



Strategic roadmap for vocational education and training sector in the Republic of Azerbaijan

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1. EXECUTIVE SUMMARY

Under the 16 March 2016 order of the President of the Republic of Azerbaijan on *Approval of “Main directions of strategic roadmap of national economy and its key sectors” and issues arising from it*, a Working Group was created to develop a comprehensive year-long roadmap for 11 sectors of Azerbaijani economy including 8 main and 3 supporting sectors, an economic development strategy and an action plan for 2016-2020, a long-term vision for 2025 and a target vision for the timeframe beyond 2025.

Vocational education and training (VET) sector is a part of the strategic roadmap, which is aimed at creating a competitive, inclusive and sustainable economy. It determines key directions for ensuring economic development of Azerbaijan through vocational education in short- and long-term perspectives and a strategic vision for 2020, a long-term vision for the timeframe up to 2025 and a target vision for the period beyond 2025. Strategic targets and priorities for achieving strategic vision for 2020, including relevant actions, implementation periods, main and other executors, expected impacts, implementation mechanisms have been elaborated. Careful selection and implementation of priorities for a short-term perspective will create an enabling environment for the actions to be implemented in the longer run. Besides, the strategic roadmap will be an information and cooperation tool for private sector representatives at local and international level.

Key points related to vocational education and training (VET) sector

The *Strategic Roadmap for Vocational Education and Training Sector in the Republic of Azerbaijan* was developed with the goal to execute the tasks set in the “*Main directions of strategic roadmap of national economy and key sectors of economy*” approved under 16 March 2016 order of the President of the Republic of Azerbaijan.

Building upon the current global trends in the VET area, this document was prepared on the basis of the principles of flexibility and integration with a view to develop a VET system that trains qualified human resources based on educational programs responding to labour-market needs in the country.

The document includes a VET sector strategy and action plan for 2016-2020, long-term vision for 2025 and target vision for the period beyond 2025. In this view, guided by the “*Main directions of strategic roadmap of national economy and key sectors of economy*”, the following strategic targets have been set in the VET system of the Republic of Azerbaijan for 2016-2020:

- Integrate employers into VET system;

- Create a strong outcomes-based funding mechanism;
- Create targeted vocational development programs; new jobs
- Create sector-based specific programs;
- Apply tools that facilitate achievement of VET targets.

Although the priorities to be applied in VET sector will have a 7 million AZN impact on GDP, the set priorities will result in an indirect impact of 1.230 million AZN (about 2% of GDP of 2015) through the initiatives of other sectors. VET sector is interlinked with the priorities set for other sectors; it plays a significant role in realization of the full potential of those sectors, and the investment in this area has a multiplier effect.

The results to be achieved on VET priorities in frames of the strategic roadmap and investment needed are indicated in the following table:

No.	Description	GDP impact (2020), million AZN	Employment, full-time experts	Investment, million AZN
1.1.	Build partnership with employers	2	-	165,15
1.2.	Recruit new qualified specialists into vocational education system	2	195	-
2.1.	Identify additional public, private and international funding sources to ensure future development of VET system	2	-	33
3.1.	Ensure adult training and further training	1	177	-

Note 1: This table only indicates priorities that require over 10 million AZN investment and allow to create over 100 jobs.

Note 2: These figures are only provided to give an impression on impact of the priorities. During the implementation of actions, it is necessary to carry out comprehensive analysis on each priority to get more accurate figures.

2. GLOBAL TRENDS

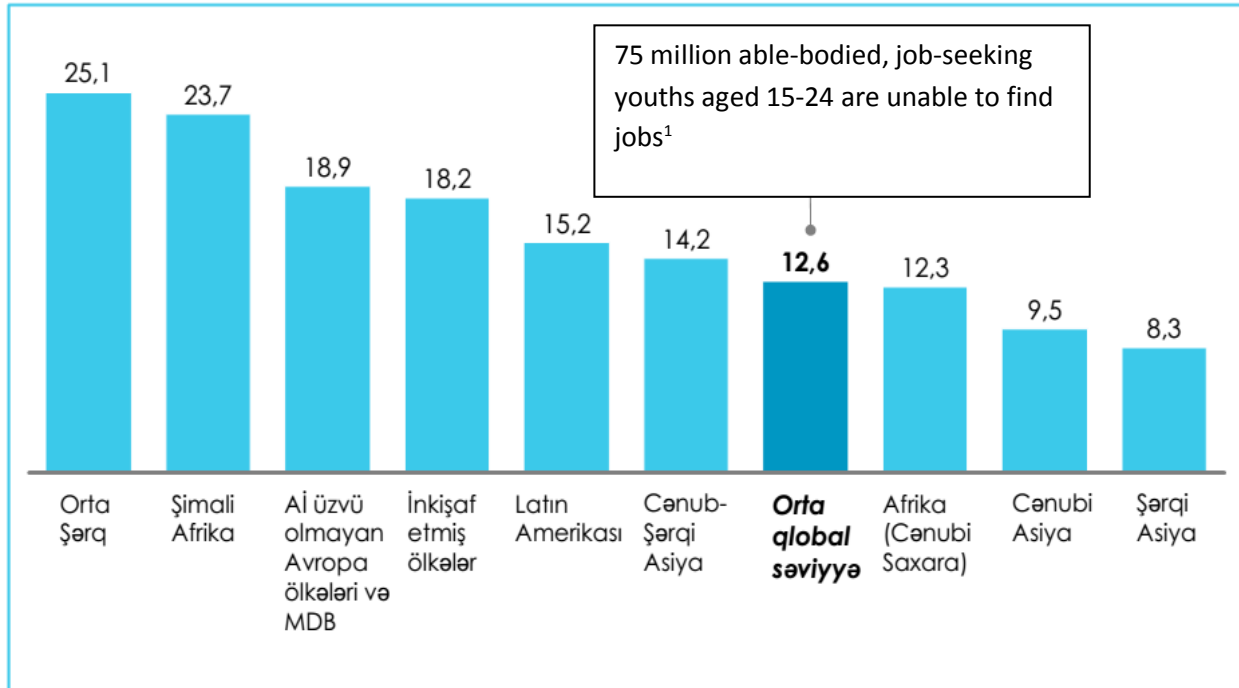
Vocational education plays a significant role in formation of a competitive and developed society. With a view to develop economy and ensure social equality, local and international organizations and those responsible for setting economic development directions of the country attach great importance to creation of a modern vocational education system.

The importance of vocational education and training (VET) as a factor of economic productivity is boosted by four important global trends including globalization, global economic environment, productivity requirements and increased attention to education for employment.

Globalization expands relations between countries and the national economies. Globalization of different economies, cultures and student population leads to increasing interest in comparison of the functioning and effectiveness of education systems. Moreover, increased competition between countries in the regional and global value chain creates a demand for more qualified workforce. Against the background of a global innovation economy, the countries with highly qualified workforce are one step ahead.

Secondly, the global economic environment has increased the attention to fundamental economic skills. In several countries, global economic uncertainty has weakened trust in business and reduced the number of jobs. The shortage of talented workforce versus high unemployment rates is considered to be a result of the gap between educational system and labour market. Especially in the present global environment, the high rates of youth unemployment is one of the significant issues that impede economic development and undermine social stability (Figure 1).

Figure 1. Unemployment rate of youth aged 15 – 24 (in %, 2010)



¹ Bundan başqa, işlə təmin olunmasına baxmayaraq 152 milyon gənc yoxsulluq içində yaşayır (adambaşına düşən gündəlik gəlir 1,25 dollardan aşağı olmaqla).

Middle East | North Africa | (Non-EU) European Countries and CIS | Developed countries| Latin America | South-East Asia | **Average global rate** | Sub-Saharan Africa | South Asia | Eastern Asia

1. Moreover, although being employed, 152 million youths live in poverty (income per capita less than 1.25 USD/day)

Source: International Labour Organization, Global Employment Trends (January 2011)

The global economic uncertainty and growing competition for access to new markets have resulted in increased productivity requirements. Accordingly, countries are paying increasingly more attention to enhancement of labour productivity of markets, companies and individuals. The technology acts as a catalyst here, that is, by providing educational systems with tools that allow to respond to requirements of labour market. Information technologies make it easier to increase productivity through the “learning by teaching” model.

Fourthly, the increasing interest in education is driven by the need to address the growing shortage of qualified workforce and needs of students and employers. The increasing shortage of qualified personnel is caused by the gaps between the education and labour market in terms of quality, quantity and expectations. Quantity-related gaps emerge as a result of the fact that the number of trained workforce is sometimes bigger or smaller than that required by the labour market in view of different qualification degrees (primary, secondary or higher qualification) or fields (medicine, technology etc.). Quality gaps emerge as students fail to meet employers’ requirements regarding professional competencies or level of preparedness to work. Moreover, the initially wrong imaginations regarding future opportunities that will be provided by the profession or tools that will ensure career success result in a gap between expectations of education and labour market.

To meet the demand for competent workforce, many countries pursue relevant legal and economic reforms aimed at developing vocational education and reducing unemployment. The reforms implemented in the field of vocational education aim at keeping the future workforce at a level that satisfies the requirements of evolving and competitive labour market.

The global trend is such that pupils who want to continue their education at higher schools prefer to leave the secondary school with a vocational qualification certificate. This gives them an extra profession in addition to a secondary school diploma thereby allowing them to have a deeper insight into the field of their choice. The demand for vocational education graduates with international certificate remains high at both international and local levels. This significantly increases the opportunity of specialists to work abroad. Vocational education is becoming more practical through use of e-textbooks and simulators.

Optimized allocation of infrastructure and other costs and increased efficiency in the use of funds in frames of the public-private partnership create new cooperation opportunities in the vocational education. Timely response to the training requirements of employers and training of workforce using relevant vocational education program that quickly adapts to the requirements of evolving labour market are key features characterizing modern vocational education institutions. In addition to the foregoing,

another important trend in modern vocational education is that the vocational education graduates acquire entrepreneurial skills encouraging them to create their own jobs.

Creation of a vocational education system that trains workforce meeting requirements of labour market is even more important for developing countries. Specifically, TIMSS scores of these countries are getting increasingly lower. Moreover, the unsatisfactory level of the quality control and evaluation of the functioning of the system in such countries are adversely affecting the quality of education.

In view of the importance of vocational education and training in general economic development, many countries develop and implement programs for the development of this field. In-company are regarded as one of the most effective tools that enable graduates of initial and secondary vocational education to move from education to employment. Such cooperation with real sector creates a real economic impact.

Global experience shows that there are a number of key success factors that ensure effectiveness of interventions in the value chain of vocational education and training. Firstly, successful interventions allow for a better data collection and distribution and creates broader opportunities to inform stakeholders, ensure transparency and control operation. On the other hand, involvement of a number of providers and stakeholders engaged in a specific industry or a sector is a more transformative solution. This kind of sector-based cooperation, which is based on consensus and ensure cost sharing and risk reduction, is stimulated.

To increase attractiveness of vocational education, countries enhance the system productivity by stimulating both pupils and employers. Moreover, marketing campaigns are increasingly used to transform the public image of vocational education.

3. CURRENT SITUATION ANALYSIS

3.1. PRESENT STATE OF VOCATIONAL EDUCATION AND TRAINING SECTOR

Historical traditions

Vocational education and training system in Azerbaijan has a rich history as a part of national education system. Vocational schools preparing carpenters and metal workers were created in Nakhchivan in 1879; a sericulture school was established in Shaki and Yelizavetpol (present Ganja) in 1883 and 1884 respectively; vocational schools were created in Baku in 1887. The number of vocational schools reached 10 by 1914.

During the Soviet period, the network of vocational schools in Azerbaijan was expanded and the logistics base thereof was improved. In 1980s, 185 vocational educational institutions educating over 100,000 students on 300 specialties were operating across the country; qualified workforce trained in diverse occupational directions were sent to enterprises. Both facts indicated the development of this field.

In late 1980s and early 1990s, the developments in the socio-economic life of the country adversely affected the development of this field; the logistics base of vocational educational institutions started to go out of order and the vocational education system was on the brink of collapse.

