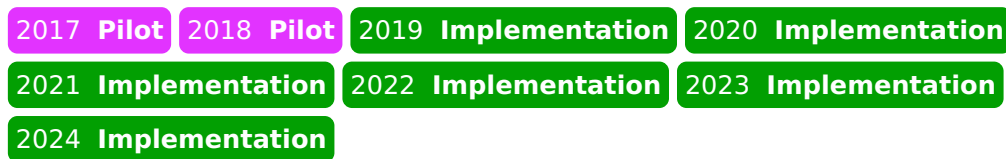


Forecast model to align admission plans with labour market needs

POLICY DEVELOPMENT	PRACTICAL MEASURE/INITIATIVE	 BULGARIA
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Timeline



ID number 28052

Objectives

- (a) to improve the conditions for organising and conducting vocational education and training;
- (b) to maintain good quality vocational education and training;
- (c) to provide a set of adequate skills for the professions of the future;
- (d) to train specialists for whom there is demand in the labour market but who are not willing enough to train in these professions and specialties, and to secure staff for areas of priority for regional economic development;
- (e) to address the shortage of specialists in the labour market.

Description

The VET Directorate of the education ministry developed at the end of 2017 a (pilot) forecast model, in cooperation with the nationally representative employers' organisations, to inform admission plans in line with labour market needs. The model is based on the expected replacement needs within the next five years in each economic sector (according to the national classifier of occupations and professions). It uses anonymised data from the national social security institute, based mainly on labour contracts, and data on learners in the VET system (calculated a substitution factor, outlining the deficits and non-compliance areas).

The forecast model is used at the stage of evaluation of proposals presented annually by the nationally represented employers' associations and key ministries for inclusion of additional professions in the list of professions with labour market shortages. The new proposals are evaluated by a committee composed of representatives from the education and labour ministries against the following criteria:

- (a) relevance of proposed specialties/professions to labour market needs in compliance with the labour ministry forecasts and the results of surveys carried out by the Employment Agency;
- (b) significance/importance of the specialty/ profession for the economic development of the country and/or of a particular region.

2017 Pilot

2018 Pilot

At the beginning of 2018, the education ministry prepared a list of 57 specialities with expected shortages in the labour market, updated at an annual basis.

The Council of Ministers Decree of June 2018, adopting the list of State-protected specialties of professions and the list of specialties of professions with expected shortage of specialists on the labour market, was implemented since the academic year 2018/19.

2019 Implementation

Amended at the end of 2018, the decree updated specialties for the academic year 2019/20 and set rules for ensuring that the labour market needs for qualifications were met. The decree also regulated the establishment of an interdepartmental commission with the education minister, featuring representatives from education and labour ministries assigned with the task of drafting annual proposals for updating the lists.

2020 Implementation

The number of professions with expected labour market shortages increased to 71. Five specialties from the list of State-protected specialties for 2019/20 were removed from the updated list for 2020/21, and one specialty was added. The specialties that were removed from the list no longer met the criterion of uniqueness of territorial character because they were taught in more than four schools in the country. Three specialties were removed from the list of specialties for which there is an expected shortage of specialists in the labour market for the academic year 2020/21, and 17 specialties were added.

With the adoption of the updated list of State-protected specialties from professions, the State plan/admission to VET remained relevant to the economic development of the country and met the needs of employers for qualified staff. The implementation of the amendments implies the creation of favourable conditions that increase individual motivation to acquire qualifications in professions that foster career development and ensure smooth transition from education to employment.

The implementation of the decree improved the conditions for organising quality vocational education and had a positive effect on the development of the economy, regarding the implementation of regional programmes and projects.. The amendment also provided conditions for training in specialties in innovative and/or high-tech sectors.

Shortages identified in State protected specialties gave school leaders the right to open classes with fewer students (less than the minimum required number) in these specialties.

2021 Implementation

At the beginning of December 2021, the usual procedure for the update of the Decree on the list of State-protected specialties of professions, and the list of specialties of professions with an expected shortage of specialists on the labour market for the academic year 2022/23 was launched. The outcome was an amended decree (Decree No 13 of 21 January 2021), which included specialties based on pre-defined criteria. Ministries and employers' organisations participated in this development, which was a requirement set by the Vocational education and training Act (VETA).

The decree added two specialties to the list of State-protected specialties of professions: locomotives and wagons (profession of railway fitter) and production of meat, meat products and fish (profession of operator in the food industry). Renewable energy sources specialty (profession of technician of energy facilities and installations) was added to the list of specialties of professions with an expected shortage of

specialists in the labour market.

