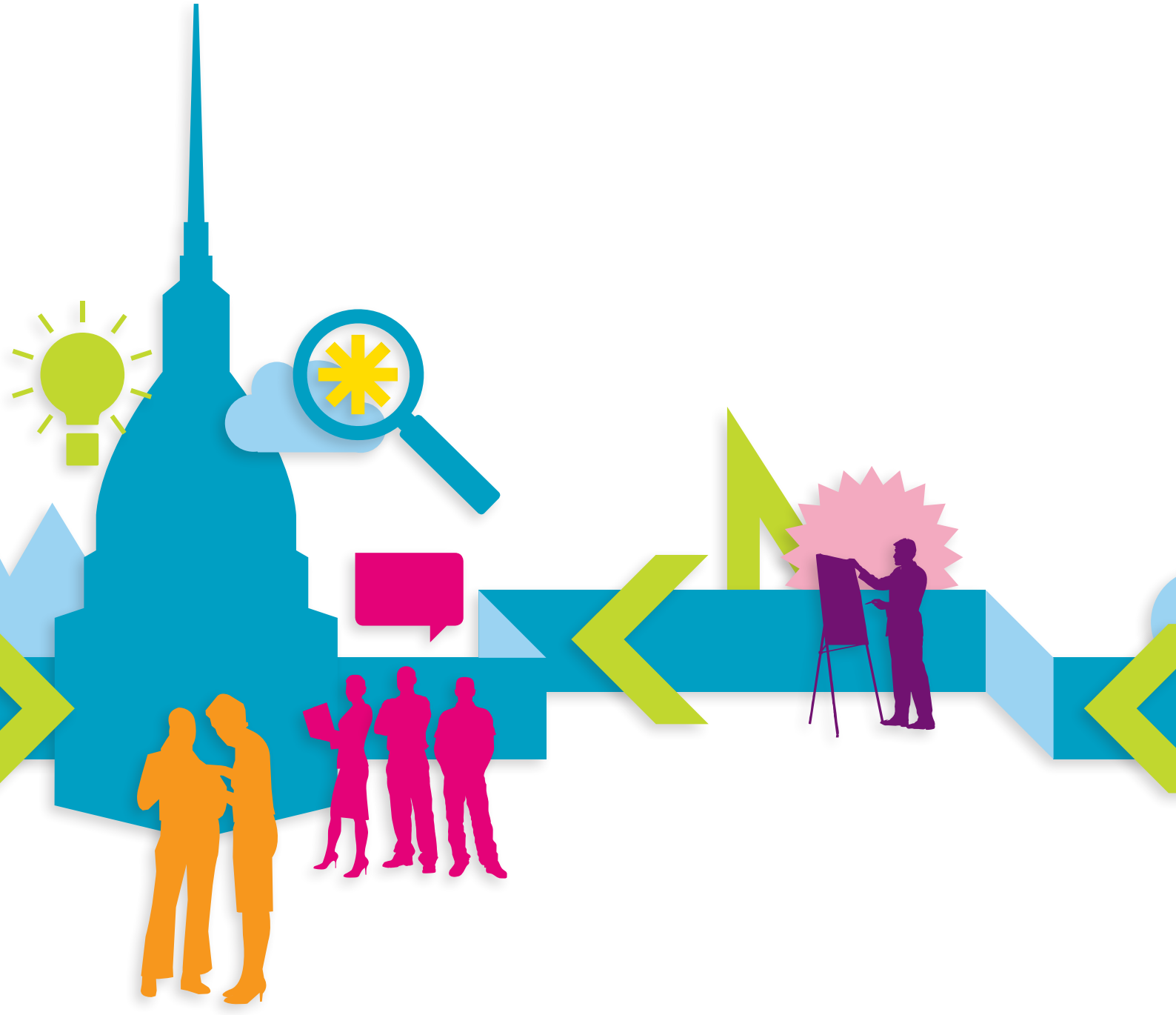
ETF
Working together
Learning for life

TORINO PROCESS 2012

KAZAKHSTAN



TORINO PROCESS 2012
KAZAKHSTAN

CONTENTS

PREFACE

This country review on the Kazakh vocational education and training (VET) system was implemented within the framework of the Torino Process. This process is a major initiative launched in 2010 by the European Training Foundation (ETF) with three main objectives:

- to support evidence-based policy making in partner countries, with a view to improving the contribution of VET to sustainable development;
- to serve as a basis for designing the ETF's support strategy to these countries;
- to consolidate and provide evidence for the ETF's recommendations to the European Commission for European Union (EU) external assistance.

The 2012 analysis is based on a participatory process implemented at both national and regional levels. It includes interviews and focus group meetings comprising all major stakeholders. At these events, information was collected and knowledge was shared about current VET policy and its implementation in Kazakhstan (April 2012). This report aims to capture the progress and key VET developments over the last two years in Kazakhstan. A draft version was circulated in the country for comments and was validated at a seminar in Astana held in October 2012.

The ETF is most grateful for the excellent cooperation with the Ministry of Education and Science and the Agency of Statistics of the Republic of Kazakhstan. The Foundation is very appreciative of the in-depth insights provided by participants during the constructive discussions which took place at all meetings.

EXECUTIVE SUMMARY

Kazakhstan is an upper-middle income country. It ranks among the most successful former Soviet republics in the transition from a centralised to a free market economy. Since 1996, stable economic growth and economic dynamism have led to significant changes in the structure, size and nature of the labour market. Kazakhstan is a diverse country, with significant regional and sectoral differences.

Education faces two major challenges. The first is a youth bulge, where about 50% of the population is under 29. This means that ways must be found to provide increasingly large numbers of young people with sufficient education, training and job opportunities to ensure prosperity and stability. Secondly, the education system must be adapted to the needs of a globally integrated market economy, an open society and diverse regional economic conditions. Many policies and actions implemented for VET system reform in the past aimed at providing a better response to demographic, technological and international changes. They also aspired to make better use of the country's natural resources and geography and improve social needs and labour market demands.

2012 is an important year for Kazakh VET reform. VET has assumed a strategic level of importance and occupies the centre of government attention. Since last year, new approaches have started to modernise the VET system. These are based on the Torino Process analysis that was conducted in 2010. They also take into account international experience and practice. Stakeholders are motivated and engaged in contributing to VET reform.

The main challenge is to develop and implement VET with an open model of VET cooperation between education and business. This model must suit the geographic, economic and social conditions of different regions and local communities. The use of two learning environments will generate numerous processes which will require interaction and consensus at different levels among stakeholders: regulations, councils, school governing boards, working groups, VET institutions, VET teachers and in-company trainers. The government amended VET legislation in 2011. This contributed substantially to sustainable development. It also ensures the legal framework for cooperative VET, social partnership and company investment. The legislation sets out the preconditions for companies to participate actively in VET reform by contributing to emerging VET structures and formats.

The first pilot initiatives for the implementation of the cooperative VET format and the dual system have taken place. Three regional strands were identified:

- highly industrialised areas with large international and national companies and small and medium enterprises (SMEs) as subcontracted partners;
- areas with mainly SMEs;
- rural areas with a very low population density.

The attributes and characteristics of different VET formats – such as full-time school, part-time school, dual system, cooperative VET and work-based learning arrangements – need to be identified and specified for different VET fields and professions. The establishment of councils at national, regional, local and sectoral levels ensures a vertical management structure. Effective processes must now be adopted. Previously, stakeholders' efforts focused on designing VET. Now, there is an urgent need to find new ways of organising VET, improving quality and coordinating these processes. Progress can be assessed with the establishment of Kasipkor Holding. This national joint stock company is an intersectoral and interinstitutional centre. It aims to improve the prestige of VET, raise the quality of teaching and ensure active communication between education and business.

Traditionally, businesses do not participate in education and a lot remains to be done. Technical, staffing and economic decisions need to be taken and financial models need to be developed. The government needs to link an active labour market policy and the process of industrialisation with VET.

However, the legal basis for decision making through cooperative responsibility between the state and the economy is still absent. Business must take the lead in identifying needs. The dual partners must develop quality concepts for integrated learning and training. Quality standards, frameworks and certification processes need to be agreed. Processes must be initiated to encourage reflection and agreement. They must also take into account the potential contribution that large companies, SMEs and vocational schools can make. There is an urgent need for the major VET actors to understand the interconnected nature of all the processes at work.

In 2011 and 2012, a variety of developments can be observed simultaneously in different contexts and at levels which are sometimes contradictory. These challenges could be overcome through a more intensive and inclusive exchange of information and through coordinated agreement processes. Focus group stakeholders worked out two key ways in which VET reform could be strengthened in the coming years:

- implementing cooperative VET as an open model of VET cooperation directed at three different regional strands: highly industrialised areas with mainly big national and international companies, areas with mainly SMEs and rural areas with a very low population density;
- redefining and implementing social partnership and recognising and accepting dual VET learning environments.

The 2012 country review clearly reconfirmed and specified the three priorities agreed in 2010 for further intervention to enhance VET quality.

- Shifting from a centralised to a multi-level ‘down-up’ policy approach in policy making, policy implementation and governance. In this approach, bottom-up processes meet with top-down processes. It also covers local provinces and communities. Connections between national, regional, local, sectoral and institutional initiatives and knowledge sources should be strengthened. Core themes should be aligned with higher-level actions such as national plans, programmes and legal directives. The sharing of experiences must be improved in order to consolidate decision-making processes with a priority placed on a down-up policy, which builds on the advantages of both top-down and bottom-up approaches. Governance and VET management models based on regionalisation, sectoral divisions, institutionalisation and shared responsibilities should make VET planning an ongoing process. A legal framework has been created following the implementation of the council structure as a vertical VET management line and the establishment of Kasipkor Holding as a coordination body. Roles and tasks need to be acquired through practice; agreement processes between the levels of hierarchies in business and education need to be managed.
- Increasing the attractiveness of VET by (i) encouraging discussion of the terms ability, talent and giftedness in VET and analysing these attributes as a precondition for improved quality. Vocational ability includes disposition, special abilities, motivational factors and multilateral intersection of various intellectual, artistic, psychomotor, social and creative competences. Improved dialogue between the business, research and education communities would support these developments; (ii) creating a new, more extensive VET infrastructure involving vocational colleges, higher technical schools and interregional, inter-industrial and in-company VET centres as called for by all actors; and (iii) identifying secure job opportunities for young people with appropriate salaries, individual professional development opportunities, increased job availability, increasing job

complexity and appropriate content. The improvements made in 2011 and 2012 can be seen as good preconditions to achieving these objectives. They included implementing interregional centres, increasing teachers' salaries by 100%, changing terminology, such as 'pupil' to 'student' and 'VET school' to 'VET college', and raising the quality of enterprise training.

- Professionalising various VET staff groups at all levels and from both sides: education and business. This would facilitate the provision of cooperative VET based on shared responsibilities. It would also help to achieve structural and institutional improvements and the efficient use of resources, optimise selection procedures, ensure easier access to various levels of VET and result in better guidance and pedagogic knowledge. The professionalisation of VET staff is needed to ensure their active participation in down-up policy processes. This is intrinsically linked to the quality and attractiveness of VET. Cooperative VET assumes cooperative management at all levels and on both the business and education side. The expansion of the teacher training system in a national and international context serves as a strong basis for future action.

A. VISION FOR VET SYSTEM DEVELOPMENT

The Ministry of Education and Science documents present a new national vision, describing Kazakhstan as an 'educated country, with intelligent economics and a highly skilled workforce at European level'. VET will be a 'powerful factor in the development of the country', a main component in guaranteeing 'future economic prosperity' and an 'integral component in ensuring social and economic equality'. A new personality model of an 'educated, self-sufficient and creative individual able to make decisions independently' is emphasised (Republican Scientific and Methodological Centre of the Ministry of Education and Science, 2010). At each level of education, starting with pre-school, the education process will focus on the development of analytical skills, creativity and individual abilities. It will also focus on encouraging the potential for lifelong learning (Kazakhstan State Programme for Education Development 2008-12, Republican Scientific and Methodological Centre, 2010). VET should prepare 'high-class professionals for innovation development' (Kasipkor, 2012) and 'multifunctional persons, who are not trained for only one task' (Republican Scientific and Methodological Centre, 2012). Student education should be holistic and not based on learning facts (Republican Scientific and Methodological Centre, 2012). VET targets for 2020 demand an approach that will respond flexibly to global changes and support the rapid development of the Kazakh economy. This will 'provide education according to the needs of Kazakh people' so that they will be able to 'seek and use information for decision making' and 'realise their creative and intellectual potential' (Republican Scientific and Methodological Centre, 2010).

In the last two years, greater efforts have been made to improve efficiency and quality in VET. This has been done by amending the legislative framework, starting to decentralise the VET structure, improving staff qualifications, strengthening the links between the education sector and the labour market and creating partnerships between stakeholders in a national and international context. Progress has been made in the following areas.