The frameworks of new vocational education policy

Starting from mid-1990s, the vocational education received increasing attention; a series of purposeful activities were carried out to improve this field. In accordance with the resolution of the Cabinet of Ministers of the Republic of Azerbaijan on “*Activities for improvement of initial vocational education system in the Republic of Azerbaijan*”, the vocational schools with poor logistics base failing to meet modern requirements were merged or terminated, technical vocational education institutions were given the status of vocational school or vocational lyceum.

A State Program on *Development of Technical Vocational Education in the Republic of Azerbaijan (2007-2012)* was adopted in 2007. Within the framework of this program, a number of activities were implemented boosting admission to the vocational education institutions. Creation of State Agency for Vocational Education under the Ministry of Education of the Republic of Azerbaijan assumes great importance in development of vocational education and compliance with modern standards.

Diversification of national economy in recent years, purposeful reforms performed with a view to ensure sustainable development of non-oil sector do not only ensure development of sectors that create added value in the country, but also increase the demand for competitive and qualified workforce in the labour market thereby creating a need to build a flexible and market-oriented vocational education system that allows to satisfy this demand.

The State Agency for Vocational Education under the Ministry of Education of the Republic of Azerbaijan implements and coordinates state policy in the area of initial vocational education in the Republic of Azerbaijan and organizes the operation of initial vocational education institutions under the Ministry of Education of the Republic of Azerbaijan.

Azerbaijan’s vocational education system consists of initial vocational education institutions (vocational schools, vocational lyceums and vocational education centres). The national vocational education system includes 116 educational institutions, including 114 public (109 of them are under the Ministry of Education of the Republic of Azerbaijan) and 2 private educational institutions. 6 of them used to operate in Nagorno Karabakh and surrounding areas. They do not operate at present. Public vocational education institutions that operate under the Ministry of Education educate about 24,000 students on 154 specialties. Education in vocational education institutions is mainly financed at the state expense and partly on paid basis¹.

¹Source: Ministry of Education of the Republic of Azerbaijan.

In spite of implemented activities, some problems remain in vocational education and training system, a priority area of educational system. Specifically, as opposed to developed countries where 40-60% of graduates are enrolled in vocational education institutions following secondary education, this number falls to less than 11% in Azerbaijan. This is an indication of low interest of population in this field of education.

The present vocational education and training system of Azerbaijan is facing the following problems:

- regulatory legal framework for initial vocational education is neither renewed, nor flexible;
- logistics base and educational resources are outdated physically and contentwise and are out of order;
- educational programs, textbooks and learning materials used in vocational education system do not meet modern requirements;
- there is no advanced mechanism to assess or monitor the operation of vocational education institutions;
- vocational education system does not fully follow modern market economy principles of governance and the mechanism for financing from state budget is not efficient enough;
- employing organizations do not participate in the financing of vocational education institutions and there is not a relevant legislative framework for this;
- the training level of personnel employed in vocational education system is not satisfactory;
- the linkage between vocational training institutions with different forms of ownership is weak;
- career orientation work in general education institutions is weak;
- graduates do not meet labour market requirements.
- there are initial vocation education institutions that overlap offering training on the same professions;
- most of educational institutions are used for purposes other than originally intended;

In spite of some problems in the VET system, positive trends observed in the national economy due to countrywide result-oriented reforms put new requirements before the VET system. Actions taken with the aim to diversify economy and develop, besides oil and gas industry, areas of non-oil sector that create high added value, boost the labour market needs for competitive and qualified manpower. In view of this, the VET system must ensure progressive human resources training able to meet increasing and dynamically changing needs of labour market.

3.2. SWOT ANALYSIS OF VOCATIONAL EDUCATION AND TRAINING SECTOR

<i>Strengths</i>	<i>Weaknesses</i>
<ul style="list-style-type: none"> • State Strategy on Development of Education in the Republic of Azerbaijan; • Newly-founded State Agency for Vocational Education under the Ministry of Education of the Republic of Azerbaijan; • land plots and other assets at the disposal of the vocational education institutions; • existing occupational traditions on a number of areas in Azerbaijan. 	<ul style="list-style-type: none"> • outdated infrastructure, equipment and logistics base; • outdated educational programs, textbooks and learning materials; • unsatisfactory training level of teaching staff and personnel; • poor financing of educational institutions; • low-income and low-level student population • unsatisfactory level of career orientation work; • poor standing of vocational education; • lack of a stimulating salary system.
<i>Opportunities</i>	<i>Threats</i>
<ul style="list-style-type: none"> • state interest and support in reforming vocational education area; • vocational education identified as a priority area in the strategic roadmap; • international organizations and financial institutions interested in vocational education area; • private-sector support to vocational education system through public-private partnership; • labour market needs for qualified and competitive manpower; • public policy aimed at developing non-oil sector and diversifying economy. 	<ul style="list-style-type: none"> • impact of global financial-economic crisis on the national economy; • failure to require a vocational qualification certificate as part of job application; • lack of enough enterprises in the country that produce competitive products; • lack of interest of employers in the cooperation with educational institutions; • poor legal framework of vocational education and bureaucratic obstacles; • failure to transform negative public attitude towards vocational education; • use of most educational institutions for purposes other than originally intended;

4. STRATEGIC VISION

4.1. STRATEGIC VISION FOR VOCATIONAL EDUCATION AND TRAINING SECTOR WITHIN THE TIMEFRAME UP TO 2020

2020 strategic vision for Azerbaijan's VET sector is to form a VET system consisting of optimized institutions with engineering pedagogical staff that meets labour-market needs, renewed educational programs (curricula) and occupational standards.

Explanation of strategic vision

The strategic targets and priorities outlined in this document will be realized using the full potential of the country. In this view, the strategic roadmap identifies the components of strategic vision concept as priorities.

2020 strategic vision envisages development and adoption of a draft *Law on Vocational Education* in Azerbaijan. Vocational education will be optimized in the country accordingly. This can be done through improvement of the logistics base of vocational education institutions by termination, temporary suspension or merger of vocational education institutions whose logistic base is poor and capacity to train highly qualified personnel is limited. Besides, international experience can be studied to build new fully equipped vocational education institutions that meet modern standards. Moreover, specialization of vocational education institutions will be carried out; mechanisms will be developed for attracting additional financial and non-financial assistance from employers and other parties to strengthen existing institutions with a view to create a network of developed vocational educational institutions by 2025 and beyond.

In addition, participation of private sector in the VET system will be stimulated; a mechanism based on public-private partnership between private sector and VET institutions will be developed. This joint cooperation mechanism will be implemented in pilot vocational education institutions selected on the basis of specific criteria by 2020. Such cooperation will support vocational education institutions by enabling them to use the logistics base and specialists of the private sector. On the other hand, educational programs (curricula) will be tailored to the needs of employers. As a result, this cooperation will enable a quality education that is based on outcomes in VET institutions. It will also enhance the integration of graduates into labour market and increase their productivity.

Training process of engineering pedagogical staff in VET institutions will be improved for modernization of personnel training. In this view, diagnostic assessment of engineering pedagogical staff employed in educational institutions will be performed and relevant projects will be carried out to allow them to acquire necessary skills and knowledge.

Along with formal education (that is completed upon receipt of a state certificate/diploma on education), a methodology will be developed for recognition of competencies acquired informally (where knowledge is acquired through self-education) and non-formally (through various courses, study circles, individual lessons without issue of the state certificate/diploma on education). Once recognition of such competencies is realized, a relevant regulatory legal framework will be formed for a mandatory requirement for a vocational qualification certificate as part of job application.

The achievement of the abovementioned targets will transform the standing of vocational education in the country, increase the interest of secondary school leavers in this sector of education, and allow graduates of vocational education institutions to better meet the increasing demand in labour market for competitive and qualified workforce. In general, the impact of VET priorities is bigger than the direct and indirect impacts described in this document and it will be possible to see this indirectly in other sectors which will employ graduates of vocational education. Specifically, the key aim of VET priorities is to provide enough competent workforce to support strategic priorities introduced in other important sectors. Although the priorities to be applied in VET sector will have an impact of about 7 million AZN on GDP, the set priorities will result in an indirect impact of 1.230 million AZN (about 2% of GDP of 2015) through the initiatives of other sectors. As is seen, VET sector is interlinked with the priorities set for other sectors; it plays a significant role in realization of the full potential of those sectors.

4.2. LONG-TERM VISION FOR VOCATIONAL EDUCATION AND TRAINING SYSTEM FOR THE TIMEFRAME UP TO 2025

The long-term vision for vocational education and training sector in Azerbaijan within the timeframe up to 2025 is to form a vocational education system that:

- *trains qualified workforce based on occupational standards and educational programs (curricula) meeting requirements of labour market;*
- *enjoys close cooperation with employers in every sector; and*
- *has functional VET institutions.*

Explanation of strategic vision

Building upon the experience of pilot vocational education institutions established in Azerbaijan as a result of actions implemented in frames of 2020 strategic vision, new vocational education institutions meeting modern standards will be built and the logistics base of existing vocational education institutions will be fully upgraded in frames of broad cooperation with employers in Azerbaijan by 2025.

Azerbaijan will approve National Qualifications Framework in this period. Graduates of vocational education institutions will enjoy privileges to continue their education in higher education institutions on relevant specialties; a mechanism will be created to allow high-performing graduates of vocational education institutions to be

directly admitted into higher education institutions without taking admission exams. In the pilot phase, recognition of competencies on several specialties acquired through informal (where knowledge is acquired through self-education) and non-formal (through various courses, study circles, individual lessons without issue of the state certificate/diploma on education) methods will be realized. Mandatory requirement for a vocational qualification certificate for employment on several specialties that require special competence and necessitate observation of labour safety will be considered.

Building close cooperation with key employers from diverse sectors of economy will significantly improve quality and quantity indicators of vocational education institutions. Full integration of employers into vocational education system will allow vocational education institutions to benefit from real experience in various sectors and to attract more financial resources. Employers, in their turn, will be able to tailor the workforce training in vocational education to their needs.

By 2025, the teaching process in all VET institutions will be based on educational programs (curricula) tailored to the needs of economic sectors and these programs (curricula) will be regularly updated based on the feedback from employers. This will allow the vocational education system to respond rapidly to the requirements of evolving labour market and to supply the labour market with competitive and qualified human resources.

Building systematic cooperation with employers will allow to upgrade and modernize equipment in vocational education institutions without additional funding from state budget. Short-term visits to base and model enterprises will become a major component of teaching process. Classroom materials will be prepared in accordance with the new educational program reflecting application of new technologies.

Azerbaijan's vocational education institutions will be fully integrated into online education infrastructure. The students will have an access to teaching materials, be able to join online seminars and test various production methodologies in e-laboratories. Vocational education institutions will be equipped with mobile applications and other types of software. Employers will be integrated into these systems and the students will be able to easily search for the most suitable job offers from among a high number of alternatives.

The 2025 strategic vision also envisages prioritization of entrepreneurial and financial literacy, as well as technological development issues in vocational education. This will allow the students to have initial financial knowledge and skills needed to build a business. Besides developing the students' entrepreneurial thinking style in formal learning process, vocational education institutions will also organize non-formal education courses aimed at personal development. As a result, this will develop innovative and entrepreneurial thinking style which will make a positive contribution to the national economy in the long run.

Actions to be implemented in the area of vocational education by 2025 will allow to shape new image of this sector. That is, the renewed infrastructure and content of vocational education will transform the negative opinions on vocational education

institutions and allow them to be recognized as reliable educational institutions offering decent career opportunities. Pupils of general education schools will be better informed of the education opportunities in vocational education institutions. They will be able to contact those institutions before making a choice on educational direction and specialties. Besides, special consulting services offered in vocational education institutions will allow the students to adapt their skills to the needs of employers. Partnerships built between Azerbaijani vocational education institutions and international partners will raise the quality of education.

The admission into vocational education institutions will rise by 2025. As a result of partnership between employers and vocational education institutions, a certain number of students will be employed by partner enterprises. Subsequently, it will boost admission of students into those education institutions. Besides, an advanced database of graduates of vocational education institutions will be created.

