publicly available.

***The potential of new technologies and new forms of work*** to increase employment and inclusion, while ensuring fair working conditions and social protection, should also be explored.

### Changing skills needs in the labour market

The document **"Changing Skills Needs in the Labour Market"**, published by the OECD, presents an in-depth systematic analysis of global trends in the mismatch between the skills of the workforce and market requirements. It provides information on 40 countries, including OECD members and emerging economies, and examines skills shortages and surpluses across different dimensions – cognitive, social and physical. Through this analysis, the document identifies the sectors with the greatest demand for specific competencies and emphasizes the importance of education

systems, lifelong learning and the adaptability of workers to a dynamically changing economy.

One of the main findings of the report is the growing shortage of digital skills and their increasing role in professional development across all sectors. Digitalisation and automation are transforming traditional professions, requiring new technical qualifications and structural changes in workforce training. The document examines the importance of cognitive and social skills, such as critical thinking, effective communication and the ability to work in teams, which are becoming increasingly important, especially in the service sector, project management and innovation.

The analysis also pays special attention to the problem of skills mismatches. Many countries experience both a shortage of qualified specialists in certain sectors and a surplus of workers with skills that are not adequately applied in the labour market. This mismatch leads to serious economic and social consequences, including slower growth, higher unemployment among some occupational categories and limited career opportunities.

To overcome these challenges, the report proposes concrete measures, such as better adapting educational programs to real economic needs and creating incentives for businesses to invest in training and retraining employees. It examines good practices from various countries that have successfully reduced the mismatch between the supply and demand of skills, showing that countries with well-functioning education systems tend to experience smaller imbalances in the labour market. The document emphasizes that when curricula are closely linked to the needs of business and industry, the likelihood of better professional integration and economic stability is significantly higher.

Another important focus is the role of government policies and employers in facilitating access to training and professional retraining. Closer cooperation between the public sector, business and educational institutions is needed to ensure that training systems are in line with market needs. An important part of the proposed solutions is also supporting career guidance, which allows workers to make informed choices about their professional development.

Unlike the European Union's approach, which addresses skills shortages within the single market, the OECD report takes a deeper look at the systemic factors that lead to these imbalances. It finds that the problem is not just local or temporary, but stems from several deep structural causes, including outdated education systems that do not meet the needs of the economy, an uneven distribution of the workforce, and insufficient investment in lifelong learning.

Tackling the skills mismatch requires a holistic approach, including ***adapting education systems, promoting training*** and creating ***more opportunities for professional growth***. Only through coordinated efforts between governments, employers and educational institutions can sustainable human capital development



models be built that meet the challenges of the modern labour market and contribute to long-term economic growth and social stability.

### A European Care Strategy for caregivers and care receivers

In 2022, the European Commission presented the European Care Strategy to ensure quality, accessible, and affordable care services across the European Union and to improve the situation for both those receiving care and those providing it, whether professionally or informally. The strategy is accompanied by two recommendations for Member States: one on revising the Barcelona targets regarding early childhood education and care, and the other on access to affordable, high-quality long-term care.

Long-term care empowers people, who as a result of old age, illness and/or disability depend on help for daily activities, to maintain their autonomy and live with dignity. However, for many people these services are still not affordable, available or accessible.

Investing in care is important to attract and retain talents in the care sector, which is often characterised by difficult working conditions and low wages, as well as to address labour shortages and fulfil the sector's economic and job creation potential.

Investing in high-quality care also means improving women's participation in the labour market and gender equality, in particular gender pay and pension gaps. Women still bear the main brunt of care responsibilities, with 90% of the formal care workforce made up of women, and 7.7 million women out of employment because of care responsibilities.

To address these issues, the Commission is proposing concrete actions to support Member States in increasing access to high-quality and affordable care services, while improving working conditions and work-life balance for carers.

#### Early childhood education and care

The Commission proposes to set new ambitious yet realistic targets so that by 2030 at least:

- 50% of children below the age of 3 are in early childhood education and care;
- 96% of children between the age of 3 and the starting age for compulsory primary education are in early childhood education and care, as already agreed in the European Education Area framework.

#### Long-term care

The Commission recommends that Member States draw up national action plans to make care in the EU more available, accessible and of better quality for all.

## Fair working conditions and training for care staff

To improve working conditions and attract more people – in particular men – to the care sector, Member States are recommended to:

- Promote collective bargaining and social dialogue with a view to improving wages and working conditions;
- Ensure the highest standards of occupational health and safety;
- Design continuous education and training for care workers;
- Tackle gender stereotypes around care and launch communication campaigns;
- Ratify and implement ILO Convention 189 on domestic workers.

### EU recommendations that can be adapted locally

The EU recommendations for addressing labour and skills shortages can be adapted and implemented in the municipality of Haskovo, taking into account local economic characteristics, demographic challenges and labour market needs.

**Promoting training and retraining.** Recommendations for upskilling and retraining can be implemented in collaboration with local vocational training centers, schools and businesses. Creating on-the-job training programs or vocationally oriented courses will help reduce the mismatch between the skills of the workforce and the requirements of the local economy.

**Support for young people and activation of the inactive workforce.** Haskovo Municipality can create local initiatives for employment and training of young people who are not working or studying. Programs to support older workers and women, especially through flexible working conditions and access to childcare and social care, can increase the participation of more people in the economy.

**Development of sustainable sectors and attraction of investments.** In line with the EU recommendations to support the green and digital economy, Haskovo Municipality can promote the development of industries such as energy efficiency, renewable energy, agro-technologies and the IT sector. Facilitating dialogue between business, educational institutions and local authorities will allow for better planning of economic growth and more effective use of EU financial instruments, such as the European Social Fund + (ESF +).

**Improving working conditions and social protection.** The EU recommendations for better working conditions and social protection can be implemented by incentivizing the provision of safe jobs and encouraging employers to offer competitive wages. This will help retain staff in the region and reduce the emigration of young and qualified people.

Adapting these recommendations will enable Haskovo to address demographic and economic challenges by creating better job opportunities and working conditions, which will contribute to the sustainable development of the region. An example of such actions are good practices of regions with a similar economic profile as Haskovo, which have addressed the shortage of labour and specific skills through innovative measures.

### **Burgenland, Austria: Dual training to address skills shortages**

Burgenland is an Austrian province with an agricultural and food-related profile, as well as a developed small and medium-sized business, resembling the economic structure of the Haskovo municipality. Due to a shortage of young specialists in important sectors such as mechanical engineering, food production and healthcare, the regional government, together with businesses, expanded the dual training system. Under this model, students study in vocational schools while simultaneously working in companies that provide practical training. This has not only reduced the mismatch between the demand and supply of qualified personnel, but also improved the relationship between education and business. In Haskovo, where such partnership structures between business and education are underdeveloped, such a model could support industries with an urgent shortage of qualified labour.

### **Olt, Romania: Attracting talent with financial incentives**

The Olt region in southern Romania, where agriculture, food processing and light industry are the main economic sectors, has faced emigration trends and a lack of skilled workers for many years. In an attempt to overcome this problem, the local authorities have developed financial incentive programs for returning professionals. These include tax breaks for young professionals, interest-free loans for starting businesses and subsidies for employers who hire locals after graduating from universities in other regions or abroad. As a result, some companies have been able to attract back engineering and technical personnel, and the local healthcare sector has benefited from additional bonus schemes for medical personnel who decide to settle in the region. In Haskovo, the shortage of doctors and engineers is also critical, and similar financial measures could motivate specialists to stay or return.

### **Lombardy, Italy: Special training programs in the health sector**

Lombardy, despite being a region with a larger territory and economy, has faced a serious shortage of nurses and paramedics in its smaller towns and rural areas. To address this problem, the regional authorities have created paid internship programs for healthcare workers and financed accelerated training for medical specialties through European funds. A program has also been developed that encourages step-by-step retraining – for example, laboratory technicians could undergo additional training and become nurses. A new project with an implementation period of January 2024 – June 2026 focuses on training and employment of refugees in healthcare in the regions of Lombardy, Lazio and Emilia Romagna. The municipality of Haskovo could implement similar models to compensate for the shortage of nurses and other specialized healthcare workers.

### **Galicia, Spain: European projects for digital skills**

Galicia, a northwestern region in Spain, has long suffered from a lack of highly skilled workers in the digital technologies that are becoming increasingly important in the economy. To address this problem, the regional authorities have created partnerships between universities, vocational schools and technology companies to provide mass training in digital skills, including automation, big data and IT security. The funding came mainly from the European Social Fund and has led to a rapid reduction in the technology gap in the region. Similar programs targeting digital skills for small and medium-sized businesses would also be useful for the municipality of Haskovo, especially in industrial zones and logistics centers.

The presented EU practices showcase a range of mechanisms for adapting to skills shortages – from dual training and return incentives to digital upskilling and health-sector retraining. For Haskovo, their relevance lies not only in the direct transfer of models but also in understanding the enabling conditions that made them successful: sustained cooperation between education and business, targeted use of EU funds, and regional policy leadership. To tailor these recommendations effectively, Haskovo must assess its own capacity to replicate such frameworks and identify leverage points – for instance, existing vocational centers that could anchor dual education, or regional health institutions that could host accelerated medical training. Aligning these measures with the strategic focus of CARE-GET – especially in building the MedTech Hub and fostering digital and wellness-related skills – will be critical to ensuring that adaptation leads to long-term transformation, not just short-term labour fixes.

### **Key lessons learned and strategic implications for Haskovo**

These international practices highlighted above provide valuable insights into tackling local labour shortages and skills mismatches. These examples demonstrate how targeted, sector-specific interventions – especially in healthcare and digital competencies – can drive talent retention, workforce reintegration, and regional resilience. Drawing from these cases, several key strategic directions emerge for the Haskovo Municipality:

- Introduce targeted financial incentives for healthcare and technical professionals, similar to the Olt model. These could include relocation bonuses, tax relief for young professionals, or employer subsidies tied to local workforce integration, especially in rural and underserved areas.
- Develop modular, accelerated training programs for the healthcare sector, following the Lombardy example. This could include requalification pathways, paid internships for medical staff, or partnerships with local universities and vocational schools to fill critical occupational gaps.
- Launch collaborative initiatives between local authorities, education providers, and businesses to boost digital skills in industrial zones and logistics centers, inspired by the approach in Galicia. Funding from the European Social Fund+, the Just Transition Fund, or Erasmus+ could be leveraged to support scalable

digital training programs in areas such as automation, cybersecurity, and data management.

These measures should be embedded as guiding principles in Haskovo's local workforce development strategy: targeted incentives, flexible reskilling and upskilling pathways, and active public-private partnerships. Integrating these elements will help address structural gaps in the labour market – particularly in the medical and digital sectors – and support the broader goals of sustainable economic development.

## 5. CHANGING ECONOMIC LANDSCAPE IMPACTING THE LABOUR MARKET

The changing economic landscape is strongly influenced by new technologies that are transforming industries and the labour market. The key technologies of Industry 4.0, digital transformation and green digitalization play a crucial role in shaping the future of industries and the global economy. Their implementation not only transforms business models and production processes, but also creates new opportunities for sustainable development and increased competitiveness.

### Key technologies of Industry 4.0

Industry 4.0 is a concept that describes ***automation, connectivity, and smart technologies in the industrial sector***. The key technologies driving this transformation include:

- Artificial intelligence (AI) and machine learning – support the analysis of large volumes of data, process automation, and intelligent decision-making.
- Internet of Things (IoT) – enables the connectivity of devices and sensors, which optimizes production and logistics processes.
- Cloud computing – provides access to data and computing power in real time, improving the efficiency of companies.
- Augmented and virtual reality (AR/VR) – used for training, simulations, and improving the user experience.
- Blockchain technologies – guarantee reliability and security in the management of supply chains and financial transactions.
- Cyber-Physical Systems (CPS) – connect physical processes with software algorithms for intelligent production management.
- Robotics and automation – autonomous robots perform complex tasks, reducing costs and the risk of human error.

These technologies are shaping ***a new model*** of industrial production, in which the requirements for the workforce are changing - the need for specialists with digital skills is increasing.

The key technologies of Industry 4.0 are driving profound transformations in the industrial sector, as automation, artificial intelligence, the Internet of Things and robotics optimize production processes and create smarter and more connected



factories. By deploying machines with the ability to self-learn and analyse data in real time, efficiency is improved, errors are reduced and costs are minimized. This transformation of industry automates routine tasks, thereby freeing up human capital for more complex and creative activities.

The Internet of Things connects devices and machines into a single network, allowing for better coordination and transparency in the management of production processes. Cloud computing and big data enable the processing and analysis of huge volumes of information, which improves strategic decision-making. Blockchain technologies increase security and reliability in the supply chain, ensuring traceability and reducing the risk of fraud. Virtual and augmented reality are used in training and support, creating interactive environments for the development of knowledge and skills.

The impact of these technologies on the labour market is significant. The demand for manual and repetitive tasks is decreasing, while the need for specialists in the fields of software engineering, data analysis, artificial intelligence and automation is increasing. Companies require employees who have digital skills and can work in intelligent manufacturing environments. This creates challenges for the labour market, requiring the need to further qualify or requalify the workforce to meet new industrial realities.

Industry 4.0 not only modernizes production processes, but also changes the role of humans in industry. Instead of routine tasks, humans will be more involved in monitoring, analysing and making strategic decisions, which emphasizes the importance of ***adaptability, creativity and technological skills***. This transformation poses new challenges for education and vocational training, but also creates new opportunities for economic growth and innovation.

The CARE-GET project strategically integrates the principles of Industry 4.0 to support the development of a future-oriented MedTech Hub in Haskovo. By fostering automation, real-time data processing, and intelligent decision-making in the healthcare and MedTech sectors, the project aims to modernize the local economy and shift it towards high-value, innovation-driven services. Technologies such as cloud computing, artificial intelligence, and IoT are being leveraged not only to improve health service delivery – through telemedicine and remote diagnostics – but also to attract and retain medical and technological talent in the region. The digitalization of healthcare enables more inclusive access to services, especially for rural and aging populations, while also providing opportunities for local startups and SMEs to engage in the growing field of digital health solutions.

At the same time, the application of Industry 4.0 within the CARE-GET framework creates momentum for a more inclusive and efficient labour market. By focusing on digital skills, automation literacy, and cross-sectoral collaboration, the project supports the reskilling and upskilling of workers – from youth and long-term unemployed to women and older adults. The MedTech sector offers opportunities for meaningful employment in fields such as software development, health informatics, and remote patient monitoring, opening new career paths in a previously under-diversified local

economy. In this way, Industry 4.0 becomes not only a technological paradigm but also a lever for social innovation, economic revitalization, and long-term resilience in Haskovo.

### Digital business transformation

Digital transformation affects all industries and business models, and is characterized by ***the integration of digital technologies*** for improved efficiency and innovation. Key aspects include:

- Automation and digital platforms – reduce operating costs and improve the speed of business processes.
- Big Data and analytics – facilitate making strategic business decisions based on data.
- E-commerce and digital services – create new channels for sales and interaction with customers.
- Cybersecurity – protecting data and critical infrastructure becomes a priority in the digital age.
- Remote work and virtual teams – digitalization is changing the way work is organized.

The transition to digital business requires workforce renewal, improvement of digital competencies, and strategic change management.

Digital transformation is completely changing the industry by implementing new technologies that automate processes, improve efficiency and create innovative business models. Industries are moving from traditional to intelligent production systems, where data, artificial intelligence and automation play a key role. This transition allows companies to optimize their operations, reduce costs and increase their competitiveness through digital technologies such as cloud computing, big data and machine learning.

The introduction of connected machines and intelligent analytics is changing the way products are designed, manufactured and distributed. Companies can anticipate market trends, personalize their services and respond more quickly to changes in demand. New technologies make it possible to create digital twins – virtual copies of physical systems that allow for more precise management of operations, smarter maintenance and minimizing risks in supply chains. These improvements increase productivity, but at the same time require a different type of workforce, capable of working with complex software systems and algorithms.

In the labour market, digital transformation is creating significant changes, reducing the need for routine and mechanical tasks that can be automated, but at the same time increasing the demand for specialists with expertise in IT technologies, data analysis and cybersecurity. The workforce must develop digital skills to meet the new



demands of enterprises. The need for ***training and retraining is growing*** as professions are transformed and new responsibilities related to software engineering, data management and digital business arise.

This technological revolution is leading to an increase in remote work and the use of digital tools for communication and interaction. Global access to job opportunities is increasing competition among personnel, while expanding career development horizons. Companies are increasingly relying on adaptive teams that use automation and artificial intelligence to optimize business operations.

Ultimately, digital transformation is driving a fundamental shift in industrial processes and the labour market, creating ***more efficient, automated, and connected work environments***. The application of new technologies brings both challenges and opportunities, as organizations and employees must constantly adapt and improve to remain competitive in the dynamic digital age.

### Green digitalization

Green digitalization is the fusion of digital technologies and sustainable practices to ***reduce the ecological footprint of economies***. The main directions in this area are:

- Smart energy systems – use IoT and AI to optimize energy consumption.
- Digital Twins – model energy systems for improved efficiency and lower carbon emissions.
- Data-driven circular economy – using blockchain and Big Data for more efficient resource and waste management.
- Eco-efficient automation and manufacturing – the application of digital technologies to reduce the carbon footprint in industry.

Green digitalization is not only a tool for sustainability, but also for competitiveness, as businesses increasingly turn to green technologies. It is transforming industry by integrating digital technologies with sustainable practices to reduce carbon footprints and optimize resource use. By implementing smart energy systems, automated demand management, and digital solutions for the circular economy, businesses are reducing their environmental impacts while improving their efficiency. Connected devices and sensors in production processes enable precise monitoring and management of resources such as electricity, water, and raw materials, leading to significant reductions in waste and emissions. Data collected in real time is analysed using artificial intelligence to identify opportunities for further efficiency and optimization.

The implementation of digital twins allows simulations and monitoring of entire production systems before their actual operation, which prevents inefficient use of resources and leads to more sustainable planning. Blockchain technologies provide

transparency in production and logistics processes, allowing for complete traceability of supply chains and ensuring that materials and products meet environmental standards. Automation and robotization further reduce losses and increase the use of renewable energy to power production facilities. Cloud platforms and big data support informed decision-making by anticipating consumer demand and minimizing overproduction.

In the labour market, green digitalization is leading to ***the emergence of new professions*** related to the creation and management of energy-efficient systems, the analysis of environmental data and the development of smart solutions for sustainable development. Traditional industrial jobs are being transformed, with digital platform experts, eco-engineers and sustainability management specialists playing an increasingly important role. These changes are creating the need for training and retraining, as employees need to develop skills to work with smart technologies and sustainable business models.

Companies that successfully implement green digitalization increase their competitiveness as consumers and regulators demand a more environmentally friendly approach. At the same time, carbon taxes and environmental regulations incentivize businesses to invest in innovative solutions that simultaneously improve economic efficiency and reduce environmental impact. The work environment is becoming more digitalized, with remote monitoring and forecasting through software algorithms reducing the need for physical intervention.

Green digitalization is creating new growth opportunities for sustainable industries such as renewable energy, smart cities and electric mobility. This transformation is not only helping companies respond to environmental challenges, but is also ***shaping the future of the labour market*** by fostering digital and environmental innovations. This is leading to a dynamic restructuring of jobs, where skills related to future technologies and sustainable development will be key.

### Digital transformation progress indicators

Measuring progress in digital transformation is done through various indicators, which can be divided into several categories:

- Technological adaptation: Share of companies using AI, IoT, Cloud Computing and Big Data; use of automated and digitalized processes.
- Economic effects: Productivity growth associated with digital innovations; share of digital services in companies' total revenues.
- Growth of digital skills: Share of workforce with digital competencies; investments in digital training and retraining of employees.

- Digital infrastructure: Level of implementation of 5G and high-speed internet; increasing number of smart factories and intelligent production lines.
- Cybersecurity and reliability: Frequency of cyberattacks and effectiveness of security measures; share of companies using blockchain for data protection.

The indicators show how far digital transformation is progressing and how it is impacting the labour market and the economy.

Measuring progress in digital transformation is essential, as it allows companies, governments and society to assess ***the impact of digital technologies on the economy, industries and the labour market***. This process makes it possible to identify areas where progress is significant, as well as those that are lagging behind and require additional investment and development strategies. Through clear and objective indicators of digital maturity, organizations can plan their future steps, adapt their business models and ensure their sustainability in an increasingly dynamic and competitive market.

Digital transformation is driving ***significant structural changes*** in the economy and industry, with automation, artificial intelligence and the Internet of Things ***creating new opportunities, but also causing imbalances*** in employment levels and the skills required by the workforce. Measuring progress helps companies understand how digital technologies contribute to productivity, where processes can be optimized and what training is needed to ensure employees are prepared for the new requirements. Organizations can track the effectiveness of their digital investments and compare their development against their competitors, thereby increasing their adaptability and competitiveness.

For governments and public institutions, measuring digital transformation provides important information for ***formulating strategies*** for innovation, economic growth and digital education. Understanding the level of digital adoption in different sectors allows for ***the development of policies*** that support small and medium-sized enterprises in digitalization, encourage investment in technological infrastructure and ensure that all regions and social groups have access to digital resources. This is key to ***reducing digital inequality*** and building an economy that is resilient to future technological challenges.