- Legislative and normative provision of the framework. Kazakhstan's current Law of Education was adopted in 2007. This law regulates the content-related requirements of educational programmes. It also governs the location, form and organisation of educational and learning processes for technical and vocational education and adult education. Article 55 defines the aims and objectives of quality management. The underlying State Programme of Education Development, which runs up to 2020, focuses on modernising VET and providing updated VET content and infrastructure. In September 2011, the parliament adopted the law on amendments and additions. It introduces the norms of social partnership and cooperative VET provision based on corporate and shared responsibility between the state, enterprises and vocational schools. A legal framework exists for a certification system and the development of the national qualifications framework and professional standards. Also in 2011, amendments were made to the occupational framework in the Labour Code and to the Employment 2020 programme. Amendments to the latter programme covered three aspects: industry, business in rural areas and SME development.

- Centralised structure with standardised regulation. Internal vocational school issues (objectives, content, methodologies and VET organisation) are the responsibility of the national authorities. External matters (finance, maintenance, resources) are under the remit of local executive authorities. The VET department within the Ministry of Education and Science is in charge of the education system. It performs its functions in line with the Ministry of Education and Science statute approved on 28 October 2004 by decree No 1111 of the Kazakh government. The statute defines the functions and rights of the Ministry of Education and Science and determines the organisation of ministry activities. The VET department is responsible for VET policy and development. It reports to the relevant secretary in the ministry who approves the department

statute. In 2011, the Prime Minister established the National Council for Vocational and Technical Education. The sectoral ministries, employer and branch representatives, regions and local administrations are involved in this council. In addition, 16 regional councils, 14 sectoral councils and 162 local and institutional councils were set up (government decision No 298 of 30 March 2011, Ministry of Education and Science, 2012). With the implementation of the council-based structure, a diversified system of vertical VET quality management came into force at the beginning of 2011. The national council reports to the Prime Minister. It has an executive body that is affiliated to the Republican Scientific and Methodological Centre, which coordinates the meetings of the national council.

- VET staff. The upgrading of teacher qualifications and teacher retraining is managed by the Republican Institute for Upgrading Qualifications of Administrative and Academic Staff in Education, various *oblast* (city) institutions and six interregional centres for advanced teacher qualification. The I. Altynsarin National Academy of Education is responsible for scientific provision.

- A retraining and upgrading qualification system based on voucher/module financing was implemented as part of the legislative amendment in September 2011. Its objective is to raise the status of teachers. Teachers' salaries increased by 100% in January 2012. New legislation on individual teaching activity which is not subject to licensing has been introduced.

- Partnerships. National counterparts are becoming increasingly involved in the discussion on VET developments. They are very willing to cooperate with international partners in general and there is broad recognition for the integration of international assistance into VET reform processes. At the end of 2011, Kasipkor Holding, the national joint stock company financed by the government and supported by both the public and private sector, was set up as an intersectoral and interinstitutional centre. Its objective is threefold: to study global best practices and implement them in the Kazakh VET system; to create a network of world-class colleges in partnership with leading educational institutions and businesses; and to strengthen national and international cooperation in VET at all VET management levels (Resolution of the Kazakh government, 7 July 2011, No 777, Ministry of Education and Science, 2012).

- Processes. The main challenges for the Kazakh VET system lie in the fact that it is currently still a network of interdependent and interconnected stand-alone processes and content, ill-adapted to the current economic and social situation. An integrated network of processes is not yet in place for implementing the new policies, strategies, operational objectives and plans. VET governance processes are characterised by top-down initiatives from the various levels. Bottom-up knowledge is currently requested only in quantitative terms via regular, mostly weekly or monthly, reporting systems.

To translate the vision into specific policy measures and actions, Kasipkor is designing actions for the period 2011 to 2020. These actions are closely linked to the priorities agreed for intervention in the 2010 Torino Process. They address three strategic directions: improving the prestige of the national VET system; raising the quality of teaching; and ensuring sustainable communication with the business community (Kasipkor, 2012).

In 2011, the EU delegation to Kazakhstan implemented a EUR 4 million VET reform project with contract partner German International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit – GIZ). This project supports the implementation of two state programmes: the State Programme of Education Development for 2011-20 and the State Programme for Accelerated Industrial-Innovative Development of Kazakhstan for 2010-14. The project focuses on capacity building through organisational development. The contractor's horizontal tasks are aimed at

developing institutional partnerships with public bodies involved in VET and establishing a discussion platform to increase synergies, fill gaps, reduce overlap, exchange best practices and increase the visibility of the sector. The emphasis is mainly on developing vocational and professional standards for the machine building sector, the oil and gas sector and agriculture. The Atyrau, Ust-Kamenogorsk and Astana/Akmola regions have been selected for this work. The standards will be tested at different pilot schools. A second focus is the provision of support to the Republican Scientific and Methodological Centre, the sectoral and regional councils as a platform for employer associations, trade unions and governmental representatives in developing an independent certification system for professional qualifications. To date, the following deliverables have been submitted:

- recommendations for the work of the secretary of the national councils and for the work of the regional and sectoral councils;
- recommendations for cooperation between the newly implemented councils and the governmental structures;
- sectoral qualifications frameworks for the machine building industry, the agricultural sector and the oil and gas sector;
- vocational standards for agri-tech service workers, farmers, welders, machine operators, fitters and operators;
- educational programmes and qualification descriptions for the agri-tech services and farmers;
- instructions for developing and creating templates for the sectoral qualifications framework, occupational standards, qualification description;
- instructions for linking the national qualifications framework to the sectoral qualifications framework;
- a glossary.

The EU is also financing the VET Institutional Partnership Project, operated by the European Network of Implementing Development Agencies (EUNIDA). Its aim is to support the Republican Scientific and Methodological Centre by setting up an institutional partnership under the umbrella of the French Ministry of Education. This will include a specialised institute in France with which experiences and practices can be exchanged and links can be established with the French national VET system. Its main activities will be in the areas of organisational development and capacity building of the Republican Scientific and Methodological Centre. This will include supporting the National Council's working group and research and development in relation to VET quality issues such as educational standards, plans and programmes. It will also be expected to provide advice and assistance with regard to VET qualification assessments, data collection, processing and interpretation.

The EU and Central Asia: Strategy for a New Partnership was launched in 2007. A key pillar of this strategy is the Central Asian Education Platform, which the EU launched in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan in February 2012. The overall objective of the project is to contribute to Central Asian country programmes aimed at improving the competitiveness and productivity of national economies and the capacity for sustainable development in the region. Three components are covered: dialogue forums, marketing and communication, and studies to complement the dialogue. The latter are used for additional studies, briefings and policy advice. The project also aims at strengthening donor coordination activities in two education sectors: VET and higher education. The project is contracted to GOPA, a private German consulting company.

In November 2011, the ETF and the Kazakh Ministry of Education and Science signed a memorandum of understanding for greater cooperation in VET reform in the Central Asian region. Since 2011, a loan of 29.23 million dollars from the World Bank has been used for a project with three main components: developing professional standards and quality assurance for VET; strengthening governance, management and financing for VET; and strengthening the skills delivery capacity of VET institutions. Kazakhstan joined the Bologna process in 2010, having ratified the European Cultural Convention. It has demonstrated commitment to the goals and policies of the process. It is also a member of the Organisation for Security and Cooperation in Europe (OSCE), United Nations (UN), International Monetary Fund (IMF), Organisation of Islamic Cooperation (OIC), International Organisation for Migration (IOM), United Nations Development Programme (UNDP) and Shanghai Cooperation Organisation (SCO). Relations between Kazakhstan and its neighbours – China, Russia, the other Central Asian countries and the EU – are friendly. Specific cooperation in VET has been strengthened in the last two years with VET policy makers and policy implementers from Singapore, Norway and Germany. A challenge for the Kazakh Ministry of Education and Science is to coordinate donor investments in an efficient and effective way and to avoid overlap of projects and parallel approaches.

All focus group members involved in discussing the analytical framework agreed that the implementation of VET policy and strategies should be subject to a continuous reflection between policy, science and practice at the various levels. In order to achieve an ongoing dialogue and collaboration, contextual obstacles (different environments with different ‘languages’), cultural obstacles (lack of tradition for openness in the debate) and structural obstacles (differences between the world of work and the world of education in objective setting and methodologies) need to be overcome. ‘It is urgent to build a common understanding about [the] “vision of VET”, what [this] vision means and what to do in the absence of something which does not yet exist’ (Murzhamedganova, 2012). The capacity to translate multi-level perspectives, experiences and research results into policy needs to be developed and trained.

B. EXTERNAL EFFICIENCY: ADDRESSING DEMOGRAPHIC, ECONOMIC AND LABOUR MARKET NEEDS

Kazakhstan is an upper-middle income country that ranks among the most successful former Soviet republics in transitioning from a centralised to a free market economy. Since 1996, stable economic growth and economic dynamism have led to significant changes in the structure, size and nature of the labour market. However, this economic growth has been highly dependent on the energy sector.

Kazakhstan is a very diverse country, with significant regional and sectoral differences. With a total area of 2 724 900 square kilometres it is the ninth largest country in the world after Russia, China, the United States, Argentina, Brazil, Canada, India and Australia. Kazakh territory stretches 3 000 km from west to east and 1 600 km from north to south. According to the Kazakh Agency of Statistics, the population of the country at the beginning of 2012 was 16.675 million, of which 54.7% live in urban and 45.3% in rural areas (Table 1). The population density was 5.9 persons per square kilometre. There are 14 administrative territorial units (regions). The most densely populated area is South Kazakhstan with a population density of 21.1 persons per square kilometre; the lowest population density is in the Aktobe region with only 2.1 persons per square kilometre. Over the past 20 years, Kazakhstan's demographics have changed dramatically. Between 1992 and 2002, the population decreased by almost 1.5 million. This was caused by high levels of emigration and mortality and low fertility. Organic population growth could not compensate for high levels of out-migration from the country. Since 2004, the population of Kazakhstan has begun to grow for two main reasons: natural increase and immigration[1]. In 2011, the population exceeded the 1991 level by 1.9%.

Table 1. Population (beginning of the year)

Year	Population ('000)	including		% of total population	
		Urban	Rural	Urban	Rural
1991	16 358.2	9 366.9	6 991.3	57.3	42.7
1992	16 451.7	9 404.0	7 047.7	57.2	42.8
1996	15 675.8	8 730.3	6 945.5	55.7	44.3
2001	14 865.6	8 413.4	6 452.2	56.6	43.4
2002	14 851.1	8 429.4	6 421.7	56.8	43.2
2006	15 219.3	8 696.5	6 522.8	57.1	42.9
2009	15 982.3	8 649.6	7 332.7	54.1	45.9
2010	16 204.6	8 806.9	7 397.7	54.3	45.7
2011	16 442.0	8 961.4	7 480.6	54.5	45.5
2012	16 675.4	9 114.6	7 560.8	54.7	45.3

Source: Agency of Statistics of the Republic of Kazakhstan, 2012

[1] Net migration in Kazakhstan was negative in the first half of the 2000s (-1 320 442.0 in 2000 and -220 975 in 2005 – World Bank). In 2010, however, the value of net migration was positive (6 990 in 2010 – World Bank), suggesting that there are more people immigrating to Kazakhstan than emigrating from the country. This suggests that the Kazakh economy is becoming increasingly attractive not only for Kazakhs themselves, but also for neighbouring countries.

The age structure of the population has changed significantly. The number of people aged between 0 and 14 years is decreasing. The number of people in the 15-64 years and 65 years and over age groups is increasing. At the end of 2010, the share of the population aged between 0 and 14 years amounted to 24.5% of the total population; compared to 1991, the number in this age group decreased by 6.8%. During the same period, the share of the population aged between 15 and 64 years increased by 6.4% and accounted for 68.9% of the total population at the end of 2011. The percentage of the population aged 65 years and older was 6.6%, an increase of 0.5% compared to 1991.

Improvements in the quality of life have resulted in increased fertility in recent decades. The birth rate in 1991 was 21.5 births per 1 000 inhabitants. Up to 2000, the birth rate declined. It began to rise again in 2001 and increased from 14.6 births per thousand in 1999 to 22.5 per thousand in 2011. Between 1991 and 2011, the mortality rate per 1 000 inhabitants increased from 8.2 to 8.7. In 1995 and 1996, the mortality rate reached a peak of 10.7. Accordingly, the rate of natural increase in 1991 was 13.3 per thousand, which declined to 4.7 in 1999. Since 2000, there has been a gradual increase in the rate of natural increase, reaching 13.8 in 2011.

One living standards indicator, as well as a human development indicator, is the life expectancy of a population. In Kazakhstan, life expectancy increased from 67.6 years in 1991 to 69.0 years in 2011. Life expectancy at birth over the past ten years has increased by 3.21 years (2001: 65.8 years; 2011: 69.0 years). As in previous years, male life expectancy (60.5 years in 2001; 64.2 years in 2011), is lower than female life expectancy (71.3 years in 2001; 73.8 years in 2011). Year after year, the gender gap in life expectancy at birth between men and women is decreasing (the gap in 2001 was 10.8 years; by 2011 it was 9.6 years). Kazakhstan's population has a high literacy rate (Table 2).