Application of differential financing mechanism in vocational education institutions will enable full adaptation of the logistics base of high-performing vocational education institutions to modern standards. Besides, a policy and guidelines framework supporting state interests will be developed by 2025. This framework will encourage more participation of private partners.

The mechanism for overseeing the performance of vocational education institutions will be improved with a view to ensure sustainability of actions envisaged up to 2025. Centralised exams aimed at checking the knowledge and technical skills of graduates of every vocational area could enable objective assessment of graduates on the basis of same standards. If the employers accept the results of these exams as an indicator of their labour skills, it can improve their employment opportunities.

4.3. TARGET VISION FOR VOCATIONAL EDUCATION AND TRAINING SECTOR FOR THE TIMEFRAME BEYOND 2025

Azerbaijan's target vision for VET system is to build an internationally recognized competitive system which finds and involves potentially talented youth and equips the priority sectors with innovative workforce with high labour productivity.

Explanation of strategic vision

Recognition of competencies acquired through informal (where knowledge is acquired through self-education) and non-formal (through various courses, study circles, individual lessons without issue of the state certificate/diploma on education) methods will be widely applied countrywide beyond 2025. Besides, a mandatory requirement for a vocational qualification certificate for employment on all specialties taught in vocational education institutions will be considered. In this period, career orientation work will be built effectively in general education schools. Educational consultants'

purposeful observations at primary schools will enable prospective students to select vocational education institutions and programs suitable for themselves from early ages. To familiarize pupils with specialties in vocational education in a practical way, various events and contests will be organized. In the National Qualifications Framework, the students' skills on craftsmanship and technical professions will be assessed from early ages; teaching materials and system will be digitized.

International accreditation of Azerbaijan's vocational education institutions will be carried out. To succeed, high level training and teaching standards and tools will be prepared in vocational education institutions. International accreditation will allow vocational education institutions to follow leading world practices in their management system. International partnerships will be built between Azerbaijani and foreign vocational education institutions. As a result of increased education quality and employment opportunities, admission to vocational education institutions will rise. Increasing competition between vocational education institutions will oust those who cannot withstand competition from the system; it will help bring the number and quality of institutions that meet standards to a more optimum level.

Employers will be fully integrated into VET system, from development of educational program (curriculum) to financing, beyond 2025. Some vocational education institutions will satisfy more specific needs of employers, being fully or mostly financed by private companies. These employers will choose their employees from among the students whose education is fully funded by them and will enable them to have their vocational education lessons in their enterprises. Employers will identify talented students and award dedicated scholarships to them. Development of relations between employers at this level will create certainty in the career of the students of vocational education in Azerbaijan.

Further training courses for adults will be integrated to courses organized by state agencies for reducing unemployment. As a result of these actions, the number of morning and evening groups will rise and use of vocational education institutions will further expand.

The target vision of the country up until this period is to turn the vocational education institutions to a centre of support for entrepreneurial initiatives and creative ideas. The students who embark on entrepreneurial activities will be able to test their unique ideas in the laboratories of vocational education institutions. Making use of their mutual relations with industries, these institutions will help students fund and realize their promising ideas. Continuing development of entrepreneurial ideas and close mutual ties with industrial centres will help recruit more experienced and well-educated teaching staff into vocational education institutions.

5. TARGET INDICATORS

While the GDP impact of VET sector priorities will be about 7 million manats, the priorities will result in an indirect impact of 1.230 million (about 2% of GDP of 2015) manats through initiatives of other sectors.

The following target indicators have been set for actions to be implemented in VET system up to 2020:

- 10 pilot vocational education institutions with diverse directions organized in partnership with employers;
- about 70% of graduates of pilot vocational education institutions employed;
- 264 specialists and 176 seconded non-staff teachers involved in vocational education;
- annual growth rate of the participants of adult training courses raised to 17%.

6. STRATEGIC OBJECTIVES

Strategic objectives for VET sector are the following:

- ensure an improved legal, economic and information framework for vocational education;
- form a new positive image for vocational education;
- build a management structure for vocational education institutions building upon improved public-private partnership;
- build a network consisting of an optimized number of rationalised public vocational education institutions;
- increase attractiveness of the vocational education system for the private sector;
- form vocational education institutions with a modern infrastructure, logistics base and educational resources;
- achieve financing of vocational education system based on a new economic model;
- ensure a renewed content in vocational education institutions compatible with modern requirements;
- prepare engineering pedagogical staff in the vocational education system responding to the requirements of labour market;
- enhance employment rate of graduates of vocational education institutions;
- reduce the rate of poverty, crimes and other negative affairs at the expense of increased employment.

7. STRATEGIC TARGETS

7.1. STRATEGIC TARGET 1: INTEGRATE EMPLOYERS INTO VOCATIONAL EDUCATION AND TRAINING SYSTEM

Partnership with employers is one of the key prerequisites for taking the vocational education system of Azerbaijan to a modern level. It is of crucial importance to involve employers in the vocational education system as a key stakeholder, organize training of manpower in relevance to the employers' needs and implement a mechanism of public-private partnership in education. In view of this, integration of employers into VET system has been set as one of the strategic targets. This strategic target envisages building of different levels of partnership between vocational education institutions and largest employers from private and public sectors operating in diverse sectors of economy.

7.1.1. Priority 1.1: Build partnership with employers

Justification



Cooperation between employers and vocational education institutions provides benefits such as linking education and training with real sector and employment of graduates. The strategy developed with a view to diversify national economy and reduce dependence on the oil and gas revenues identifies the human capital as one of the most important factors. Vocational education system can make a significant contribution to this process by ensuring preparation of qualified and competent manpower.

As is known, Azerbaijan has inherited the present vocational education system from the period of Soviet Union. In this education system, there was a direct linkage between vocational education system and industrial and trading enterprises. Specifically, vocational education institutions were usually connected to a specific enterprise, which acted as a base enterprise that offered industrial placements and employment opportunities. After restoration of the independence of our country, large enterprises lost their traditional markets; the country faced socio-economic problems. These and other developments resulted in breach of the link between the vocational education institutions and base enterprises. This eventually made it more difficult for graduates of these institutions to find jobs and weakened the contribution of vocational education system to the economy. On the other hand, the relations between vocational education system and business sectors are weak and not systematic. This has resulted in limited employment opportunities for graduates of vocational education. This is one of the reasons that reduced the attractiveness of this area.

The above-mentioned factors have made it necessary to build partnership between vocational education institutions and employers, particularly large public and private companies by encouraging the participation of non-state sector in this work in the first place. While some measures have been taken for building cooperation between vocational education institutions and employers from public and private sectors, partnership opportunities with large companies are still limited in a number of areas. Expansion of these partnership relations would be mutually beneficial for both sides,

where the employers would be able to adjust the content of education and training of manpower in relevance to their needs and vocational education institutions would be able to train skilled manpower compatible with the labour-market needs (Figure 2).

Figure 2. Elements of participation of employers in vocational education system according to leading foreign practices

İşgötürənlərin iştirakı	 Azərbaycan	 Avstraliya	 Birləşmiş Krallıq	 Almaniya
▪ Lazımı proqramların hazırlanmasında əməkdaşlıq etmək		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
▪ Özel təlim şirkətlərini seçmək				<input checked="" type="checkbox"/>
▪ Öz ehtiyaclarından istifadə etməklə xüsusi kvalifikasiya standartlarını müəyyən etmək		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
▪ Öz işçi arsenalı vasitəsilə təhsil proqramını (kurikulumu) hazırlamaq	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
▪ İstehsalat təcrübəsi imkanı yaratmaq		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
▪ Yeni və işlənmiş avadanlıqlar da daxil olmaqla, resurslarla təmin etmək	<input checked="" type="checkbox"/>			
▪ Şagirdlərin işçilərlə əməkdaşlıq etməsi ilə davamlı istehsalat təlimləri təmin etmək		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
▪ Şagirdlər tərəfindən mənimsəmə/inkışaf səviyyəsinin vaxtaşırı monitorinqi və yoxlanılması		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
▪ Bazarın/şirkətin gələcək ehtiyacları üzrə xüsusi tövsiyə/proqnozlar verməklə, peşə təhsili müəssisələrinə tələbələr qəbul sayına istiqamət vermək	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Participation of employers	Azerbaijan	Australia	UK	Germany
- Cooperate in development of necessary programs				
- Select private training companies				
- Identify special qualification standards using their own needs				
- Prepare educational program (curriculum) using its own workforce				
- Create opportunity for industrial placements				
- Supply resources including new and used equipment				
- Ensure continuous in-company trainings through cooperation of pupils with employees				
- Monitor and check the mastering/development level of pupils periodically				
- Guide the vocational education institutions with respect to the number of students to be enrolled, by providing special recommendations/projections as regards the future needs of the market/company				

Partnership between vocational education institutions and employers can be built at three levels: low, medium and high (Figure 3).

Figure 3. Levels of public-private partnership on vocational education

		Aşağı tərəfdaşlıq səviyyəsi	Orta tərəfdaşlıq səviyyəsi	Yüksək tərəfdaşlıq səviyyəsi
Avadanlıqlar dəstək	▪ Müasir avadanlıqların təmin edilməsi		✓	✓
Tədris proqramı ilə əlaqədar dəstək	▪ Bazarın tələblərinə əsaslanan kurikulumun təmin edilməsi və tədris proqramının hazırlanmasına dəstək verilməsi		✓	✓
Təlimçi dəstəyi	▪ Müəllim və təlimçilərin təkmilləşdirilməsi ▪ Öz işçilərinin əlavə kurs təlimçiləri dərslərə cəlb edilməsi	✓	✓	✓
İdarəçilik dəstəyi	▪ Bir məktəb üzrə mülkiyyət hüququnun öz üzərinə götürülməsi və hərtərəfli idarəçiliyin təmin edilməsi			✓
İstehsalat təlimi imkanları	▪ İş təlimləri üçün şərait yaradılması		✓	✓
Məzunların işə götürülməsi	▪ Kursu bitirən təcrübəçilərin işə götürülməsinə təminat verilməsi			✓

		Low level	Medium level	High level
Equipment support	Supply modern equipment			
Support to educational programs	Provide a curriculum based on market requirements and support development of educational program			
Trainer support	Improve teachers and trainings Involve its own employees in classes as additional course trainers			
Management support	Undertake right to ownership of a school and ensure full management			
In-company training support	Create opportunity for on-the-job trainings			
Employment of graduates	Guarantee employment of graduates of the course			

Figure 4. Stimulating measures for employers in accordance with the level of partnership

		Gümüş tərəfdaşlıq	Qızıl tərəfdaşlıq	Platin tərəfdaşlıq
İnsan resurslarına dair tədbirlər	<ul style="list-style-type: none"> Tələbələrə seçiminin işəgötürənlərin tələblərinə uyğunlaşdırılması Peşə təhsili infrastrukturuna girişi təmin etmək Məzunların işə götürülməsində prioritetlərin müəyyən edilməsi 	✓	✓	✓
İdarəçilik tədbirləri	<ul style="list-style-type: none"> Peşə təhsili və təlimi müəssisələrində idarəetməyə nəzarətin təklif edilməsi 			✓
Hüquqi tədbirlər	<ul style="list-style-type: none"> İstehsalat təcrübəsi ilə bağlı qanunvericilikdə aşağıdakılar üzrə tələblərin yumşaldılması: <ul style="list-style-type: none"> Minimum ödəniş İş müddəti 		✓	✓
Maliyyə tədbirləri	<ul style="list-style-type: none"> Vergi güzəştlərinin verilməsi İstehsalat təcrübəsi üzrə sosial sığortanın dəstəklənməsi İşçilərin təlimləri ilə bağlı subsidiyalara verilməsi 			✓

		Silver partnership	Gold partnership	Platinum partnership
Human resources measures	<ul style="list-style-type: none"> Adapt the choice of students to the needs of employers Ensure access to the vocational education infrastructure Identify the priorities in recruitment of graduates 			
Management measures	<ul style="list-style-type: none"> Propose control over management in VET institutions 			
Legal measures	<ul style="list-style-type: none"> Mitigate the following legislative requirements on industrial placements: <ul style="list-style-type: none"> Minimum payment Working time 			
Financial measures	<ul style="list-style-type: none"> Tax incentives Support social insurance on industrial placement Grant subsidies for employee trainings 			

Depending on the partnership level, measures are taken in the world experience to stimulate employers as well (Figure 4). The first stimulus of such a partnership is that the employers from private and public sector are equipped with skilled manpower in the first place. Additional stimulating measures, in short- and long-term perspectives, could be taken to enhance private-sector interest in the partnership with vocational education. Such measures would include financial, legal and other incentives and reliefs.