Measuring progress in digital transformation also plays a crucial role in assessing the impact on sustainable development and environmental efficiency. By using digital indicators related to green digitalization, it is possible to assess how technologies contribute to reducing carbon emissions, optimizing resources and developing smart energy systems. This is particularly important for international environmental goals and for the commitments of countries and companies to sustainable development.

***A Green Digitalization Monitoring Barometer*** has been developed in Bulgaria – a tool that serves to measure and track progress in the implementation of digital

technologies to protect the environment and improve efficiency in enterprises. It functions by collecting and analysing data related to the use of innovations that reduce the carbon footprint, optimize energy costs and improve resource management both in different economic sectors and in people's personal and everyday lives. Based on this information, recommendations can be made to improve environmental policies and promote innovation. Its main goal is to provide a clear and measurable view of how digitalization can contribute to sustainable development, while supporting people, enterprises and institutions in the transition to a greener way of working.

### Impact on the economy of Haskovo municipality

The key technologies of Industry 4.0, digital business transformation and green digitalization can have a significant impact on the economy of Haskovo Municipality, contributing to ***innovative development, increasing productivity and adapting to modern market requirements***. In the context of the specific economic and demographic characteristics of the region, digitalization and smart technologies can accelerate the modernization of the main industrial sectors, create more ***opportunities for growth and employment*** and increase ***the quality of life in the municipality***. The CARE-GET project supports this transformation by creating a framework for the integration of these technologies in the health and MedTech sectors, helping position Haskovo as a regional innovation hub.

In the manufacturing sector, the application of ***automation, artificial intelligence and robotic systems*** can compensate for a shrinking and aging workforce, enabling companies to ***optimize their processes, reduce operating costs and remain competitive***. At the same time, targeted upskilling programs can ensure that the existing workforce transitions smoothly into roles that require higher digital and technical literacy. This is particularly important for the mechanical engineering, processing and food industries, which are among the main drivers of the local economy. The introduction of ***smart factories and connected manufacturing systems*** will allow for more precise management of supply chains, higher efficiency and reduced waste.

Agriculture can benefit from green digitalization by implementing ***precision farming technologies, using drones, sensors for soil and climate monitoring and irrigation automation***. This will not only increase yields and reduce losses, but also reduce the sector's dependence on manual labour, which is increasingly difficult to find due to demographic changes.

Logistics and trade will also be positively impacted by the integration of ***digital transaction management platforms, smart warehouse systems, and blockchain technologies for tracking deliveries***. This will improve the connection of the local economy with national and international markets, facilitate the access of local businesses to global trade, and reduce delivery times and logistics costs.

Digital transformation will have a significant impact on ***the health sector*** in Haskovo Municipality, where a shortage of medical personnel and resources has been felt in recent years. The implementation of ***electronic health records, telemedicine and artificial intelligence*** for diagnostics will allow for faster and more efficient patient management, reduce the administrative burden on medical teams and improve ***access to quality health services for residents in remote areas***. Technologies such as remote patient monitoring and the use of analytical tools for predicting health risks will increase the efficiency of the health system, protect public health and prepare for future challenges. These advancements are foundational for the future MedTech Hub envisioned by CARE-GET, where digital diagnostics, teleconsultations, and AI-powered care services form the backbone of an innovative health ecosystem in Haskovo.

Industry 4.0, digital business transformation and green digitalization will contribute to the economic sustainability of Haskovo by ensuring ***better adaptation to global trends***, improving the quality of services and optimizing local resources. The implementation of these technologies ***will stimulate investments, improve working conditions and create new job opportunities*** in sectors with high added value, which will make the municipality a more attractive place for young specialists and qualified personnel.

To fully exploit the opportunities of Industry 4.0, the municipality needs to invest in ***education and training***, promote training in ***engineering, technical and digital skills*** and attract talented young people to these fields. Improving the connection between business, technological solutions and education will ensure that the workforce is prepared for future market demands and will help create high-paying and sustainable jobs.

Implementing a tool such as ***the Green Digitalization Monitoring Barometer*** can be particularly useful for the municipality of Haskovo, as it will help it assess in real time to what extent the implemented digital solutions contribute to sustainable development. By using the barometer, local authorities can track the impact of the introduction of smart street lighting, digital waste management, e-government services and various other initiatives that can reduce the ecological footprint of the municipality. Local authorities can use the data obtained to justify ***investments in digital and green technologies***, as well as to develop policies that ***will improve the quality of life of citizens***. In addition, the implementation of such a tool can give the municipality a competitive advantage and attract new investments and funding from various sustainable development programs. In the long term, its implementation can lead to significant benefits for both business and the public sector, improving the overall sustainability of the community.



## 6. ANALYSIS OF SKILLS SHORTAGES AND MISMATCHES IN THE LABOUR MARKET OF HASKOVO MUNICIPALITY

Within the framework of the analysis of gaps and skills in the municipality of Haskovo, a key role is played by a survey among employers, which is a basic tool for directly identifying the real needs of businesses for skills and competencies. The collected data aims to identify specific shortages, discrepancies between the education system and the labour market, as well as future trends in the demand for personnel. This is necessary for the development of effective policies for vocational training and human resources development.

An online survey was created for the purposes of the study<sup>2</sup>. The questionnaire includes a total of 42 questions as a combination of open-ended questions (giving respondents the opportunity to answer in their own words), closed-ended questions (including all possible answer options and the respondent chooses one of them) and semi-closed questions (those in which, in addition to the structural answers, other answers are also possible, most often with "other"). Closed-ended questions with multiple answers predominate, as practice shows that they are most effectively completed by respondents.

The following conditions were observed when developing the questionnaire:

- Appropriate questions were selected from the perspective of the set goals and the specific conditions for the survey;
- Clear wording is provided so that it does not allow for interpretation and the questions are perceived unambiguously;
- Various types of questions are included;
- Appropriate scales are provided to obtain objective and adequate answers to the questions posed - heavy scales are avoided due to the risk of misunderstanding and "distraction" on the part of the respondent, but at the same time they are tailored to the type of question, so as to collect the necessary information and provide more opportunities for analysis (e.g., with nominal scales, only the mode can be calculated, while with proportional scales, all arithmetic operations are possible);
- Typical errors in compiling questionnaires have been eliminated (for example, asking questions that are highly unlikely to receive an answer that is either impossible or difficult for the respondent, or the latter simply does not want to answer).

The survey was conducted between February 19 and March 28, 2025, and 50 responses were received. The respondents were employers operating in the territory of Haskovo Municipality.

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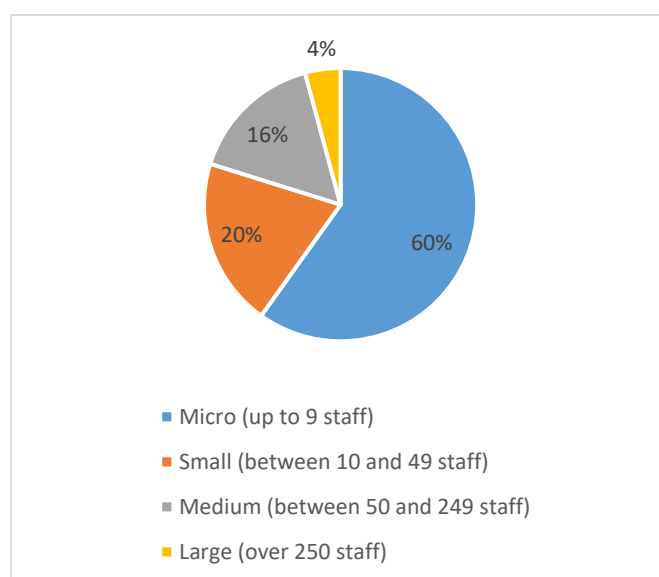
<sup>2</sup> Annex 1 to this analysis: <https://drive.google.com/drive/folders/1z3l3PE1C6LAknY5ysIHwadvV25X-h7jm?usp=sharing>

## General information

The "General Information" section includes questions about the type of enterprise, the sector in which it operates, and its period of operation in that sector.

Micro-enterprises account for 60% of the survey participants, 20% of them are small enterprises, 16% are medium-sized and 4% are large enterprises ([Question 1.1](#)).

**Figure 1: Type of enterprise according to number of employees**

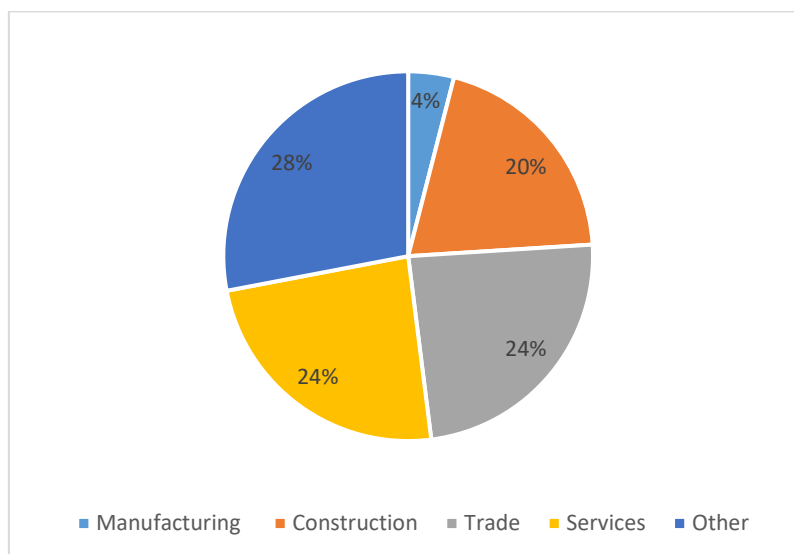


*Source: Questionnaires*

24% of respondents operate in the trade and services sectors, 20% in construction, and 4% in manufacturing ([Question 1.2](#)).



**Figure 2: Sector in which the enterprise operates**



*Source: Questionnaire*

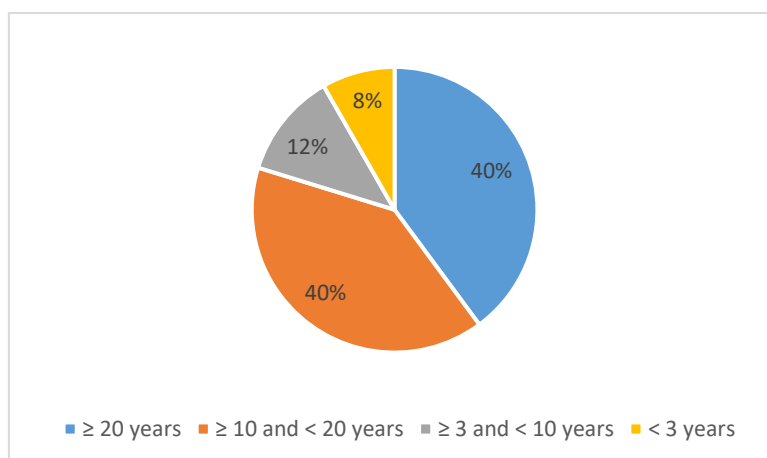
28% answered "Other", and the clarifying question stated:

- Real estate;
- Medical activities;
- Insurance;
- Healthcare;
- Professional activities and scientific research;
- Business and other management consulting activities;
- Mechanical engineering.

The presence of enterprises in specialized fields such as scientific research, consulting, and healthcare suggests emerging diversification and the potential for knowledge-intensive economic development in Haskovo.

A significant part of the enterprises covered in the study have many years of experience in the business. For 40% it is >20 years, and for another 40% – between 10 and 20 years. 12% have been on the market between 3 and 10 years and only 8% – less than 3 years ([Question 1.3](#)).

**Figure 3: Years of existence of the enterprise**



*Source: Questionnaire*

The "General Information" section of the survey among employers in Haskovo Municipality provides the context for understanding the local business climate. Micro-enterprises are the most common, followed by small, medium and large enterprises. The distribution by sector is also diverse, with trade and services, construction and manufacturing taking the leading positions. The period of operation of the enterprises shows that the majority of them have many years of experience, which suggests the sustainability of local business and its ability to adapt to changes over time.

This dataset provides valuable insight into the composition and resilience of the business environment in Haskovo Municipality. The dominance of micro-enterprises highlights the fragmented nature of the local economy, while the variety of sectors represented – including emerging knowledge-based activities – reflects a certain degree of diversification. The significant experience of most enterprises further indicates business stability, although it raises questions about the ecosystem's ability to attract and support new ventures.

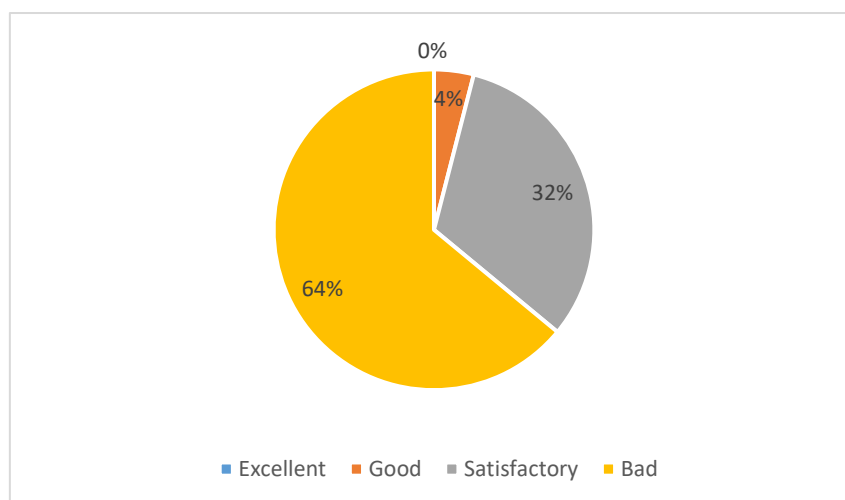
### Hiring staff

The questions in the "Hiring staff" section are designed to explore key aspects of the interaction between employers and the labour market. They cover both the current state of the market and the challenges associated with finding and training personnel, while focusing on the needs and expectations of business. They aim to identify the main problems that employers face, as well as to outline trends in the search for qualified specialists. The questions also provide information on employers' preferences regarding the qualities, skills and education of candidates, which is important for adapting the education system to market needs.

*Question 2.1. How do you assess the current state of the labour market?*

For 64% of those who answered the question, the current state of the labour market is bad, and for 32% it is satisfactory. Only 4% define it as good, and none of the respondents chose the "excellent" answer option available in the survey.

**Figure 4: Assessment of the current state of the labour market**



*Source: Questionnaire*

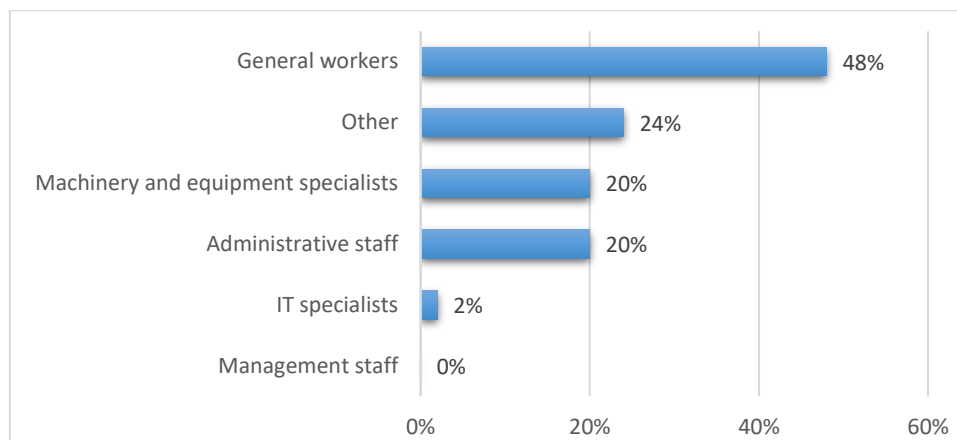
The fact that the majority (64%) rate it as "bad", while only 4% evaluate it as "good", highlights serious issues related to the quality of jobs, working conditions, or opportunities for professional development. The absence of responses rating the labour market as "excellent" further suggests significant deficiencies that limit the satisfaction of both employees and employers.

This may indicate structural problems, such as a shortage of skilled labour, a mismatch between the skills offered and the needs of businesses, low wages, or limited opportunities for career advancement. These data point to the need for targeted measures to improve the state of the labour market, including investments in education, training, and the creation of better working conditions.

*Question 2.2. What are the most frequently advertised vacant positions?*

The results of the responses show that the most frequently advertised vacancies are for general workers – 48% of all, "Machinery and equipment specialists" and "Administrative staff" receive 20% of the responses each. The demand for IT specialists is minimal (2%), and "Management staff" is not selected as an answer by anyone.

**Figure 5: Most frequently advertised job vacancies**



*Source: Questionnaire*

The high demand for low- and mid-skilled roles, alongside limited demand for managerial or IT positions, indicate a relatively underdeveloped service economy and low digitalization across enterprises in the region.

A significant share of the survey participants – 24% – indicated the answer “Other”, and the following answers were received to the clarifying question:

- Medical professionals;
- Drivers and other transport workers;
- Specialized construction workers;
- Food delivery driver.

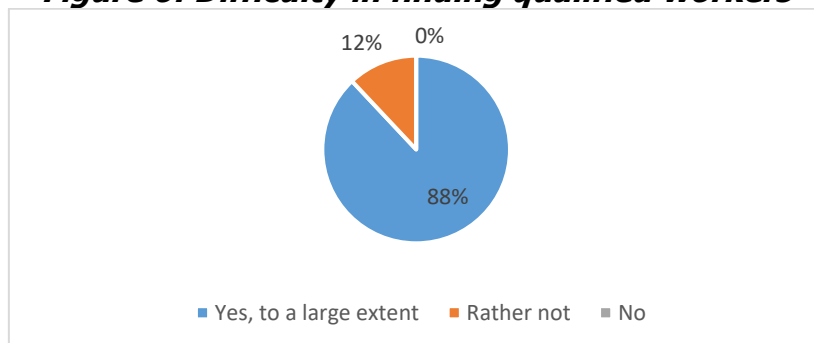
This highlights the importance of occupations requiring specific skills or qualifications that are important for certain sectors such as healthcare, transport and construction.

The sum of the percentages exceeds 100 because the question allows for more than one answer.

### *Question 2.3. Do you experience difficulties in finding qualified personnel?*

The answers to this question clearly show that the majority of surveyed employers (88%) experience significant difficulties in finding qualified personnel. Only 12% of them indicated that these difficulties are rather insignificant. Not a single participant stated that they did not encounter any problems in this area, which is the answer option available in the questionnaire. These data indicate a serious shortage of qualified specialists on the labour market, which probably hinders business and limits development opportunities in various sectors.

**Figure 6: Difficulty in finding qualified workers**



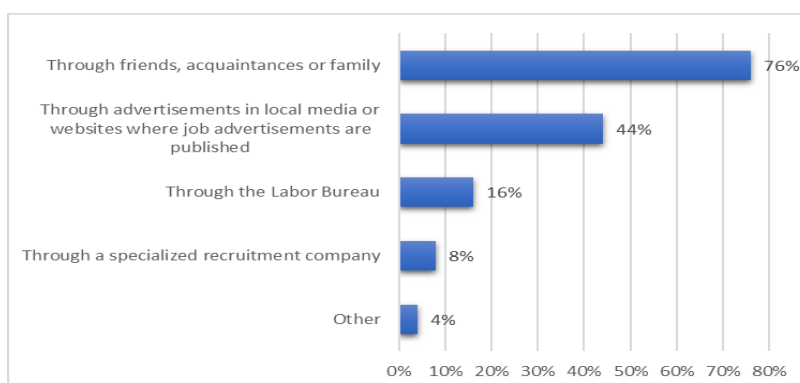
Source: Questionnaire

*Question 2.4. What is your method for hiring new employees?*

The most preferred way to hire new employees is through personal contacts – friends, acquaintances or family, as this method was indicated by 76% of respondents. In second place, with 44%, is the use of advertisements in local media or job websites, which indicates a significant role of public channels for recruiting personnel. Only 16% of employers rely on the Labour Office, and 8% use the services of specialized recruitment companies. The answer “Other” was indicated by 4%, and the clarifying question was answered that all channels are used.

The sum of the percentages exceeds 100 because the question allows for more than one answer.

**Figure 7: Way to hire new employees**



Source: Questionnaire

The responses indicate employers prefer informal and direct approaches to hiring, which is likely due to the greater trust in personal recommendations and the lower costs associated with this process.