Table 2. Literacy rate by main age group, 2009 (%)

Total population			Urban population			Rural population		
Total	Male	Female	Total	Male	Female	Total	Male	Female
Population aged 9-49								
99.8	99.8	99.8	99.9	99.8	99.9	99.7	99.7	99.8
Population aged 15+								
99.7	99.8	99.7	99.8	99.9	99.8	99.6	99.7	99.5

Source: Agency of Statistics of the Republic of Kazakhstan, 2011

Kazakhstan is rich in mineral deposits and agricultural land, and has considerable industrial potential.

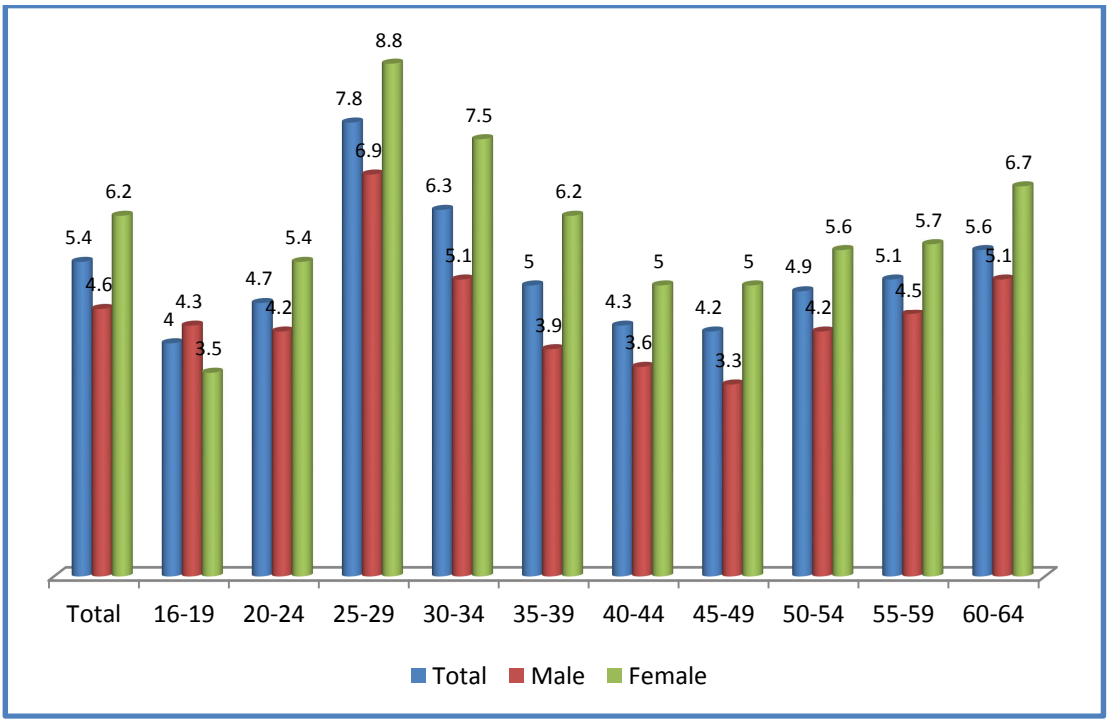
In 2011, the share of agriculture in gross domestic product (GDP) was about 5.3%, while the share of industry and the services sector were 44.3% and 50.4% respectively (World Bank). The share of agriculture in the economy has been declining since 1999, dropping to 5.3% of GDP. However, agriculture employs almost 30% of the employed population, a level that has been constant for several years. According to the Agency of Statistics, the manufacturing and construction sectors together provided jobs for 25% of the employed population in 2011. While the energy sector in Kazakhstan accounts for more than 15% of GDP, only 2.6 % of the total labour force (compared to 3.2 % in 2010) is employed in the sector. The number of people working in the sector increased by around 15.3% over the past six years (Annex 1, A1.2). Just over 50% of employment is in the services sector. Developments in the financial and insurance sector have led to an increase of almost 53% in employment in this sector over six years. The number of employees working in hotels and restaurants showed a similar trend. Their share of the total employment figure is still relatively limited.

The education sector employed 572 000 people in 2001 and 717 100 people in 2006. By 2011, this figure had grown by nearly 16%, a reflection of the importance attributed to education by the government.

According to the Ministry of Labour and Social Protection, economic restructuring, competitiveness and sustainable development are the main economic challenges shaping the demand for skills. The radical economic transformation of recent years has led to new international relations and the country's integration into the global economy. Foreign investment in Kazakhstan's economy has increased year on year. Reported data for 2011 showed GDP per capita of approximately 11 356.6 dollars compared to approximately 8 513.5 dollars in 2008 (Kazakh Agency of Statistics).

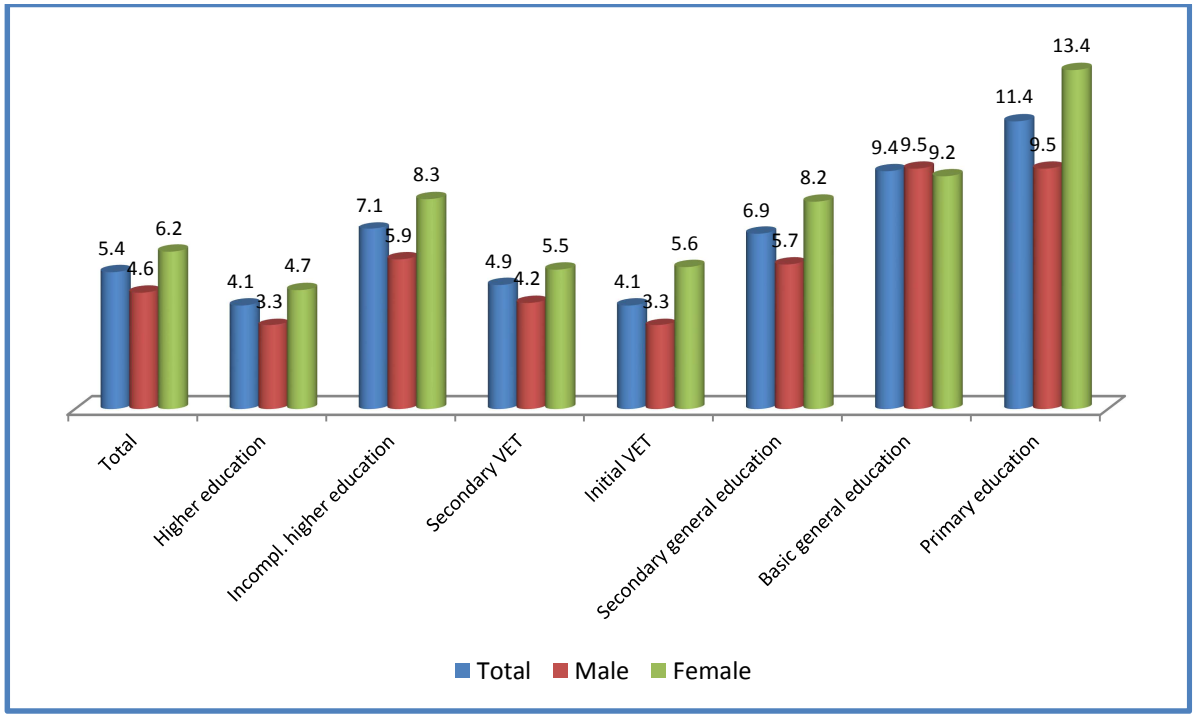
Between 2005 and 2011, the number of registered enterprises increased by 32.8% (Annex 1, A1.8). Of the total number of registered enterprises in 2011, new businesses account for almost 5.4%. The overwhelming majority (97%) of businesses are small, 4.7% are medium and 0.8% large. Small and medium-sized enterprises accounted for 20.2% of GDP in 2010. According to the Agency of Statistics and the Ministry of Labour and Social Protection, unemployment is decreasing constantly. It fell from 8.1% in 2005 to 6.6% in 2009 and 5.4% in 2011. The long-term unemployment rate fell from 4.3% in 2005 to 2.5% in 2009 and 2.1% in 2011.

Figure 1. Level of unemployment by age, 2011 (%)



Source: Agency of Statistics of the Republic of Kazakhstan, 2011

Figure 2. Level of unemployment by education level, 2011 (%)



Source: Agency of Statistics of the Republic of Kazakhstan, 2011

According to the Agency of Statistics, the level of hidden unemployment decreased from 1.1% of the economically active population in 2010 to 0.4% in 2011. Young people, women over 35 and people approaching retirement are most affected by joblessness. However, the share of youth unemployment in total unemployment decreased considerably from 6.7% in 2009 to 4.6% in 2011, with higher rates among the urban population and women. Unemployment among young women fell from 8.2% in 2009 to 5.0% in 2011; unemployment among young men fell from 5.5% in 2009 to 4.2% in 2011. A comparison of urban and rural youth unemployment rates (in the 15-24 age group) in 2009 and 2011 also revealed that women are still at a disadvantage, In 2009, figures released by the Agency of Statistics showed that 9.8% of women were out of work in urban areas, compared to 6.2% of unemployed young men. The rural equivalents were 6.8% for young women and 4.9% for young men. In 2011, 6.1% of women were unemployed in urban areas, compared with 5.1% of men. The same pattern is observed in rural areas. However, doubt is cast on the reliability of this data as most of the unemployed are currently classified as self-employed. Kazakhstan uses the International Labour Organisation (ILO) methodology, where the employed population includes everyone who worked (for at least one hour) for pay, profit or family gain during a surveyed week. This has been questioned by some stakeholders who consider this definition too broad as it overestimates the number of employed people and underestimates the number of unemployed people.

Since 2010, many initiatives have been implemented to further support the dynamic economic development and improve the employment situation on the labour market. These include a variety of multi-layered government measures. As part of the Employment 2020 programme, only 66 000 people changed their employment status from self-employed and unemployed to employed in 2011. From 2012, it is expected that employers will be compensated for up to 70% of the costs of training staff. Vocational retraining for the unemployed is currently only provided on the request of employers (who must provide guaranteed employment) or under entrepreneurship promotion drives for the self-employed. Educational institutions wishing to provide in-service training must go through a competition and the costs are often covered by the state or shared with the enterprises (Torino Process, 2010).

The State Programme for Accelerated Industrial-Innovative Development of Kazakhstan for 2010-14 covers the establishment of new factories and industrial complexes and the creation of an industrialisation map with more than 100 projects. It includes the following measures:

- forecast of labour market developments;
- further development of the national infrastructure;
- creation of 96 000 social jobs for target groups using public cofinancing, including practical training for 34 000 young people in enterprises;
- encouraging the development of various forms of flexible employment (flexible working hours, part-time work, job rotation within organisations, social support, territorial and professional mobility of the workforce);
- human resources development mechanism for the period between layoff of workers and new employment; this includes the training and retraining of the workforce based on real employment prospects in the new workplace (shared responsibility between national government, regions and local communities for systematic work on staff training and retraining at the existing vocational schools);
- extension of public sector employment;
- increase in the maximum period for which unemployment benefits are paid from the State Social Insurance Fund, from four to six months;
- temporary changes in migration law: reducing the quota for foreign labour (by half) and introducing temporary restrictions on attracting foreign workers.

Under the Employment 2020 programme, 65 000 self-employed, unemployed and low-income people will be integrated into productive employment through training, retraining and advanced training.

In 2010, the Republican Scientific and Methodological Centre stated that ‘one of the most important strategic factors for sustainable economic development’ is the development of small and medium entrepreneurial business in all production sectors in the form of independent activities by individuals, aimed at making profit and undertaken on their own behalf, at their own risk and under their own financial responsibility’ (Republican Scientific and Methodological Centre, 2010). A Road Map for Business 2020 has now been formulated. It aims to ensure sustainable and balanced growth of regional businesses in non-oil sectors of the economy, maintain existing jobs and create new permanent jobs.

According to the World Bank report *Doing Business 2011: Making a Difference for Entrepreneurs*, which looks at economies around the world, Kazakhstan improved business regulation the most in 2011. It improved conditions for starting a business, obtaining construction permits, protecting investors and trading across borders. As a result, it moved up 15 places in the rankings on the ease of doing business - to 59 among 183 economies. Kazakhstan also moved up 21 places to number 51 in the World Economic Forum’s Competitiveness Report 2012-13.

In order to implement measures to improve human resources policy in the social and economic sphere, the Agency of Statistics is working on a survey to examine the size and staffing of large and medium-sized enterprises. The survey is focused on identifying staff needs in legal entities and branches with more than 50 employees. Results are expected in January 2013.

Although many efforts have been made to strengthen the links between the labour market and VET they are still weak. Businesses traditionally do not contribute greatly to identifying needs from a qualitative, quantitative or content-related perspective. Nor do they participate in VET and VET quality assurance. Many larger national and international companies consider the public vocational schools to be incapable of providing adequately skilled VET graduates and have set up their own training centres. They have designed staff development plans and provide initial and continuous on-the-job training and training abroad - only for their own staff. Institutional cooperation between education and business at local level often focuses only on the provision of 'internships' for students and teachers. The quality of such internships suffers from insufficient guidance and monitoring. The complexity of work tasks and work processes cannot be perceived by the young people or their teachers. SMEs in particular have little understanding of the role that VET could play in developing a quickly evolving labour market and society. Education and business urgently need to share their strengths to improve VET quality. According to trade unions, the six National Council working groups would be better at performing the following specific tasks: raising the prestige of VET, cooperating with social partners, attracting employers, introducing independent certification and anticipating the professions and types of qualifications that will be required.