Actions

Action 1.1.1: Identify strategic employment areas in labour market and forecast the demand for workforce. First, the largest and strategic employment areas

and employers in the country will be identified. In this view, relevant state agencies will perform analyses in order to identify labour market needs in priority areas of the economy by individual regions and conduct surveys among employers to identify needs for specific specialties. Besides, *Classification of Specialties in Initial Vocational Education* will be renewed in relevance to the present and projected needs of labour market.

Action 1.1.2: Conduct a comprehensive study of the present state of VET institutions and develop an action plan for optimization. The relevant state agency (“RSA”) will investigate the present state public initial vocational education institutions operating in the country and will evaluate their infrastructure, logistics base and the capacity of teaching staff. Based on the results, it will prepare a relevant action plan with the aim to rationalize and optimize those educational institutions, terminate or temporarily suspend the operation of some vocational education institutions if necessary, as well as identify new initial vocation education institutions to be built. The RSA will also put forward proposals for the implementation of the action plan.

Action 1.1.3: Carry out optimization in large industrial centres and regions. Rationalization of the network of vocational education institutions will be carried out through merger of vocational education institutions and creation of specialized vocational education centres on specific specialties in accordance with the action plan to be developed as part of Action 1.1.2. The optimization process will commence with merger of educational institutions located in Baku and Ganja, large industrial centres, which offer overlapping training of human resources. Then some of vocational educational institutions based in the regions will be optimized in a similar way; operation of unpromising educational institutions will be terminated or operation of some educational institutions at the area of which it might be possible to build new vocational education institutions in future will be suspended temporarily. The optimization process will be completed with relevant measures.

Action 1.1.4: Build pilot vocational education institutions. Based on the data collected through surveys and studies as part of Actions 1.1.1 and 1.1.2, the RSA will select pilot education institutions which will be able to train new qualified manpower in priority areas that are on high demand in the market. To ensure that the selected pilot vocational education institutions meet modern standards and operate in relevance to demand, they will undergo capital repair where necessary or new vocational education institutions will be constructed. Relevant state agencies will prepare proposals aimed at preventing the use of selected pilot vocational education institutions for purposes other than intended. The proposals will be realized within the limits of existing possibilities. Proposals on stimulating measures that allow for better involvement of private sector in vocational education system will be developed. Proposals will also be made to encourage initiatives regarding establishment of private vocational education institutions by private sector or involvement of private sector in management of public vocational education institutions.

Action 1.1.5: Build a mechanism for cooperation with employers at pilot vocational education institutions, develop occupational standards and curricula.

The implementation of mutually beneficial mechanisms of cooperation with employers will start with pilot vocational education institutions as part of Action 1.1.4. In this view, the RSA will put forward proposals for making relevant amendments to the existing regulatory legal framework with the aim to identify the interests and responsibilities of partner employers, as well as mechanisms to encourage them and stimulate cooperation.

Taking account of the practices applied in leading countries, the interests and responsibilities of employers in frames of a mechanism based on public-private partnership, as well as the scale of these responsibilities will be identified. In line with the scale of interests and responsibilities of employers, the partnership will be at low, medium or high levels.

Then the RSA will build relations with the largest employing organizations from public and non-public sectors and enable a process of partnership between them and vocational education institutions. In frames of the partnership, the employers will be encouraged to take part in improvement or renewal of the logistics base of selected vocational education institutions. To ensure relevance of trained knowledge and skills to the labour-market needs, the employers will be involved in the development of relevant occupational standards by relevant state agencies, drafting of educational programs (curricula) under these standards, as well as the evaluation of the student knowledge and graduation exams. Relevant requirements and recommendations of partner employers will be taken into account in the adjustments made to educational programs (curricula). To enhance opportunities of vocational education students to be enrolled in industrial placements, apprenticeships, as well as employment opportunities of the graduates of vocational education, the RSA will regularly perform mutually coordinated activities. Besides, with a view to ensure efficient use of new technologies and equipment brought into the country in future and ensure that the personnel who will use them has adequate level of professionalism and skills, a mechanism will be developed to provide this equipment or its training prototypes or simulators to the vocational education institutions in the first place and where it is not possible, to enable teaching staff of vocational education institutions to conduct trainings in the territory of those enterprises. Moreover, a transparent and efficient school management model will be developed involving representatives of employing organizations.

Action 1.1.6: Ensure public awareness on pilot vocational education institutions and admission. Mass media will be used to publicize information regarding the partnership between vocational education institutions and employers. The RSA will also use social media and other tools, in frames of pilot projects, to raise the public awareness on admission of students into the vocational education institutions, specialties and the opportunities of graduates to be employed by partner organizations and so on. This, in turn, will contribute to the career orientation work as well. Once the abovementioned information is publicized, admission into pilot schools will be

performed. Relevant amendments will be made to the existing regulatory legal framework identifying the optimum size of training groups in line with the labour market needs and chosen specialties of students. With the goal to ensure transparency, the admission into vocational education institutions will be carried out at ASAN service centres in frames of so-called “ASAN *peşə*” (ASAN profession) project.

Action 1.1.7: Monitor and oversee partnership programs. To check the compliance of the quality and progress of education in pilot vocational education institutions with original requirements set in the partnership program, a special monitoring system will be compiled and implemented. The RSA will take necessary measures to address any issues revealed by the regular monitoring.

Action 1.1.8: Publicize information regarding efficiency of partnership programs. The RSA will publicize information regarding the progress and efficiency of partnership program with employers. In this view, the efficiency of the said programs will be examined and relevant reports will be published. Measures aimed at eliminating the revealed problems will be included into the action plans of following years.

Action 1.1.9: Introduce the occupational standards and educational programs (curricula) applied in pilot vocational education institutions to other vocational education institutions. To ensure that entire VET system benefits from the success of pilot projects, the RSA will evaluate educational programs (curricula) used as part of the project and apply them in other vocational education institutions where necessary.

Expected outcomes and outcome indicators

As a result of the cooperation between employers and pilot vocational education institutions, occupational standards and educational programs (curricula) will be developed, employment rate of graduates will rise, and a foundation will be laid for introduction of this practice in other vocational institutions with a view to ensure preparation of skilled manpower in future. Moreover, vocational education will gain a positive image and the number of those who choose vocational education will rise.

As a result of the increased labour productivity and employment opportunities of vocational education graduates, this priority is estimated to make an indirect impact of 2 million manats on GDP.

It is intended to organize 10 pilot vocational education institutions with diverse directions and raise the employment rates of vocational education graduates to 70% by 2020 in frames of the partnership with employers. The rise in employment opportunities will allow a 50% increase in the number of students enrolled in partner vocational education institutions. The increased number of students, in turn, will lead to a 5% increase in the number of teaching staff in those vocational education institutions.

Investment needed

An additional funding of 165 million manats is needed for rebuilding (construction, capital repair and logistics) of selected pilot vocational education institutions, and 150,000 manats are needed for development of new curricula (teaching materials, books, online textbooks).

Expected risks

- lack of interest of employers in the cooperation aimed at identifying the demand in labour market and needs for relevant specialties;
- lack of vocational education institutions with infrastructure and logistics base suitable for pilot projects.
- failure to adopt relevant regulatory legal framework to enable mechanisms for encouraging and stimulating cooperation with employers;
- lack of enough financial resources for optimizing vocational education institutions and building pilot vocational education institutions.
- failure to transfer refugees and IDPs settled in selected pilot vocational education institutions to other residential areas in a relevant manner.

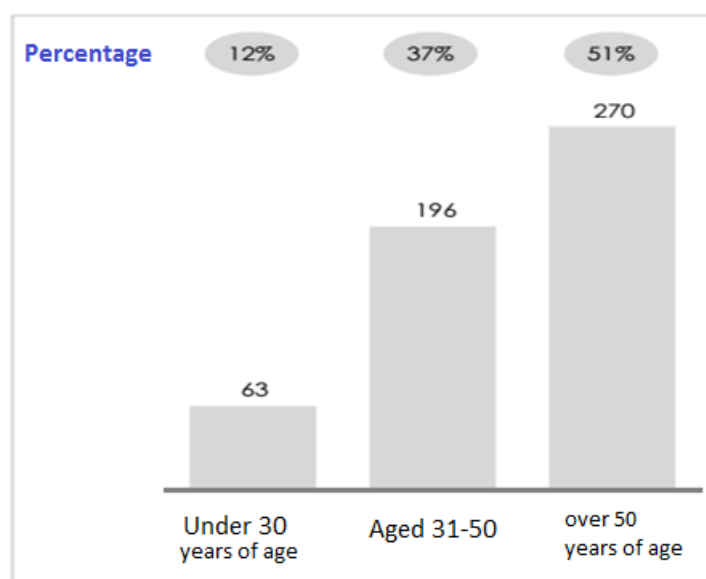
7.1.2. Priority 1.2: Recruit qualified new specialists to the VET system

Justification

One of specific features of vocational education system is the crucial importance of both pedagogical knowledge and practical competence of teaching staff on the relevant specialties. This requirement makes it more difficult to supply professional teachers in this area. One of the key problems is the lack of higher education framework to train master-pedagogical staff in the area of vocational education. That the age of most of the vocational education teachers is over 50 (Figure 5) necessitates replacement of the teaching staff by new personnel in coming 5-15 years².

Figure 5. Age limits of master-pedagogical staff of vocational education institutions (%)

² Source: Ministry of Education of the Republic of Azerbaijan.



Source: Ministry of Education of the Republic of Azerbaijan

On the other hand, the current salary rate of vocational education teachers is not attractive to those who seek full time employment. Specifically, average salary of vocational education teachers is 203 AZN³, which is less than average salary rate (444 AZN) in Azerbaijan. The said reasons make it more difficult to recruit competent personnel to the area of vocational education. Therefore, involvement of employers in education and training process is crucial for ensuring competent personnel training in labour market and ensuring that vocational education meets high standards. As such, not only the knowledge and skills of graduates would become at the required level and quality, but also the need of institutions for competent teachers would be satisfied. Moreover, cooperation creates enabling environment for training, retraining and further training of teachers and enhances the opportunities to evaluate them and use new technologies. In addition, the knowledge and skills acquired by students from teachers that come from industries are based on latest technological innovations and leading knowledge on relevant areas.

Actions

Action 1.2.1: Perform diagnostic assessment of present teaching staff of vocational education institutions and enhance their knowledge and skills. With the goal to identify the capacity and professional level of the present teaching staff of vocational education institutions in frames of action 1.1.2, the RSA will perform diagnostic assessment. If this evaluation reveals that the knowledge and skills of the teaching staff do not fully meet the requirements of compulsory subjects on the

³ Source: The Ministry of Education of the Republic of Azerbaijan

educational program (curriculum), possibility of further training or retraining of those employees will be considered.

Action 1.2.2: Identify measures to recruit new teaching staff to the VET process. The RSA will take necessary measures to recruit highly professional masters with industrial experience and pedagogical staff to the pilot vocational education institutions on priority specialties identified through surveys conducted as part of action 1.1.1. In this view, specific conditions and criteria will be developed for selection of the pedagogical staff; specialties for which it is needed to involve professional specialists of employers with practical experience and employers operating in those areas of specialization will be identified. Then relevant encouraging and stimulating measures will be identified for both employers and their specialists who will be involved in teaching process. The RSA will apply to the employers in order to involve their employees in the teaching process as teachers (as a part-time trainer or through year-long secondment programs).