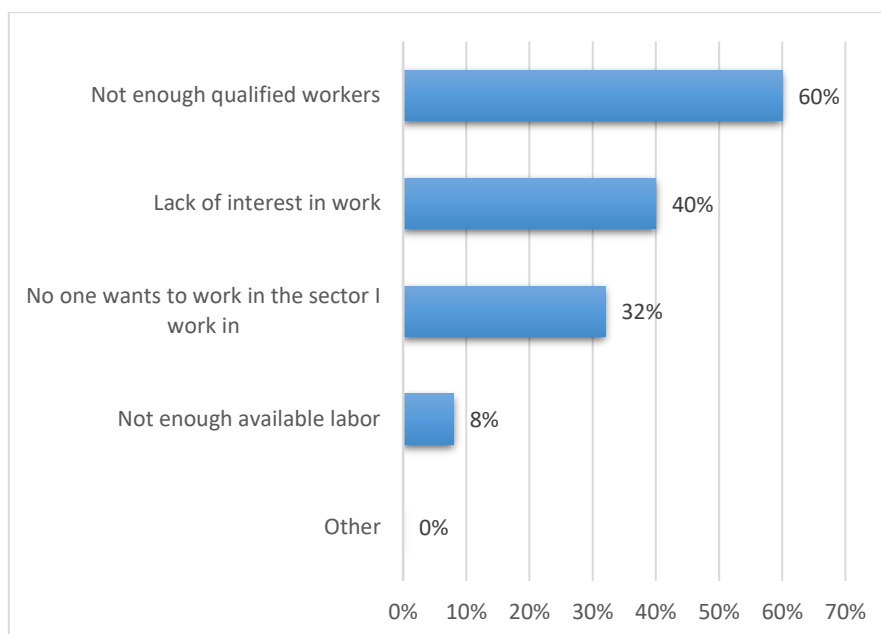
Heavy reliance on personal networks (76%) points to informal labour practices, which may limit diversity, professionalism, and transparency in recruitment.

*Question 2.5. What are the main difficulties you most often encounter when recruiting new staff?*

The main difficulty employers face when recruiting new staff is the lack of sufficiently qualified workers, indicated by 60% of respondents. In second place, 40% of participants noted a lack of interest in work, which may be related to motivation or working conditions. The third most common problem, indicated by 32%, is the reluctance of people to work in the specific sector, which probably reflects specific challenges in certain industries. The lack of a sufficiently available workforce was noted by 8% of respondents, and the answer "Other" was not indicated.

The sum of the percentages exceeds 100 because the question allows for more than one answer.

**Figure 8: Main difficulties in hiring new staff**



*Source: Questionnaire*

This data indicates that the main problems are related to both the qualifications and the motivation and preferences of potential candidates, which creates serious challenges for employers.

These findings reveal a dual challenge: not only is there a shortage of qualified workers, but there is also a notable lack of motivation or willingness among potential employees. This underlines the importance of both skills development and improving job attractiveness, including working conditions, career prospects, and wages.



*Question 2.6. What are the main reasons for the difficulties in recruiting new staff?*

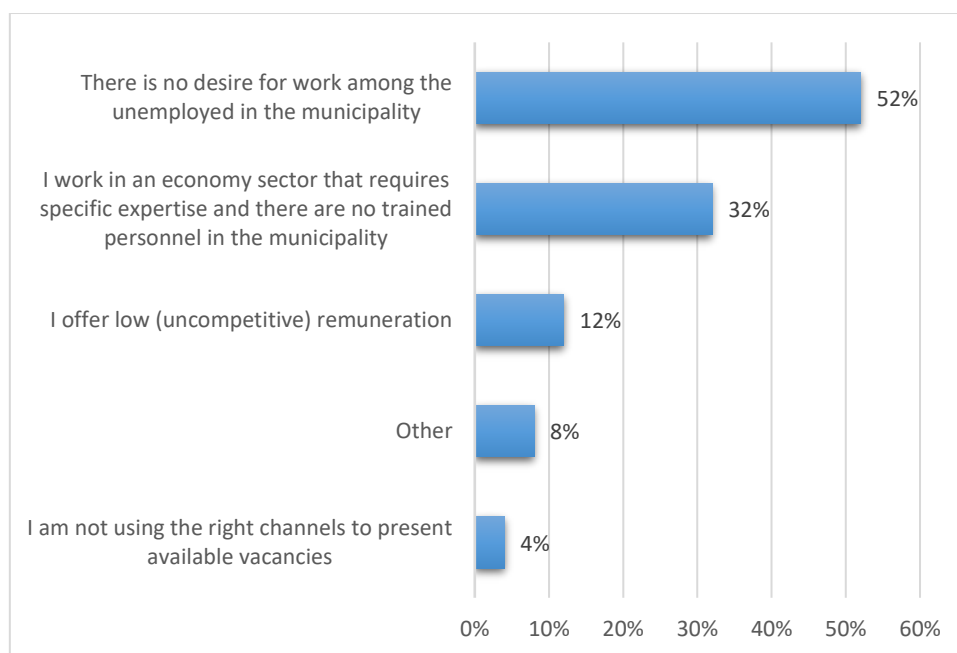
The main difficulties in recruiting personnel are related to the lack of desire for work among the unemployed (52%) and the shortage of qualified personnel for specific economic sectors for which there are no trained personnel in the municipality (32%). 12% of respondents admit that they offer low (uncompetitive) remuneration, which makes it difficult to attract candidates. 8% of employers chose the answer "Other", and to the clarifying question they indicated:

- In NGOs, employment is temporary and it is difficult to retain qualified staff sustainably;
- Lack of basic skills.

The least significant reason, noted by 4% of respondents, is the incorrect use of channels to present vacant positions.

The sum of the percentages exceeds 100 because the question allows for more than one answer.

**Figure 9: The main reasons for difficulties in recruiting new staff**



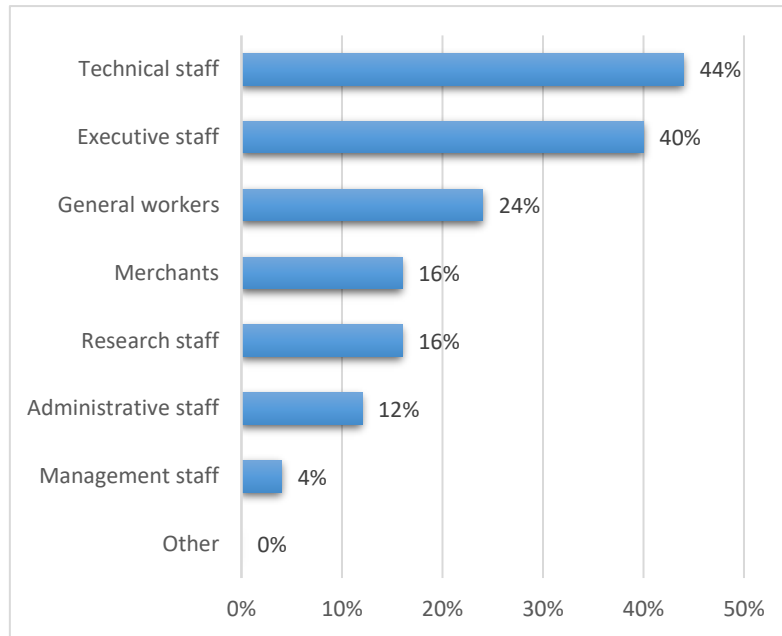
Source: Questionnaire

*Question 2.7. Which specialists are the most difficult to find on the labour market?*

The most difficult to find in the labour market are technical specialists, indicated by 44% of respondents. In second place are managers, indicated by 40% of participants. General workers are the third most difficult group to find, indicated by 24% of respondents, which may be related to a lack of interest in unskilled labour. At the same

time, general workers are the most frequently advertised position according to the answers to [Question 2.2](#).

**Figure 10: Specialists most difficult to find in the labour market**



*Source: Questionnaire*

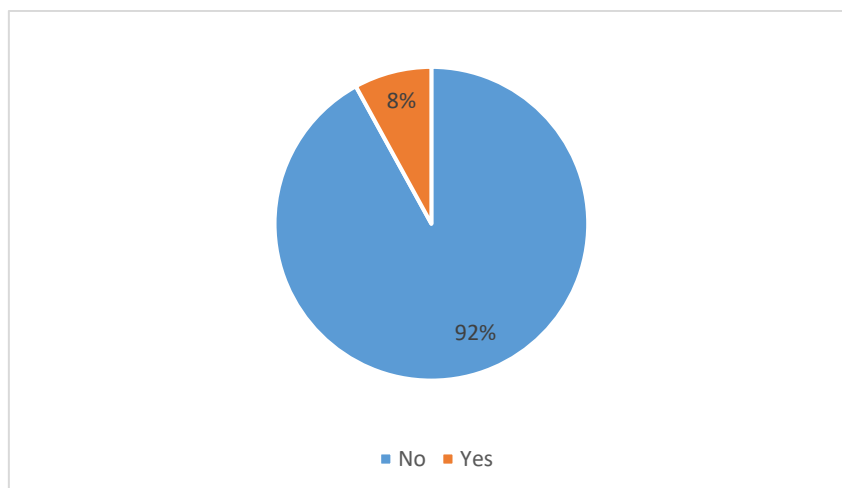
Merchants and research staff are mentioned by 16%, while administrative staff is difficult to find according to 12% of respondents, which is a relatively low share compared to the other categories. The least difficulty is found in finding management staff, mentioned by only 4% of respondents. The sum of the percentages exceeds 100, as the question allows for more than one answer.

The relatively low difficulty in finding management staff may suggest a stable availability of leadership candidates locally or reflect limited demand for such roles in predominantly micro- and small enterprises. However, the difficulty in recruiting merchants could highlight gaps in vocational training or limited attractiveness of retail careers for younger generations, despite the trade sector's significance in the local economy. The pronounced challenge in attracting research staff points to structural weaknesses in the local knowledge ecosystem – such as insufficient collaboration between enterprises and research institutions and underscores the broader issue of brain drain, with highly skilled professionals often leaving for better opportunities in larger urban hubs. These findings emphasize the importance of integrated talent strategies, such as those promoted by CARE-GET, to foster local skills development, improve employment pathways, and strengthen the link between education, research, and business in regions facing demographic and economic transitions.

*Question 2.8. Have you hired foreign workers in your enterprise in the last 1–2 years, e.g. from India, Nepal, Ukraine, Kazakhstan and other countries?*

A significant share of employers – 92% – have not hired foreign workers. Only 8% of respondents gave a positive answer to this question.

**Figure 11: Hiring foreign workers**

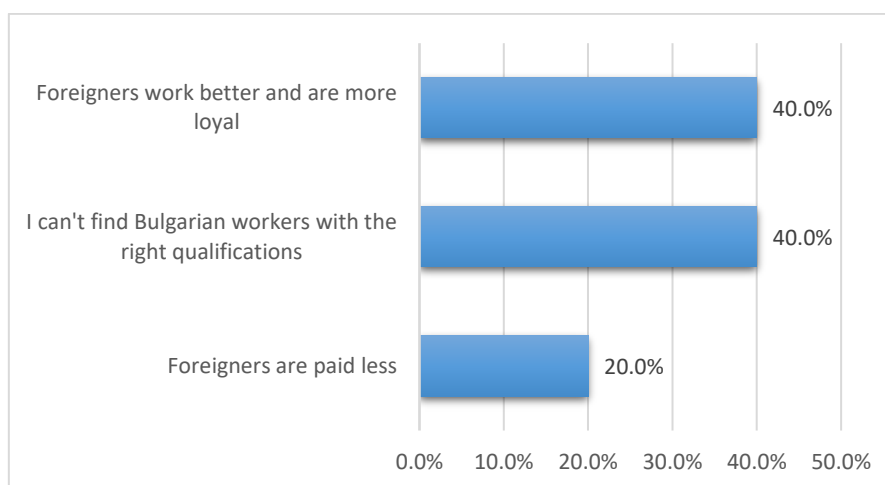


*Source: Questionnaire*

*Question 2.9. If you have hired foreign workers from third countries, what is the reason for this?*

40% of those who hired foreign workers indicated that they could not find Bulgarian workers with appropriate qualifications, and other 40% believe foreigners work better and are more loyal. The reason for 20% of those who answered this question is that foreign workers receive lower wages, which may be an economic motive for hiring them, but is not a major factor according to the data.

**Figure 12: Reason for hiring foreign workers**



*Source: Questionnaire*

*Question 2.10. What are the three most important qualities you look for in potential candidates for employment at your company?*

The most important quality that employers look for in potential candidates is motivation for work, indicated by 80% of respondents. Equally important – 56% each – are personal qualities, such as teamwork and meeting deadlines, as well as qualifications (knowledge) in a specific field, which shows parity between professional skills and personal characteristics.

**Figure 13: The three most important qualities sought in potential job candidates**



*Source: Questionnaire*

Loyalty is important to 52% of respondents, indicating that employers are looking for long-term commitment and reliability in employees. Professional experience is mentioned by 44%, and a desire for development is important to 36% of employers.

The answer "Other" is not specified, which indicates that the predefined answers cover the main criteria for evaluating candidates.

The sum of the percentages exceeds 100 because the question allows for more than one answer.

*Question 2.11. What are the three most important qualities that are missing in people who apply for a job with you (they may be different from those listed in the question above)?*

The most frequently missing quality in job candidates is motivation, with 80% of employers surveyed citing it as a major problem. In second place is the lack of desire

for development, which according to 60% of respondents indicates insufficient ambition and drive for improvement. The third most important quality missing is professional experience, cited by 48% of employers, suggesting that many candidates lack the necessary practical skills for the position. These three aspects are key to the successful performance of candidates and their suitability for the work environment.

**Figure 14: The three most important qualities that are missing in job applicants**



*Source: Questionnaire*

Loyalty and qualification (knowledge in a specific field) were mentioned by 32% of respondents as missing qualities. This shows that employers are looking for candidates who not only possess specific skills, but are also ready to commit to the organization in the long term. The lack of personal qualities, such as teamwork and meeting deadlines – noted by 28% of respondents, highlights the importance of soft skills for successful integration into the work environment. None of the respondents mentioned other missing qualities, which suggests that the listed aspects cover the main problems that employers encounter in candidates.

The sum of the percentages exceeds 100 because the question allows for more than one answer.

A detailed analysis of the relationship between the answers to the above two questions reveals interesting dependencies and discrepancies between the qualities that employers are looking for and those that they believe are lacking in candidates.

Motivation to work is the most important quality that employers look for (80%) and at the same time it is the most frequently missing quality in candidates (80%). This shows a clear discrepancy between employers' expectations and the reality of candidates.

Motivation is a key factor for successful employee performance, but it is clearly a serious problem in the selection of personnel.

Personal qualities such as teamwork and meeting deadlines are important to 56% of employers, but are missing in only 28% of candidates, suggesting that while these qualities are important, they are not among the most serious deficits that employers encounter. However, soft skills remain important for successful integration into the work environment.

Qualification (knowledge in a specific field) is important for 56% of employers, but is absent for 32% of candidates. There is a moderate discrepancy here – qualification is significant, but not among the biggest problems for candidates. This may mean that employers are willing to accept candidates with insufficient qualifications if they demonstrate other important qualities, such as motivation.

Loyalty is important to 52% of employers, but is missing from 32% of candidates. This shows that while loyalty is valued, it is not among the most serious missing qualities. Employers probably view it as a quality that can be developed over time.

Professional experience is important to 44% of employers, but is absent for 48% of candidates. There is a slight discrepancy here – professional experience is important, but its lack is a more common problem. This may mean that employers are faced with the challenge of hiring candidates with insufficient practical experience, which makes it difficult to perform certain tasks.

A desire to develop is important to 36% of employers, but is absent in 60% of candidates. This is a significant imbalance – although a desire to develop is not among the most important qualities that employers are looking for, its absence is a serious problem. This may indicate that employers are inclined to accept candidates with insufficient ambition, but this subsequently negatively affects their effectiveness and long-term suitability.

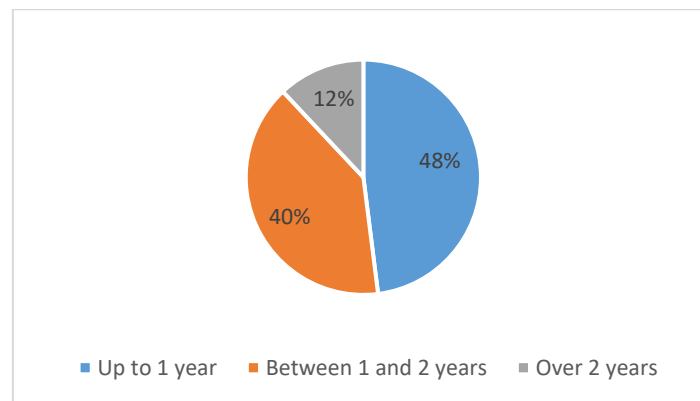
The analysis shows that motivation to work is a critical quality that employers are looking for and that is most often missing in candidates. Personal qualities and qualifications are important, but their lack is not such a serious problem. Loyalty and professional experience are valued, but lack of experience is more common. The desire for development, although not among the most important qualities that employers are looking for, is a significant deficit in candidates. This discrepancy between expectations and reality highlights the need for better training, motivation and development of candidates to meet the needs of employers.



*Question 2.12. How long does it take to train a new employee to achieve maximum work efficiency?*

According to 48% of respondents, less than 1 year is needed to train a new employee to achieve maximum work efficiency. Between 1 and 2 years is the training period for 40% of employers and over 2 years – for 12% of them.

**Figure 15: Time required to train a new employee to achieve maximum work efficiency**



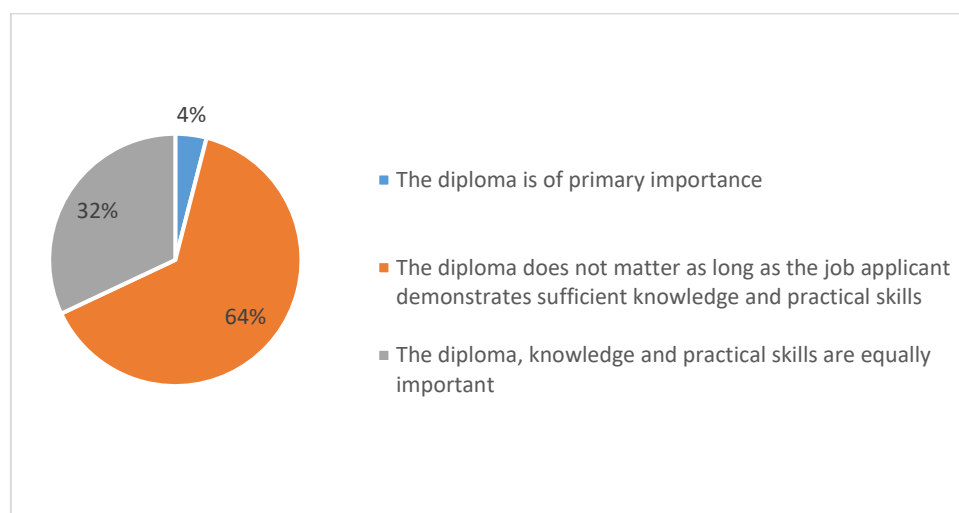
*Source: Questionnaire*

All employers who believe that new employees can reach maximum efficiency in a relatively short period of time are from the construction, trade and service sectors, where the job positions do not require too long training or complex skills. However, for a significant part of employers, training requires more time, which may be related to more specific requirements or complexity of the job. A small number of respondents indicate that training exceeds two years, which is probably typical for positions requiring high qualifications or long-term development. This reveals a diversity in employers' expectations, depending on the nature of the job and the complexity of the tasks.

*Question 2.13. Does the educational level of job candidates matter to you or do you prefer proven knowledge and practical skills?*

For most employers – 64% – a diploma is not of primary importance, as long as candidates demonstrate sufficient knowledge and practical skills. This highlights the pragmatic approach of employers who prioritize real abilities and competencies over formal education.

**Figure 16: Importance of educational level and proven knowledge and practical skills of job applicants**



*Source: Questionnaire*

However, a significant portion of respondents – 32% – believe that diploma, knowledge and practical skills are equally important, suggesting a balanced approach to assessing candidates. Only 4% of employers place diploma as the main factor.

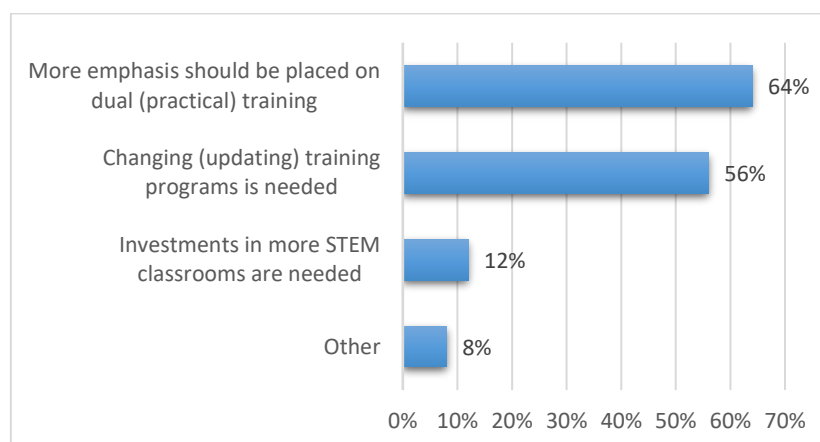
The results show that formal education plays a secondary role in the selection process for most positions.

While this flexibility may support entry into various technical or vocational roles, it's important to note that in sectors such as healthcare, a central focus of the CARE-GET project, formal qualifications are not optional, but essential.