To date, no legislative framework exists for collaborative decision making in VET, only for the discussion of interests. According to the government's terminology, social partnership is a 'system of relations and mechanisms addressed to discuss common agreed interests: interests with the representative organs of the executive power and the representative trade union and employer association.' Social dialogue is defined as the 'process of interaction between social partners' (Boribekov, 2010). According to the trade unions, 'more responsibility should be assigned to the sectoral work' as – as mentioned in article 275 of the Labour Code – 'sectoral agreement would be the basis for collective agreement' (interview with trade union).

In this context, focus group members discussed possible ways out of this dilemma. They reflected on how to improve the attractiveness of VET and initiate meaningful collaboration between both sides (education and business) so that the labour market, society, business, education and the individual student can all benefit. For businesses, responsibility and collaboration mean more than the provision of internships. Cooperation means the implementation and acceptance of two different training environments in VET with constant partners: the company and the school. A precondition for this is a commitment and willingness to enter into new types of dialogue, knowledge sharing and participation. Labour market and VET market perspectives need to be in balance. Both interest groups need to have the platform to exchange their positions in order to find a consensus that is acceptable to society. Individual interests and the interests of the counterpart need to be reflected upon and respected. This calls for some type of training at all levels. It is essential that all sides realise the benefit of collaboration. On the business side, this means that the costs of student training need to be balanced with the benefits of using young people in the workforce. Companies with few employees and without a foothold in the market are less interested in investing in VET. However, the need for a productive workforce can be met by participating in VET. Costs in the handicraft sector are lower than in the commercial and industrial sectors, as the trainee contributes to production. The enterprise contributes to the professional identification and development of the role of the apprentice. Apprentices could be cheaper than graduates. Other advantages would be a better image for the company and a contribution to social responsibility. New investments could be financed from this financial advantage. The profitability of invested capital thereby increases along with the qualifications of staff members.

In general, company training objectives and educational objectives have only some aspects in common. The company has three options: to further train their staff; to search for new staff on the labour market; or to participate in VET. Company managers must identify the most efficient option. On the vocational school side, it is essential that meaningful connections are established with the world of

work. Schools can no longer rely on the implementation of centrally planned instructions. Schools must take on the responsibility for the practical implementation of learning opportunities, which are integrated into work processes in the second learning environment. Content-related lesson input needs to be connected to the work process elements and developments. There is an urgent need to coordinate the distribution of information and the provision of guidance to help young people in vocational self-determination in line with the needs of the economy.

The focus group members stressed that the following steps were necessary to increase the attractiveness of VET:

- legal certainty for companies making investments;
- implementation of different VET forms, where responsibility is legally bound and shared;
- VET needs to reach students, employers and educational staff:
  - on the one hand, young people are looking for identification and fulfilment in work; on the other, they are looking for a secure livelihood. They are aware that only a qualified education protects them against unemployment. However, they do not yet see the relevance of VET and its advantages;
  - there is a realisation that general education needs to support the individual development of talented and gifted young people;
  - the increasing availability of jobs will also increase their attractiveness;
  - the attractiveness of the training is also determined by the nature of the relevant professional work. This covers areas such as complexity (fragmented workflows need to be connected and integrated), salary, content, and hazards (stress-related issues such as physical hardship or health risks);
- professionalisation of VET staff groups: competence must be improved at all VET levels to ensure better implementation of VET and labour market policy.

C. EXTERNAL EFFICIENCY: ADDRESSING SOCIAL DEMANDS FOR VET AND PROMOTING SOCIAL INCLUSION

According to the government's vision, 'the education system will be able to provide equal access to appropriate education of high quality for everybody, regardless of the material wealth of the family, place of residence, ethnicity and health' by 2020. This means 'accessibility and quality for people of varied social and economic status, ethnicity, gender, physical abilities'. Education should provide everyone, regardless of origin, with 'the opportunity to achieve the level most appropriate to his/her potential. Equality of educational opportunities will become an integral part of social and economic equality' (Republican Scientific and Methodological Centre, 2010, in Torino Process, 2010).

Between 1999 and 2009, the education level of the population improved significantly. Particularly noticeable was the proportion of the population having a higher, incomplete higher and secondary special education.

Table 3. Population by level of education

	1999		2009	
	People	per 1 000 people	People	per 1 000 people
Population aged 15+	10 693 665		12 156 705	
of which with:				
Higher education	1 350 982	126	2 407 523	198
Incomplete higher education	183 283	17	380 003	31
Secondary special education	2 394 445	224	3 039 965	250
General secondary education	3 915 210	366	4 074 026	335
Basic secondary education	1 919 888	180	1 621 460	133
Primary education	796 509	74	594 546	49

In 2009, for every 1 000 people, 198 aged 15 and older had higher education, 31 had incomplete higher education and 250 had secondary special education.

At the beginning of the 2011/12 academic year in Kazakhstan, 808 separate organisations with 88 branches were active in technical and vocational education. These consisted of 325 schools and vocational high schools (1% increase) and 571 colleges, of which 20% were located in rural areas. According to the Ministry of Education and Science, the number of VET institutions increased by 49% over the last 10 years. This growth was mostly due to the increase in the number of private colleges (79%). At the same time, the number of public colleges and professional lyceums has increased by only 15%. The total number of students was 604 000, of whom 46.6% were women. About 58% of all basic secondary education students were trained in VET institutions.

According to the Ministry of Education and Science (2012), 42.1% of the total number of students studied within the state education order and 57.9% of students paid for educational services. Currently, 93% of vocational school students and 16% of VET college students receive education

subsidies. Economics-related professions are the most popular, accounting for 23% of the professions studied. These are followed by industrial professions (19.5%), pedagogic professions (15.4%) and others (41.9%) (Ministry of Education and Science, 2012). Among the least popular professions are communications, arts and sports. Training in business-related professions is mostly provided in private colleges and is paid for privately by students.

In 2008, 605 VET institutions were in cities and 162 were in rural regions. There were 559 535 VET students in urban institutions and 53 225 in rural institutions; only 8.7% of all VET students studied in rural institutions. In 2008, professional lyceums were educating only 6.1% of the appropriately aged population. The highest level of 9.8% was in the Pavlodar *oblast* and the lowest rate of 3.5% was in the Almaty *oblast*. Enrolment in colleges, as a percentage of the appropriately aged population, was 16.5% in 2008. Almaty city has the highest regional rate at 29.9%, while the Almaty *oblast* has the lowest at 8.9% (Samsayev, 2009). Since the beginning of 2012, all VET institutions (schools and colleges) are called colleges. The number of teachers at the end of 2011 totalled 45 700.

According to Kasipkor Holding, the number of VET institutions increased by 49% in recent years. However, the number is still insufficient. Focus group members stressed that the regional distribution of VET institutions is inadequate considering the geographical and social conditions. Moreover, it is not efficient in terms of demand and equity. Many more VET institutions are currently needed at different levels. More diverse forms of VET are needed to meet the various demands.

The Ministry of Education and Science analysis underlines the fact that economic growth and transformation, which are heavily dependent on the exploitation of raw materials, are negatively affected by the socio-economic situation in many regions. This situation is caused by economic recession, inflation, the payments crisis, exacerbated external competition and increased commodity prices on world markets. The extraction of massive amounts of natural resources has led to high levels of environmental emissions. About 75% of the country is experiencing an increased risk of ecological destabilisation and there is an acute problem of desertification (Ministry of Education and Science, 2010, in Torino Process, 2010).

Disabled children are compensated for the cost of being educated at home. The quota for the number of disabled young people in secondary education and VET is implemented according to a governmental order. However, rehabilitation and social institutions do not satisfy the social and educational needs of these young people. Much more energy is needed to support their access to the labour market. As mentioned by focus group members, 3% of the total number of workplaces for employees are earmarked for disabled people.

A number of initiatives have been introduced since 2010 to enhance the contribution that VET can make to society. These include a range of measures introduced under the State Programme for Accelerated Industrial-Innovative Development of Kazakhstan for 2010-14. This programme aims to create 96 000 social jobs for target groups using public cofinancing, including practical training for 34 000 young people in enterprises. It also aims to encourage the development of various forms of flexible employment. Another objective is to integrate 65 000 self-employed, unemployed and low-income people in productive employment, through training, retraining and advanced training.

Government strategies aimed at overcoming disadvantages faced by vulnerable groups have been generally successful. According to the focus group discussions, the main social challenges facing Kazakhstan are the geographic challenges, dangerous working conditions and various kinds of migration. In particular, rural citizens, unemployed people and self-employed people do not have broad access to initial vocational education and training or technical and vocational education and training. Major high-level efforts will be needed to overcome these challenges and reach the ambitious targets set for 2020.

Geographic challenges influencing VET reform are caused by imbalances in industrial and economic developments. Three strands can be identified.

1. The industrial economy – mainly in the area of Atyrau in West Kazakhstan and Ust-Kamenogorsk in East Kazakhstan. The implementation of cooperative forms of VET can be established on strong preconditions.

2. Business in rural areas based on SME development. Specific support must be given to SMEs so that they can take responsibility for some aspects of practical training. Interinstitutional centres are needed to close the gaps between SMEs' abilities.

3. No business due to increasing desertification and/or very low population density. If there is no work where people live, young people will need to move to other places so that they can participate in vocational training or social projects.

Dangerous working conditions are particularly prevalent in Ust-Kamenogorsk and Pavlodar. Nuclear contamination and high levels of environmental emissions lead to growing health problems. Young people are not willing to go and work there, older workers are returning to their former homes. In the past, these sectors offered specific additional salaries. Now the equipment is old and is much more dangerous to use than before. Trade unions raise the question of improving materials and conditions and of providing further benefits. Initial VET and continuing VET need to understand these poor conditions. Block training could be an appropriate way to meet the needs of the parties involved.

As outlined in section B, migration is a growing phenomenon. It covers migration from rural to urban areas and transnational migration. The result is continued negative net migration and an outflow of professionals. A study on flexicurity (an integrated strategy for enhancing flexibility and security in the labour market) has shown that this movement is now balanced by a growing influx of migrants, largely from other Central Asian countries, especially Kyrgyzstan, Tajikistan and Uzbekistan (Kurassova, 2010, in Torino Process, 2010). Illegal migration of low-skilled workers has also been growing in recent years. This has pushed the government to adopt legal frameworks to manage migration and to recognise the rights of migrant workers. Most young people from small, depressed cities and rural regions do their best to find a job in the larger cities. Many are unable to successfully implement these plans due to economic constraints, a restriction that has a harsh impact on labour market flexibility (Torino Process 2010).

An imbalance exists in the distribution of funding between regions. The conditions for practical training are worse in rural than in urban areas. Many rural schools lack the necessary equipment and facilities for laboratory studies in special subjects. As a result, curricula and programme requirements are not fully implemented. The implementation of lifelong learning strategies is hampered by many difficulties, mainly at enterprise level. This situation compounds the lack of opportunities for low-skilled workers, women, older workers, self-employed people and minorities (Kurassova, 2010, in Torino Process 2010). According to Kurassova, companies are permitted to employ and train foreign workers on the condition that they provide parallel training for Kazakh staff. As outlined in section B, young people, women over the age of 35 and people approaching retirement are those most affected by joblessness. The problem is more pronounced in rural areas than in urban areas.

Comparing the 2010 and 2012 figures, it can be seen that gender differences in employment have decreased but still remain an important issue. The types of work undertaken by men and women also differ. Ministry of Education and Science reports cite women working in particularly adverse conditions in the production of coke, oil refining and the processing of nuclear materials, where 29.2% of employees were women in 2010. In the mining industry, 16.7% of total employees were women. In electricity production and gas and water distribution the figure was 16.1%. Some women are forced to

accept jobs that are potentially harmful to their health due to the shortage of suitable work and low salaries (Torino Process 2010). Improved, differentiated and attractive vocational options must be offered to develop student and trainee professional skills and competences appropriate to their needs. The disparity in education level and profile must also be addressed.

The focus group confirmed once more that new didactics and teaching and learning methods and an open and effective system of independent proficiency assessment and certification are urgently required. ‘High quality education and training for all, providing “equal opportunities” to achieve a level most appropriate to his/her potential will only be forthcoming if these measures are accompanied by the efficient use of resources, optimisation of selection procedures, improved access to VET, better guidance and greater pedagogic know-how. Policy makers, researchers and policy implementers are strongly recommended to reflect and discuss the issues of “ability”, “talent” and “profession” in an educational and VET organisational context’ (focus group meeting, 2012).

D. INTERNAL QUALITY AND EFFICIENCY OF INITIAL AND CONTINUING VET DELIVERY

In the past, Kazakhstan's education policy was dominated by intentions to reform the higher education system. The aim was to incorporate the Bologna Process and, consequently, quality assurance instruments and tools. VET was mainly for those young people who had not completed compulsory education or had not been successful in general or higher education and had therefore dropped out. According to the Ministry of Education and Science in 2010, the interest in general secondary education professions was so high that, by the end of the 1990s, the number of students in vocational schools had decreased by a factor of 2.5, the number of students in colleges had dropped by half and the number of students in rural vocational schools had decreased even more dramatically. As a result, VET institutions were privatised or closed in some areas of the country. Kazakhstan ranked 59th out of the 65 countries that took part in the Programme for International Student Assessment (PISA) in 2009.