Action 1.2.3: Select new pedagogical personnel with practical experience and organize relevant trainings. A list of teachers who wish to teach at vocational education institutions and are invited from partner employees by the RSA will be compiled. Recruitment of new teachers will be performed through evaluation of applicants in accordance with the conditions and criteria set as part of Action 1.2.2. Upon completion of the selection process, would-be teachers will take part in relevant trainings in order to be familiarized with pedagogical process and be prepared to the teaching process. In this view, the possibility of organizing pedagogical evening courses for those teachers can be considered. The RSA will examine opportunities for pedagogical trainings, as well as reorganizing of those trainings in relevant periods and take relevant measures.

Action 1.2.4: Monitor the performance of new pedagogical staff. The RSA will assess the performance of teaching staff recruited from employing organizations with a view to ensure that teaching process meets quality standards. The assessment will be performed periodically based on the criteria set out by RSA. Based on the results of assessment, the teachers will receive relevant recommendations and proposals. Besides, opinion surveys will be conducted among students to assess the performance of teaching staff. The RSA will use the results of these surveys to make relevant changes to the content and structure of lessons.

Expected outcomes and outcome indicators

New competent personnel with practical experience will be recruited to vocational education process.

This priority is a supporting tool for implementation of priority 7.1.1. It will have a direct and indirect impact on GDP at an amount of 2 million AZN. In calculation of this impact, the payment to the new teaching personnel with practical experience was assumed as 15 AZN/hour. As part of this priority, it is intended to recruit 264 specialists

of employers and 176 seconded non-staff teachers by 2020. As a result, in line with the number of seconded teachers, 176 direct and 19 indirect new jobs will be created.

Investment needed

To achieve these impacts, 100,000 AZN is needed to organize trainings for newly recruited non-staff teachers and 150,000 AZN for performing diagnostic assessment with participation of employers.

Expected results

- low salary of engineering pedagogical staff in vocational education system making it difficult to recruit new teachers;
- refusal of the employers to involve their employees in the teaching process as teachers.

7.2. STRATEGIC TARGET 2: BUILD AN OUTCOME-BASED STRONG FINANCING SYSTEM

Increased funding is of great importance for ensuring the successful future of vocational education system in Azerbaijan. Improvement of present vocational education system will contribute to the development of Azerbaijan's economy. To achieve this target, public, private and international funding sources will be identified; performance-based rewards mechanism will be introduced for vocational education institutions and teaching staff with the goal to ensure efficient use of funds. Thus an outcome-based strong financing system will form.

7.2.1. Priority 2.1: Identify additional public, private and international funding sources to ensure future development of VET system

Justification

Financing system needs to adapt to modern standards in order to ensure success of programs planned to be implemented in VET system of Azerbaijan. In vocational education system, the quality of education directly depends on the financing level. This is one of the key prerequisites for flexible solution of issues such as:

- financial stimulation of teaching staff, an inalienable component of training and teaching process;
- compliance of logistics base, infrastructure and equipment with modern requirements and so on.

On the other hand, it is also crucial to ensure transparency and efficiency in the financing of vocational education system, as well as to create a progressive financial management model.

At present, the VET system in Azerbaijan is mainly financed from state budget (96%)⁴. Development of a legislative regulatory mechanism on use of funds received from non-budget sources as intended can also trigger growth of this income.

Financing by private sector under the principles of public-private partnership, as well as with support from international donors and financial institutions is a widely used international practice that can trigger reasonable changes in the VET system and can stimulate its growth. This would also allow to reduce budget's burden in financing of the vocational education system, organize vocational education institutions under business principles and ensure high quality and transparency.

Actions

Action 2.1.1: Permit the sale of goods and services produced in vocational education institutions and evaluate the production capacities of selected pilot vocational education institutions. With a view to enhance the opportunity of vocational education institutions to receive non-budgetary funds, relevant amendments will be made to the current legislation to permit the sale of goods and services produced in vocational education institutions. The RSA will perform an assessment of the financial state of pilot vocational education institutions selected as part of Action 1.1.4, possibility of boosting non-budgetary revenues, and efficient use of public financing. As part of evaluation, a profit-and-loss analysis report will be made based on the following:

- Identification of areas of production and services for both industrial placement of students of VET institutions and increase of non-budgetary revenues in educational institutions;
- Inventory of lands, equipment and logistics base belonging to the institutions; and
- The analysis of the present infrastructure of educational institutions for production and services to ensure efficient use thereof.

Action 2.1.2: Identify areas of goods and services intended to be produced in vocational education institutions and minimum standards for those goods and services. Based on the information acquired as a result of evaluation performed in Action 2.1.1 and also the requirements of the market, the RSA will identify the areas of goods and services that are intended to be produced in the vocational education institutions, and the minimum standards for those goods and services. Then, with a view to create necessary infrastructure for the production of relevant goods and services, logistics base will be provided and works will be performed in pilot vocational education institutions selected in Action 1.1.4 to prepare for operation.

Action 2.1.3: Develop a system for monitoring and management of non-budgetary funds. With the aim to ensure industrial placement of vocational education students and increase non-budgetary revenues, the RSA will develop and apply a transparent management mechanism and a system for periodical auditing and monitoring of financial outcomes in order to manage revenues made from the sale of

⁴ Source: Ministry of Education of the Republic of Azerbaijan.

goods and services produced in pilot vocational education institutions. Besides, integration of the vocational education institutions producing goods and services into the centralized procurement system will allow to reduce procurement costs. To ensure transparent, efficient and centralized management of revenues and expenditures, creation of a vocational education development foundation under the RSA will be considered.

Action 2.1.4: Organize sale of goods and services produced in vocational education institutions. The first clients of goods and services produced in vocational education institutions will be the RSA in the first place and then other state institutions and organizations in phases. The RSA will update its procurement systems to include the production capacities of the vocational educational institutions. In addition, a trademark (brand) for goods and services produced by pilot vocational educations will be created; relevant measures will be taken to organize annual fairs to deliver those products to private companies and broad buyer population thereby increasing the non-budgetary revenues.

Action 2.1.5: Evaluate sale-oriented production activity in vocational education institutions. The RSA will perform an annual assessment of the production and sale of goods and services in pilot vocational education institutions. Based on the results of the evaluation, the RSA will make relevant corrections and changes to the program and will consider the possibility of introducing the program in other vocational education institutions in addition to pilot vocational education institutions.

Action 2.1.6: Identify alternative funding sources. The RSA will prepare a draft budget for the vocational education institutions to achieve the targets set. It will identify leading international practices regarding alternative funding of vocational education institutions with participation of employers and international organizations. To this end, the RSA will develop a regulatory legal document with special incentives for financing of vocational education institutions at the expense of non-state funds or other stimulating and encouraging tools. The possibilities for financing of vocational education institutions by employers will be studied based on mechanisms indicated in Strategic target 1. In addition, the possibilities of involving EU, World Bank, UNESCO and other similar international organizations in the financing of some specific areas such as organization of trainings for managing and teaching staff of the vocational education institution and development of educational programs (curricula). Active participation of these organisations in the program will be ensured.

Expected outcomes and outcome indicators

This priority is expected to have a direct and indirect impact of 2 million AZN on GDP. This impact includes additional funds acquired from sale of goods and services in pilot vocational education institutions as a result of implementation of actions.

The first outcome indicator is to ensure participation of at least 65% of vocational education institutions in the program and an average additional income of 105 AZN per

student made by schools. Secondly, a 20% increase is expected in the funds allocated for each student in vocational schools.

Investment needed

Vocational education system needs an additional funding of 33 million AZN for the full realization of this priority, including the following:

- inventory lands, equipment and logistics base belonging to the vocational education institutions;
- perform a profit-and-loss analysis based on the analysis of the present infrastructure of educational institutions to ensure efficient use thereof for production and services;
- create infrastructure needed for production of relevant goods and services;
- ensure integration into centralized procurement system;
- create a trademark (brand) for the sale of goods and services produced in vocational education institutions;
- organize fairs;
- engage international experts to identify leading international practices relating to alternative financing; and
- organize trips.

Expected risks

- failure to adopt a relevant regulatory legal framework to attract non-budgetary funds;
- failure to create production infrastructure in vocational education institutions;
- difficulties in the sale of goods to be produced;
- failure to ensure transparency and efficiency in the management of non-budgetary funds;
- failure to attract additional financing to the vocational education system.

7.2.2. Priority 2.2: Introduce performance-based rewards mechanisms

Justification

A greater part of the present pupils of vocational education benefit from relevant conditions and opportunities offered by VET system. Specifically, the pupils receiving vocational education at the expense of state are not only exempt from paying tuition fees, but also receive a scholarship of about 40 AZN. This factor, taken in isolation from other criteria, ensures attractiveness of vocational education system for certain pupils. However, the scholarship is not based on outcomes. To receive the scholarship, a pupil only needs to register. Besides, the performance indicators of vocational education institutions and their pupils are not taken into account in the allocation of funds. On the

other hand, another important issue is that the award of scholarships at the expense of the state budget does not have a direct impact on development of vocational education system.

The evaluation of performance of vocational education institutions does not take account of key performance indicators; they all receive a pre-designed amount of funding from state budget. Such an evaluation kills competition between vocational education institutions reducing the general quality of vocational education. This makes it impossible to distinguish high-performing educational institutions from others. One of the key reasons for this is the lack of a legal framework enabling financing based on key performance indicators in the vocational education system.

In light of the foregoing, it is necessary to reform the mechanism of financing of vocational education system from state budget. In accordance with modern requirements, this includes creation of a differential financing system based on key performance indicators, efficient use of funds of state budget, development of a targeted financing mechanism for high-performing vocational education institutions, as well as adoption of an improved legal framework enabling implementation of these measures.

Actions

Action 2.2.1: Identify key performance indicators for vocational education institutions. To evaluate the performance of vocational education institutions, the RSA will develop relevant key performance indicators (employment rate of graduates, attestation results, training level of teaching staff etc.) taking into account the specialization areas of these institutions. These indicators will be prepared and adopted based on joint discussions taking into account the general interests and feedbacks of students and vocational education institutions. Once the indicators are set, the vocational education institutions will be informed accordingly.

Action 2.2.2: Create an outcomes-based financing system. Proposals for amending the regulatory legal framework with respect to the financing and scholarship mechanism for implementing an outcomes-based financial system will be developed through consultations between RSA and other related parties. Once relevant amendments are made to the legal framework, the financing of vocational education institutions will be carried out based on the outcome-based financing system. This financing system will consist of two parts, including basic component and performance-based payment component. Basic component implies payments to every vocational education for time, material and other costs. Performance-based payment component will be aimed at further enhancement of quality indicators of vocational education institutions with high key performance indicators set in action 2.2.1. It will be ensured through the funds collected in the vocational education development foundation to be created as part of action 2.1.3, as well as additional financial support from the state. These funds will be spent for salaries of high-performing teaching staff and other necessary expenditures.

Action 2.2.3: Continuous monitoring of outcomes-based financial system.

To ensure purposeful collection and analysis of data related to key performance indicators, the RSA will start creation of a database. In a parallel, a special validation procedure will be determined to check the accuracy of data collected from vocational education institutions. Based on the collected data, the RSA will develop a relevant mechanism to identify the ratings of vocational education institutions. This mechanism will allow to identify vocational education institutions with low ratings and prepare relevant support mechanisms for them. The financing will depend on the rankings of vocational education institutions based on key performance indicators. The RSA will perform a continuous monitoring of outcomes-based financing system. Finally, the RSA will take necessary measures to publicize information regarding results of the works performed in frames of this action.

Expected outcomes and outcome indicators

Implementation of performance-based stimulation mechanisms will act as an important supporting factor in enhancement of the education quality and eventually the labour productivity of vocational education graduates. Such stimulation mechanisms are not expected to have a direct impact on GDP or employment as they form an important supporting factor for strategic priorities.

Investment needed

This priority will not require significant investment.

Expected risks

- failure to accept proposals for amending the regulatory legal framework with respect to financing and scholarship mechanism with a view to implement outcomes-based financing system;
- lack of accuracy and transparency of data for evaluation of vocational education institutions.

7.3. STRATEGIC TARGET 3: DEVELOP TARGETED PROFESSIONAL DEVELOPMENT PROGRAMS

7.3.1. Priority 3.1: Organize adult training and further training

Justification

As a part of the lifelong learning system, adult (persons, who have passed the threshold of adulthood, live independently, has life experience and occupation in most

instances) education is a process that ensures adequate and rapid adaptation of citizens to the dynamic changes in the society and economy.