#### *2.14. What needs to be improved in the education system to meet the needs of business?*

According to 64% of respondents, the education system should place greater emphasis on dual training and practical training. This highlights the need for a closer connection between theory and practice in order to prepare staff who are ready to join the workforce directly. In addition, a significant part (56%) of respondents believe that it is necessary to update curricula to meet modern business requirements and technological progress. Investments in more STEM classrooms are mentioned by a small part of respondents – 12%, which shows that although important, this is not a top priority for most employers.

**Figure 17: Improvements needed in the education system to meet business needs**



*Source: Questionnaire*

8% answered "Other", and the clarifying question suggests organizing classes in secondary schools with specialties from sought-after personnel for local businesses. Overall, the results emphasize the need for reforms to make education more practical and aligned with the real requirements of business.

The sum of the percentages exceeds 100 because the question allows for more than one answer.

The results of this section of the survey reveal serious challenges that employers face in the labour market, as well as their expectations and needs. The overall state of the market is assessed as unsatisfactory, with the majority of respondents describing it as bad. This shows that employers are experiencing difficulties in finding suitable personnel, which negatively affects their ability to develop their business.

The most frequently advertised positions are for general workers, highlighting the need for unskilled labour, but there is also a shortage of personnel for specific professions, such as medical specialists, drivers and construction workers. The demand for technical specialists and managers is also significant, but these positions are among the most difficult to fill, indicating a lack of qualified personnel in these fields.

The main difficulties in recruiting personnel are related to the lack of motivation to work, insufficient qualifications and lack of interest in certain sectors. Employers indicate that motivation is the most important quality they look for in candidates, but at the same time it is also the one most often missing. This clearly shows a discrepancy between business expectations and the reality of the labour market. The lack of desire for development and professional experience are also serious problems that hinder the successful selection of personnel.

Recruitment methods are mostly informal, with employers relying primarily on personal contacts. This is likely due to a lack of trust in institutional recruitment channels or the

need for a quick and cost-effective process. However, the use of public channels, such as advertisements in the media and websites, also plays an important role.

The education system is seen as a key factor in improving the state of the labour market. Employers emphasize the need for greater emphasis on practical training and dual training, as well as updating curricula to meet modern business requirements. This shows that there is a significant gap between education and the needs of employers, which must be overcome through reforms.

The results of the "Hiring staff" section highlight serious problems in the labour market, such as a shortage of qualified personnel, lack of motivation and insufficient connection between the education system and business. Employers are faced with the challenge of finding suitable employees who meet their requirements, while at the same time looking for ways to adapt selection and training processes to market realities. This highlights the need for targeted efforts to improve the labour market, including education reforms, support for businesses and stimulating the motivation and qualification of the workforce.

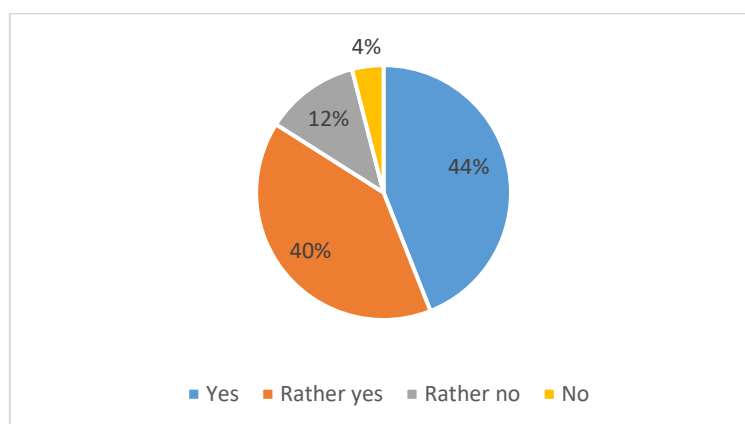
### Education and skills

The questions in this section of the survey explore important aspects related to personnel qualifications, training needs, and the degree of technological integration in enterprises.

*Question 3.1. Do you think that the employees in your company have sufficient skills and qualifications for the work they do?*

The answers to the question show that the majority of employers assess the level of skills and qualifications of employees in their enterprises as good or satisfactory. 44% of respondents are categorical that employees have the necessary skills and qualifications for their work, and 40% express a moderately positive opinion. This means that a total of 84% of employers have a positive assessment of the competences of their staff. However, 12% consider the level of skills and qualifications to be unsatisfactory, and 4% are of the opinion that employees do not have enough skills.

**Figure 18: Availability of sufficient skills and qualifications of employees in the enterprise**



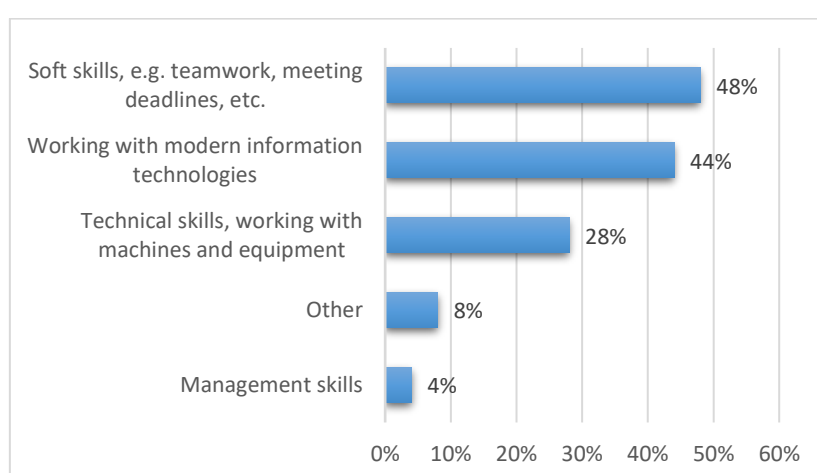
Source: Questionnaire

The data shows that although most employers are satisfied, there is still a small but significant share of enterprises that encounter problems with the qualifications of their staff.

*Question 3.2. What additional training or qualification courses do employees in your company need?*

The greatest attention is paid to soft skills, such as teamwork, meeting deadlines, and the like, which are mentioned by 48% of respondents. This clearly shows that interpersonal and organizational competencies are key to the effectiveness of the work process and successful interaction between employees.

**Figure 19: Need for additional training or qualification courses**



Source: Questionnaire

The need for training in working with modern information technologies is indicated by 44% of respondents. This result is indicative of the importance of digitalization and

technological progress in the modern work environment. Companies realize that employees must be prepared to work with new software solutions and tools that optimize processes and increase productivity.

Technical skills, including operating machinery and equipment, were mentioned by 28% of respondents. This is an important aspect, especially for businesses that rely on specific technologies and equipment that require specialized training. Although this percentage is lower compared to soft skills and digital competence, it remains significant for manufacturing and technical-oriented sectors.

Management skills were mentioned by only 4% of respondents, which may mean that the company already has enough qualified managers or that management functions are not a top priority for current development. However, this does not exclude the possibility that these skills are important for the future of the organization.

Also interesting is the answer "Other", given by 8% of respondents, who specify that they do not need external training because they develop the qualifications of their employees internally and continuously. This shows the independent approach of some enterprises to training, which can be effective if it is well organized and adapted to the needs of the staff.

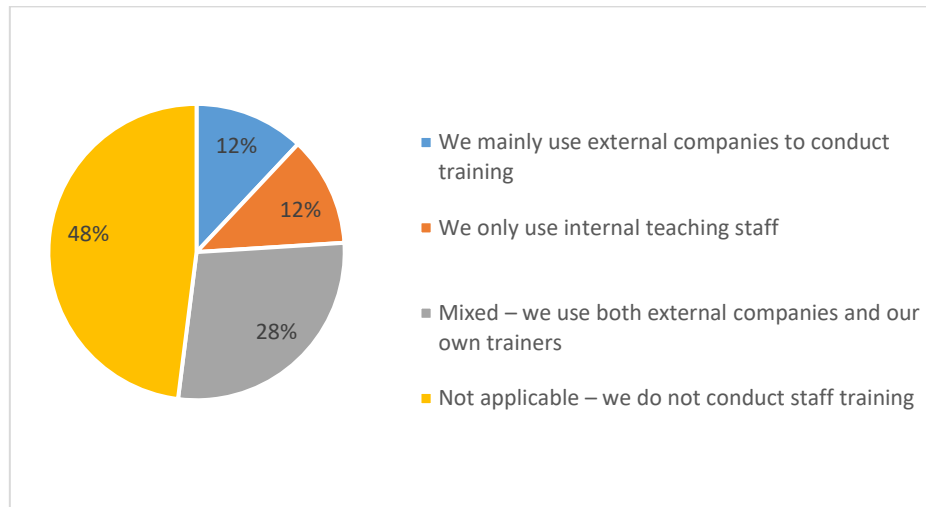
The responses to this question highlight the importance of soft skills and digital competence, which are in line with global workforce development trends. At the same time, technical skills remain important for specific sectors, while management skills are given lower priority. Some companies prefer to develop their employees' qualifications internally, which is an indicator of well-established internal training and development systems.

*Question 3.3. Do you use qualified external providers to conduct training or do you conduct them with internal lecturers (your own staff)?*

The answers to the question show a variety of approaches that enterprises use to conduct staff training.



**Figure 20: Methods for conducting staff training**



*Source: Questionnaire*

The largest share of respondents (48%) indicated that they do not provide training for their employees, which may indicate a lack of need for additional qualifications or limited resources allocated to staff development. It may also mean that companies rely on already qualified employees or on-the-go training without formal courses.

28% of respondents use a mixed approach, combining external training providers and internal trainers, and 12% rely entirely on internal trainers, indicating that these companies have sufficient qualified staff who can transfer knowledge and skills to other employees. This is a cost-effective approach that can also be adapted to the specific needs of the organization.

Another 12% of respondents primarily use external companies to deliver training. These companies prefer to leverage the expertise of external providers, which can be particularly useful for training related to new technologies, management skills, or other specific areas that require a high degree of specialization.

The high share (48%) of companies not providing formal training raises potential concerns about long-term workforce adaptability. While it could reflect a currently stable skill match, it may also suggest a lack of strategic focus on lifelong learning and continuous upskilling – both critical in the context of rapid technological and market changes. The fact that nearly a third of companies use a mixed training model suggests a growing awareness of the need to blend external expertise with in-house contextual knowledge. This hybrid approach could become a best practice in ensuring agility and resilience.

Analysis of the responses shows that enterprises have different approaches to staff training, depending on their needs, resources and strategic goals.

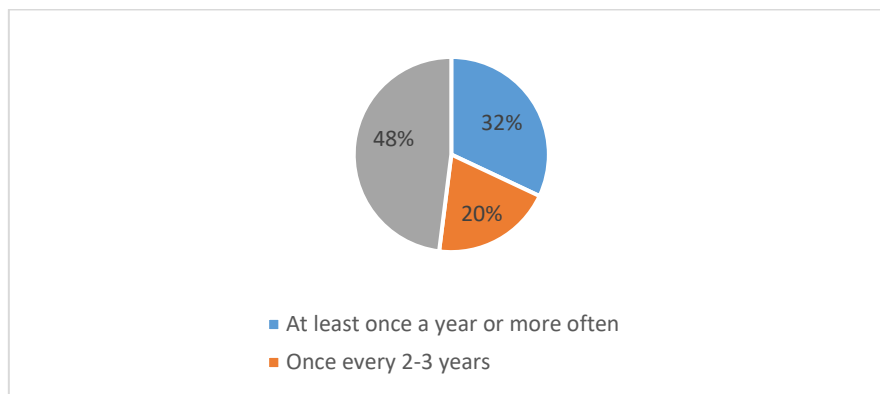
*Question 3.4. How often do you conduct training to improve the qualifications of the staff in your company?*

The answers to the question about the frequency of conducting training to improve the qualifications of personnel show a clear division between enterprises that actively invest in the development of their employees and those that do not conduct such training.

32% of respondents indicate that they conduct training at least once a year or more often. This is an indicator of enterprises that realize the importance of continuous staff development and strive to maintain a high level of qualification, adapting employees to new technologies, working methods or changing market requirements. 20% of respondents conduct training once every 2-3 years. This approach may be associated with more limited resources or a lower need for frequent qualification courses, especially if the work in the enterprise does not require frequent changes in staff skills.

A significant share – 48% of respondents indicate that they do not conduct training for staff at all. This can be explained by various factors – lack of resources, low need for additional qualifications or a preference for training “on the go”, without formal courses. It is possible that these companies rely on already qualified employees or do not see added value in organizing training.

**Figure 21: Frequency of training for staff development**



*Source: Questionnaire*

*Question 3.5. How do new technologies affect your labour needs?*

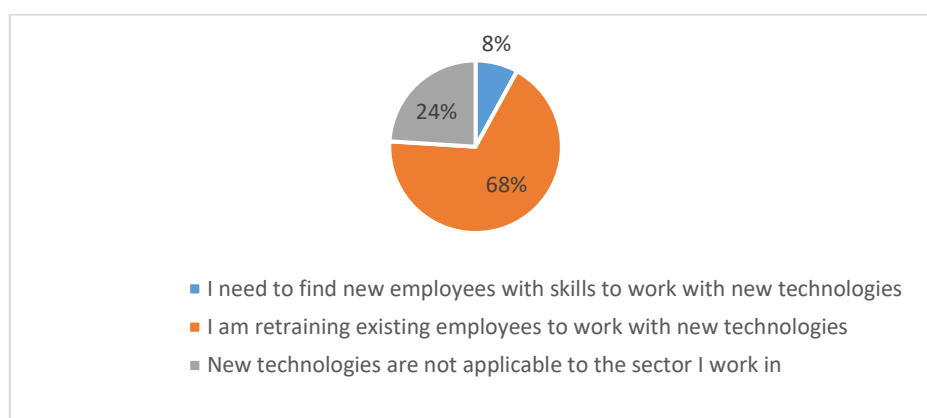
Responses to the question about the impact of new technologies on labour needs indicate that most businesses are adapting to technological changes by retraining their existing employees. This is evident from the fact that 68% of respondents indicate that they train their current employees to work with new technologies.

24% of respondents stated that new technologies are not applicable to their sector. This may be due to the specifics of their activity, which does not require the

implementation of innovations, or to the slower pace of technological development in certain industries. These enterprises probably do not feel a significant need for changes in the qualifications of their personnel.

Only 8% of respondents indicated that they need to hire new employees with skills to work with new technologies. This is a relatively low share, which can be explained by the preference of most companies to retrain their existing staff rather than looking for new ones. It is also possible that companies are having difficulty finding qualified staff on the labour market, which leads them to internal training.

**Figure 22: Impact of new technologies on labour demand**



*Source: Questionnaire*

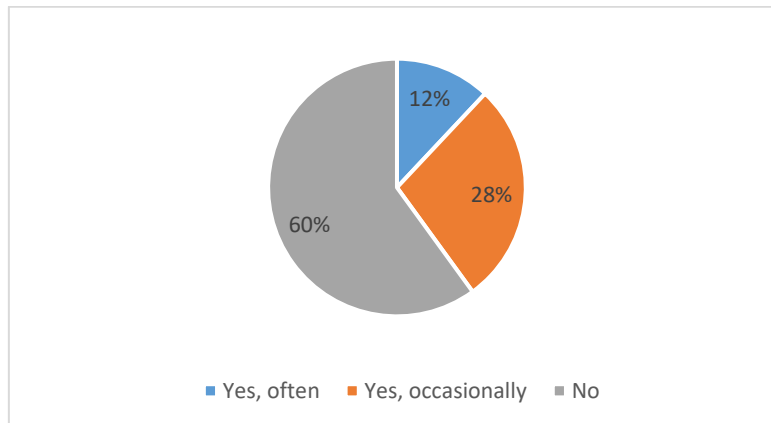
These responses reflect a pragmatic trend among enterprises: prioritizing retraining over new hiring. This approach is cost-effective and fosters loyalty but also places a significant burden on internal training structures. The 8% of companies seeking new talent may represent a leading edge of innovation-driven businesses requiring specialized digital or tech expertise not easily developed in-house. Additionally, the 24% for whom technology is not applicable may need to reassess this stance as digital tools increasingly permeate even traditionally low-tech sectors.

### *Question 3.6. Do you use artificial intelligence-based tools in your business?*

A large proportion of enterprises are still not integrating such technologies into their operations. 60% of respondents stated that they do not use AI-based tools. This may be due to various factors, such as lack of need, limited resources, insufficient knowledge of AI capabilities or the specifics of the sector in which they operate.

28% of respondents indicated that they use AI-based tools, but only occasionally. This indicates that these companies have begun to experiment with implementing AI technologies, but are not yet actively or systematically using them. They may be testing the application of AI in certain aspects of their business, such as process automation, data analysis or improving customer service.

**Figure 23: Using AI-based tools**



*Source: Questionnaire*

Only 12% of respondents said they frequently use AI-based tools. This small share indicates that there are businesses that are actively integrating AI technologies into their work and are likely using them for process optimization, efficiency gains, or innovation.

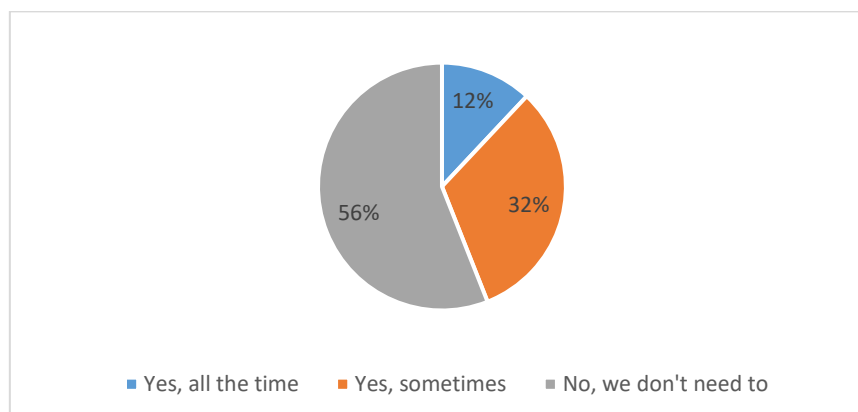
*Question 3.7. Do you use digital technologies or work automation in your company? (<https://go-green-barometer.ltu.bg/czifrovi-tehnologii/>)*

More than half of businesses are not yet integrating such technologies into their operations. 56% of respondents said they do not use digital technologies or automation, which may reflect a perceived lack of need, or a strategic decision to prioritize other investments. However, this perception could limit long-term competitiveness in increasingly digital markets. This may be due to the specifics of the sector in which they operate, the lack of resources to implement such technologies, or insufficient knowledge of their benefits. Sector sensitivity likely plays a strong role – businesses in agriculture, local retail, or crafts may face structural barriers to automation that differ from those in manufacturing or IT.

32% of respondents indicated that they use digital technologies or automation sometimes. This indicates that these companies have started to implement technological solutions, but are not yet using them systematically or to their full potential. They may apply automation in certain aspects of their business, such as data management, production processes or customer communication.

Only 12% of respondents said they consistently use digital technologies or automation. This small share shows that there are companies that are actively integrating technological solutions into their work, probably with the aim of optimizing processes, increasing efficiency and competitiveness. These companies are likely to be in sectors that are more closely related to technology or are leaders in digitalization.

**Figure 24: Use of digital technologies or automation of work**



*Source: Questionnaire*

The data shows that digital technologies and automation are not yet widely adopted in business, with more than half of enterprises not using them. However, some companies are starting to implement them, albeit in a limited way, and a small percentage are actively integrating them into their operations. This highlights the potential for growth and development in the field of digitalization, especially for enterprises that want to increase their efficiency and competitiveness.

The results from the Education and Skills section reveal the different approaches of enterprises to training, qualification and technology implementation. Soft skills and working with modern technologies are top priorities for training, with most companies preferring internal staff development. The frequency of training varies, but a significant share of enterprises does not conduct any at all. New technologies lead to retraining of existing employees, and the use of artificial intelligence and digital technologies remains limited, with the majority of companies not yet actively integrating them. This highlights the need for wider implementation of innovations and systematic development of human capital.

In the context of the CARE-GET project, where a key priority is the development of the MedTech and care sector in Haskovo, the need for both soft skills (e.g., communication, teamwork) and digital competence (especially in health-related tech systems) is particularly relevant. These insights can guide the design of reskilling pathways and collaborative learning programs that match employers' expectations with real economic opportunities in the region.

## Working conditions

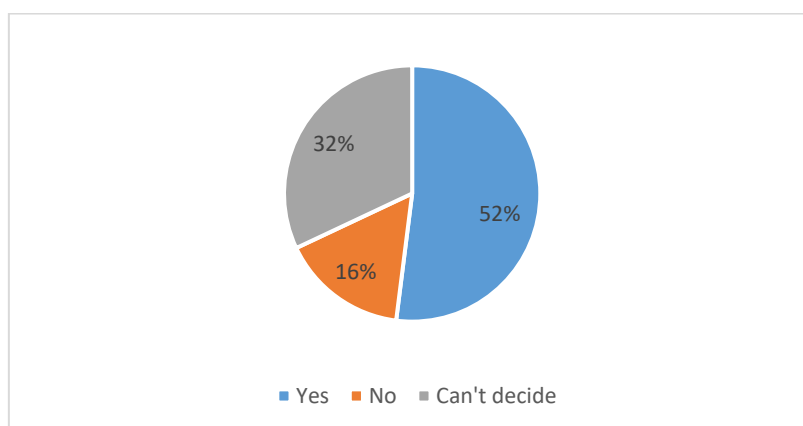
The questions in this section of the survey are aimed at understanding the competitiveness of working conditions and the efforts that enterprises make to improve the working environment.