Another development, in 2021, was that the specialties of computer-aided design and patterning of woven surface products (profession of textile designer), agriculture (profession of plant breeder) and beekeeping and sericulture (profession of livestock technician) will not be protected in the future. They no longer meet the uniqueness of territorial character criterion as they are provided by more than four schools in the country.

The updated list increased the number of protected specialties of professions to 50.

The specialties belong mainly to economic sectors such as mechanical engineering, metallurgy, mining, architecture, construction, transport, electrical engineering and energy, and applied arts.

The number of specialties of professions with an expected shortage of specialists in the labour market rose to 78. Examples of such specialties: machine technicians, machine operators, electricians, chemist technologists, biotechnologists, glass production workers, shipbuilders, sign language translators from and into Bulgarian and polygraphists.

Any changes in the lists come into force the next academic year. In this regard the abovementioned changes will be valid from the academic year 2022/23.

2022 Implementation

Studies of employers' needs for qualified labour continued. Information was collected from employers about new specialties from professions to be preferentially financed as state-protected or as specialties of professions with expected shortage in specialists. Specifically at the beginning of 2022, an updated list of state - protected specialties for the academic year 2022/23 including a total of 51 specialties and an updated list of specialties with an expected shortage of specialists on the labour market for the academic year 2022/2023 including a total of 78 specialties were adopted.

The specialties Computer design and patterning of woven surface products (Profession Textile Designer), Agriculture (Profession Plant Breeder) and Beekeeping and Animal Husbandry (Profession Livestock Technician) were removed from the list of State-protected specialties.

After the update of the list, the protected specialties became 51, mostly in the field of mechanical engineering, metallurgy, mining, architecture, construction, transport, electrical engineering and energy, applied arts, etc. Some of most wanted specialties of professions for an expected shortage in the labour market was identified were machine technicians, machine operators, electricians, electricians, chemical technologists, biotechnologists, workers in glass production, shipmasters, translators from and into Bulgarian sign language, polygraphists, etc.

In 2022, the Employment Agency conducted two rounds of survey on employers' workforce needs. Data from the beginning of 2022 demonstrated the labour market would need will need 111 040 professionals (the highest demand was identified for tailors - with 9 621 requests, followed by machine operators - with 6 659 requests, builders - with 4 901 , cooks - with 4 487, etc.

These studies from the Employment Agency proved beneficial for the preparation of future National Employment Plans and for social partners who adapted their training projects (especially for vulnerable groups) according to the findings of such surveys.

2023 Implementation

At the end of 2023, information was collected from employers for amendments and additions to the List of state-protected specialties of professions for the academic year 2024/25 and the List of specialties of professions in which there is an expected shortage of specialists in the labour market for the academic year 2024/25. After a review, it was proposed to drop two specialties from the list of state-protected

specialties of professions: specialty with code 5220108 electrical equipment of lifting and elevator equipment of the profession of the electrician and specialty with code 5250701 locomotives and wagons of the profession railway technician. The last one, was moved to the List of specialties with an expected shortage of specialists in the market of labour for the year 2024/25.

In 2023, new specialties proposed by employers were added to the List of State-protected specialties for the 2023/24 academic year. Ten new specialties were included, seven of which in the construction field, such as construction carpentry, roofing, and dry construction. Two new specialties in the fields of applied arts and crafts and production technologies including luthier and design and technology of leather goods. The tenth specialty was radioactive waste management in the field of electrical engineering and energy. The window and glass installation specialty was removed for no longer meeting the uniqueness criterion. The total number of state-protected specialties was 61, each taught in no more than four schools nationwide. Additionally, the List of specialties with expected shortages in the labour market shortages was updated with six new specialties, increasing the total number to 84. Two of the new specialties were in the field of forestry (timber harvesting and mechanisation of forestry). Two more in the field of construction (basic and finishing works and construction and architecture). The remaining two were software provision in the field of computer science and cargo and service logistics in the field of transport services. In 2023, the first graduates in these protected and in-demand specialties completed their studies.

In 2023, the Employment Agency changed the way of conducting the survey of employers' workforce needs. It was clarified that the study of labour needs amongst employers in the country is a nationally representative survey that is held once a year in the period May-July. The survey aims to collect information on the short-term needs (next 12 months) of workforce with certain qualifications, as well as information on the sought-after specialists with secondary and higher education in the next 3-5 years. A total of 4 252 employers were included in the survey in 2023.