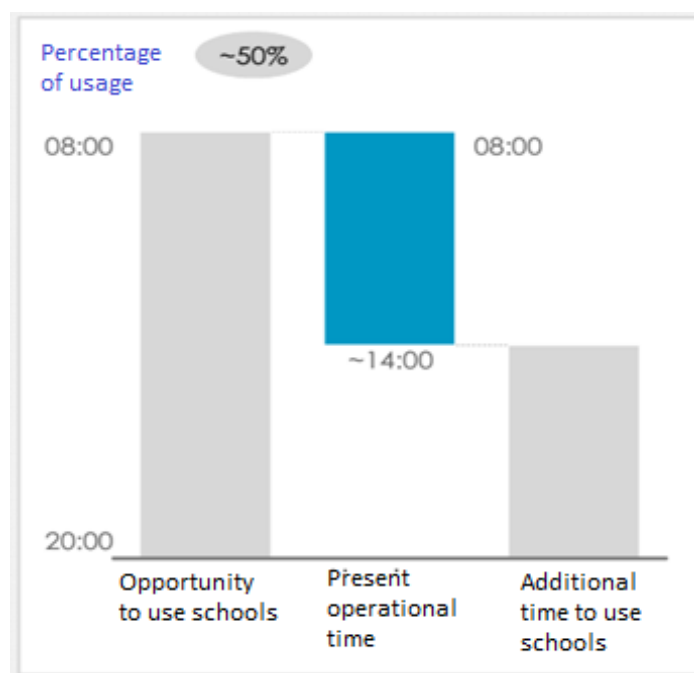
Due to the rapid development of science and technologies at modern times, great part of knowledge becomes outdated in a short period, which makes the content of a number of trained occupations outdated. Clearly, the only reason for the unemployment problem is not the lack of jobs; it is also caused by the fact that the vocational education and labour skills of the unemployed and job-seeking citizens do not respond to the requirements of a modern labour market.

At present, training of the unemployed is not held in a systematic manner; their acquisition of new skills to enter labour market is not systematic either. Since the job seekers fail to exercise their full potential in the labour market through the specialties they possess, they face some issues with employment. As a result, the competent workforce on priority specialties in the labour market is little. On the other hand, the failure of the occupational knowledge and skills of the employed people to meet modern standards results in low labour productivity and failure to deliver quality products, works and services to the market. This eventually reduces the competitiveness of the national economy.

In modern period, all citizens need skills-oriented trainings for development of entrepreneurial activity and introduction of modern information technologies. Besides, globalization and integration into world economy sets new requirements before the Azerbaijani citizens. This, first of all, should be accompanied by the following:

- education of citizens should meet international standards;
- they should understand democratic values correctly and use them in daily life; and
- observe “Lifelong learning” concept with the aim to maintain their competitiveness.

Figure 6. Present operational period and additional potential of vocational education institutions



At present, Azerbaijan's vocational education institutions mostly operate for half of the day. The capacity of training and teaching base of the institutions is not used for the rest of the day (Figure 6). For the job seekers and other persons to acquire new skills, it is of great importance to organize adult education, retraining and further training courses. This will allow reducing unemployment rate, enhancing the professionalism and competence of workforce in the labour market and increasing self-development opportunities for the population.

Actions

Action 3.1.1: Create a relevant legislative framework for organization of adult education and further training courses in vocational education institutions. The RSA will conduct consultations on necessary amendments to the regulatory legal framework with respect to adult education and further training courses. Based on these consultations, RSA will prepare relevant proposals to create a liberal and democratic legislative framework which will ensure systematic regulation of the VET sector.

Action 3.1.2: Conduct discussions with relevant stakeholders on organization of adult education and further training courses. Together with other governmental structures and the largest employers of the country, the RSA will identify:

- possibilities of organizing courses on priority areas in which there is a demand for adult education and further training courses;
- mechanisms that will stimulate enterprises and organizations to invest in personnel training;
- possibilities of funding participation of people from poor and low-income families in those courses;

- preparation of educational programs (curricula) for those courses, selection of relevant teaching staff and organization of additional training for them if necessary.

Action 3.1.3: Prepare a mechanism to organize adult education and further training courses. The RSA will develop a mechanism for organization of adult education and further training courses in vocational education institutions based on the information acquired from implemented studies and discussions and the amendments made to the legal framework. Within the framework of this mechanism, the following will be organized:

- module-based flexible courses for the unemployed to acquire new skills on areas which are on demand in the labour market;
- further training courses for the employed to increase their competence and self-development opportunities; and
- training courses (computer, language, sewing, weaving, metal worker, welder etc.) for any layer of population.

Relevant bodies of executive power will prepare educational programs (curricula) of the said courses in partnership with private sector. Resource centres (for career orientation, information, awareness raising, promotion etc. purposes) for adult education will be created as well.

Action 3.1.4: Organize quality monitoring in courses. The RSA will create an information base for systematic evaluation of current state of educational process and collection of data with the aim to monitor courses, enhance quality and sustainability thereof. Additionally, the RSA will take measures to organize similar courses in other vocational education institutions across the country.

Expected outcomes and outcome indicators

This priority will have a direct and indirect impact of 1 million AZN on GDP. This impact reflects the amount to be spent for the further training courses by the adult and state organizations; a participation fee of 400 AZN per person is expected to be paid. The number of participants of the courses for adult will have a growth rate of 17% by 2020. In total, 140 direct and 37 indirect new jobs are expected to be created by this priority.

Investment needed

300,000 AZN is needed for new curricula (including teaching materials, books, online textbooks) to be prepared for being used in adult education courses.

Expected risks

- weak partnership between agencies on implementation of adult education mechanism;
- lack of interest of adults in the courses;
- Failure to provide relevant financing;
- lack of accuracy and transparency of data collected for quality monitoring purposes.

7.4. STRATEGIC TARGET 4: DEVELOP SECTOR-BASED SPECIFIC PROGRAMS

Implementation of certain sector-based priorities in frames of this *Strategic roadmap* implies enhancement of training level of workforce through educational initiatives. When necessary, VET system can act as a partner in implementation of priorities on different sectors including, but not limited to, the following:

- Establishment of model enterprises for small- and medium-sized entrepreneurial subjects;
- Development of agricultural sector through education opportunities at the level of university, vocational education, information-consulting services;
- Expansion of the operation of Bank Academy to ensure higher quality services in financial services sector;
- Increase of the number of qualified tourism graduates;
- Increase of computer literacy in businesses etc.

7.4.1. Priority 4.1: Establish model enterprises for small- and medium-sized entrepreneurship subjects and organize work of VET institutions on promotion of entrepreneurial thinking style

Justification

With a view to help satisfy the needs of Azerbaijan's Small- and Medium-sized Entrepreneurship subjects (SMEs) for qualified, skilled and always improving human resources, the *Roadmap on Production of Consumer Goods at the level of Small- and Medium-sized Entrepreneurship in the Republic of Azerbaijan* considers organization of work in two directions: creation of a model enterprise and promotion of entrepreneurial thinking style. Realization of these directions also necessitates relevant measures in VET system.

Model enterprises are prevailed by real-time on-the-job training or practice-based training, where theoretical knowledge is complemented with practical exercises. In frames of cooperation between vocational education institutions and model enterprises aimed at supporting SMEs in supply of highly qualified workforce, it is necessary to make an accurate assessment of educational needs on relevant specialties, develop educational programs (curricula) based on experimental teaching and experience to

meet these needs, as well as ensure practice, training and evaluation of pupils in relevant specialties in order to prepare skilled workforce.

Besides, it should be noted that use of educational methods aimed at enabling pupils to acquire entrepreneurial knowledge and skills and a business-oriented non-standard thinking style and a unique approach from early ages, and development of the skills of the adult create favourable conditions to promote entrepreneurial activity. In this sense, by integrating “entrepreneurial module” into all educational programs (curricula) in the vocational education system, which is a link of the educational chain, for promotion of entrepreneurial thinking style, it is possible to succeed in enhancement of employment opportunities of school-leavers. It will also allow them to acquire necessary skills to build their own businesses and be engaged in entrepreneurial activities.

Actions

Action 4.1.1: Build cooperation between vocational education institutions and the model enterprise. VET system will play an active role in selection of a direction on the relevant sectors of economy and relevant specialties in model enterprises to be built in industrial zones, exploration of education and training needs on these direction, creation of relevant educational programs meeting these needs, identification of logistics base and equipment to be used in trainings to be held on the basis of educational programs. In addition, with a view to satisfy the labour market needs for highly qualified manpower in frames of cooperation between VET institutions and model enterprises, opportunities of model enterprises will be widely used for both industrial placements and evaluation of their knowledge and skills. Industrial placement in a model enterprise will be an asset for vocational education graduates in employment with SMEs.

Action 4.1.2: Promote entrepreneurial thinking style in vocational education system. Training and education programs (curricula) will be developed together with SMEs, based on relevant competencies, with a view to:

- enable vocational education students to shape their entrepreneurial thinking style and acquire a modern non-standard approach and entrepreneurial skills;
- equip graduates who want to build their own business with both theoretical information and practical skills.

Entrepreneurial activity will be promoted by organizing meetings with successful businessmen in practical exercises. Teaching staff on entrepreneurial module will be retrained; the knowledge and competencies of students will be jointly assessed with participation of representatives of SMEs.

Creation of model enterprises for SMEs is detailed in priority 4.2 of the *Roadmap on Production of Consumer Goods at the level of Small- and Medium-sized Entrepreneurship in the Republic of Azerbaijan*.

Expected outcomes and outcome indicators

The amount of funds to be received by model enterprises from companies to maintain the level of their operational costs is considered a factor that creates additional GDP impact. Other impacts on GDP and companies are detailed in the *Roadmap on Production of Consumer Goods at the level of Small- and Medium-sized Entrepreneurship in the Republic of Azerbaijan*.

Investment needed

An additional funding of 50,000 AZN is required for retraining of teaching staff on entrepreneurial module and organization of relevant trainings.

Expected risks

- failure to involve VET institutions in the organization of operation of model enterprises;
- failure to create necessary conditions to enable pupils to be on industrial placement and training in model enterprises and to evaluate them;
- lack of interest of businessmen in participating in teaching of entrepreneurial program in vocational education institutions.

7.4.2. Priority 4.2: Support satisfaction of needs of sectors

Justification

VET institutions need to implement relevant measures in the area of training of skilled manpower on priority sectors (agriculture, financial services, tourism, telecommunication, utilities, heavy industry and engineering).

Implementation of activities on the selected areas requires a relevant regulatory legal framework, infrastructure, progressive educational curricula and coordinated joint activity of engineering-pedagogical staff. Establishment of modern pilot vocational education institutions requires training of skilled manpower that meet requirements of labour market in priority areas of national economy. The operation of these vocational education institutions will be directly aimed at addressing the needs of enterprises operating in the priority areas of economy for skilled manpower. In view of the importance of qualified manpower for stimulation of future development in economy, it is necessary to strengthen continuous relations between existing vocational education institutions and selected sectors.

Actions

Action 4.2.1: Support satisfaction of sector-based general needs. Vocational education system will train highly qualified manpower in relevance to the needs of relevant sectors. The present development tendencies in the country and world in those sectors will be taken into consideration in development of occupational standards on

required new specialties by relevant state agencies; those specialties will be included in the *Classification of Specialties in Initial Vocational Education*, and new module-based educational programs (curricula) will be developed in partnership with international organizations. Part-time recruitment of highly qualified specialists in vocational education institutions from each sector will be ensured. Industrial placements will be organized for students in the enterprises selected by sector.

Action 4.2.2: Support satisfaction of sector-specific needs

Agricultural sector: Meetings will be organized with successful farmers, and field trips will be organized to leading and distinguished agricultural enterprises for promotion of vocational education in agrarian sector.

Tourism sector: Considering communication (language) needs of tourists, relevant foreign languages and vocational tourism courses will be organized in vocational education institutions based in tourism and recreation zones.