Presidential decree No 1118, dated 7 December 2010, implemented the State Programme of Education Development for 2011-20. It aims to develop human resources though equal access to high-quality education in order to ensure sustainable economic development. The main elements are financial provision, status of pedagogues, VET management, e-learning, early-year education, primary and secondary general education, higher education and postgraduate education, vocational education and training, social education and youth work. The programme will be implemented in two stages: from 2011 to 2015 and from 2016 to 2020. The following developments are implemented or envisaged in the area of VET.

Financial provision. With a total budget of KZT 72.5 billion (Kazakh tenge, around EUR 0.36 billion), the Kazakh VET system is financed with a share of 0.3% of GDP or 7.2% of the overall education budget. This includes KZT 14.7 billion (EUR 0.735 billion) from the state budget and KZT 56.8 billion (EUR 0.284 billion) from the local *akimat* (municipal, district or provincial government) budget. Colleges funded from local budgets receive only half the amount of funding provided to colleges under the republican system. Funding should be increased gradually so that it reaches the average percentage level of GDP of highly industrialised countries by 2020 (State Programme of Education Development for 2011-20). In 2011, equipment in VET colleges was replaced at a total cost of KZT 2 283.2 million (EUR 11 416 million). The cost of educating one student in 2011 was KZT 221 500 (EUR 1 100). This does not include equipment costs. Per capita financing will be guaranteed for all VET students in all VET colleges until 2013. Budget transparency and efficiency needs to be improved.

VET teachers. At the end of 2011, the teacher-student ratio was 1:13.4 (45 700:604 000).Many initiatives designed to further professionalise VET teachers and to raise their status are at the planning or implementation stage. Six regional centres for teacher training were set up in early 2012. Based on a modular system of financing, every teacher can select an institution for further training. Institutions outside Kazakhstan can also be selected. Further upskilling of teaching staff in industries is supported. By 2013, continuing training will be financed by vouchers in the regions of Pavlodar and Dshambylskaya and in the cities of Astana and Almaty. This will be extended to the whole country by 2015. By 2020, 100% of pedagogues will have received continuing training. In 2011, more than 1 600 VET teachers received further training: the state covered the costs for 1 024 people, including 24 who travelled abroad for the training, and a World Bank loan covered the costs for a further 350 people. A four-year modular system was developed for the in-service training of VET teachers and VET college directors. It focuses on new technologies, modern didactics, teaching forms and methodologies. According to the Ministry of Education and Science in 2012, 6.5% more engineers and VET teachers

completed training courses on new technologies (compared to 5.5% in 2010). The education of English language VET teachers has also been promoted.

Training programmes for VET college teachers have been updated and implemented. In 2012, 3 500 teachers improved their skills: 500 teachers in an interregional centre, 100 managers and teachers in Singapore and 120 teachers (from six areas of VET fields) in Turkey. As part of the World Bank's Project for Modernization of Technical and Vocational Education, 700 teachers qualified within one month.

In 2011, 20 vocational school directors and teachers spent six weeks gaining practical experience in dual system VET colleges in seven cities in Germany. This was arranged within the framework of the EU's VET reform project. Participants covered a number of areas, including cultural and language preparation and evaluation. Another 20 VET college teachers will travel to northern Germany in the autumn of 2012. They will study how the dual system operates and gain practical experience in VET colleges and cooperating companies.

In 2011, the ETF school development project focused on capacity building for VET teachers, school directors and in-company trainers (30 people in total). In 2012, capacity building will focus on the training of teacher educators in five Kazakh teacher training institutes at tertiary level.

Status of pedagogues. Collaboration with the mass media is intended to raise the status of VET teachers and help to enhance their image in society. A regional and national forum for technical and scientific exchange will be established. A new system for career stages will be developed in the coming year. According to the state programme, teachers' salaries will be increased by 100% in 2012. They should reach private sector levels by 2015. The salaries should stimulate and inspire innovation and engagement among staff. Payment will be flexible and will be aligned to teacher performance.

Equipment and material. As emphasised by the focus groups, nearly all VET colleges have outdated materials and equipment. These do not correspond to the reality of the labour market. VET colleges are completely absent in rural areas (24 *rayons* or counties). Dormitories are not provided by 113 VET colleges. The state programme for 2011-20 contains plans for the modernisation of VET infrastructure by 2015 and improvements in its material and technical basis. New information technology, interactive technology, e-learning and a Kazakh web portal for training will be implemented. Updated equipment and material has been provided to 48 vocational schools. Funding for 24 schools came from the state's budget and 24 were supported by a World Bank loan (Ministry of Education and Science, 2012).

Infrastructure. The state programme for 2011-20 envisages better alignment of the pathways between general education at secondary level, scientific education at university level and technical and vocational education at secondary, post-secondary and tertiary levels. The trend in Kazakhstan is to see VET as an integrated sector. However, the implementation of lifelong learning strategies is hampered by many difficulties, mainly at enterprise level. Most employers prefer to take on highly skilled employees. They see a risk in less qualified staff moving on after the company has invested in expensive training.

Between 2015 and 2020, a coherent concept for lifelong learning needs to be designed and implemented. Continuing professional development and the acquisition of new competences need to be facilitated during a person's entire lifetime. The concept also needs to be independent of age, professional qualification level and profession and offer direct training in VET institutions, enterprises and e-learning.

VET quality: To improve the quality of training and competitiveness, the state programme for 2011-20 will promote social partnership mechanisms at national, regional and institutional level by 2015. Members at national level are the national ministries and representatives of regions, employer associations and trade unions. At regional level, representatives of the *akimats*, employer associations, employers and VET institutions will be involved. At institutional level, pedagogues, parents, VET experts, employers and social partner representatives will participate. The aim is to increase graduate competence according to the needs of the economy. By 2015, the national qualifications system should be complete and professional standards and modularised programmes should be confirmed. National certification organisations should be created based on international experience.

If the statements of focus group members in 2010 are compared with those of 2012, it can be concluded that many challenges have been positively addressed by the government. The development of a methodology for designing national and sectoral qualifications frameworks, professional standards and communication mechanisms between VET and the labour market has been initiated. Sixty-five types of curricula and programmes and 650 types of curricula for secondary specialised VET have been ensured with the participation of employers. Changes in the classification of VET professions and specialties and in post-secondary education have been implemented. These take into account the proposals of sectoral councils, associations, large companies, teaching unions and vocational schools (order No 115 of the Committee for Technical Regulation and Metrology of the Ministry of Industry and Trade, dated 18 March 2011). In 2011, 65 state VET standards and 65 vocational programmes were developed and published for 720 technical subjects. Employers and international experts participated in this work. A total of 22 credit programmes covering modular technology education and higher technical education were introduced. The government approved guidelines on compulsory state education standards (6 March 2012, decree No 290). Its aim was to promote agreement on national standards for vocational education in line with the requirements of the market and the certification of graduates' qualifications. This decision was made with the participation of representatives of relevant government agencies, educational institutions, research organisations, scientific and methodological centres, businesses, trade associations and employer associations. The level of professional training of VET students is independently assessed in line with article 28, paragraph 10 of the Law on Education. The Labour Code legislates for the certification of employees' qualifications. Industrial training provided by employers was legally established as part of the State Programme for Accelerated Industrial-Innovative Development of Kazakhstan for 2010-14 and the State Programme of Education Development for 2011-20. The balance between theoretical and practical training was reviewed. Options for improving cooperation between VET teachers and in-company trainers were discussed. According to the Ministry of Education and Science (2012), the following quantitative indicators have been set for 2015: the share of integrated educational curriculum, developed with the participation of international experts and employers, will be 25%; the percentage of students whose training costs will be covered by employers will be 0.8% (0.7%) of the total number of students.

Between 2011 and 2020, Kasipkor (2012) will pursue three strategic directions to translate the vision and legislation into specific measures and actions. These directions are closely linked to the three priorities agreed with national stakeholders in the framework of the Torino Process. They entail:

1. improving the prestige of the national VET system by
   - building new colleges
   - involving strategic partners
   - ensuring openness and transparency in the new organisations
2. raising the quality of teaching by
   - qualifying teaching staff, including industry professionals
   - implementing training programmes based on newly elaborated professional standards
   - overhauling the system and providing modern equipment for classes and workrooms
   - promoting the exchange of positive experiences with existing college networks
3. ensuring sustainable communication with the business community by
   - encouraging sector associations to participate in the management of the newly created colleges
   - engaging local and international companies in the organisation of industrial apprenticeships
   - taking into account the interests of SMEs when organising training

The following developments should help to improve accessibility.

- Interregional centres for training and retraining staff for the oil and gas industry in the city of Atyrau, and for the fuel and energy sector in Ekibastuz were set up over the last year and are under the management of the Kasipkor Holding joint stock company.
- The design and construction of world-class colleges in the cities of Astana and Almaty has been initiated. Closing 12 schools may also improve the VET network.

Seven new specialised vocational schools are planned for the study of engineering, architecture and construction, information and communications technology, design, agriculture, mechanical engineering and crafts. Four interregional centres will be constructed for the study of oil and gas (Atyrau), welding, maintenance and machine building (Ust-Kamenogorsk), electrical engineering and thermotechnics (Ekibastuz) and food, fashion design and spinning (Shymkent). Schools will have capacity for 200 to 400 students. Vocational staff who teach there will be asked to pass a practical test every three years in an enterprise. Kasipkor has identified strategic partners in Singapore (Nanyang), China, Germany and the Netherlands (Fontys University of Applied Sciences) with which experience and knowledge can be shared.

A new culture of teaching and learning is both a precondition and a tool for achieving VET reform. This calls for the development of basic technical knowledge and orientation knowledge. Responsibility for action is linked to processes in the world of work. Learning processes in the school and the enterprise need to be reflected upon and interconnected. The focus should be on bringing together potential and practical cognitive, social and emotional elements to develop knowledge that can be adapted further. The objective is to educate and train young people who are open-minded and prepared for continuous learning. The acquisition of content-related knowledge and the competence to apply this knowledge in the workplace must be integrated.

In their meetings, focus group members discussed their perceptions of new ways of learning. To date, however, teaching has been based on standardised instructions. Students do not have a possibility to manage their own learning processes. The teacher's role is no longer to reproduce knowledge but to

support students in constructing their knowledge themselves. Many teaching concepts, such as open, example-based, experience-based and action-based teaching, lead to specific didactics like normative didactics, information-theoretical didactics and communicative didactics. These methods are based on specific concepts of the human being and different perceptions about the scope and function of institutional education. The new culture of teaching and learning must reflect on these interconnected processes and the qualification of selected VET professionals in the areas of education and business.

In contrast to general education, VET has a specific context. It therefore needs special skills and competences. Vocational staff working in education and business need to be able to innovate in education and in their vocational domains, adapt to rapidly changing situations (in the labour market, for example) and interact with these changes. The two areas need to learn from one another. Staff on both sides increasingly need to work in self-reflective teams and build effective relationships with relevant networks. During the meetings, teacher representatives were astonished to hear about the improvements in the legislative framework for VET provision and the objectives set by the government for VET reform. Occasionally, there is a lack of information or a failure in the flow of information. Furthermore, some roles are not as clear as they could be due to underdeveloped relationships between colleges and employers. Obstacles need to be overcome in daily teaching practice. Further efforts and support are urgently needed to strengthen participatory processes in the implementation of VET. Focus group members agreed that the establishment of the council system was most effective in theory. However, it needs to be made operational. Duties and functions must be clearly defined for all parties, particularly at the regional and institutional level. The current system is based on control and compliance methods. The focus group members debated the weaknesses and strengths of the current reality.

They listed the following weaknesses on the education side:

- outdated equipment and material in most vocational schools; if modern equipment is provided, teachers may not have the necessary skills to use it and it remains unpacked or unused;
- many problems with cooperation between private and public VET institutions;
- limited scope for action by VET staff;
- lack of method competence;
- absence of standards, despite extensive discussion about reaching standards;
- outdated assessment questions which urgently need to be revised;
- uncertainty about how to cooperate with enterprises.

They listed the following weaknesses on the business side:

- lack of confidence in educational institutions;
- lack of knowledge about identifying and assessing business needs;
- different methods, templates and contents used in developing the sectoral qualifications frameworks, which now exist for the oil and gas sectors thanks to KAZmunaigas, KAZenergy, and the EU project and will be once more developed by the World Bank project;
- uncertainty about how many/which sectoral qualifications frameworks should be linked to VET and how many/which ones should be linked to higher education;

- lack of experience and knowledge in designing and organising practical training – it involves more than a visit to the enterprise combined with showing and repeating;
- lack of know-how and experience of employers when assessing graduates;
- lack of know-how in identifying employees who are interested in taking on pedagogic tasks and prepared to train as a qualified in-company trainer.