*Question 4.1. Do you think that working conditions in your sector (e.g. remuneration, development opportunities, etc.) are competitive with those in other sectors of the economy?*

The majority of respondents (52%) believe that working conditions in their sector are competitive compared to other sectors of the economy. This suggests that these companies feel confident in the remuneration offered, development opportunities and other aspects of the work environment, which may make them attractive to the workforce.

However, 16% of respondents said that working conditions in their sector are not competitive. This could signal problems related to low salaries, limited career opportunities or insufficient working conditions, which could make it difficult to attract and retain staff.

**Figure 25: Competitiveness of working conditions in the sector**



Source: Questionnaire

32% of respondents cannot assess whether working conditions in their sector are competitive. This group probably includes enterprises that have not analysed their competitiveness in the context of the labour market.

*4.2. What additional measures do you implement to improve the working environment and working conditions in your enterprise?*

44% of enterprises do not implement additional measures to improve the working environment. While this may be due to limited financial or managerial resources, it

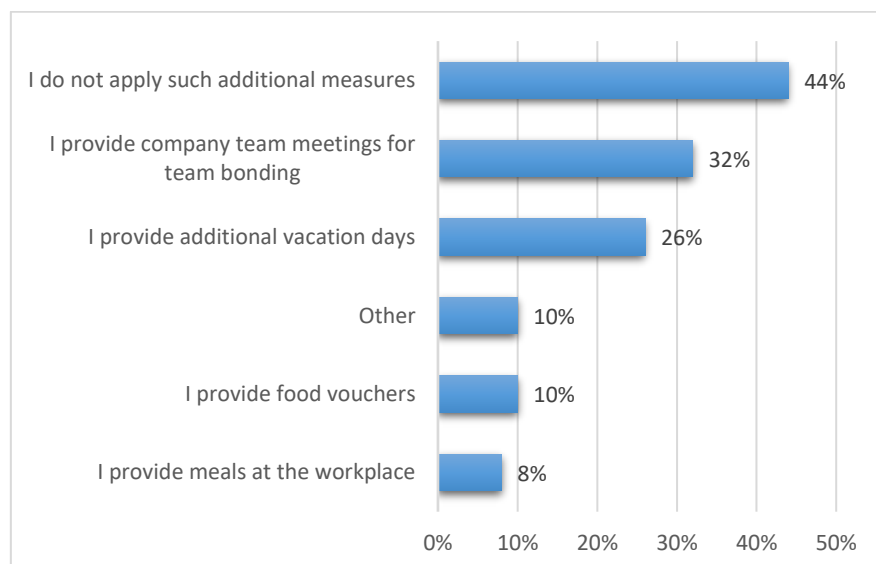


may also indicate a lack of strategic focus on workplace culture and employee well-being. This inattention could become a disadvantage in retaining talent, particularly as work-life balance and employee support become increasingly important in labour market preferences.

32% of respondents indicated that they organize company meetings to unite the team. This measure is aimed at improving team spirit and creating a better atmosphere in the workplace, which can increase employee motivation and productivity.

26% provide additional days of vacation, a valued social benefit related to work-life balance. 10% of respondents provide food vouchers, and another 8% provide meals at the workplace. These measures demonstrate a commitment to employee well-being and a desire to increase employee satisfaction.

**Figure 26: Additional measures implemented to improve the working environment and working conditions**



*Source: Questionnaire*

10% of respondents indicated other measures, with the clarifying question answered with answers related to flexible working hours and company events in the spring and summer.

The sum of the percentages exceeds 100 because the question allows for more than one answer.

It is important to note that those implementing additional measures to improve the working environment and working conditions do not experience fewer difficulties in finding qualified personnel ([Question 2.3.](#)) – only 11% of them respond that they rather do not experience difficulties, while 89% answer “Yes, to a large extent”. This result indicates that the additional measures are not sufficiently effective or do not

address the root causes of the problem. The difficulties in finding qualified personnel are deeply rooted and require a comprehensive approach to overcome them.

The results of this section reveal mixed opinions on the competitiveness of working conditions. While some companies feel confident in the remuneration and development opportunities offered, others are unsure or believe that their conditions lag behind those in other sectors. At the same time, a significant number of companies do not take additional measures to improve the working environment, which may limit their attractiveness to employees. Among those that do make efforts, initiatives to unite the team and provide additional social benefits stand out, which shows a commitment to the well-being of staff.

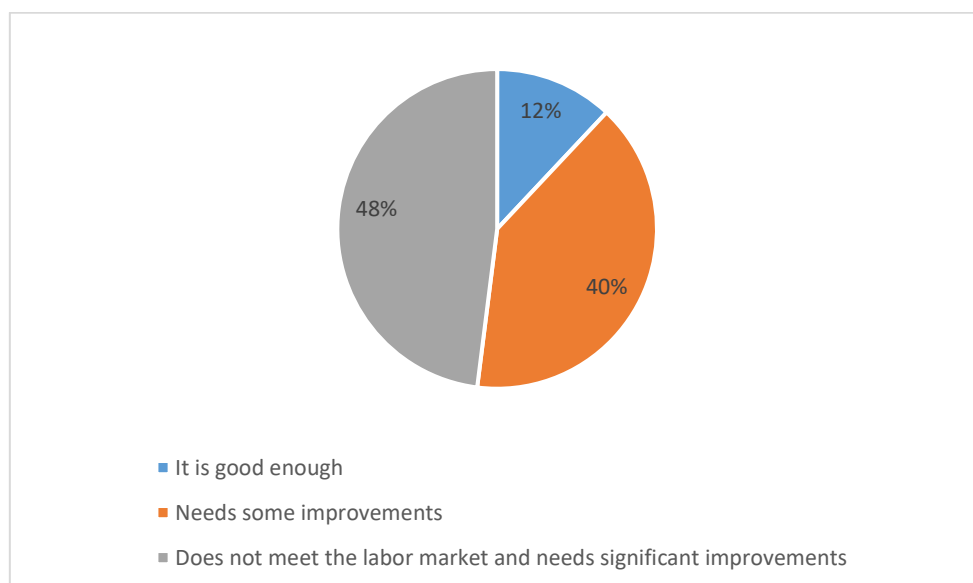
### Regulatory framework

The “Regulatory framework” section explores employers’ opinions on labour legislation and regulations related to the labour market in the country.

#### *Question 5.1. How do you assess the labour legislation in Bulgaria?*

According to 48% of respondents, the country's labour legislation does not meet the labour market and needs significant improvements. 40% of respondents see a need for some improvements and only 12% of them believe that it is good enough.

**Figure 27: Assessment of labour legislation in Bulgaria**



*Source: Questionnaire*

*5.2. Do you have any suggestions for improvements in regulations related to the labour market and hiring of labour (please specify)?*

In response to this question, respondents propose specific and practically targeted measures, which include improving the interaction between business and local authorities, facilitating access to labour, reducing bureaucracy, reforms in education, and creating more flexible and adaptive regulations. The summary of the answers shows that respondents see many problems and offer various solutions for improving regulations related to the labour market and hiring. The main conclusions from the proposals are the following:

- 1. Better connection between municipalities and business:** Respondents emphasize the need for active dialogue between local authorities and employers. They suggest that municipalities engage in supporting businesses by helping to attract labour from other regions, finding jobs for family members of newly hired employees, improving infrastructure, and promoting the city as an attractive place to live and work. There is criticism of the lack of initiative on the part of municipalities and suggestions to encourage good employers in order to create a positive example and incentive for others.
- 2. Opening up the labour market to non-EU workers:** Some respondents suggest facilitating the recruitment of workers from countries outside the European Union, such as Moldova, Turkey, Vietnam, etc. This is seen as a solution to address the shortage of staff in certain sectors.
- 3. Reducing the administrative burden:** There is a clear need to reduce bureaucracy and digitalize labour market processes. This includes simplifying hiring procedures, document management, and interaction with institutions.
- 4. Improving the education system:** Respondents point to the need for reforms in education to ensure better training of personnel to meet the needs of business. This includes both the quality of education and its adaptation to modern labour market requirements.
- 5. Flexible forms of employment:** A clear definition of part-time work and the creation of more opportunities for flexible employment are proposed, which would make it easier for both employers and workers.
- 6. Protection of employers' interests:** Some respondents believe that employers' interests are not well protected enough and propose changes that would facilitate their activities and create a more favourable environment for business.
- 7. New organization of the labour market:** There are proposals for a better structure of the labour market that would make it easier for companies to present their needs for personnel with specific qualifications, which would improve the relationship between employers and potential employees.

The results of the answers to the questions in the “Regulatory Framework” section emphasize the need for a comprehensive modernization of the labour market in order to meet the challenges of the modern economy.

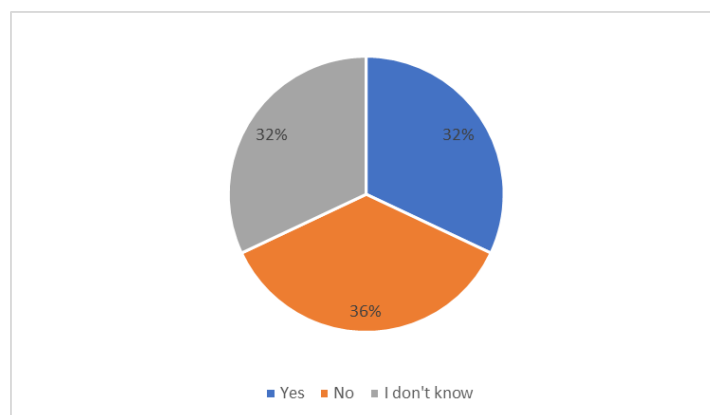
## Future plans

The questions in this section aim to assess enterprises’ intentions to increase the workforce and to explore employers’ perspectives and forecasts for the medium-term development of the labour market.

### *Question 6.1. Do you plan to increase your staff number in the next 3 years?*

Employers’ views on their plans to increase staff over the next three years are highly diverse. Almost a third of respondents – 32% – said they plan to increase their headcount, a positive sign of growth and expansion in certain sectors. These businesses are likely seeing new opportunities, expecting increased demand for their products or services, or planning to invest in expanding their business.

**Figure 28: Planning for staff growth over the next 3 years**



*Source: Questionnaire*

At the same time, another significant portion – 36% of respondents – indicated that they do not plan to increase their staff. This may indicate that these companies have reached their optimal capacity. It is also possible that there are external factors limiting their plans, such as a shortage of qualified personnel, high hiring costs or uncertainty in the economic environment.

It is also interesting that 32% of respondents could not give a definitive answer to the question. This uncertainty indicates a lack of predictability and difficulties in planning

future development. The reasons for this may be related to an unstable economic environment, rapidly changing market conditions or the lack of a clear growth strategy.

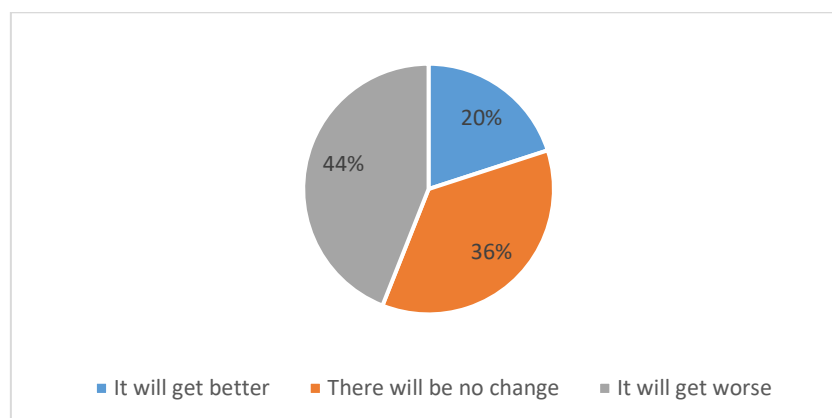
These results show that there is no single trend among enterprises. The uncertainty among a significant share of respondents signals the need for a stable economic environment and support for businesses to facilitate planning and stimulate expansion. This includes measures to improve access to qualified personnel, reduce the administrative burden and create conditions for sustainable development of the labour market.

*Question 6.2. What are your expectations for the development of the labour market in the next 3-5 years?*

The results of the question on expectations regarding the development of the labour market in the next 3-5 years show predominantly pessimistic attitudes among employers. The largest share of respondents (44%) believe that the labour market will deteriorate. This is a serious signal of concerns about the future, which may be related to problems such as a shortage of qualified personnel, demographic decline, lack of adequate reforms or economic instability. These concerns reflect real difficulties that enterprises are already facing and expectations that they will worsen.

A significant portion (36%) of respondents believe that there will be no change in the development of the labour market. This may mean that employers do not expect significant reforms or changes that would facilitate hiring or improve working conditions. The lack of expectations for development may also be an indicator of low trust in institutions and their ability to respond to labour market problems.

**Figure 29: Expectations for the development of the labour market over the next 3-5 years**



*Source: Questionnaire*

20% of respondents are optimistic, believing that the labour market will improve. This share is relatively small, which indicates that optimism is the exception, not the rule.

The results of the section “Future plans” show prevailing concerns and a lack of confidence in the future development of the labour market. Pessimism and expectations of deterioration highlight the need for targeted actions to address the problems that employers identify, such as staff shortages, bureaucratic obstacles and lack of flexibility in labour regulations. The lack of expectations for change or improvement is a clear signal of the need for reforms that would inspire confidence and create conditions for sustainable development of the labour market.

The summary of the results of the survey among employers in Haskovo municipality shows they are facing serious challenges in the labour market, including a shortage of qualified personnel, lack of motivation among candidates and an insufficient connection between the educational system and the needs of business. The state of the labour market is assessed as unsatisfactory, and expectations for the future are mostly pessimistic, with the majority of respondents predicting deterioration or no change in the coming years.

The main problems identified by employers include the ***lack of practical skills and motivation among candidates***, as well as ***insufficient support from institutions*** to facilitate recruitment and retention. At the same time, employers point to the ***need for labour law reforms, reducing bureaucracy and digitalization of processes***, as well as a ***more active role of municipalities in supporting businesses***.

The labour market outlook, according to respondents, is characterized by ***ongoing shortages of personnel, especially in technical and executive positions***, as well as the need to adapt to new forms of employment and technological changes. However, some employers see potential for improvement through reforms and investments in education.

To overcome the challenges of the labour market, a joint effort between business, institutions and the education system is needed to create conditions for sustainable development and competitiveness:

- 1. Reforms in the education system:** Emphasis should be placed on dual training, practical training, and updating curricula to prepare personnel who meet the needs of business.
- 2. Improving labour legislation:** Introduce more flexible regulations to facilitate hiring, part-time work, and adaptation to new forms of employment.
- 3. Active role of the municipality:** Haskovo Municipality to work in close cooperation with business, helping to attract staff, improving infrastructure and promoting the region as an attractive place to live and work.
- 4. Reducing bureaucracy:** Digitalize processes related to hiring and personnel management to facilitate interaction between employers and institutions.



**5. Incentives for motivation and development:** Develop programs to increase the motivation and qualification of the workforce, including through support for employee training and development.

## 7. ANALYSIS OF SKILLS SHORTAGES AND MISMATCHES IN THE HEALTHCARE SECTOR OF HASKOVO MUNICIPALITY

The study of skills shortages and mismatches in the healthcare sector in Haskovo Municipality is based on the responses of the participants who voluntarily participated in it. An online survey was created for the purposes of the study<sup>3</sup>. The questionnaire includes a total of 31 questions as a combination of open questions (giving respondents the opportunity to answer in their own words), closed (including all possible answer options and the respondent chooses one of them) and semi-closed (those where, in addition to the structural answers, other answers are also possible, most often with "other"). Closed questions with multiple answers prevail, as practice shows that they are most effectively completed by respondents. The following conditions were observed when developing the questionnaire:

- Appropriate questions were selected from the perspective of the set goals and the specific conditions for the survey;
- The number of questions is limited so that the survey is not too long (the respondent loses patience and starts answering chaotically);
- Clear wording is provided so that it does not allow for interpretation and the questions are perceived unambiguously;
- Various types of questions are included;
- Appropriate scales are provided to obtain objective and adequate answers to the questions posed - heavy scales are avoided due to the risk of misunderstanding and 'distraction' on the part of the respondent, but at the same time they are tailored to the type of question, so as to collect the necessary information and provide more opportunities for analysis (e.g., with nominal scales, only the mode can be calculated, while with proportional scales, all arithmetic operations are possible);
- Control questions are included to identify contradictions and verify the accuracy with which individuals answer the questions to ensure the reliability of the data;
- Typical errors in compiling questionnaires have been eliminated (for example, asking questions that are highly unlikely to receive an answer that is either impossible or difficult for the respondent, or the latter simply does not want to answer).

The survey was conducted between February 17 and 25, 2025, and 38 responses were received. The respondents were working in the healthcare sector in the Haskovo municipality.

<sup>3</sup> Annex 2 to this analysis:

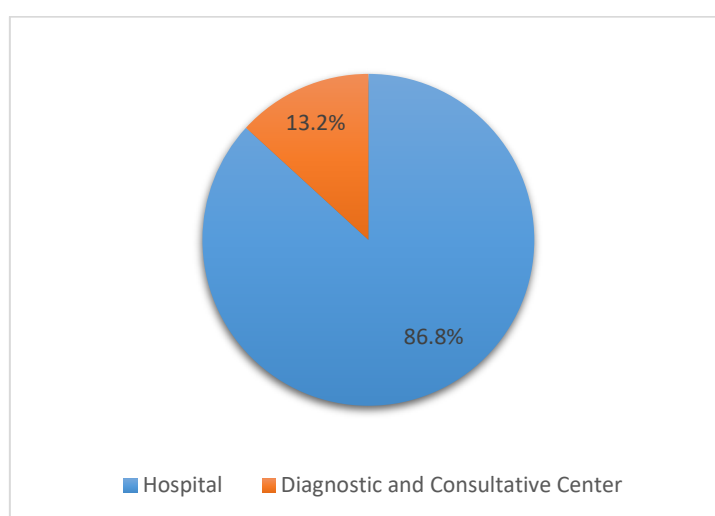
<https://drive.google.com/drive/folders/1lvcq1Iv74BDpfpScOREipIzWHb4faOb0?usp=sharing>

## General information

The "General Information" section includes questions about the type of healthcare facility in which respondents work, their position, and their length of employment there.

Of the participants in the study, 86.8% work in a hospital, and 13.2% in a diagnostic and consulting center ([Question 1.1](#)).

**Figure 30: Distribution of respondents according to the type of healthcare facility they work in**

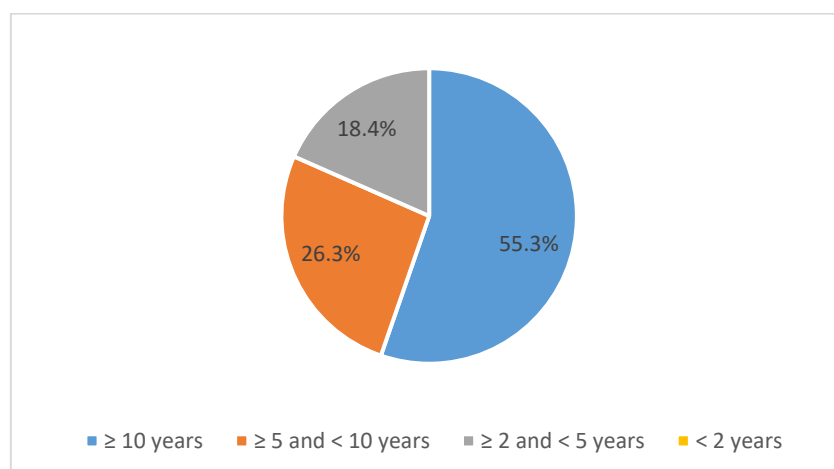


*Source: Questionnaire*

55.3% of respondents have been working in the healthcare sector for more than 10 years, 26.3% for 5 to 10 years, and 18.4% for 2 to 5 years ([Question 1.2](#)).

As shown in Figure 30, the vast majority of respondents are employed in hospitals. This distribution may reflect the structure of healthcare provision in Haskovo Municipality, where hospitals play a central role in patient care and staffing challenges are more visible.