2024 Implementation

In 2024, the two distinct surveys were conducted again, each addressing different aspects of workforce and education planning.

The Employment Agency's survey focused on labour market needs and was conducted between May and July 2024. The purpose was to collect information on short-term workforce needs (for the next 12 months) and the demand for specialists with secondary and higher education over the next 3-5 years. The data collected in 2024 was used by the Employment Agency to prepare short-term labour market forecasts for the next year. The analysis was ready at the beginning of November 2024.

This labour market needs survey also evaluated the key competences required by employers. In 2024, as in the previous year, self-control and discipline were highlighted as the most valued skills, with 87.4% of employers identifying them as a top priority. Communication skills and teamwork were important to nearly 85% of employers, while problem-solving skills were ranked first by 78.0%. More than half of employers (56.7%) expressed the belief that training in key competences was necessary, and 53% preferred candidates who had undergone such training prior to employment.

The results of the Employment Agency's survey indicated that the most in-demand profession remained construction worker, with 22 719 job advertisements, followed by tailor and machine operator. Among professions requiring higher education, teachers and nurses were the most sought-after.

The results were shared with the education ministry to improve the planning of admissions for vocational and higher education programmes, including for regulated professions.

In November 2024, the procedure for preparing the state admission plan for VET, including data from the analysis of the Employment Agency's survey began.

Additionally, part of the procedure included consulting with employers to include new specialties from professions in the List of state-protected specialties and in the List of specialties of professions in which there is an expected shortage of specialists in the labour market. Based on the proposals both lists were amended and supplemented for the 2025/26 academic year. The List of specialties of professions in which there is an expected shortage of specialists in the labour market included six new professions that will be taken into account when finalising the state admission plans. These professions were:

- (a) system programmer, specialty system programming;
- (b) application programmer, specialty application programming;
- (c) artificial Intelligence programmer, specialty Artificial Intelligence programming;
- (d) robot programmer, specialty robot programming;
- (e) aviation technician, specialty repair of electronic aviation instrumentation equipment;
- (f) technician of energy facilities and installations, specialty gas equipment.

Bodies responsible

- Ministry of Education and Science
- National employer organisations
- Employment Agency

Target group

Learners

Learners in upper secondary, including apprentices
Young people (15-29 years old)

Education professionals

School leaders

Other stakeholders

Social partners (employer organisations and trade unions)

Thematic categories

Governance of VET and lifelong learning

Establishing and developing skills intelligence systems

Modernising VET offer and delivery

Modernising VET standards, curricula, programmes and training courses

European priorities in VET

VET Recommendation

VET agile in adapting to labour market challenges

Subsystem

IVET

Further reading

[Decree No 13 of Council of Ministers of 21 January 2021 on the adoption of an updated Lists of state-protected specialties and specialties of the professions in which there is an estimated shortage for the academic year 2021/22](#)

[Decree No13 of 10 February 2022 on the adoption of the updated list of state-protected specialties and specialties, in which there is an expected shortage of specialists in the labour market for the academic year 2022/23](#)

[Employment Agency.\(n.d.\).The workforce needs survey 2023](#)

[Decree No 34 of 8 March 2023 on the adoption of the updated list of state-protected specialties and specialties, in which there is an expected shortage of specialists in the labour market for the academic year 2023/24](#)

[Decree No 6 of 22 February 2024 on the adoption of the updated list of state-protected specialties and specialties, in which there is an expected shortage of specialists in the labour market for the academic year 2024/25](#)

Related policy developments

2024 Implementation

VET provision financial incentives for qualifications in demand

The latest amendments in the Pre-school and School Education Act (into force since January 2018) envisage financial stimulus for schools which provide VET training for qualifications needed in the labour market.

 BULGARIA

Type of development

Regulation/Legislation

Subsystem

IVET CVET

2024 Implementation

The consultative council for VET

In 2018, a consultative council for vocational education and training (VET) was established by the education ministry with the participation of other ministries, the National Agency for Vocational Education and Training (NAVET), organisations of employers and trade unions and other bodies and civ

 BULGARIA

Type of development

Regulation/Legislation

Subsystem

IVET CVET

Legal framework for the implementation of dual VET

An Ordinance that regulates dual vocational education and training (DVET) came into force at the beginning of September 2015.

 BULGARIA

Type of development

Regulation/Legislation

Subsystem

IVET CVET

“ ” Cite as

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