On the government side, more autonomy and freedom are needed to develop strategic principles, define priorities, find solutions independently and make decisions at local level. Vocational schools and enterprises need to collaborate and agree on two issues: the number of specialists to be educated and employed and the qualification requirements for each profession.

The focus group members discussed developments in Atyrau as an example of good practice at regional level. In Atyrau, 232 companies have signed an agreement to support VET by providing internships to students and cooperating in the design of content and methodologies. Responsibility must be shared at different levels of VET policy implementation and a new learning culture for all stakeholders must be created. These are urgent preconditions for improving quality and matching graduate skills more effectively with the needs of the labour market. This can only be done if vocational staff at all levels are more professional and capable of coordinating and managing the underlying processes. Learning processes are construction processes, not only for VET teachers in schools and trainers in companies, but also for school managers, employers and other stakeholders on the education and business side. Focus group members confirmed that all parties were very prepared and willing. They also acknowledged many new initiatives at all levels. However, these activities need to be managed jointly. Coordination bodies must manage the agreement processes between the hierarchical levels in business and education. This can be done from bottom up and top down. The advantage of both approaches is that all partners can identify with these new plans and developments and can integrate their own experiences.

The focus group concluded that lack of transparency in bureaucratic procedures hamper the appropriate fulfilment of long-term objectives and lead to inflexibility in managing educational processes and inefficient use of resources. The real impact of new legislation has not yet been seen. Better documentation and evaluation of state programmes in relation to responsibilities would improve interinstitutional processes. According to Thomas Lux: ‘There is great potential for vocational education and training in Kazakhstan’ (Weindl, 2012). However, ‘good legislation cannot be implemented if there is no awareness and know-how at different regional, local and sectoral levels. Resources are needed to develop understanding, participation and ownership. History has shown that changes are coming from the bottom, but bottom-up activities need a frame where they can be created’ (interview with Thomas Lux, 2012).

E. GOVERNANCE AND FINANCING OF THE INITIAL AND CONTINUING VET SYSTEM AND INSTITUTIONAL CAPACITIES FOR CHANGE

Kazakhstan has a centralised structure with standardised regulation. Internal matters in vocational schools (objectives, content, methodologies and the organisation of vocational education and training) are the responsibility of the national government. External matters (finance, maintenance, resources) are under the remit of local executive authorities. The VET department within the Ministry of Education and Science is responsible for VET policy and development.

In terms of governance, the legal basis for decision making through cooperative responsibility between the state and the private sector is absent. Steps have been taken to establish councils at national, regional, local and sectoral levels to implement a vertical management structure with a need to connect active labour market policy and the process of industrialisation with vocational education and training.

In 2011, the Prime Minister established the National Council for Vocational and Technical Education. The sectoral ministries, employer and branch representatives, regions and local administrations are involved in this council. In addition, 16 regional councils, 14 sectoral councils and 162 local and institutional councils were established in 2012. With the implementation of the council-based structure, a diversified system of vertical vocational education and training quality management came into force at the beginning of 2011. A key challenge is to make the councils relevant and interact with a balanced information stream both downwards and upwards.

By amending the law on cooperative VET and social partnership, the government has contributed substantially to the sustainable development of VET. It ensures the legal framework for cooperative VET, social partnership and company investment. The government recognises that the most successful VET systems in the world are based on legally agreed and well-implemented partnerships between business and education. VET makes sense only if employment is created and the quality needed for increased competitiveness in a global market is achieved. The faster that technical innovations are taking place, the faster that technical knowledge is outdated. Exposure to practical work environments is very important for VET. In-company training should be neither a ‘sightseeing’ activity nor an activity of showing and repeating. Where possible, schools should provide more practical training content in a theoretical context. Enterprises should provide more theoretical knowledge in a practical context.

In February 2012, President Nursultan Abishuly Nazarbayev and German Chancellor Angela Merkel signed a new partnership agreement covering raw materials, industry and technology. Its aim was to deepen cooperation at government level and at the economic level. According to the transcript of the press conference, the President invited the Chancellor to encourage German industry to invest in Kazakhstan. They discussed the conditions for improving economic relations, cooperation in higher education and the implementation of the dual system in highly industrialised areas. ‘Our economy will be prepared – so I think – to support VET implementation. We spoke about the dual system. This means that especially young people should receive a good training to work in different areas of the industry’ (Merkel, 2012). The sixth meeting of the intergovernmental Kazakh-German working group on trade and economic cooperation took place in Germany on 26 June 2012. At the meeting, the possibility of a joint Kazakh-German project on introducing a dual system in the VET sector was discussed. A memorandum of strategic partnership between the Federal Ministry for Economic Cooperation and Development (BMZ) in Germany and the Ministry of Education and Science and the

Ministry of Industry and New Technologies in Kazakhstan is currently being prepared. A joint action plan agreed by the Ministry of Industry and New Technologies and Atameken Union (the country's main business association, representing the interests of the community of entrepreneurs for the sake of the improvement of business climate) has been approved.

At the republican conference in June 2012, the Ministry of Education and Science and the National Welfare Fund Samruk-Kazyna joint stock company signed a memorandum on cooperation in training, retraining and skills development. This memorandum includes an agreement between the educational institutions and Kazakh companies on cooperation in the field of training. Meanwhile, large enterprises have started to transform their training centres into training locations where dual training can be implemented and developed. To date, more than 100 VET organisations are implementing elements of the dual system in the VET fields of agriculture, transport, metallurgy, machinery, petroleum and chemicals. On the business side, the implementation of the dual system in the current year will involve more than 100 training companies. More than 120 specialists will be trained on new training schemes and 70% of practical experience will be gained in the workplace.

The main challenge for the coming years will be the implementation of a differentiated VET system with shared responsibility. Who needs to cooperate successfully, considering the diversity of Kazakhstan? Who are the actors who need to share responsibility at the different levels of implementation? Which forms of VET (school-based, work-based, dual, cooperative) are appropriate for specific professions, fields, levels, regions, enterprise concentrations? These features need to be identified and incorporated in the open model of VET duality.

The government has made good efforts in the last few months to find answers to these various questions.

- The government invited GIZ to implement the dual system as a pilot initiative in the highly industrialised areas of Ust-Kamenogorsk and Atyrau. Regional councils have been asked to identify the professions for which the dual system could be developed (by the end of 2012). The Ministry of Education and Science, Ministry of Industry and New Technologies, Ministry of Transport and Ministry of Agriculture are invited to select base companies for these pilot initiatives. Kazakh companies have been selected as a first step: State Companies, SAMRUK, KAZMUNAIGAS, KAZ-Telekom, KAZ-Agro, KAZ Atomprom and Atameken.

- In parallel, Kasipkor has analysed the strengths and weaknesses of the most highly regarded VET systems in the world and considered using the following in a Kazakh context: the German dual system, the Norwegian model and the Singapore model. The criteria are emerging industry, low business activity and weak communication between business and education. Sub-criteria are budget spending (focus on business), investors' trust and managing difficulties. The Singapore model has been most useful in this context. However, no specific consideration has been given to the group of professions or type of enterprise to be involved, the concentration of enterprises in the environment, equipment needed and duration of training.

Kasipkor's idea is to implement different VET systems in different parts of the country, for example the Singapore model in the south. This approach needs critical reflection. The Kazakh VET system can be very diverse due to the regional and local differences. However, any reform of the system should take into account the many other features of these contexts. School-based VET, work-based VET and duality can work in parallel under one roof in one school. It is important that VET professionals are aware of the variety of characteristics and the importance of developing quality in different vocational school formats.

The creation of the new council bodies at national, regional and sectoral levels will provide a good basis for future decentralised governance. It will also provide an opportunity for dialogue and participation across different levels and sectors. However, many issues still remain to be addressed: sharing responsibilities, extending social dialogue, coordinating activities in developing standards and sectoral qualifications frameworks and increasing school autonomy. Currently not every sector has a sectoral council. Trade unions are still not involved in every council. Level practitioners need to understand the importance of producing information and material which is useful, accessible and meaningful to others. Policy makers need to realise the importance of ensuring that bottom-up information and project results are disseminated in those areas which have a major economic and social relevance.

The focus groups recommended the development of appropriate dissemination and knowledge-sharing strategies. VET policy implementation processes should be reflected upon constantly as a matter of course. Correct information at all VET governance and implementation levels should be ensured. There is an urgent need to recognise various partners in VET. Creating a constructive and collaborative environment where there is trust means that interdisciplinary solutions for problems can be found.

A key challenge is the implementation of cooperative VET as an open model of VET cooperation between education and business. It must be appropriate to geographical and social needs. The state has set important conditions; it must now pursue active labour market policies. Business needs certainty to invest. Two learning environments need to be approved and realised. The main elements of practical training need to be recognised and respected:

- practical relevance so that the student can develop a perception of real working processes and their practical importance;
- target group relevance, so that wrong perceptions can be changed and adapted to training content;
- activity so that students can develop professional identity;
- control;
- topicality, so that permanent technical changes and process can be taken on board and used for updating VET input.

VET in Kazakhstan has concentrated on one learning environment for a long time. The increased complexity of production tasks and work processes and the application of new techniques and machines mean that cooperative VET models are needed. Decisions about human resources and business decisions need to be taken into consideration when planning the implementation of technical decisions. Which kind of knowledge is to be developed in a particular learning environment? Which kind of interconnecting training centres need to be set up in areas where there is a predominance of SMEs? How can attributes and characteristics be identified as conditions for the different VET models in the regions? Which employees should be selected and qualified for pedagogic and training tasks? How can VET staff on the education side and the business side be qualified for cooperative VET? What costs will be incurred by particular VET programmes? How much time is needed for the different tasks at different levels? Companies need to develop an understanding of their own training costs, compared to the cost of recruiting qualified staff from outside.

At the national level, finance models need to be developed. However, a VET control system is not yet sufficiently developed, which means there is no reliable evidence of decision making. So ‘the legal basis for decision making in joint responsibility of government and business is still lacking’ (interview

with Rainer Goertz, GIZ). At present, basic decisions are based on different experiences and reflections. The weakest point in VET implementation is in the administration and the processes. All focus group members and donors confirmed once more in 2012 the three strategic priorities for further intervention and VET reform support – agreed under the Torino Process in 2010:

- Shifting from a centralised to a multi-level 'down-up' policy approach in policy making, policy implementation and governance. In this approach, bottom-up processes meet with top-down processes. It also covers local provinces and communities. Connections between national, regional, local, sectoral and institutional initiatives and knowledge sources should be strengthened. Core themes should be aligned with higher-level actions such as national plans, programmes and legal directives. The sharing of experiences must be improved in order to consolidate decision-making processes with a priority placed on a 'down-up' policy, which builds on the advantages of both top-down and bottom-up approaches. Governance and VET management models based on regionalisation, sectoral divisions, institutionalisation and shared responsibilities should make VET planning an ongoing process.

- Increasing the attractiveness of VET by a) encouraging discussion of the terms ability, talent and giftedness in VET and analysing these attributes as a precondition for improved quality. Vocational ability includes disposition, special abilities, motivational factors and multilateral intersection of various intellectual, artistic, psychomotor, social and creative competences. Improved dialogue between the business, research and education communities would support these developments; b) creating a new, more extensive VET infrastructure involving vocational colleges, higher technical schools and interregional, inter-industrial and in-company VET centres as called for by all actors; c) ensuring that young people can identify with their jobs by providing security, an appropriate salary, individual professional development opportunities, greater job availability and improvements in the complexity, appropriate content and stress reduction in jobs.

- Professionalising various VET staff groups at all levels and from both sides: education and business. This would facilitate the provision of cooperative VET based on shared responsibilities. It would also help to achieve structural and institutional improvements and the efficient use of resources, optimise selection procedures, ensure easier access to various levels of VET and result in better guidance and pedagogic knowledge The professionalisation of VET staff to ensure their active participation in down-up policy processes is intrinsically connected to the quality and attractiveness of VET. Cooperative VET assumes cooperative management at all levels and on both the business and education side.