Telecommunication sector: In view of rapid development of information and telecommunication technologies and the need to widely apply the knowledge related to this sector in all fields, courses will be organized in IT STEP ACADEMY, an institution which functions in the base of vocational education institutions preparing human resources in line with international standards. It will award international certificates (Microsoft, Cisco, Autodesk etc.).

Industry and engineering sector: VET institutions, along with large industrial and engineering enterprises, will develop and introduce a mechanism of dual system of vocational education on required specialties.

In addition to the abovementioned actions, the role of vocational education institutions in other sectors is discussed in the strategic roadmap on relevant sectors.

Expected outcomes and outcome indicators

Although this priority will not have a direct impact on Azerbaijan's GDP, it will help to achieve an additional 1.230 million AZN GDP through other sectors. Besides, by supporting needs of other sectors through high level activities in the area of vocational education, it will be able to raise the skills of the graduates of Azerbaijani universities and vocational education institutions from semi-qualified to qualified workforce level. This priority will result in an increase in the productivity of workforce and boost efficiency and competitiveness of firms working in Azerbaijan.

Investment needed

A 150,000 AZN investment is needed for preparation of new curricula (including teaching materials, books, online textbooks) with the aim to organize relevant foreign language and vocational courses in the vocational education institutions located in tourism and recreation zones.

Expected risks

- failure to adopt a relevant regulatory legal framework stimulating cooperation of vocational institutions with enterprises functioning in the selected areas;
- refusal of enterprises to admit pupils of vocational education for industrial placements;
- failure to set occupational standards on selected areas;
- failure of enterprises to provide adequate support to drafting of educational programs (curricula);
- failure to provide graduates with jobs.

7.5. STRATEGIC TARGET 5: APPLY TOOLS TO FACILITATE ACHIEVEMENT OF VOCATIONAL EDUCATION AND TRAINING TARGETS

Development of vocational education is characterized as one of the important steps in meeting the country's demand for qualified workforce. Establishment of a vocational education database, recognition of competence acquired informally and non-formally and mandatory requirement for a vocational qualification certificate for employment are crucial factors that will trigger rapid development of vocational education. The development of vocational education in the country is impeded by the employers' failure to require a vocational qualification certificate and non-implementation of a mechanism for recognition of competencies acquired informally and non-formally. This is observed both in large companies, which are expected to ensure high quality, and SMEs that use hired workforce. Setting a requirement for a vocational qualification certificate, a key quality-certifying indicator, is one of the main reforms that would transform the attitude towards vocational education. Besides, the amount of data collected on Azerbaijan's vocational system with large availability in a single platform is little. The data are scattered over a number of platforms forcing potential students to search different sources to obtain information that could help them make a choice between education providers. To note, many countries ensure data transparency at various levels not only for public awareness purposes, but also for recruiting graduates in areas that are on high demand.

7.5.1. Priority 5.1: Recognize competencies acquired informally and non-formally

Justification

In their entire life, people acquire certain skills (foreign language skills, ICT, sports, nursing, apprenticeship) and competencies outside of formal education. Acquisition of some important competencies and skills at work, trainings, volunteer activities etc. is recognized as informal and non-formal education and is considered to be one of key directions of education in the world. The law of the Republic of Azerbaijan

on Education defines three types of education: *formal*, *informal* and *non-formal*. *Formal education* is completed upon award of a state certificate on education; *informal education* is acquisition of knowledge through self-education; and *non-formal education* is a form of education which is achieved through various courses, study circles, individual lessons without issue of the state certificate/diploma on education. The mechanism for recognition of competencies and skills acquired informally and non-formally, which is widely applied in Europe and foreign countries, has been made accessible and convenient for everyone. It is of great importance to recognize these skills and competencies for the development of individuals, society and economy in the modern period which is characterized by rising importance of human capital and high competition. The set objective can be achieved through recognition of these skills and introduction of a requirement for a vocational qualification certificate as part of job applications from now on. At present, although a document certifying general secondary, specialized secondary or higher education is required for employment depending on the complexity of the profession, a document certifying vocational qualification is not required. This has resulted in the fact that most of the people actively engaged in labour market have no qualification. The failure of general secondary school-leavers, who do not move forward towards other steps of education, to acquire specialization in any area creates obstacles in establishment of a competitive production in the national economy. Requirement for a vocational qualification certificate, in turn, will have a positive impact on work safety in all areas, increase of labour productivity and competitive production, and rendering of works and services.

Actions

Action 5.1.1: Develop a mechanism for recognition of competencies acquired informally and non-formally. Relevant body of executive power will adopt a regulatory legal document regarding a mechanism for recognition of competencies acquired informally and non-formally. The competencies in specialties which can be recognized through vocational education institutions will be identified by this mechanism.

Action 5.1.2: Form a legal framework for demanding a vocational qualification certificate for employment. Once recognition of competencies acquired informally and non-formally is ensured, adoption of a regulatory legal document on compulsoriness of a vocational qualification certificate for those who want to enter the labour market will be considered. The specialties for which such a document will be required for employment in future will be identified.

Expected outcomes and outcome indicators

Implementation of this priority will result in a 20% increase in the number qualified human resources who enter labour market in the country.

Investment needed

No investment is needed for this priority.

Expected risks

- failure to adopt a regulatory legal document on recognition of competencies and compulsoriness of a vocational qualification certificate for employment.

7.5.2. Priority 5.2: Ensure transparent data monitoring and a single database

Justification

At present, there is not a centralized and accurate database that stores data on Azerbaijan's VET system and the operation of this system, trained occupations, evaluation results based on performance indicators and other relevant information on choice of profession and career opportunities. A limited amount of data collected in a non-systematic manner are scattered over a number of information platforms thereby forcing potential students to search various sources for choosing a relevant VET institution. This significantly reduces the efficiency of selection process. Lack of information on specialties, description of skills to be acquired, employers and graduates' employment opportunities, salary on specialties etc. make it difficult for the pupils, parents, employers and educational institutions to make certain decisions (Figure 7).

Figure 7. Data infrastructure on vocational education

Kategoriya	Təsviri	Məlumat mövcuddurmu?
Təcrübəçi	▪ Qeydiyyat səviyyəsi (Program və müəssisə üzrə)	✓
	▪ Təhsildən imtina edənlərin sayı (Program və müəssisə üzrə)	✗
	▪ Məzunların sayı (Program və müəssisə üzrə)	✓
	▪ Program üzrə iş təlimləri	✓
	▪ Hər bir tələbə üzrə xərclər	✓
Məzunların izlənilməsi və yerləşdirilməsi	▪ İşəgötürənlər və ya sektorlar üzrə yerləşmə	✓
	▪ Hər bir məzun üzrə xərclər	✓
	▪ Məzunların profili və əlaqə məlumatları	✗
	▪ Məzunların izlənmə səviyyəsi	✗
	▪ 12 aydan sonra işə götürülənlərin faizi	✗
	▪ İş tapmaq üçün sərf olunan orta zaman müddəti	✗
	▪ Universitet məzunları ilə peşə təhsili məzunlarının əməkhaqlarında fərq	✗
	▪ Əmək haqqı orta əmək haqqı səviyyəsindən yüksək olan məzunların faizi	✗
Müəssisənin infrastrukturunu və heyəti	▪ Müəssisənin infrastrukturunun statusu	✓
	▪ Müəllimlərin kvalifikasiyaları və idarəetmə şurasının profili	✗
Bilik və bacarıqlar üzrə tələblər	▪ İşəgötürənlərin məmnunluğu	✗
	▪ Peşə təhsili orqanları və müəssisələrinin sənaye ilə əlaqələri	✓
	▪ Tərəfdaşlığın dəyişdirilməsi	✓
	▪ İşəgötürən və sektor tərəfindən spesifik tələblər	✓
Əmələtmanın monitorinqi	▪ Əmələtmə vəziyyəti, məsələn tələbə və müəllimlərin davamiyyəti	✗
	▪ Keyfiyyətə təminat	✗

Category	Description	Data availability
Students	<ul style="list-style-type: none"> - Registration level (by program and institution) - Number of those who withdrew from education (by program and institution) - Number of graduates (by program and institution) - On-the-job trainings on the program - Expenditures for each student 	
Tracking and placement of graduates	<ul style="list-style-type: none"> - Placement by employers or sectors - Expenditures for each graduate - Profile and contact details of graduates - Tracking status of graduates - Percentage of employment in 12 months - Average time spent to find a job - Difference between the wages of university graduates and vocational education graduates - Percentage of graduates with a wage higher than average 	
School infrastructure and staff	<ul style="list-style-type: none"> - Status of infrastructure of the institution - Qualifications of the teachers and profile of management board 	
Knowledge and skills requirements	<ul style="list-style-type: none"> - Employer satisfaction - Relations of vocational education bodies and institutions with industries - Change of partnership - Specific requirements from employer or sector 	
Compliance monitoring	<ul style="list-style-type: none"> - Compliance level, for ex. attendance level of teachers and students - Quality assurance 	

Wide use of modern information and communication technologies in the operation of VET system, organization of regular debates and consultations, extensive publicizing of the developments in this field through mass media, internet and social media, can

enable transformation of the public image of vocational education on one hand, and enhance access of vocational education graduates to labour market through integration of work and career opportunities on the other hand.

It is of great importance to bring together all participants of VET system in a single database and store all analyses of the data in the same platform. Besides, it is also necessary to establish a single coordination centre to ensure accuracy, transparency and reasonableness of the collected data. The coordination centre needs to oversee the type and volume of the statistic data to be collected and the content of data to be published.

Actions

Action 5.2.1: Analyse existing data infrastructure. The RSA will analyse existing data infrastructure in the vocational education institutions and take necessary measures to establish relevant regulatory legal framework.

Action 5.2.2: Build a database. The RSA will create a database on the basis of data and reports provided by relevant organizations for data collection, processing and analysis with a view to enhance education quality in VET system and better meet labour-market needs.

Action 5.2.3: Create a web page containing vocational education data. In the next stage, once the mechanism reflecting job opportunities for graduates of vocational education institutions and ensuring recognition of skills is ready, the RSA will create a web page for presenting data to the public and ensure transparency and easiness of use. All documentation procedures, except for evaluation of competencies and skills, will be implemented through the web page. To facilitate broad use of this web page by the public, the RSA will make a decision on the types of data to be publicized and the details of these data, and will decide when to publish data on the web page. With a view to ensure accuracy of data submitted by vocational education institutions, the RSA will make a decision regarding audit and check mechanisms and perform regular analyses on the basis of data provided by relevant bodies in order to understand changes in the labour market. Based on the results of these analyses, the RSA can publicize the changes in the demand for workforce and stimulate the number of those who receive education on relevant areas.

Action 5.2.4: Ensure public awareness on the web page. In order to raise public awareness on the web page, the RSA will take relevant measures. It will use videos, TV programs and interviews with employers to inform the public of the web page. The RSA will continuously control the web page for making relevant improvements to the design, as well as for updating data.

Expected outcomes and outcome indicators

Although this priority does not have a direct impact on GDP, it will play a supporting role in the achievement of positive outcomes on other priorities. This priority is expected to create about 10 jobs.

Investment needed

A 700,000 AZN investment needs to be made for building IT infrastructure in the vocational education institutions and creating a web page.

Expected risks

- failure of relevant bodies of executive power and employers to provide accurate data in time;
- lack of interest of other bodies of executive power and employers in coordination and implementation of efforts with respect to the database;
- failure to take measures in relevance to the results of analyses and evaluation.

8. FINANCING MECHANISMS

To achieve set strategic targets, 199.9 million AZN investment is needed. The implementation of the actions outlined in the strategic roadmap will be financed through the following sources:

- state budget;
- non-budgetary foundations;
- funds of National Foundation to Support Entrepreneurship;
- local budgets;
- funds of local authorities, enterprises and organizations regardless of the form of ownership;
- direct foreign investment;
- loans from national bank system and grants;
- loans, technical and financial assistance from international organizations and foreign states;
- other sources not prohibited by law.