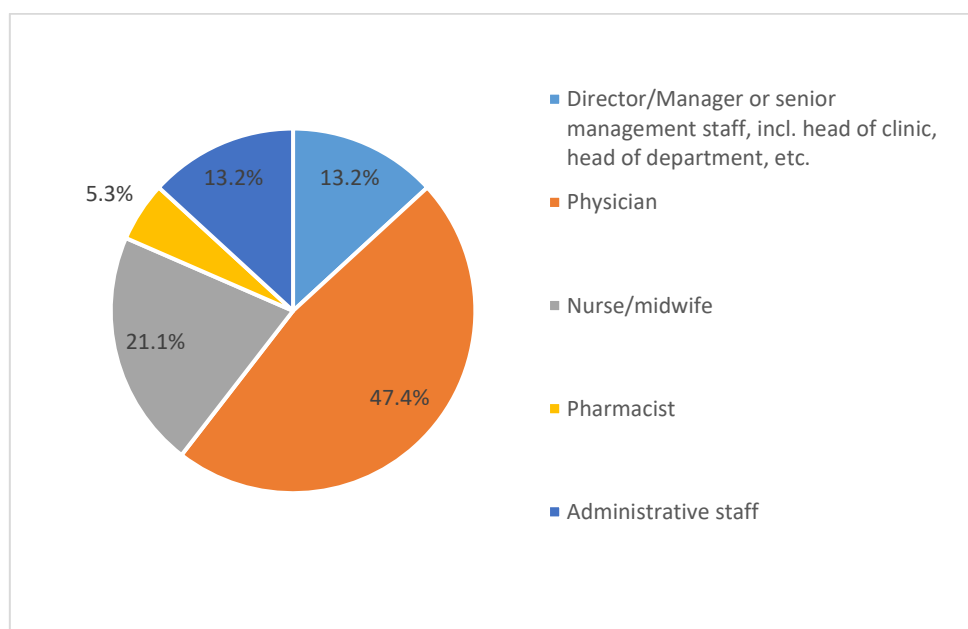
**Figure 31: Distribution of respondents according to their length of employment in the healthcare sector**



Source: Questionnaire

47.4% of the respondents are doctors, 21.1% are nurses or midwives, 13.2% are senior management personnel – directors, managers, heads of clinics, heads of departments, etc., 13.2% are administrative personnel and 5.3% are pharmacists ([Question 1.3](#)).

**Figure 32: Distribution of respondents according to their position in the healthcare facility**



Source: Questionnaire

## Current state

The questions in the “Current state” section aimed to gather information on the availability or lack of sufficient staff, as well as the reasons for the lack of staff. The analysis of the results shows several key aspects of the current state of the sector, the difficulties and opportunities for improvement.

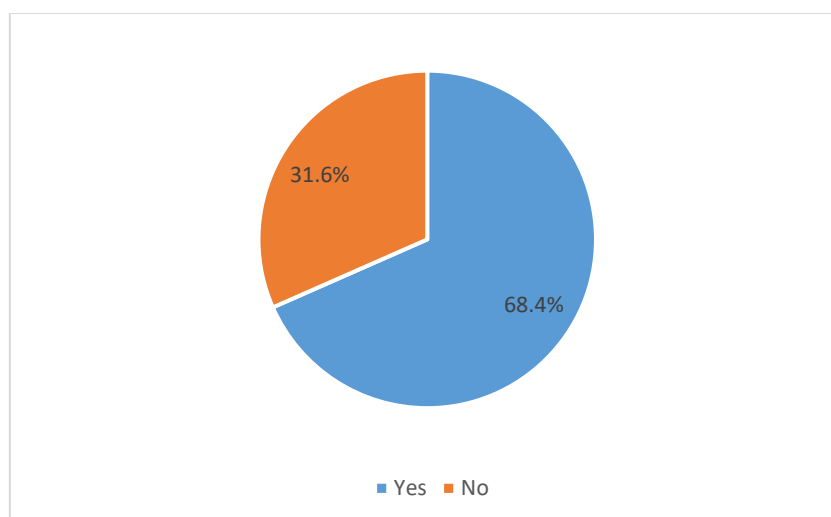
*Question 2.1. Do you have enough staff to meet the needs of patients in your healthcare facility?*

More than half of the respondents – 68.4% – believe that their healthcare facility has enough staff to meet the needs of their patients, but the percentage of those who indicated a shortage is significant – 31.6%.

Of those who indicated that their healthcare facility lacked sufficient staff to meet the needs of patients, 91.7% worked in a hospital. Such a problem existed only according to 8.3% of specialists in diagnostic and consultative centers.

The responses indicating staff shortages, particularly among doctors and nurses, align with broader national and EU trends of increasing healthcare demand coupled with an aging workforce.

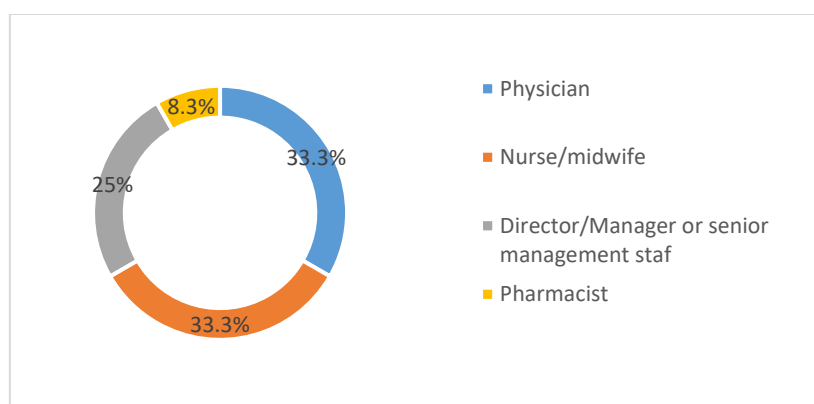
**Figure 33: Availability of sufficient staff in the health facility**



*Source: Questionnaire*

An interesting result is that 33.3% of those who responded that their healthcare facility does not have enough staff are doctors, 33.3% are nurses or midwives, 25% are senior management personnel, and 8.3% are pharmacists.

**Figure 34: Position of respondents who said their healthcare facility lacked enough specialists**



*Source: Questionnaire and own calculations*

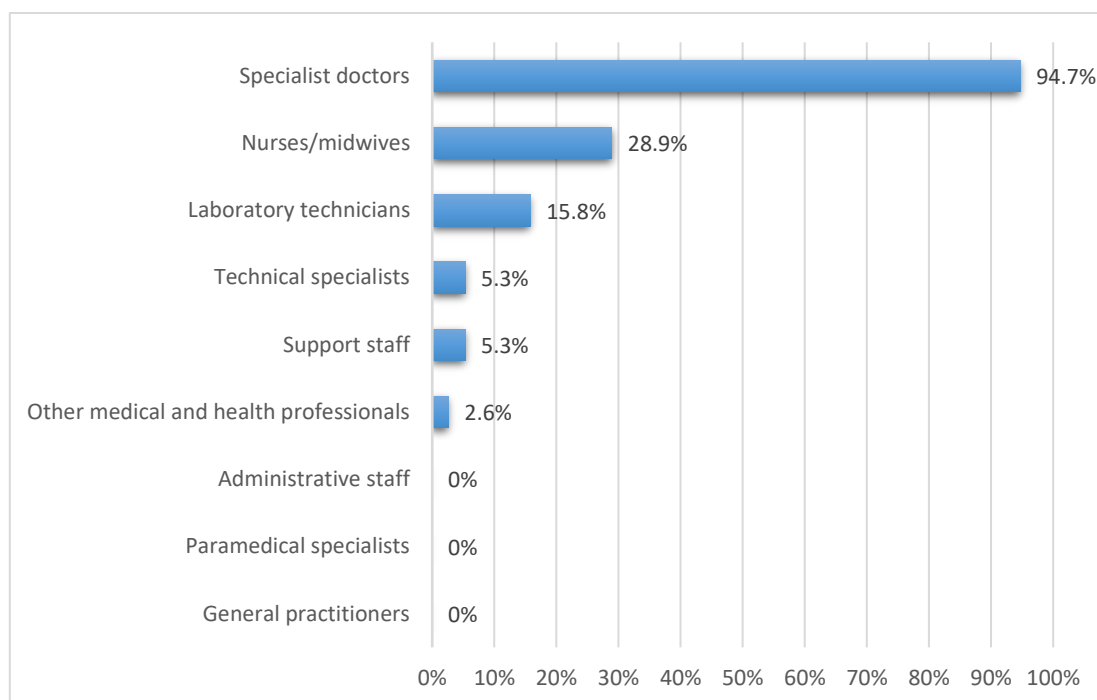
The feeling of staff shortages in healthcare facilities is shared by various professional groups. The significant share of doctors and nurses/midwives who gave this response is an indicator of high workload and a stressful work environment. At the management level, there are also concerns about the adequate number of human resources.

#### *Question 2.2. What specialists are most often missing in your healthcare facility?*

In health facilities, there is most often a shortage of specialist doctors – according to 94.7% of respondents, and nurses/midwives – according to 28.9% of them. The lack of laboratory technicians is also reported as an important problem by 15.8% of respondents. Less significant, but still present in the answers, are the lack of technical specialists (5.3%), support staff (5.3%), as well as other medical and health professionals (2.6%).

The sum of the percentages exceeds 100, as the question allows for more than one answer.

**Figure 35: Most frequently missing specialists in healthcare facilities**



*Source: Questionnaire*

At the national level, the shortage of specialist doctors and nurses is one of the most serious problems in the health sector. The aging medical staff, the emigration of young professionals and the insufficient incentives to retain specialists further deepen the crisis. To overcome this negative trend, targeted measures are needed to attract and retain qualified specialists, especially in the scarcest specialties.

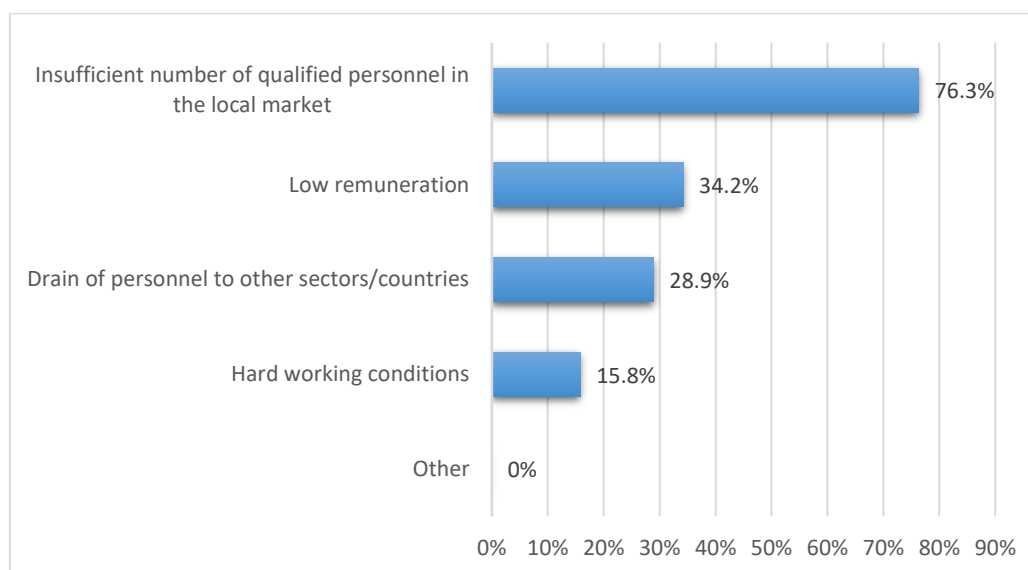
### *Question 2.3. What are the main reasons for the lack of staff?*

Among the main reasons for staffing problems, the opinion about the insufficient number of qualified personnel on the local market prevails – 76.3%. This reason is particularly strongly supported by senior management personnel, who unanimously point to the lack of personnel as the main problem. Low remuneration is also a serious obstacle to attracting new specialists, with 34.2% of respondents indicating this factor. Low remuneration as a reason for staff shortage is indicated by 23.1% of nurses/midwives and by 23.1% of doctors. Other reasons also indicated are the outflow of personnel to other sectors or countries (28.9%) and difficult working conditions (15.8%).

The sum of the percentages exceeds 100, as the question allows for more than one answer.



**Figure 36: Main reasons for staff shortages**



*Source: Questionnaire*

The analysis of the data from the "Current state" section related to the shortage of labour force shows that measures are needed to improve staffing in healthcare facilities. Optimizing remuneration is an important step that could help attract and retain medical staff. In addition, it is important to develop strategies to retain existing specialists and to limit the migration of medical staff to other sectors and countries. Improving working conditions and ensuring better motivation can also have a positive impact on the staffing problem in healthcare facilities.

### Specific skills need

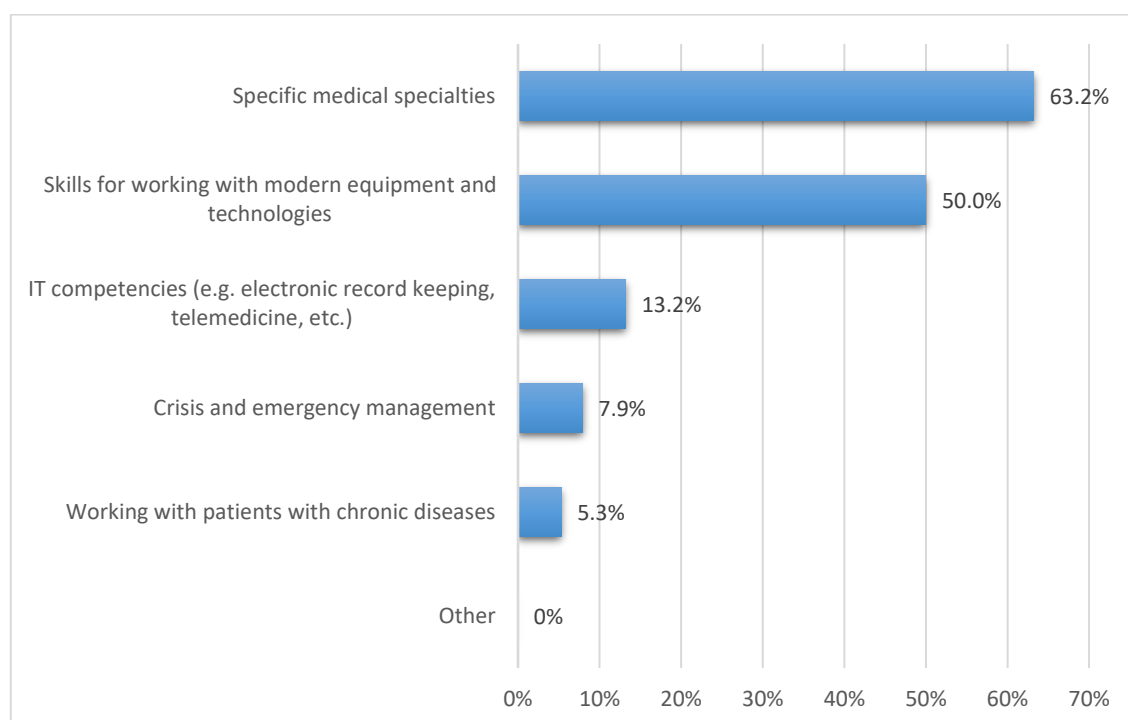
The questions in the "Specific skills need" section aim to identify the main staffing and qualification problems in healthcare facilities. They explore the deficit of key skills among staff, as well as the challenges in attracting new staff. The information obtained can help develop strategies for training, improving qualifications and improving working conditions, as well as finding solutions to overcome difficulties in recruiting and retaining specialists.

#### *Question 3.1. Which skills are most lacking in your healthcare facility?*

Of the skills that are lacking in healthcare facilities, specific medical specialties are most often cited – 63.2%, followed by skills for working with modern equipment and technologies, which are deficient according to half of the respondents. Although IT competencies and skills for managing crises and emergencies are cited as less significant problems, they are still indicated as a need by 13.2% and 7.9% of the

survey participants, respectively. Skills for working with patients with chronic diseases are cited as deficient by 5.3% of the respondents. The sum of the percentages exceeds 100, as the question allows for more than one answer.

**Figure 37: Most scarce skills in healthcare facilities**



Source: Questionnaire

The lack of specific medical specialties is cited as the most lacking skill by 100% of medical facility managers, and IT competencies (e.g. electronic record keeping, telemedicine, etc.) are the next most lacking skills according to 40% of senior management personnel.

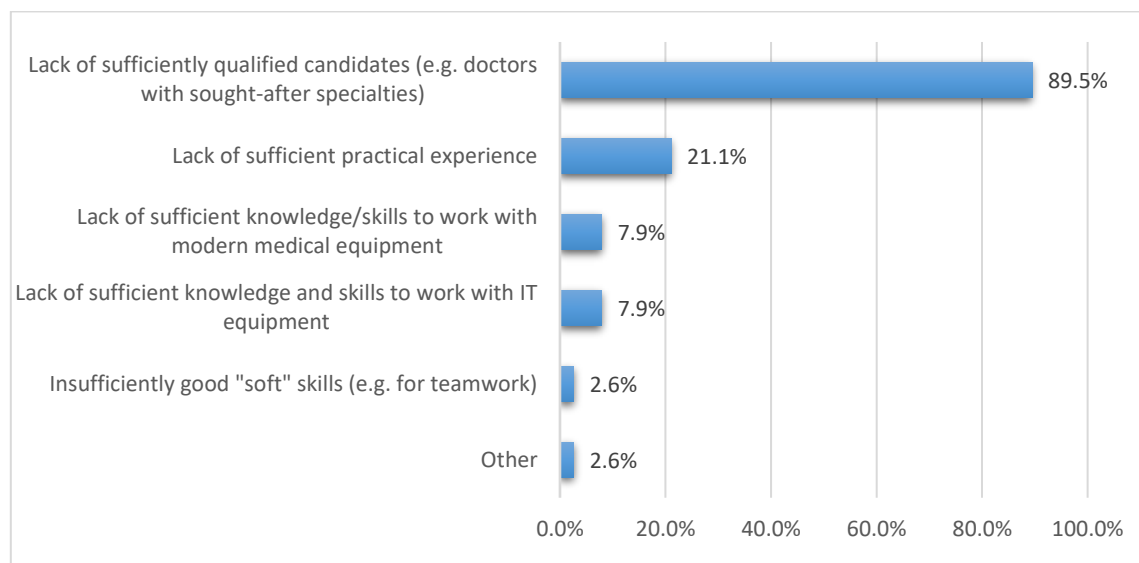
Notably, 100% of facility managers identified the lack of specialized medical professionals as the most pressing issue. In addition, 40% of senior management respondents mentioned the lack of IT competencies as a key gap in their teams – highlighting the need for digital skills development in the context of ongoing healthcare digitalization.

These results reflect the increasing complexity of healthcare delivery, where staff are now expected not only to have medical expertise but also to navigate new technologies, participate in digital patient care workflows, and respond effectively to emergencies and public health crises.

*Question 3.2. What, in your opinion, are the most common difficulties in recruiting staff?*

When recruiting staff, the biggest problem is the lack of qualified candidates, especially doctors with sought-after specialties, which was indicated by 89.5% of survey participants.

**Figure 38: Most common difficulties in recruiting staff**



*Source: Questionnaire*

According to 21.1% of respondents, this is the lack of practical experience. 7.9% of the responses indicate as difficulties the lack of sufficient knowledge/skills to work with modern medical equipment and the lack of sufficient knowledge and skills to work with IT equipment. Insufficiently good 'soft' skills are a difficulty in recruiting personnel according to 2.6% of respondents. The same is true for the percentage of those who chose the answer "Other", with the clarifying question indicating "insufficient remuneration". The sum of the percentages exceeds 100, since the question allows for more than one answer.

Based on the results of the answers to the questions in this section, it can be concluded that efforts to attract healthcare professionals are seriously hampered by the lack of suitable personnel at the local level. In addition to the lack of doctors with sought-after specialties, another obstacle is the insufficient preparation for working with modern equipment and technologies, which limits the possibilities for effective implementation of modern medical practices. Although skills in working with IT systems and crisis management are not perceived as such a serious problem, their importance should not be overlooked, especially in view of the increasing digitalization in healthcare.

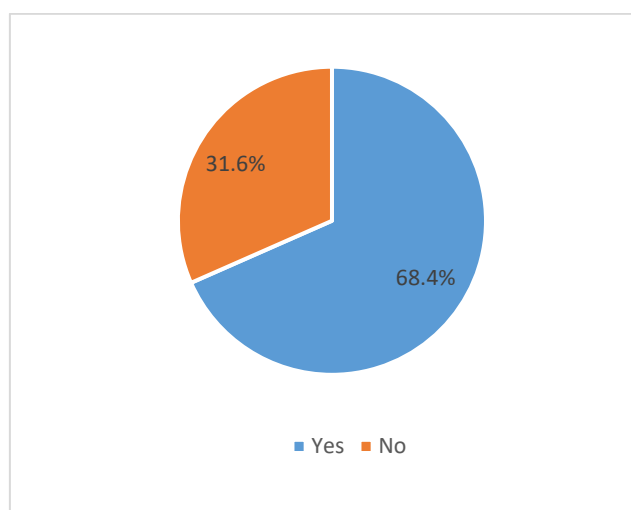
## Training and development opportunities

The questions in this section of the survey are aimed at collecting information on the opportunities for additional training in healthcare institutions and the need for them. The aim is to examine the conditions for training and development of medical specialists in order to identify opportunities for improving qualifications in the healthcare sector, thereby achieving higher quality of healthcare services and better preparation of staff to deal with the challenges in their work.

*Question 4.1. Does your healthcare facility offer opportunities for professional development (additional training)?*

The majority – 68.4% of respondents – answered that the healthcare facility they work in offers opportunities for improving their qualifications or additional training. 31.6% of respondents gave a negative answer to this question, which shows that despite the positive trend, there are still healthcare facilities in the Haskovo municipality where access to training and qualification courses is limited.