ANNEXES

Annex 1. Statistical tables and figures

A1.1 Basic data of the labour market

Economically active population (in thousands)					
	Q1	Q2	Q3	Q4	Year
2007	8 115.0	8 243.9	8 297.4	8 259.2	8 228.3
2008	8 336.8	8 425.6	8 466.0	8 421.3	8 415.0
2009	8 413.5	8 464.8	8 490.9	8 469.2	8 457.9
2010	8 555.5	8 620.3	8 652.8	8 616.1	8 610.7
2011	8 610.4	8 671.4	8 915.6	8 906.4	8 774.6
Employed population (in thousands)					
	Q1	Q2	Q3	Q4	Year
2007	7 491.0	7 642.1	7 713.5	7 680.4	7 631.1
2008	7 762.9	7 868.4	7 925.4	7 862.1	7 857.2
2009	7 830.4	7 896.6	7 955.2	7 937.4	7 903.4
2010	8 029.3	8 116.5	8 171,1	8 141,4	8 114.2
2011	8 134.5	8 204.4	8 443.3	8 429.1	8 301.6
Employees (in thousands)					
	Q1	Q2	Q3	Q4	Year
2007	4 896.2	4 953.4	5 009.7	5 035.8	4 973.5
2008	5 138.3	5 186.0	5 237.6	5 229.9	5 199.4
2009	5 199.1	5 209.7	5 266.4	5 285.3	5 238.8
2010	5 348.7	5 383.3	5 447.2	5 460.0	5 409.4
2011	5 465.9	5 496.7	5 673.8	5 694.4	5 581.4

Source: Agency of Statistics of the Republic of Kazakhstan

A1.2 Number of employees (15+) by economic sector, 2006-11* ('000)

Total	2006	2007	2008	2009	2010	2011
A. Agriculture, forestry and fisheries	610.2	645.8	676.0	644.2	618.1	604.8
B. Mining and quarrying	195.1	195.8	196.8	195.5	193.7	206.8
C. Manufacturing	487.7	502.0	508.7	507.2	531.3	502.1
D. Electricity, gas, steam and air conditioning	127.2	130.4	131.9	131.3	132.1	146.7
E. Water supply, sewerage, control of waste management and remediation	49.1	49.7	50.5	51.9	57.4	64.6
F. Construction	389.5	429.0	451.9	448.2	458.9	473,8
G. Whole sale and retail trade, repair of motor vehicles and motor cycles	486.5	500.9	564.9	577.6	627.2	630.2
H. Transportation and warehousing	326.1	336.7	356.8	361.8	381.5	397.8
I. Facilities for accommodation and meals	78.5	82.8	87.2	85.9	82.3	91.4
J. Information and communication	86.8	90.4	95.8	98.1	103.4	119.2
K. Financial and insurance activities	76.7	91.0	99.6	100.1	104.7	117.3
L. Real estate transactions	89.1	96.0	97.7	99.2	111.9	108.1
M. Professional, scientific and technical activities	121.0	133.4	139.2	144.1	144.4	171.6
N. Activities in the field of administrative and support services	135.0	146.1	152.6	157.6	161.7	166.3
O. Public administration and defence, compulsory social security	333.8	342.2	351.0	371.5	376.5	391.9
P. Education	717.1	731.5	753.2	767.3	803.3	831.6
Q. Health and social services	321.6	324.9	337.1	340.1	360.0	378.1
R. Arts, entertainment and recreation	76.8	76.5	78.7	85.1	81.2	84.5
S. Other services	55.0	54.9	56.5	60.4	70.2	84.2
T. Activities of households as employers of domestic workers and produce goods and services for own consumption	13.7	13.3	13.5	11.7	9.6	10.1
U. Activities of extra territorial organisations and bodies	0.2	0.1	0.1	0.1	0.1	0.1
Total	**4 777.0**	**4 974.0**	**5 199.4**	**5 238.8**	**5 409.4**	**5 581.4**

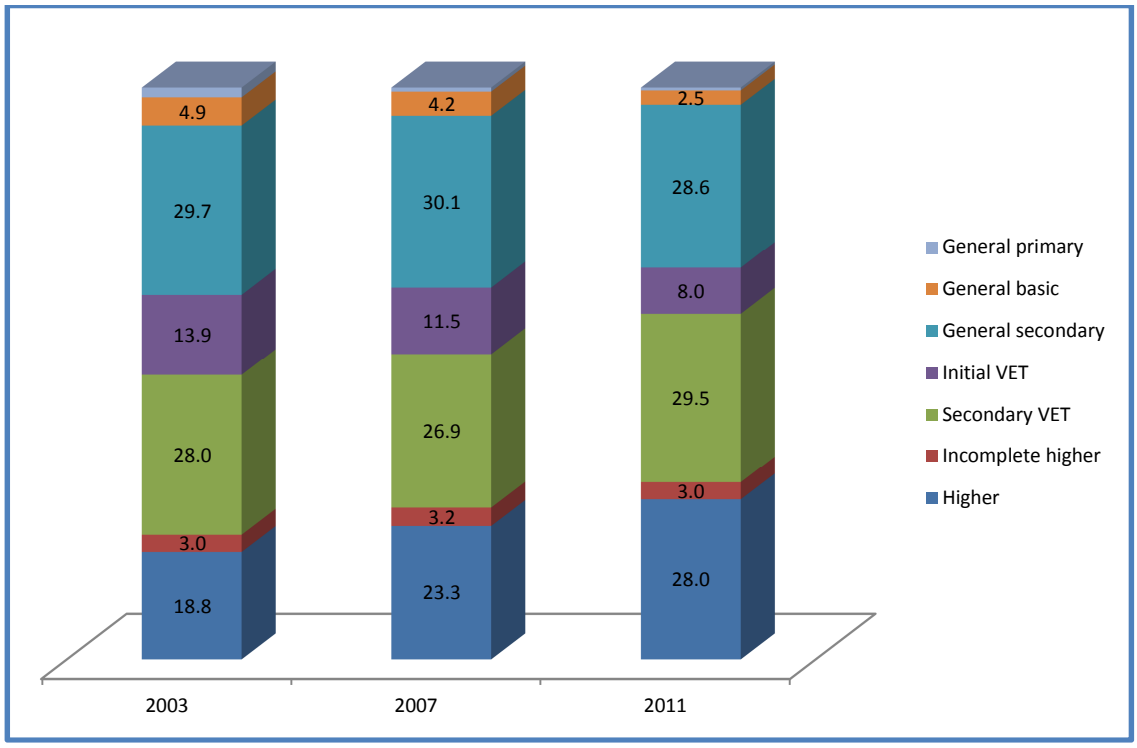
(*) In accordance with ISIC-Rev.4

A1.3 Employment rate (15+) by education level (%)

	2007	2008	2009	2010	2011
Higher education	83.3	84.1	83.4	84.5	84.4
Incomplete higher education	46.4	45.6	42.0	44.4	43.1
Secondary vocational education	77.2	79.0	77.6	78.1	77.9
Primary vocational education	75.4	74.0	77.4	77.9	76.7
General secondary education	63,9	65.3	63.8	64.0	63.7
Basic secondary education	28.4	26.8	27.8	25.5	25.0
Primary education	11.1	13.1	12.0	11.6	10.6
Total	**65.3**	**66.4**	**66.1**	**67.1**	**67.8**

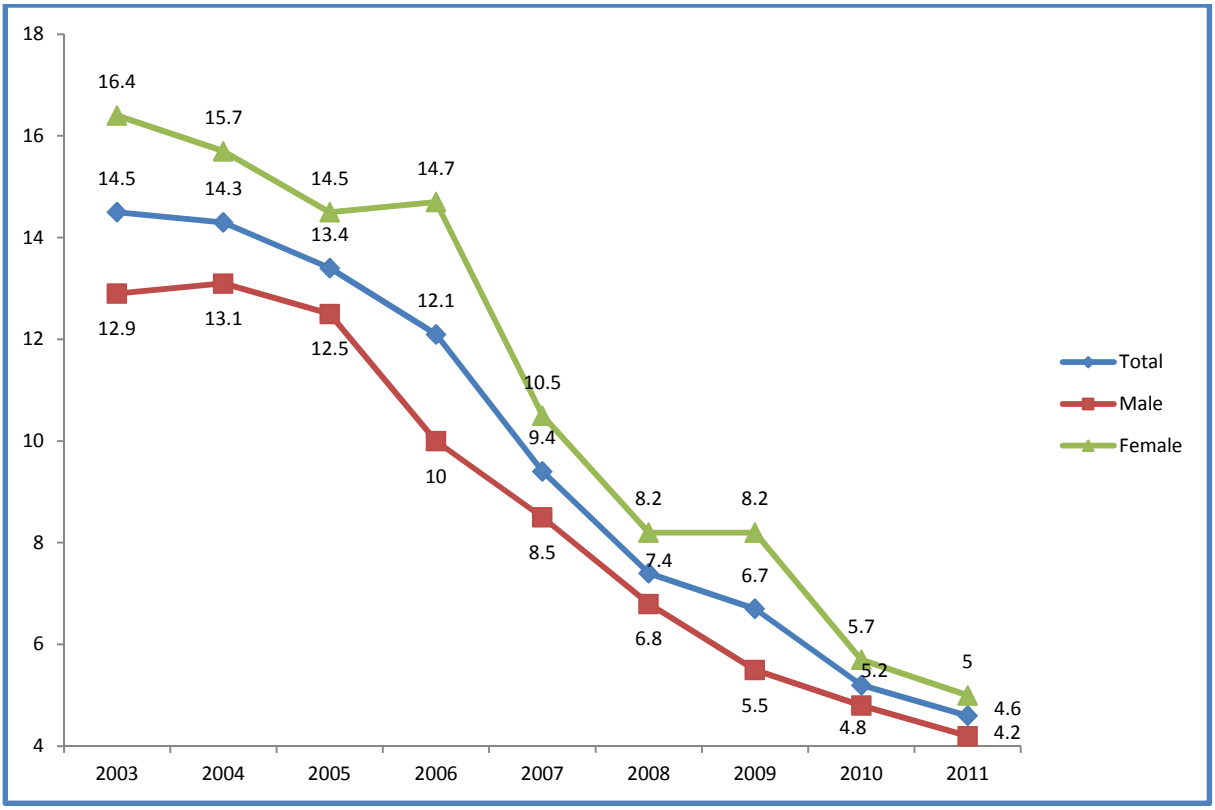
Source: Agency of Statistics of the Republic of Kazakhstan, The Economic Activity of the population of Kazakhstan in 2005-09, 2010 (ETF calculation)

A1.4 Employed population (15+) by level of education (%)



Source: Agency of Statistics of the Republic of Kazakhstan, 2011

A1.5 Youth (15-24) unemployment rate by gender (%)



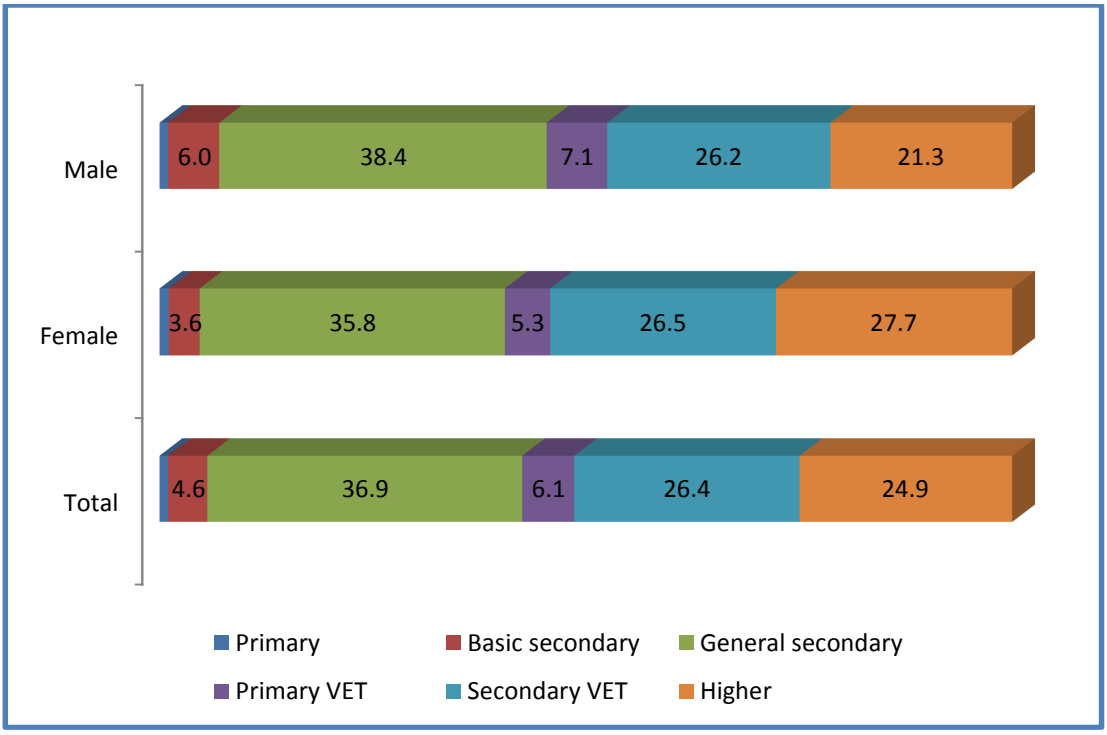
Source: Agency of Statistics of the Republic of Kazakhstan, 2011

A1.6 Number of employed and unemployed young people (15-24) by education level (in thousands)