With a view to ensure the most efficient spending of funds for the set strategic targets, the budgets will be developed in frames of outcomes-based budget compilation process. A great part of the required finance will be provided through restructuring of existing budgets, joint financing efforts of private sector and various investors.

9. IMPLEMENTATION, MONITORING AND ASSESSMENT MECHANISM

The roadmap will be implemented as described below.

Coordination and leadership: Relevant coordination and leadership will be ensured to foster decision-making, clearly identify accountability and generate additional performance capacity.

- A mechanism will be created to foster decision-making at high political level for strategic vision and roadmap. This mechanism will allow decision-makers to ensure necessary leadership over implementation of program by other key participants. The decisions related to the priorities of the implementation and concrete targets will be made through this mechanism.
- For implementation of actions in time and as intended, the main executing organization will appoint persons in charge of each priority and action. Besides, working groups will be created on priorities under the leadership of relevant agencies with participation of other agencies mentioned in the action plan. Reporting meetings of working groups will be held on a quarterly basis under the leadership of main executing organization. The meetings will discuss quarterly activities and activities scheduled for the next period. Working groups will operate in line with annual work programs. The daily work regime of the working group and division of tasks will be managed by the person in charge. As a general rule, the group will meet at the main executing organization upon a proposal put forward by the person in charge. The main executing organization will create necessary conditions to ensure operation of the working group without any obstacles; it will take necessary steps to use technical support of external experts when required.
- With the intent to oversee implementation of the Strategic roadmap, settle emerging problems or ensure adequate coordination between agencies, a Delivery Unit will be set. The main function of the Unit will be to coordinate relevant agencies, processes and technologies for effective implementation of actions. Harmonious work of working groups on action plan, summarization of quarterly reports and preparation of annual report will be governed by the Delivery Unit. Besides, the Unit will also oversee organization of funding and human resources required by other agencies and provision of additional resources when necessary.

Strategic adaptation and financing: To achieve an efficient implementation process preventing inefficient use of resources and potential conflicts between targets, the strategic vision and roadmap will be fully integrated into other sector-based plans and existing budgets.

- All relevant strategic documents will be adapted to the strategic roadmap based on the proposals of relevant state agencies. When necessary, the functions of present agencies will be re-shaped in relevance to targets. These adaptation

works will include transparent and adjustable implementation targets; the public will be informed accordingly; and these targets will be used to track the process.

- To lead the implementation, as well as ensure transparency with respect to required resources and expected results, detailed implementation plans based on actions will be developed. The assigned lead agency will bear general responsibility for the implementation plan. It will also involve all main agencies and private sector in execution of the plan.

Mobilization of stakeholders: Local and international partners from both state and non-state sector will be involved in the implementation of strategic roadmap.

- Relevant measures will be taken to identify and involve major strategic partners. Successful implementation of every strategic priority requires involvement of a number of organizations and stakeholders. For adaptation of targets and adequate coordination, advisory councils and working committees will be created to work with private sector, public institutions and international organizations, as well as crucial international partners such as international financial institutions.
- The civil society will be mobilized and involved to ensure wide support to the strategic roadmap. Moreover, active communication, transparency and engagement will help mobilize public and private sector, as well as the society as a whole and other stakeholders.

Monitoring and evaluation of the Strategic roadmap

With a view to ensure successful implementation of the Strategic Roadmap through required tools, processes and so on, it will be monitored and evaluated. The monitoring and evaluation will focus on implementation of actions as intended, expected results and indicators on relevant priorities, and observation of implementation period. Monitoring and evaluation will follow guidelines based on international methodologies.

The annual work programs of Working groups will be coordinated with the Delivery Unit before being approved by the main executing organization. Working groups will meet quarterly with participation of the representatives of the Delivery Unit.

The main executing organization will submit quarterly progress reports to the Delivery Unit at least 10 days before the quarterly meeting of the working group. Considering the comprehensive analysis and assessment of the said report, as well as the discussions made in the quarterly meetings of the working group, the Delivery Unit will provide the main executing organization with results of quarterly monitoring and recommendations for the next period within 10 days from the date of meeting. The Delivery Unit and main executing organization will take measures to take account of the results of monitoring and recommendations in the daily activities of the working group.

10. ACTION PLAN

No.	Action	Main executor	Other executors	Outcome indicators	Implementation period
STRATEGIC TARGET 1: Integrate employers into vocational education and training system					
1.1. Build partnership with employers					
1.1.1.	Identify strategic employment areas in labour market and forecast the demand for workforce	Ministry of Labour and Social Protection of Population	Ministry of Education, Ministry of Economy, large employers	<ul style="list-style-type: none"> • Indirect impact (3 million manats) on GDP; • 10 pilot vocational education institutions with diverse directions; 	2017-2018
1.1.2.	Conduct a comprehensive study of the present state of VET institutions and develop an action plan for optimization	Ministry of Education	Ministry of Labour and Social Protection of Population, Ministry of Tourism, Ministry of Education of Nakhchivan, SOCAR, <i>Azerishig OJSC</i>	<ul style="list-style-type: none"> • employment of about 70% of graduates of pilot vocational education institutions; 	2017-2018
1.1.3.	Carry out optimization in large industrial centres and regions	Cabinet of Ministers	Ministry of Education, Ministry of Economy, Ministry of Finance, Ministry of Justice, State Committee on	<ul style="list-style-type: none"> • 50% increase in the number of students; • 5% increase in the number of 	2017-2018

			Property Issues	teaching staff.	
1.1.4.	Select pilot vocational education institutions	Ministry of Education	State Committee on Affairs of Refugees and Internally Displaced Persons		2017-2018
1.1.5.	Build a mechanism for cooperation with employers at pilot vocational education institutions; develop occupational standards and curricula	Ministry of Economy	Ministry of Education, Ministry of Labour and Social Protection of Population, large employers		2017-2018
1.1.6.	Ensure public awareness on pilot vocational education institutions and admission	Ministry of Education	ASAN service, Ministry of Economy, Ministry of Finance		2019-2020
1.1.7.	Monitor and oversee partnership programs	Ministry of Economy	Ministry of Education, Ministry of Labour and Social Protection of Population, large employers		2019-2020
1.1.8.	Publicize information regarding efficiency of partnership programs	Ministry of Education	Statistics Committee, Ministry of Economy		2020
1.1.9.	Introduce the occupational standards and educational programs (curricula) applied in pilot vocational education institutions in other vocational	Ministry of Education	Ministry of Economy, large employers		2020

	education institutions				
1.2. Recruit new qualified specialists to the VET system					
1.2.1.	Perform diagnostic assessment of present teaching staff of vocational education institutions and enhance their knowledge and skills	Ministry of Education	Ministry of Economy, large employers	<ul style="list-style-type: none">• direct and indirect impact (2 million manats) on GDP;• 176 direct and 19 indirect new jobs	2018-2019
1.2.2.	Identify measures to recruit new teaching staff to the VET process	Ministry of Education	Ministry of Labour and Social Protection of Population, Ministry of Economy, large employers		2018-2019
1.2.3.	Select new pedagogical personnel with practical experience and organize relevant trainings	Ministry of Education	Ministry of Labour and Social Protection of Population, Ministry of Economy, large employers		2019-2020
1.2.4.	Monitor the performance of new pedagogical staff	Ministry of Education	large employers		2019-2020
STRATEGIC TARGET 2: Build an outcome-based strong financing system					
2.1. Identify additional public, private and international funding sources to ensure future development of VET system					
2.1.1.	Permit the sale of goods and services produced in vocational education institutions and evaluate the production	Ministry of Education	Ministry of Finance, Ministry of Economy	<ul style="list-style-type: none">• a direct and indirect impact (2 million	2019-2020

	capacities of selected pilot vocational education institutions			manats) on GDP; <ul style="list-style-type: none">20% increase in funds allocated for each student	
2.1.2.	Identify areas of goods and services intended to be produced in vocational education institutions and minimum standards for those goods and services	Ministry of Education	Ministry of Economy		2019-2020
2.1.3.	Develop a system for monitoring and management of non-budgetary funds	Ministry of Finance	Ministry of Education Ministry of Labour and Social Protection of Population, Ministry of Economy, large employers		2019-2020
2.1.4.	Organize sale of goods and services produced in vocational education institutions	Ministry of Education	large employers		2019-2020
2.1.5.	Evaluate sale-oriented production activity in vocational education institutions	Ministry of Economy	Ministry of Education, large employers		2019-2020
2.1.6.	Identify alternative funding sources	Ministry of Finance	Ministry of Education, Ministry of Economy		2019-2020
2.2. Introduce performance-based rewards mechanisms					
2.2.1.	Identify key performance indicators for vocational education institutions	Ministry of Education		No direct impact on GDP is expected	2018-2019

2.2.2.	Create an outcomes-based financing system	Cabinet of Ministers	Ministry of Finance, Ministry of Education, Ministry of Labour and Social Protection of Population, Ministry of Economy, large employers		2019-2020
2.2.3.	Continuous monitoring of outcomes-based financial system	Ministry of Economy	Ministry of Education		2019-2020
STRATEGIC TARGET 3: Develop targeted professional development programs					
3.1. Organize adult training and further training					
3.1.1.	Create a relevant legislative framework for organization of adult education and further training courses in vocational education institutions	Ministry of Labour and Social Protection of Population	Ministry of Education	<ul style="list-style-type: none"> • direct and indirect impact (2 million manats) on GDP; • 17% increase in the number of participants of adult courses; • 140 direct and 37 indirect new jobs 	2018-2019
3.1.2.	Conduct discussions with relevant stakeholders on organization of adult education and further training courses.	Ministry of Labour and Social Protection of Population	Ministry of Education, Ministry of Economy, Ministry of Finance, large employers		2018-2019
3.1.3.	Prepare a mechanism to organize adult education and	Ministry of Labour and	Ministry of Education		2018-2019

	further training courses	Social Protection of Population			
3.1.4.	Organize quality monitoring in courses	Ministry of Economy	Ministry of Labour and Social Protection of Population, Ministry of Education		2019-2020
STRATEGIC TARGET 4: Develop sector-based specific programs					
<i>4.1. Establish model enterprises for small- and medium-sized entrepreneurship subjects and organize work of VET institutions on promotion of entrepreneurial thinking style</i>					
4.1.1.	Build cooperation between vocational education institutions and the model enterprise	Ministry of Economy	Ministry of Education, large employers		
4.1.2.	Promote entrepreneurial thinking style in vocational education system	Ministry of Education	large employers		2019-2020
<i>4.2. Support satisfaction of needs of sectors</i>					
4.2.1.	Support satisfaction of sector-based general needs	Ministry of Education	large employers	<ul style="list-style-type: none"> Skills of 35% of graduates of higher and vocational education institutions raised from semi-qualified to qualified workforce level; 	2019-2020
4.2.2.	Support satisfaction of sector-specific needs	Ministry of Education	Ministry of Agriculture, Ministry of Tourism, Ministry of Communications and High Technologies, large employers		2019-2020

STRATEGIC TARGET 5: Apply tools to facilitate achievement of vocational education and training targets					
Priority 5.1. Recognize competencies acquired informally and non-formally					
5.1.1	Develop a mechanism for recognition of competencies acquired informally and non-formally	Cabinet of Ministers	Ministry of Education, Ministry of Labour and Social Protection of Population, large employers	• 20% increase in the number of workforce entering the labour market in the country	2017-2018
5.1.2	Form a legal framework for demanding a vocational qualification certificate for employment	Cabinet of Ministers	Ministry of Education, Ministry of Labour and Social Protection of Population, large employers		2019-2020
Priority 5.2. Ensure transparent data monitoring and a single database					
5.1.1.	Analyse existing data infrastructure	Ministry of Education	Statistics Committee	• No direct impact on GDP is expected; • About 10 new jobs	2017-2018
5.1.2.	Build a database	Ministry of Education	Statistics Committee, Ministry of Labour and Social Protection of Population, Ministry of Economy, ASAN service, large employers,		2018-2019
5.1.3.	Create a web page containing vocational education data	Ministry of Education	Statistics Committee, ASAN service		2019-2020

5.1.4.	Ensure public awareness on the web page	Ministry of Education	Statistics Committee, ASAN service		2019-2020
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