**Figure 39: Opportunities for improving qualifications (additional training)**



*Source: Questionnaire*

Respondents who answered the question positively specify that their healthcare facility provides additional training in specialties necessary for the performance of medical activities, language qualifications and computer literacy. Additional training and courses related to medical activities and healthcare were indicated by 70% of those who answered the clarifying question, 20% indicated language qualifications and 10% – computer literacy.

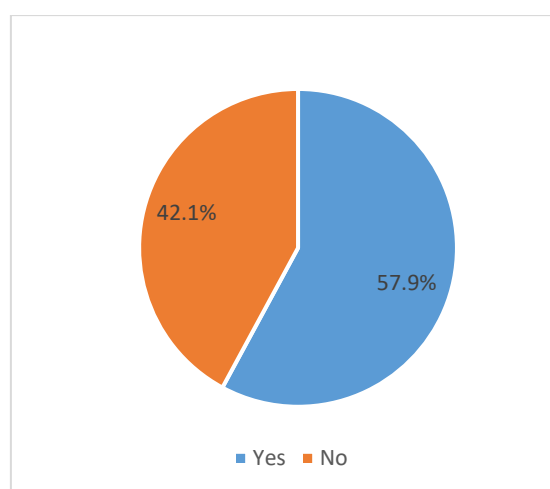
*Question 4.2. Do you need additional training to perform your duties more effectively?*

The survey results show that 42.1% of respondents believe that they do not need additional training, which may mean that they already have the necessary knowledge and skills or that their work environment does not require additional qualifications. On the other hand, more than half of respondents (57.9%) feel the need for additional training in order to perform their duties more effectively.

Of the nurses/midwives participating in the survey, only 25% indicated that they needed additional training, specifying that the desired training was related to working with specific equipment.

Of the doctors participating in the survey, 77.8% indicated that they need additional training, with 38.9% of them specifying that this training should be related to new work methodologies, skills for working with new and specific equipment and the modernization of existing technologies. Language training was indicated by 16.7% of the doctors in need of training, and computer training – by 5.6% of them.

**Figure 40: Need for additional training for more effective performance of duties**



*Source: Questionnaire*

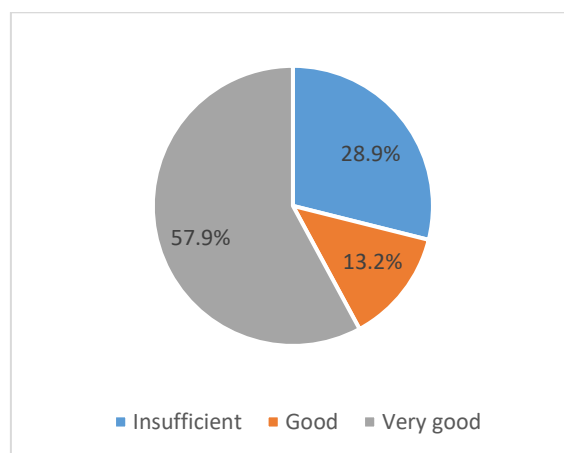
Additional training on new work methodologies is needed for 60% of managers and senior management staff (including head of clinic, head of department, etc.)

*Question 4.3. How do you assess access to external training programs in the health sector?*

The answers to the question about access to external training programs show that 57.9% of respondents rate this access as very good, and 13.2% rate it as good. However, 28.9% of respondents find access to external training programs insufficient,

suggesting that not all healthcare facilities have sufficient opportunities to provide additional qualification courses for staff.

**Figure 41: Access to external training programs in the health sector**



*Source: Questionnaire*

The majority of respondents' assessment of access to external training programs as good or very good is a positive sign of the development opportunities for medical professionals, but wider access to training is needed, especially in those healthcare facilities that experience difficulties in this aspect.

*Question 4.4. Would you suggest new types or forms of training or activities for improving qualifications? If so, what (please specify)?*

In terms of proposals for new forms of training, the most frequently mentioned are online training and distance learning – 88% of respondents to the clarifying question. This shows a preference for flexible and accessible training methods that can be implemented outside of standard working hours and adapted to the needs of different healthcare professionals.

The results of the responses to the questions in the section "Training and development opportunities indicate the need for improvements in staff development policies in the health sector and the expansion and improvement of training programs to meet the needs of the majority of employees. Existing training is not sufficient or does not cover all necessary aspects of the job.



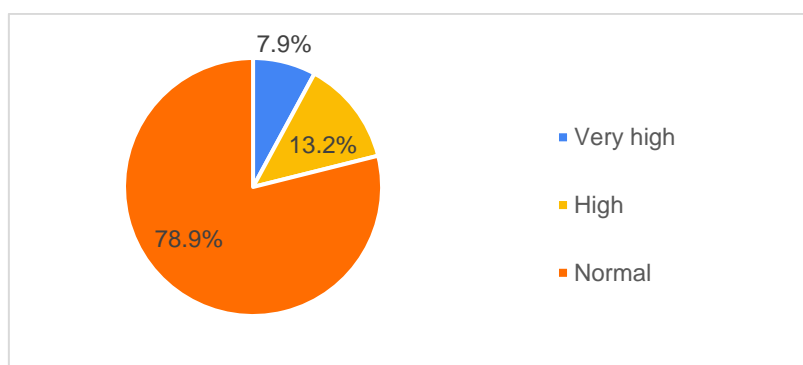
## Workload

The “Workload” section examines the quantity and intensity of tasks that healthcare workers perform within their workday, with the aim of identifying potential problems such as overload, stress or lack of efficiency, so that measures can be taken to improve working conditions.

### *Question 5.1. How do you assess your current workload?*

The workload was assessed as normal by 78.9% of respondents, 13.2% of the survey participants considered their workload to be high. Of those who gave this answer, 80% were doctors, and 20% were senior management personnel. 7.9% of the respondents defined their workload as very high, and among them the share was equally distributed between senior management personnel, doctors and nurses/midwives.

**Figure 42: Workload level**



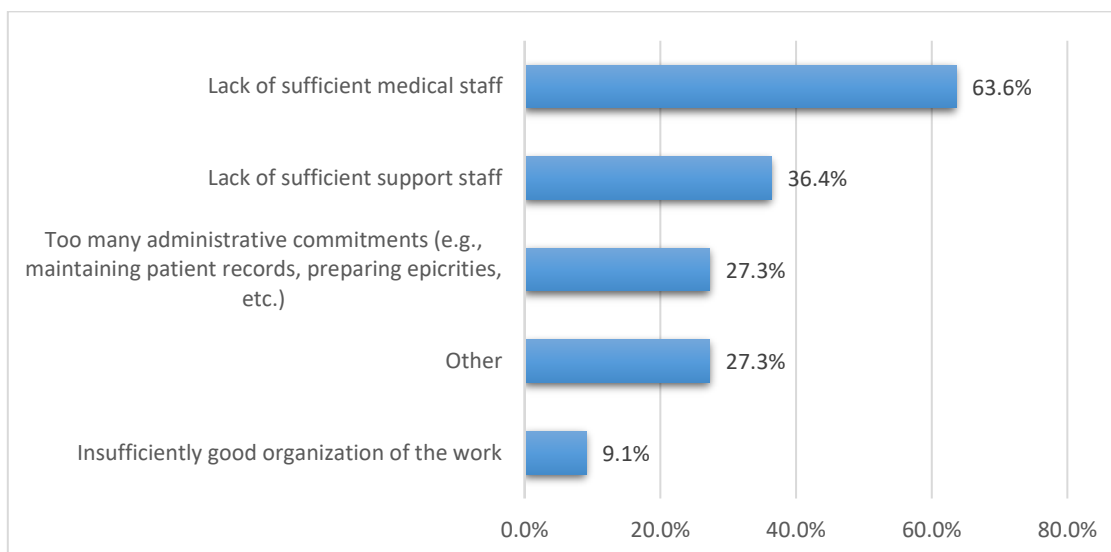
*Source: Questionnaire*

Most respondents perceive their workload as balanced, but there are still groups that experience significantly higher workloads, especially among doctors and senior management staff. It is particularly important to find mechanisms to optimize workloads and support the most affected groups in order to avoid professional exhaustion and a decline in work efficiency.

### *Question 5.2. If you indicated “high” or “very high”, what are the reasons for this?*

Regarding the reasons for high or very high workload, the lack of sufficient medical staff was cited as the main factor by 63.6% of respondents.

**Figure 43: Causes of high or very high load**



*Source: Questionnaire*

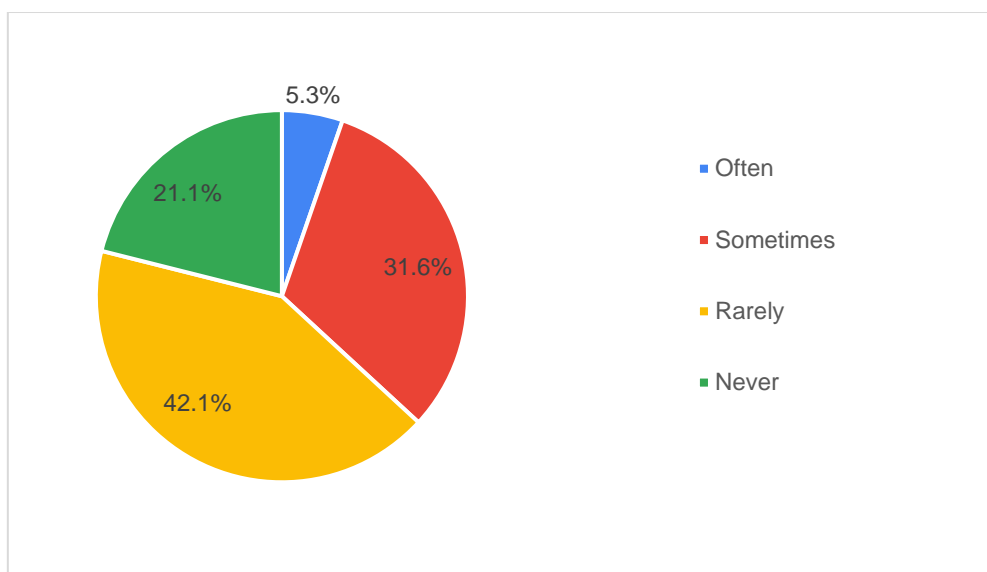
The lack of support staff was also a factor cited by 36.4% of respondents, which can make the work process more difficult and increase the workload of the core medical team. Other reasons cited included excessive administrative commitments (27.3%), which take up time and energy of specialists, as well as insufficiently good organization of work (9.1%). 27.3% of respondents answered "Other", but no answers were received to the clarifying question. The sum of the percentages exceeds 100, as the question allows for more than one answer.

The shortage of medical and support staff, along with administrative commitments, significantly contributes to the high workload in healthcare facilities. Targeted measures are needed to improve staffing, as well as to optimize work processes, including reducing the bureaucratic burden on medical professionals.

*Question 5.3. Are you required to perform tasks for which you are not qualified?*

Despite the high level of workload, 21.1% of respondents never have to perform tasks for which they are not qualified, and 42.1% rarely have to do so. 31.6% of those working in healthcare facilities in the municipality sometimes have to perform such tasks, and only 5.3% do so often.

**Figure 44: Performing tasks for which one lacks the necessary qualifications**



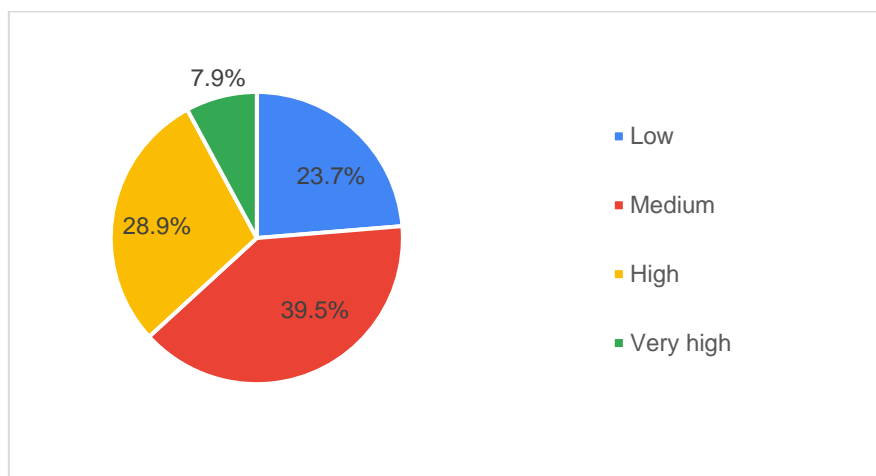
*Source: Questionnaire*

The results show that despite the presence of cases of excessive workload, the majority of staff do not perform activities outside the scope of their duties and specialties, suggesting that the system of distribution of duties is functioning well. However, in order to minimize the risk of errors and overload, it is important to pay attention to the group of employees who answered “sometimes” and “often” (total 36.9%), who are nevertheless faced with tasks for which they may not be adequately prepared.

*Question 5.4. How do you rate the level of stress at your workplace?*

The level of stress at work is high for a significant portion of respondents – 28.9%, with 54.5% of those who gave this answer being doctors and 18.2% being nurses/midwives. 39.5% of medical professionals rated the level of stress as average, 23.7% as low and 7.9% as very high.

**Figure 45: Level of stress at work**



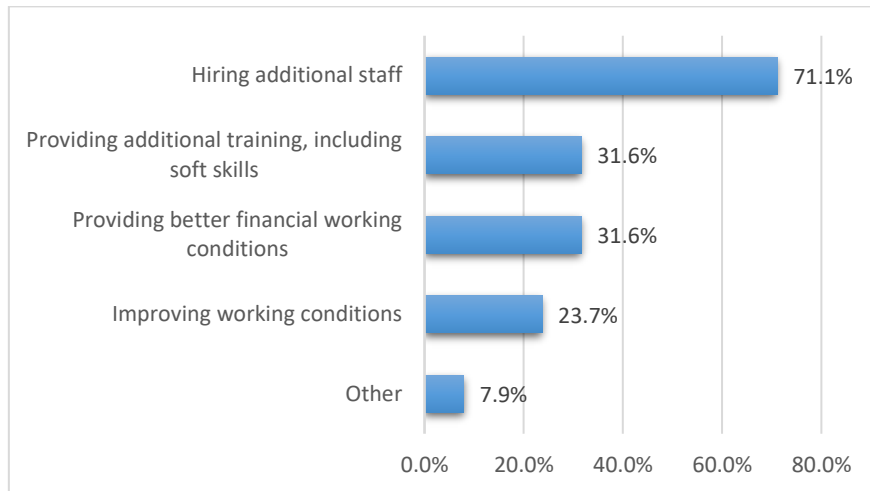
*Source: Questionnaire*

Similar to the distribution in the workload assessment, 1/3 of the professionals with very high levels of stress at work are doctors, 1/3 are nurses or midwives and 1/3 are senior management personnel. This may be related to the intensive workload, staff shortages and high responsibility of the profession. To reduce stress, it is important to take measures such as optimizing the work process, reducing the administrative burden, ensuring sufficient staff and introducing programs for the prevention of professional burnout.

*Question 5.5. What resources or support do you think are needed to reduce stress levels in your workplace?*

To reduce stress levels, the most frequently cited solutions by survey participants are hiring additional staff, conducting additional training, including in "soft" skills, providing better financial working conditions, and improving working conditions.

**Figure 46: Resources and support needed to reduce stress levels at work**



*Source: Questionnaire*

The greatest need is for additional staff, with 71.1% of respondents indicating that hiring new staff would ease their workload and reduce stress. This reflects the serious shortage of staff, especially doctors and nurses, which was mentioned as a major problem in the answers to the previous questions. Other important suggestions include providing additional training, including soft skills training (31.6%). This can help staff cope better with stressful situations and improve communication and interaction with patients and colleagues. Providing better financial working conditions is also considered an important factor in reducing stress – 31.6% of respondents indicate this aspect, half of whom are doctors, indicating that the lack of adequate remuneration is a significant stress factor for healthcare professionals. Improving working conditions (23.7%) is also an important factor in reducing stress. This response comes mainly from doctors and nurses/midwives, indicating that the physical and organizational environment in healthcare facilities needs to be improved. The sum of the percentages exceeds 100 because the question allows for more than one answer.

The data from the answers to the questions in the “Workload” section show that although most healthcare professionals perceive their workload as normal, there is a clear problem with staff shortages, which leads to an overload of certain groups of healthcare professionals – doctors, nurses/midwives and management staff. This creates conditions for the accumulation of stress, especially in combination with administrative duties and to a certain extent inefficient work organization. Although most employees do not often perform tasks outside their qualifications, the presence of such cases is a signal of potential risks in the distribution of responsibilities. The main problem remains the shortage of staff, which affects both the workload and the level of stress among healthcare professionals. It is also important to invest in training, especially in soft skills, as well as to ensure better working conditions and adequate remuneration.

## Innovations and technologies

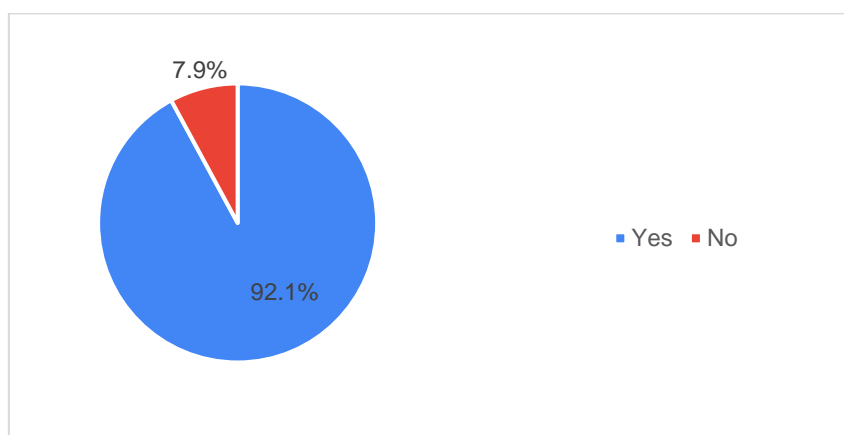
The questions in the "Innovation and Technology" section aim to analyse to what extent the healthcare facility is adapted to technological changes, whether the staff is sufficiently prepared to take advantage of them, and what measures can be taken to improve the digital competence of healthcare professionals.

### *Question 6.1. Are new technologies/digital tools used in your healthcare facility?*

New technologies and digital tools are widely used in healthcare facilities in Haskovo Municipality, with 92.1% of respondents confirming that such are used in their healthcare facility.

This is a positive sign of modernization and progress in the sector, which uses modern technologies to improve the workflow and quality of healthcare services, but the assessment of staff training ranges from excellent to unsatisfactory, as evident from the answers to the next question in the survey.

**Figure 47: Use of new technologies/digital tools**

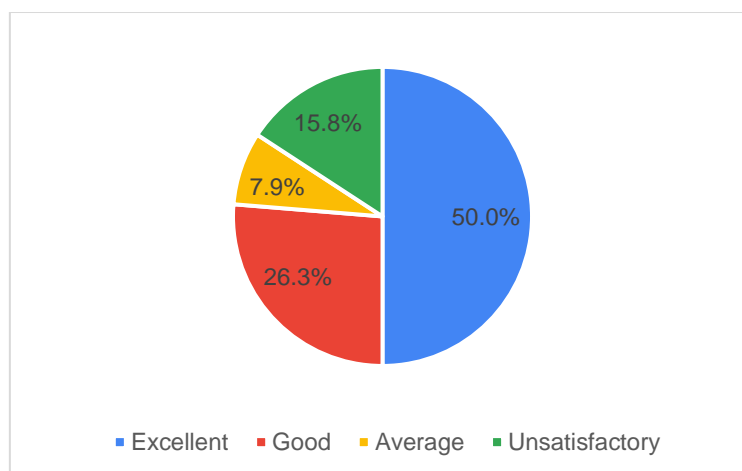


*Source: Questionnaire*

### *Question 6.2. If the answer is "Yes", how do you assess the training of staff for their use?*

The majority of respondents whose healthcare facilities use new technologies and digital tools rate the staff training as high. Half of them believe that the staff is excellently prepared, and 26.3% define it as well prepared. These results are a good indicator of the degree of training and adaptation to technological innovations in the healthcare sector in Haskovo Municipality. However, a significant percentage of respondents still express some concerns about the staff training. For 15.8%, it is unsatisfactory, and 7.9% of respondents rate it as average, which indicates some challenges in the process of integrating new technologies.

**Figure 48: Assessment of staff preparation for using new technologies/digital tools**



*Source: Questionnaire*

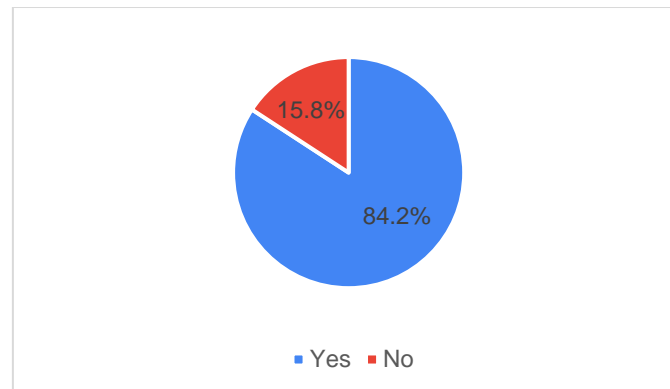
The data point to the possibility of additional training to support those employees who are experiencing difficulties. This would help increase work efficiency and make fuller use of technological innovations in healthcare practice.