	2005	2006	2007	2008	2009	2010	2011
Total employed	**1 189.2**	**1 224.2**	**1 222.7**	**1 209.1**	**1 216.9**	**1 212.8**	**1 207.9**
Higher education	123.6	143.1	145	150	191.2	215.2	222.6
Incomplete higher education	101.9	106.7	104.1	115	99.7	105.0	111.0
Secondary vocational education	186.4	184.6	205.3	224.6	235.2	275.0	298.8
Primary vocational education	141	151.5	124.6	111.3	117.7	96.3	85.6
General secondary education	494.6	498.2	506.5	486.5	461.2	426.2	405.4
Basic secondary education	130.1	125.6	126.6	109.8	102.6	78.1	71.4
Primary education	11.4	14.3	10.5	11.8	9.3	17.2	13.1
Total unemployed	**183.6**	**169**	**126.8**	**96.6**	**87.1**	**66.6**	**57.9**
Higher education	16.3	16	10.9	11	14.7	13.0	11.9
Incomplete higher education	20.2	21.7	14.4	15	7	3.5	3.8
Secondary vocational education	23.9	22.1	22.4	15.7	18.2	17.4	16.9
Primary vocational education	20.9	17.7	12.4	7.9	7.9	3.1	2.3
General secondary education	84.4	71.8	51.9	38.9	31.9	22.4	17.7
Basic secondary education	16.2	18.3	14.3	7.8	6.9	5.2	4.3
Primary education	1.8	1.3	0.4	0.3	0.6	1.9	1.0

Source: Agency of Statistics of the Republic of Kazakhstan, 2011

A1.7 Unemployed population by gender and education level, 2011 (%)



Source: Agency of Statistics of the Republic of Kazakhstan

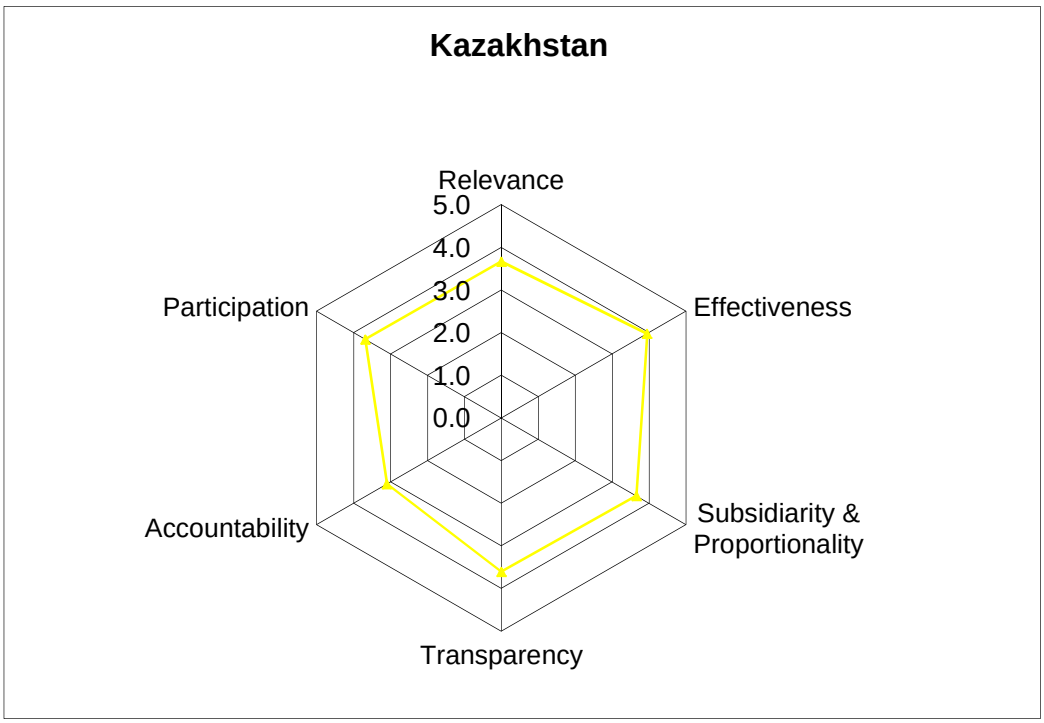
A1.8 Number of registered legal entities by size

	2005	2006	2007	2008	2009	2010	2011
Total	**226 908**	**247 930**	**268 564**	**283 744**	**298 028**	**287 068**	**301 372**
Small	213 347	233 666	253 689	268 580	282 503	271 160	284 888
Medium	11 512	12 110	12 595	12 792	13 153	13 479	14 134
Large	2 049	2 154	2 280	2 372	2 372	2 429	2 350

Source: Agency of Statistics of the Republic of Kazakhstan

Annex 2. Governance matrix

Principle	Indicators	Kazakhstan
Relevance	Governance settings support the economic role of VET, e.g. by anticipating/matching skills needs and linking this to more competence-based curricula.	3
	Governance settings support the social equity role of VET, e.g. by opening up access to learning and accreditation to wider groups or expanding continuing VET.	5
	Governance settings support the innovative role of VET, e.g. by introducing sustainability skills or entrepreneurial skills and/or key competences.	4
	Governance settings mobilise smart, efficient financing and funding mechanisms at all levels of the VET system.	3
	Governance settings respond to learner and labour market needs, e.g. by introducing more flexibility, linking formal/ informal sectors, developing more outcomes-based approaches.	3
	Governance settings support improving the professional standards and professional development of VET teachers and trainers across settings.	4
	AVERAGE	3.7
Effectiveness	Feedback shows that current governance systems support VET provision and the implementation of reforms, particularly at the VET provider level.	5
	Governance supports the achievement of national development goals and a range of broader policies, at national, intermediate and provider level.	3
	Goals are formulated in response to shared concerns and identified policy gaps, whilst taking into account feasibility of resources for implementation.	4
	Quality assurance mechanisms operate or are being developed, and these help to improve quality and apply fit-for-purpose standards.	4
	AVERAGE	4.0
Subsidiarity and proportionality	Decisions are taken at the most appropriate level and/or at the lowest level to optimise VET policy implementation.	3
	Roles and responsibilities of stakeholders do not conflict and do not leave gaps in the policy making process.	2
	Both hard regulation (e.g. laws) and soft regulation (e.g. recommendations, opinions) apply at each stage and level in the policy cycle.	5
	AVERAGE	3.3
Transparency	VET policy agenda setting, formulation, implementation and review are open processes that engage the identified stakeholders.	5
	Policy dialogue is coordinated and supported by relevant documentation, reports and guidelines.	3
	Management information systems (MIS) and other data meet the governance needs of the stakeholders.	2
	Formal and informal mechanisms for sharing information operate, so that information is used regularly by VET stakeholders.	3
	AVERAGE	3.3
Accountability	Governance practices comply with standards, regulations and procedures and are agreed by different stakeholders.	3
	Governance responsibilities, roles and functions are defined clearly and take into account the outcomes expected by users and stakeholders.	3
	Decision makers assess and respect the contributions and recommendations of the different VET stakeholders.	4
	AVERAGE	3.3
Participation	The appropriate range of stakeholders is engaged collaboratively throughout the VET policy cycle.	3
	Different government agencies (e.g. ministries) and the different levels of government (e.g. national/regional/local) are engaged actively.	5
	Coordinated participation mechanisms (e.g. social dialogue, consultation, advisory bodies) enable stakeholders to participate at key points.	4
	AVERAGE	4.0



Notes on the matrix

The matrix consists of six principles: relevance, effectiveness, subsidiarity and proportionality, transparency, accountability and participation. The countries evaluated themselves. Thus, the results are subjective ones. On the 5-point scale, 1 stands for ‘very weak performance’ and 5 for ‘very good performance’.

The scores for Kazakhstan are rather high – 3.6 on average across all six dimensions. The poorest performance is seen within the dimensions of subsidiarity and proportionality, transparency and accountability. This suggests that the main problem is seen in the division of the responsibilities of different stakeholders as well as in mutual communication and data sharing.

Annex 3. Key indicators

A3.1 Torino Process key indicators 2012 – External efficiency

Indicator	Year	KZ
Total population (million)	2011	16.56
Annual population growth (%)	2011	1.4
Share of 15-24 in the total population (%)	2010	18.7
Total dependency rates (%)	2011	46.0
Young dependency rates (%)	2011	36.2
Old dependency rates (%)	2011	9.8
Global Competitiveness Index (rank, out of 144)	12/13	51
Annual GDP growth (%)	2011	7.5
GDP per capita, PPP (current international $)	2011	13 189.2
Agriculture, value added (% of GDP)	2011	5.3
Industry (incl. construction), value added (% of GDP)	2011	44.3
Services, value added (% of GDP)	2011	50.4
Share of employed in agriculture (%,15+)	2011	26.5
Share of employed in industry (incl. construction) (%,15+)	2011	19.0
Share of employed in services (%, 15+)	2011	54.6
Activity rates (%,15-64)	2011	78.2
Activity rates, female (%,15-64)	2011	74.3
Employment rates (%,15-64)	2011	73.9
Employment rate, female (%,15-64)	2011	69.6
Unemployment rates (%,15-64)	2011	5.4
Unemployment rates, female (%,15-64)	2011	6.3
Youth unemployment rates (%, 15-24)	2011	4.6
Youth unemployment rates, female (%, 15-24)	2011	5.0
Completion of at least upper secondary education (%, total aged 15+)	2011	90.2
Adult literacy rates (%, 15+)	2010	99.7*
Adult literacy rates, female (%, 15+)	2010	99.6*

A3.2. Torino Process key indicators 2012 – Internal efficiency

Indicator	Year	KZ
Participation in VET (% of upper secondary)	2011	23.9
PISA results – % of students at proficiency level 1 or below in reading	2009	58.6
PISA results – % of students at proficiency level 1 or below in science	2009	55.4
PISA results – % of students at proficiency level 1 or below in mathematics	2009	59.2
Employment rates by education level, upper secondary VET (%, 15-64)[1]	2011	76.7 (15+)
Unemployment rates by education level, upper secondary VET (%, 15-64)[1]	2011	4.1 (15+)
Participation in lifelong learning – % of 25-64 year-olds having participated in lifelong learning	2011	md
Dropout rates in upper secondary VET	2011	md
Student–teacher ratio in upper secondary VET	2011	16.0[2]

A3.3. Torino Process key indicators 2012 – Governance and financing

Indicator	Year	KZ
Public expenditure on education (% of GDP)	2009	3.1
Public expenditure in upper secondary VET (% of total education spending)	2011	md

Sources: World Bank; United Nations Development Programme; UNESCO Institute for Statistics; World Economic Forum; Organisation for Economic Cooperation and Development; Agency of Statistics of the Republic of Kazakhstan

Notes: (1) KZ: primary VET; (2) data refer to ISCED 4 VET; (*) estimates; md – missing data.

BIBLIOGRAPHY

Agency of Statistics of the Republic of Kazakhstan, www.stat.gov.kz

Boribekov, B., *VET glossary*, Astana, 2010

Deij, A. and Aarna, O., European Training Foundation, 'Skills for the future of Kazakhstan – towards a new national qualification system in the Republic of Kazakhstan building on current initiatives', ETF, Turin, 2010

Focus group, focus group meeting on the Torino Process, Astana and Atyrau, June 2012

ILO LABORSTA database, [online], 2010. Last accessed April 2013 at: http://laborsta.ilo.org

Kasipkor Holding, presentation, Astana, March 2012

Kurassova, A., European Training Foundation, 'Labour market flexibility and security in Kazakhstan', Project ETF-ILP09-40-17, ETF, Turin, 2010

Merkel, A., press statements of the German Chancellor Angela Merkel and President Nursultan Abishuly Nazarbayev of the Republic of Kazakhstan, in: Transcript of press conference given to mark the raw material agreement, Berlin, 8 February 2012

Ministry of Education and Science of the Republic of Kazakhstan, *Analysis of the technical and vocational education system in Kazakhstan*, Ministry of Education and Science, Vocational Education and Training department, Astana, 2010

Ministry of Education and Science of the Republic of Kazakhstan, unpublished statement on the development of technical and vocational education and training in the Republic of Kazakhstan, 2012

Ministry of Labour and Social Protection of the Republic of Kazakhstan, *Statement on employability in the Republic of Kazakhstan*, Ministry of Labour and Social Protection, Astana, 2010

Musabek, E. and Sagynbaeva, A., *Demographic development of the Republic of Kazakhstan*, Astana, 2012

Ouzoun, D., European Training Foundation, *Torino Process 2010: Kazakhstan*, ETF, Turin, 2010

Republican Scientific and Methodological Centre for the Development of Vocational Education and Training, Ministry of Education and Science of the Republic of Kazakhstan, *Analytical framework for review of systems and political trends of vocational education and training*, Astana, 2010

Samsayev, I., *Legal review and institutional setup of TVET in Kazakhstan*, Almaty, 2009

Smailova, A., *Results of the national census of the Republic of Kazakhstan in 2009*, analytical report, Astana, 2011

Weindl, M., 'Großes Potenzial in der beruflichen Bildung' [interview with Thomas Lux], *Deutsche Allgemeine Zeitung*, 19 April 2012

World Bank/International Bank for Reconstruction and Development, *Doing Business 2010 – Kazakhstan*, World Bank, Washington, DC, 2010

Interviews

Goertz, R., country director, GIZ

Lux, T., coordinator EU project on VET reform, GIZ

Makatova, A., manager, Kasipkor Holding

Murzhamedganova, Z., independent researcher

CONTACT US

Further information can be found on the ETF website:

www.etf.europa.eu

For any additional information please contact:

European Training Foundation
Communication Department
Villa Gualino
Viale Settimio Severo 65
I – 10133 Turin

E info@etf.europa.eu
T +39 011 630 2222
F +39 011 630 2200