*Question 6.3. Do you need additional qualifications to work with new equipment, technologies and digital tools?*

A significant proportion of medical professionals – 84.2% of respondents – stated that they feel the need for additional training, which indicates that although new technologies have entered healthcare facilities, their effective use requires further improvement of the skills and knowledge of the staff. The implementation of technologies in medical practice is not enough in itself, and adequate training is also necessary for the staff to fully benefit from them. At the same time, 15.8% of respondents are of the opinion that they do not need additional qualifications, which suggests that they feel confident in the skills and knowledge they have already acquired.



**Figure 49: Need for additional qualifications to work with new equipment, technologies and digital tools**



*Source: Questionnaire*

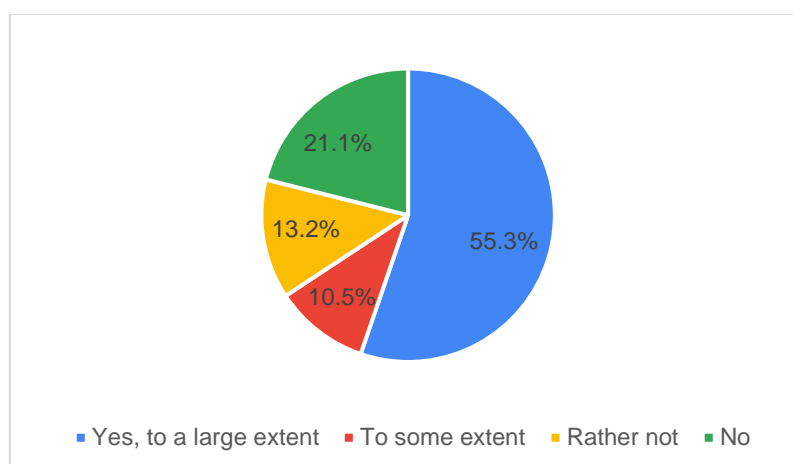
These results indicate the need for targeted training and qualification programs to support healthcare professionals in their adaptation to new technologies. Prioritizing this aspect could improve work efficiency, facilitate the integration of digital tools into daily medical practice, and ensure better quality healthcare.

*Question 6.4. Do you think that the staff in your healthcare facility is sufficiently prepared to use the possibilities of telemedicine?*

More than half of the respondents – 55.3%, believe that the staff in their healthcare facility is well prepared to use the capabilities of telemedicine, which indicates that in a number of medical facilities, digital technologies are successfully integrated into healthcare practice and medical professionals are able to use them effectively. Another 10.5% of respondents believe that the staff has some training, but probably see opportunities for further improvement.

On the other hand, however, a significant proportion of respondents expressed doubts or uncertainty about the readiness of the staff in their medical institution to use the possibilities of telemedicine. 13.2% are of the opinion that the preparation is rather insufficient, and 21.1% are categorical that it is not available. These data show that there are still challenges to the full use of the possibilities of remote medical services. The lack of confidence among a significant part of specialists may be the result of insufficient training or limited practical experience in working with such technologies.

**Figure 50: Degree of preparedness of healthcare facility staff to use the capabilities of telemedicine**



Source: Questionnaire

The detailed analysis of the data from this section of the survey shows a clear pattern – respondents who rated the staff’s training for using new technologies/digital tools as excellent or good believe that the staff in the healthcare facility is sufficiently well prepared to use the opportunities of telemedicine, while respondents who rated the training as unsatisfactory or average more often express doubts or uncertainty regarding the use of telemedicine.

There is a logical connection – confidence in the use of telemedicine is directly related to the general level of preparation for working with digital technologies. Regular training and practically oriented courses are essential to increase the competences of staff. Investments in qualification could improve not only the efficiency of work, but also the acceptance of innovations in healthcare.

### Recommendations from respondents

This section of the survey aims to gather opinions and suggestions for possible effective solutions to improve the working environment, skills and conditions in the healthcare sector.

*Question 7.1. What, in your opinion, are the most important measures to improve the skills and competencies of workers in the healthcare sector?*

The responses of the survey participants show that **the main priority for improving the skills and competencies of healthcare workers is training in its various forms** – 88.9% of the responses. Almost all respondents who expressed an opinion on this issue emphasize the importance of additional qualification courses, practical

acquisition of new skills and systematic training. Some of the participants emphasize ***training for working with innovative technologies and equipment***, which corresponds to the challenges associated with digitalization in healthcare. This emphasizes the need for targeted training that not only enriches theoretical knowledge, but also provides practical skills necessary for working with modern medical equipment.

Some respondents also point to other factors that would contribute to better training and motivation of staff, such as ***higher remuneration, improved working conditions and the availability of sufficiently well-trained staff***.

*Question 7.2. Would you recommend specific measures at the municipal level to support the health sector?*

The survey participants see ***financial support*** as a key factor in improving the health sector at the municipal level. The main recommendations focus on ***investments in the working environment, improving the material base and better infrastructure***, which would create better conditions for the work and development of medical specialists.

One idea is an analysis of the factors of the working environment, which could serve as a basis for targeted funding and improvements in working conditions. In addition, some respondents suggest the construction of a modern district hospital, which would be well equipped and would create an attractive environment for new medical personnel, especially if combined with adequate remuneration. This opinion emphasizes the importance of long-term investments in healthcare infrastructure.

In addition to material aspects, the need for ***better communication with social services*** is also mentioned, which shows the awareness that effective healthcare requires not only financial investments, but also closer coordination with other institutions.

*Question 7.3. Do you have any suggestions for solutions to the challenges you face in your work?*

The answers to this question outline several main areas in which respondents see opportunities to address the challenges in their work. First, ***continuous training and development of staff*** is indicated as a key factor in achieving better preparation and ability to address emerging problems in the health sector. This shows the recognized need for continuous improvement of the knowledge and skills of medical professionals at all levels of the health system.

Another important suggestion is ***to hire more qualified staff and improve working conditions***. The lack of sufficient staff often leads to overload and a decrease in the quality of work, which is why respondents see the provision of additional employees as one of the most effective solutions to ease the work process.

Furthermore, the ***need for better communication and cooperation with municipal authorities*** is highlighted. As staff of a municipal health facility, some participants see increased coordination with the municipality as a way to more effectively resolve important administrative and financial issues. Another aspect mentioned is the need for occupational safety of health workers, which may be related to both their physical safety and better regulation of workload.

The analysis of the data from the "Recommendations" section shows that among the main challenges in the health sector are the need to improve the qualifications of staff, ensure better working conditions, and provide financial support for medical facilities.

The health sector in Haskovo Municipality needs a comprehensive approach, including investments in education, reforms in management and provision of the necessary resources for work. This would lead to better conditions for staff and an increase in the quality of health care. Based on the results of the study, key profiles of an employer in the field of health care and the characteristics of expected potential employees in health facilities can be outlined.

## **Key profile of an employer in a healthcare facility in Haskovo municipality**

### **Main characteristics of the employer:**

- A healthcare facility (hospital, medical center, clinic) facing a shortage of qualified medical personnel.
- Existing challenges such as staff turnover, low pay, and harsh working conditions.
- There is a need for specialists in specific medical disciplines, as well as personnel with IT competencies.

### **Requirements for potential employees:**

- **Specialists needed:**
  - Specialist doctors (various medical fields).
  - Nurses/midwives.
  - Laboratory assistants.
- **Required skills:**
  - Specific medical specialties.
  - Skills for working with modern medical equipment and technologies.
  - IT competencies (electronic record keeping, telemedicine, etc.).

**Job offers:**

- Opportunities for professional development and training in specific medical disciplines.
- Access to modern equipment and technology.
- Potential for additional training in the field of IT competencies.
- Potential incentives for staff retention (financial incentives, improved working conditions).

**Key profile of a potential employee in a healthcare facility in Haskovo municipality**

**Main characteristics of the employees sought:**

- **Education and qualification:** Completed medical education (specialist doctors, nurses/midwives, laboratory assistants).
- **Experience:** Experience in a specific medical specialty is an advantage, but on-the-job training is also possible.

**Key skills and abilities:**

- Proficiency in specific medical specialties.
- Skills for working with modern medical equipment and technologies.
- Competencies in working with IT systems (electronic records, telemedicine).
- Good communication and teamwork skills.
- Adaptability and ability to work in a busy and dynamic environment.

**Expectations and needs of potential employees:**

- Competitive remuneration.
- Improved working conditions.
- Opportunity for career growth and training.
- Financial and professional stability, which reduces the motivation to emigrate.

**8. GENERAL RECOMMENDATIONS FOR OVERCOMING GAPS AND MISTAKES IN THE LABOUR MARKET OF HASKOVO MUNICIPALITY**

In order to overcome the skills gaps and labour market mismatches in Haskovo Municipality, it is necessary to implement targeted and ***integrated policies*** that engage ***active cooperation between local administration, business, educational institutions and civil society***. One of the most important priorities should be to improve vocational education and link it to the specific needs of the economy. This can be done by expanding dual training and developing programs that provide practical training. A more intensive partnership between local business and

vocational education institutions will ensure that graduates possess the necessary competencies and, accordingly, reduce the mismatch between education and labour market requirements.

It is crucial to promote **retraining and upskilling programs** for workers, especially in fast-growing sectors such as digital technologies, manufacturing and healthcare. Employers can be incentivized to invest in additional training for their employees through various mechanisms such as tax breaks, co-financed by the state and European funds, which will increase labour efficiency and improve the competitiveness of enterprises. The introduction of more widely available courses for developing digital skills and technological training will allow the local workforce to adapt to the changing demands of the industry and open up opportunities for economic growth.

It is also necessary to take measures to **attract and retain qualified personnel in key sectors** such as healthcare, industry and education. The lack of medical specialists and support staff can be compensated through targeted initiatives to increase wages, **improve working conditions** and **introduce financial incentives** for young doctors and nurses who choose to work in the Haskovo municipality. A possible measure is the introduction of **municipal scholarships** and financial bonuses for medical specialists who commit to working in local medical institutions for a certain period. A similar model can be applied in industrial enterprises, where there is an urgent need for qualified technicians and engineers.

Retaining young people in the region is another essential aspect of the strategy to reduce the labour shortage. Creating an attractive urban environment, combined with **affordable housing policies**, providing **good conditions for professional development** and career opportunities, will reduce migration to larger cities and abroad. The municipal administration can focus its efforts on promoting entrepreneurship by creating specialized programs for **financing and supporting start-ups** that are focused on innovation and high-tech production. Investments in cultural infrastructure, youth hubs, and social spaces can also foster belonging and strengthen young people's attachment to the region.

It is necessary to improve the coordination between local authorities, educational institutions and businesses through municipal employment councils, which would analyse the dynamics of the labour market in real time and offer flexible solutions to the shortcomings in certain sectors. A significant improvement could be achieved by better promoting job and training opportunities in Haskovo, using modern employment platforms and distributing information campaigns among young people, stimulating their interest in technical, engineering and medical professions.

The sustainable development of Haskovo Municipality and the provision of a sufficient number of qualified personnel require active and coordinated efforts in the fields of education, vocational training and migration policies. The systematic **improvement of working conditions, the introduction of effective mechanisms for qualification and retraining**, as well as **the promotion of strategic**



***investments in the high-tech and healthcare sectors***, will create a sustainable and dynamic economic environment that will ensure long-term progress for the region. European funding and various development programs can be a key tool for the implementation of these changes, by providing funds for training, modernization of infrastructure and the development of start-ups that create new jobs. In order for these measures to be effective, it is necessary to create a ***coordinated regional strategy*** in which all stakeholders actively participate, so as to achieve long-term and sustainable overcoming of imbalances in the local labour market, including in the healthcare sector.

A key sector such as healthcare plays a crucial role in the quality of life and socio-economic stability in Haskovo Municipality. The sector requires targeted and coordinated ***efforts to address the shortage of qualified personnel, improve working conditions, and ensure long-term sustainability***. In this regard, specific recommendations and measures aimed at the development of the healthcare sector are presented below, categorized by stakeholder groups and timeframes.

### Local Authorities

- Establishment of a municipal scholarship fund for medical students (timeline: up to 1 year).
- Improvement of working conditions in municipal healthcare facilities through minor infrastructure upgrades and provision of necessary equipment (timeline: up to 1 year).
- Investments in the modernization of healthcare infrastructure, including the construction of new healthcare facilities or the renovation of existing ones (timeline: up to 2 years).
- Development of specialized programs to attract young doctors and nurses, including the provision of affordable housing and social packages (timeline: up to 3 years).

### Employers in Healthcare

- Introduction of additional financial incentives for employees (timeline: up to 6 months).
- Provision of opportunities for professional development, including training on innovative technologies, through partnerships with educational institutions (timeline: up to 1 year).
- Investments in creating comfortable and safe working conditions, including modern workspaces, rest areas, and support for employees' mental health (timeline: up to 2 years).
- Provision of modern medical equipment to facilitate staff work and improve the quality of services provided (timeline: up to 2 years).



- Establishment of sustainable mechanisms for funding the professional development of employees, including joint projects with local authorities and European funds (timeline: up to 3 years).

### **Educational Institutions**

- Development of specialized courses for healthcare workers related to innovations in the sector and the introduction of telemedicine and telecare (timeline: up to 1 year).
- Organization of informational campaigns and presentations on professional development opportunities in the region.
- Creation of partnerships with universities and medical faculties to stimulate research and innovation in healthcare. This may include the development of new treatment methods, technologies, and approaches to improve the quality of medical services in the region. Establishing research centers or laboratories in partnership with universities can attract highly qualified specialists and enhance the competitiveness of local healthcare facilities.

### **Civil Society Organizations**

- Participation in the development of regional strategies for healthcare development (timeline: up to 3 years).

By improving working conditions, attracting and retaining personnel, as well as investing in training and modernization, long-term resolution of labour market imbalances in healthcare can be achieved, ensuring high-quality healthcare services for the population.

## **8. CONCLUSION**

The analysis of skills gaps and labour market mismatches in Haskovo Municipality shows that the region faces serious challenges related to the shortage of qualified labour, the lack of a balanced match between the education system and the needs of the local economy, as well as demographic changes that are having an increasingly negative impact on employment.

A significant part of the employers' experience difficulties in finding employees with appropriate qualifications, especially in technical professions, healthcare and various industries. This leads to limited opportunities for business expansion, makes it difficult to implement new technologies in enterprises and worsens the competitiveness of the economy in the municipality. Although average salaries in the region are growing, they remain below the national average, which leads to an outflow of personnel to larger economic centers of the country or abroad. The situation in healthcare is particularly critical, where the shortage of specialist doctors and nurses worsens the population's access to quality healthcare services.

Another major problem is the mismatch between the skills of the current workforce and the requirements of employers. Although technology and automation are developing rapidly, the lack of specialists with digital competences makes it difficult for companies to modernize. Employers agree that additional training and retraining are essential, but they are currently not well structured and accessible enough. The insufficient number of skills development programs and the lack of targeted policies in this direction lead to uncertainty in long-term workforce planning.

The active participation of businesses in the educational process are possible solutions to reduce the mismatch between the knowledge with which young professionals leave the education system and the real needs of the labour market. Expanding partnerships between vocational high schools, universities and industrial enterprises can facilitate the transition from education to employment and ensure that young people will have practical skills that can be applied immediately after graduation.

Another important aspect of the analysis is the digital transformation, which will play an increasingly key role in the economic development of the region. Although the introduction of new digital technologies and automation has the potential to optimize the work process and increase productivity, they also create risks for certain professions and impose the need for retraining of the workforce. Currently, there is no systematic approach to developing digital skills among workers and employees, which may limit the opportunities for economic growth in the long term. Without targeted investment in training in digitalization and technological skills, the municipality risks falling behind national and European trends in the field of industrial modernization.

In addition to investments in education and retraining, better coordination between local administration and business is needed. Currently, there are insufficiently effective mechanisms for forecasting labour market needs and adapting local educational programs to them. The dialogue between the public and private sectors should be strengthened by establishing a municipal advisory council on economic development to coordinate employment and investment strategies and identify the most significant skills gaps.

Through an active role of the local administration and targeted investments in human capital, the municipality can reduce skill mismatches and thereby support local businesses.

**Adapting educational programs to labour market needs:** The municipality can collaborate with local vocational schools and universities to update curricula so that they align with labour market demands.

**Creating municipal training and retraining programs:** Funding or organizing retraining and additional training courses at the municipal level, aimed at developing skills that are in shortage; introducing programs for training in digital skills, technical competencies, and other areas that are strategically important for the region.

**Supporting young professionals:** Providing scholarships or financial assistance to students and pupils who are training in professions with a high shortage of personnel.

**Improving the connection between education and the local economy:** The municipality can establish an advisory council with representatives from educational institutions and the local administration to analyse labour market needs and propose solutions to address them.

**Funding innovations in education:** Investing in the modernization of educational facilities, including equipment for technical and digital training. Supporting the implementation of new teaching methods, such as online courses, simulations, and interactive platforms.

**Incentives to retain talent in the region:** The municipality can offer housing subsidies, tax relief, or other financial incentives to qualified personnel who choose to stay and work in the region.

**Improving infrastructure and living conditions:** Investing in transportation, housing infrastructure, and public services to make the region more attractive to qualified professionals.

**Monitoring and analysing the labour market:** Establishing a municipal labour market monitoring system to identify current and future workforce needs.

In healthcare, the challenges are also serious. The shortage of personnel leads to a greater workload for staff, an increase in stress levels and a decrease in the quality of medical services offered. Those working in the sector sometimes face difficult working conditions, a high administrative burden and insufficient financial incentives, which forces them to seek employment in other parts of the country or abroad. Although medical specialists are trained in the municipality at the local branch of the Thracian University, there are no sustainable mechanisms in place to retain them in Haskovo. The Municipality of Haskovo can undertake the following measures to address the issue of workforce shortages, improve skills, and enhance working conditions in the healthcare sector:

**Financial incentives for medical professionals:** Providing scholarships for students studying medical specialties, with the condition that they work in the municipality after graduation. Financial bonuses for doctors, nurses, and other healthcare professionals who settle and work in the region. Covering the costs of specializations and additional qualifications for medical staff to enhance their competence and motivation.

**Improving working conditions:** Modernizing healthcare facilities through investments in new equipment, technologies, and infrastructure to create better working conditions. Ensuring a safe working environment, including adequate measures to protect the health and safety of staff.

**Housing and social support:** Providing housing for medical professionals relocating to the municipality through subsidized rents or municipal housing. Transportation subsidies for professionals commuting from other locations to work in the municipality's healthcare facilities.

**Attracting young professionals:** Campaigns to promote job opportunities in the municipality's healthcare sector among students and young professionals. Creating mentorship programs where experienced doctors and nurses train and support young professionals.

**Support for specialization and retraining:** Funding specializations for doctors and nurses in areas with the greatest workforce shortages. Support for training in digital skills related to the use of new healthcare technologies (telemedicine, electronic health records).

**Improving access to healthcare services in remote areas:** Establishing mobile medical teams to provide healthcare services in small and remote settlements. Investments in telemedicine to ensure access to specialists through remote consultations. Support for general practitioners working in rural areas through additional financial incentives and logistical support.

**Creating sustainable mechanisms for retaining staff:** Long-term contracts with medical professionals that include financial and social incentives to remain in the region. Professional development programs that provide opportunities for career growth within the municipality. Regular surveys of medical staff satisfaction to identify issues and take timely action.

**Improving healthcare sector management:** Establishing a municipal health council to coordinate efforts to attract and retain staff, as well as to improve healthcare services. Monitoring workforce needs in the healthcare sector and planning measures to address them. Ensuring transparency and accountability in the allocation of resources and funding in healthcare.

**Investments in prevention and public health:** Expanding prevention programs to reduce the burden on the healthcare system. Educating the population on healthy lifestyles and first aid, which can reduce the need for emergency medical services. Supporting the mental health of medical professionals through stress management and burnout prevention programs.

These measures will not only improve the quality of healthcare services but also increase the satisfaction of professionals, which is crucial for the sustainable development of the sector.

In the long term, the sustainable economic growth of Haskovo Municipality will depend on its ability to attract and retain qualified personnel, implement technological

innovations and create better working conditions for the current and future workforce. Increasing the attractiveness of the local labour market can be achieved through a combination of economic incentives, modernization of education and optimization of administrative services for businesses. The inclusion of the municipality in national policies for industrial transformation and digitalization will create opportunities for the development of high-tech industries and will help create a sustainable and competitive economic environment.

Haskovo Municipality has the potential to overcome the current problems in the labour market, but for this to happen, complex measures are needed, uniting business, educational institutions and state authorities in a targeted strategy for human capital development. Without effective policies for training, retraining and retention of key personnel, the region's economy will continue to face structural difficulties that will limit the opportunities for sustainable growth. The implementation of these strategies will depend not only on the economic future of the municipality, but also on the quality of life of its residents.